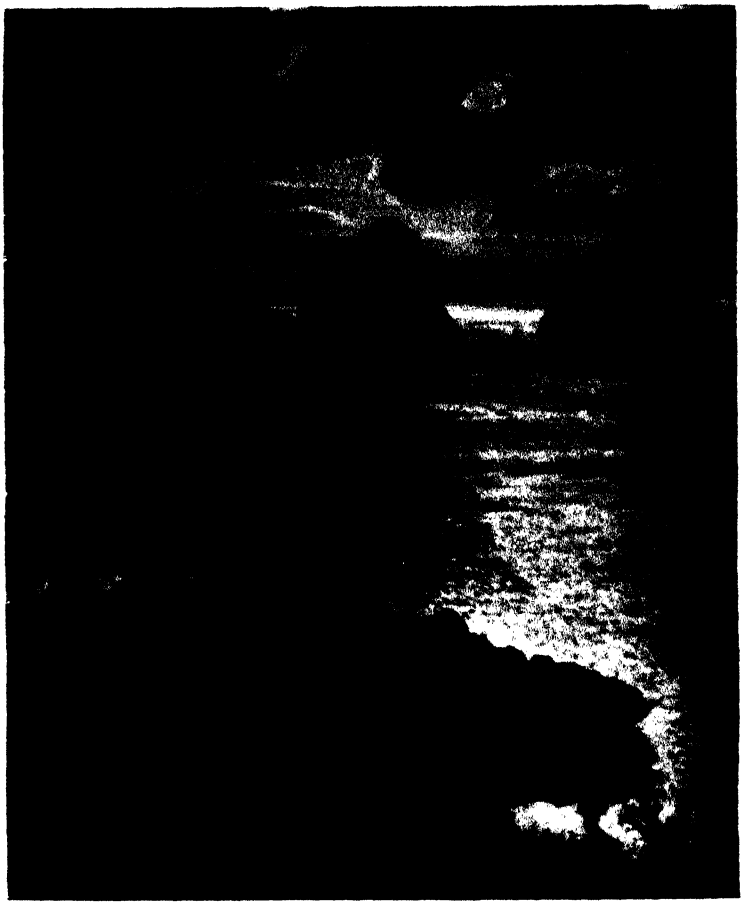
लाल बहादुर शास्त्री प्रशासन अकादमी
Lal Bahadur Shastri Academy of Administration
मसूरी
MUSSOORIE

पुस्तकालय
LIBRARY

प्रवाप्ति संख्या
Accession No. ~~2104~~ 113255
वर्ग संख्या
Class No. 910.202
पुस्तक संख्या
Book No. Cou V.4

Countries of the World

FOURTH VOLUME



Capri's Rock-bound Coast

COUNTRIES OF THE WORLD

Described by the Leading Travel Writers of the Day

Illustrated with some 4000 Actual Photographs of which about 1200 are given in Full Colours & in Photogravure

Edited by

J. A. Hammerton

FOURTH VOLUME

Pages 2181-2908

India to New Orleans

Published at THE FLEETWAY HOUSE London E.C.

VOLUME FOUR

TABLE OF CONTENTS

Descriptive Chapters

INDIA. *Sir Thomas Holdich* 2181
INDIA CENTRAL. *Edward E. Long* .. 2187
INDIAN OCEAN AND ITS ISLANDS. *Marion Newbigin* 2219
INDIA SOUTHERN. *Edmund Candler* 2231
INDO-CHINA. *Robert Machray* .. 2259
IRELAND. *Robert Lynd* 2285
ITALY NORTH. *Edward Hutton* .. 2315
ITALY SOUTH. *Cecil Headlam* .. 2349
JAMAICA. *Frank Cundall* 2373
JAPAN. *J. W. Robertson Scott* .. 2397
JERUSALEM. *G. Horsfield* 2423
KASHMIR AND OTHER HIMALAYAN LANDS. *Edmund Candler* .. 2441
KOREA. *J. O. P. Bland* 2471
LIMA. *L. E. Elliott* 2483
LISBON. *Edgar Prestage* 2493
LONDON. *Dean Inge* 2517
LUXEMBURG. *Demetrius C. Boulger* 2561
MADAGASCAR. *Robert Machray* .. 2569
MADRAS. *Edward E. Long* 2581
MADRID. *Mrs. Steuart Erskine* .. 2597
MALAYA. *Richard Curle* 2613
MALAY ARCHIPELAGO. *Richard Curle* 2637
MALTA. *Gordon Home* 2661
MANCHURIA. *Arthur de Cayle Sowerby* 2685
MEDITERRANEAN SEA. *Lewis Spence* 2695
MELBOURNE. *Boyd Cable* 2701
MESOPOTAMIA. *Edmund Candler* .. 2715
MEXICO. *Stephen Graham* 2741
MILAN. *J. A. Smellie* 2765
MONGOLIA. *Douglas Carruthers* .. 2777
MONTEVIDEO. *J. A. Hammerton* .. 2795
MONTREAL. *Beckles Willson* 2813
MOSCOW. *Sir Philip Gibbs* 2819
NAPLES. *George Sampson* 2837
NATAL. *Evans Lewin* 2851
NEWFOUNDLAND. *Beckles Willson* .. 2869
NEW GUINEA. *C. A. W. Monckton* .. 2885
NEW ORLEANS. *J. A. Hammerton* .. 2899

List of Colour Plates

INDIA CENTRAL:
Elephants and Cattle in Creek .. 2197
The Taj Mahal, Agra 2198
Palace of Maharaja Scindia at Gwalior 2199
Ghats and temples at Benares .. 2200-1
Women Working by River Side 2202
Fortress at Daulatabad 2203

INDIA SOUTHERN:
Gate Towers at Trichinopoly .. 2204

ITALY NORTH:
Lake Maggiore and Castle of Angera 2325
The Course of the Diveria .. 2326
Ruined Castle of Arco 2327
Lake Orta and San Giulio .. 2328
Lake Como 2329
Riva from Lake Garda 2330
La Rocca, San Marino 2332

ITALY SOUTH:
Sorrento from Capo di Monti .. 2331

JAPAN:
Dawn on Mount Fuji 2413
The Torii, Miyajima 2414
Stepping Stones, Kyoto 2415
Peaceful Waters, Miyajima .. 2416
Yasaka Pagoda, Kyoto 2417
Japanese Garden 2418

JERUSALEM:
Arcade of Kubbet es-Sakhra .. 2419
Bab ed-Dahiriya 2420

LONDON:
Trafalgar Square from National Gallery 2509
S. Martin's-in-the-Fields 2510
S. Clement Danes 2511
Air Force Memorial 2512
Westminster Abbey 2513
Amen Court 2514
Tower of London 2515
Tower Bridge 2516

MALAY ARCHIPELAGO:
Native Ploughman of Java .. 2653
Craft on a Lake in Java 2654
Volcanoes of Bromo and Smerve 2655

MALTA:
Village of Birzebbugia 2656
Entrance to harbour, Valletta .. 2657

MANCHURIA:
Mountains beyond Shanhaikuan 2658
Walls of Liao-yang 2659

MEDITERRANEAN SEA:
Corfu 2660

MESOPOTAMIA:
Golden Domes of Samarra .. 2733
Tomb of Ezra on the Tigris .. 2734
The Tigris at Mosul 2735
Creek in Mosul 2736
Houses of Kerbela 2737
Arch of Ctesiphon 2738

MEXICO:
Aqueduct at Los Remedios .. 2739
Popocatepetl from Ozumba .. 2740

MOSCOW:
The Kremlin 2829
Church of S. Basil 2830
River Moskva 2831
Panorama from Tower of Ivan .. 2832-3

NAPLES:
View of Harbour 2834
The Bay 2835
Porta Capuana 2836

Pages in Photogravure

INDIA SOUTHERN
Waterfalls at Wal-Hatti .. 2237
Ootacamund 2238
River Cauvery 2239
Maharaja's Palace at Mysore 2240
Mosque of Tippoo Sahib at Seringapatam 2241
Street in Seringapatam .. 2242
Primitive Oil Press .. 2243
The Malabar Coast .. 2244

INDO-CHINA
Bay of Along 2277
Waters of Along near Haiphong 2277
Joss-house at Haiphong .. 2278
Sampan on the Hué River 2279
Citadel at Hué 2280
Entrance to Citadel, Hué .. 2280
Riverside houses at Saigon 2281
Painted Screen, Hué .. 2281
Native Quarter, Saigon .. 2282
Low Tide, Saigon River .. 2283
Pagodas of Angkor Vat .. 2284

IRELAND
River Dargle, Wicklow .. 2301
Glengariff 2301
Valentia Harbour 2302
Lower Lake, Killarney .. 2303
Ruins of Monasterboice .. 2304
Towers of St. Lawrence's Gate, Drogheda 2305
Long Range—a Creek at Killarney 2306
Cliffs of Doon, Ballybunion 2307
Poison Glen in the Derryveigh Hills 2308

ITALY, SOUTH
Arch in Pompeii's Forum .. 2365
Marina Grande, Sorrento .. 2366
Cone in Vesuvius' Crater .. 2367
Ducal Palace, Urbino .. 2368
Tivoli and the Anio .. 2369
The Corso Garibaldi, Salerno 2370

JAMAICA
Avenue of Guango Trees .. 2371
Bamboo Avenue 2372

JAPAN
Bronze Buddha, near Kobe 2389
Cemetery, near Kyoto .. 2390
Temples of Nara, Kyoto .. 2391
Approach to Kunozan Temple 2392
Kiyomizu-dera Temples .. 2393
Lake Chuzenji, near Nikko 2394
Rice Fields, Yokohama .. 2395
Temple, Miyajima 2396

KASHMIR
Block House, Chitral .. 2453
Mosque of Hazrat Bal .. 2454
Ruins of Martand 2455
Rope Bridge over Jhelum 2456
The Road to Gangtok .. 2457
The Jhelum at Srinagar .. 2458
Houses by the Jhelum .. 2459
Kinchinjunga from Darjeeling 2460

LONDON
S. Paul's from the Thames .. 2533
Houses of Parliament .. 2534
The Pool 2535
Round Pond and Kensington Palace 2536
Dutch Garden, Kensington Palace 2537
The Lake in S. James' Park 2538
Rotten Row 2539
The Thames from Waterloo Bridge 2540-1
Seen from Bush House 2540-1
Chevne Walk, Chelsea .. 2542
Chelsea Reach and Power Station 2543
Waterloo Bridge seen through the Fog .. 2544
Embankment at Night .. 2545
Port of London Offices .. 2546
The Pagoda, Kew Gardens .. 2547
Entrance to S. Bartholomew 2548
Entrance to Temple Church 2548
S. Helen's, Bishopsgate .. 2548
Market Street, Mayfair .. 2548

MALAYA
Railway Terminus, Penang 2629
River Scene 2630
Mosque at Kuala Lumpur .. 2631
Penang Island and Harbour 2632-3
Pahang River .. 2632-3

MALAY ARCHIPELAGO
Canal Scene, Batavia .. 2634
River Scene, Java .. 2635
Tobacco Estate, Sumatra .. 2636

MALTA
Strada Santa Lucia .. 2677
Citta Vecchia 2678

MANCHURIA
Public Building, Dairen .. 2679
Tower of Lama, Mukden .. 2680
White Tower of Liao-yang .. 2681
"Great Square," Dairen .. 2682
Railway Station, Mukden .. 2683
Tombs of the Manchus .. 2684

MEXICO
Village of Ozumba 2757
Lake Xochimilico and Tlahuac 2758
Looking Across Amecameca 2759
Mexican Soldiers outside La Verità 2760
Main Street in San Antone .. 2761
Donkeys Carrying Firewood 2762

MILAN
View from Cathedral Roof .. 2763
The Castello Sforzesco .. 2764

MONGOLIA
Reindeer 2781
Raft on the Yenisei 2782
Landscape Round Dolmo Nor 2783
Camping on the Shores of Dolmo Nor 2784
Herd of Yaks in the Turgun Highlands 2785
Horses being Driven to Kalgan 2786
In the Turgun Mountains .. 2787
Mongols Loading Camels .. 2788
Uriankhai Woman Riding Reindeer 2788

MONTREAL
Place d'Armes 2805
Dominion Square 2806
View from Windsor Street Station 2807
The Grey Nunnery 2808
S. James' Church 2809
S. James' Cathedral .. 2810
Phillips Square 2810
Church of Notre Dame .. 2811
St. James Street 2812

NATAL
Pietermaritzburg from the Town Hall 2853
West Street 2854
Bridge over the Tugela .. 2855
Falls of Edendale .. 2856-7
Looking across Ladysmith 2858
Provincial Council Building, Pietermaritzburg .. 2859
Ocean Beach, Durban .. 2859
Drakensberg Mountains .. 2860

Photographs in the Text

INDIA CENTRAL
The Ganges at Benares .. 2186
Akbar's Tomb, Sikandra .. 2189
Fatehpur Sikri 2190
Monkey Temple, Benares .. 2191
Funeral Pyres, Benares .. 2192
Palace at Ramnagar .. 2193
Street in Benares 2193
Bathing in Ganges 2195
Overlooking Imambara Courtyard, Lucknow .. 2206
Residency, Lucknow .. 2207
Bazaar of Lucknow 2208
Sutter Chowra Ghat .. 2209
Drawing Water from Bungalow Well 2210
Native Tannery 2211
Washing and Drying Grain 2211
Marble Rocks 2212
Naini Tal and Lake .. 2213
Procession through Lashkar 2214
Gateway to Gwalior Fort .. 2215
Native Bazaar, Hyderabad 2216

INDIAN OCEAN AND ITS ISLANDS
Andamanese Shooting Fish 2218
Native Village, Nicobar Islands 2221
Highlands of Mauritius .. 2222
Banking Quarter, Port Louis 2224
Hills above Port Louis .. 2224
Waterfalls, Mauritius .. 2225
Harbour of Port Louis .. 2225
Inlet on the Mauritius Coast 2226
Copra Drying, Cocos Islands 2228
Breaking Open Coconuts, Cocos Islands 2229
Shelled Coconuts, Cocos Islands 2229

INDIA SOUTHERN
Entrance to Temple, Mysore 2233
Tank and Rock Temple, Trichinopoly 2234
Great Temple, Tanjore .. 2235
Planting Rice 2246
Little Conjeeveram 2249
Colonial College, Pondicherry 2249
Wheelwright's Shop near Bangalore 2251
Natives and Bullocks .. 2251
Valley of the Nilgiri Hills .. 2252
Periapatam Bridge 2255
Stone Temples near Mahabalipur 2256
Toda Village in Nilgiri Hills 2257
Tank in Great Temple, Madura 2257

INDO-CHINA
Thoroughfare in Haiphong 2261
Lane in Suburb of Hué .. 2262
Water Buffaloes 2262
Market Sellers, Haiphong .. 2264
Native Carts outside a Cambodian Village 2265
Native Dwelling in Cochin China 2266
Governor's Palace, Saigon .. 2268
Rice Barge, Saigon 2268
Open Market, Haiphong .. 2270
Floating Crane, Saigon .. 2271
Quays of Saigon River .. 2272
Funeral Procession, Tong-King 2273
Native Market, Hué 2274
Wayside Halt in Annam .. 2275

IRELAND
Giant's Causeway 2287
Esplanade, Bray 2288
River Lee at Cork 2289
Quays of Cork City 2290
River Suir and Waterford .. 2290
Cottages in Wexford .. 2291
Modern Street, Limerick .. 2291
Limerick City 2292
Hayfields, Killarney district 2293
Amid the Lakes of Killarney 2294

Photographs in the Text (contd.)

Dingle Showing Harbour .. 2295
Cattle Market, Tipperary .. 2296
Holy Cross Abbey, Tipperary 2297
Cloghane and Brandon Bay 2298
Coosavadig Village .. 2298
The Vale of Ovoca .. 2299
Clifden and Ardbear Bay .. 2299
Meeting of the Blackwater and Kenmare Rivers .. 2300
Island of Achill 2309
Errigal from Gweedore .. 2310
Aerial view of Belfast .. 2311
Bleaching Field near Belfast 2312
York Street, Belfast .. 2312

ITALY NORTH
Turin and River Po .. 2314
Dante's Statue, Verona .. 2317
Vineyard beneath the Becca di Nona 2318
Glacier de Zigiorenove .. 2319
Laveno and Lake Maggiore 2320
Chapel above Lake Orta .. 2322
Church of S. Antony of Padua 2323
Trieste 2334
Old Town on the Isonzo .. 2335
Limestone Peaks in a Valley of the Dolomites .. 2336
Drei Zinnen in the Dolomites 2337
Rimini and the Marecchia .. 2338
Piazza Vittorio Emanuele, Udine 2339
Church of S. Francis, Ravenna 2340
Theodoric's Palace, Ravenna 2341
Piazza Vittorio Emanuele, Bologna 2342
Church of Santa Fosca, Torcello Is. 2342
Two Leaning Towers of Bologna 2343
Looking across San Marino 2345
Monte Titano 2345
The Corso, Fiume 2346
Pleasant Corner in Fiume .. 2347

ITALY SOUTH
Ancient Wine Shop, Pompeii 2351
Cattle Show, Urbino .. 2352
Evening on Coast of Capri 2353
Drying Macaroni, Amalfi .. 2354
Scene in Amalfi 2355
Twin Watch Towers, Oria .. 2357
Town and Bay of Baia .. 2358
Small Cone of Vesuvius .. 2360
Brindisi and Harbour .. 2361
Beehive Roofs at Alberobello 2361
Iron Swing Bridge, Taranto 2362

JAMAICA
Portable Sisal Machine .. 2375
Cattle at St. Elizabeth .. 2376
King's House, Spanish Town 2378
King Street, Kingston .. 2378
Long Pond Sugar Estate 2379
Deserted Sugar Mill .. 2379
Mysore Cattle, Montpelier District 2380
Roaring River Falls .. 2381
Milk River 2382
Montego Bay 2383
Ocho Rios 2384
Dam-head on the Rio Cobre 2386
Rockfort in Kingston's Harbour 2387

JAPAN
Rugged Scenery, Hokkaido 2399
Takarazuka 2400
Inland Sea, Tadotsu .. 2401
Silk Culture, Akaya .. 2402
Shijo Bridge, Kyoto .. 2403
Huts of Honshu Natives .. 2404
Small Street, Kyoto City .. 2405
Beppu, a Health Resort .. 2406
Canal Scene, Osaka .. 2406
Approach to Shrine near Kyoto 2407
Sacred Bridge, Nikko .. 2407
Seaport of Nagasaki .. 2408
The Banks of Lake Shoji .. 2409
Bronze Buddha, Kamakura 2410
The Koraku-en Garden 2411
The Torii by Lake Hakone .. 2411

JERUSALEM
David Street 2425
Tomb at the "New Calvary" 2426
Narrow Street 2427
Within the Damascus Gate 2428
Crowded Portion of David Street 2430
Via Dolorosa 2431
Church of the Holy Sepulchre 2432
Approach to the Jaffa Gate 2433
Aerial View 2434
Haram el Sherif 2435
Looking Westwards from the Mount of Olives .. 2436
The Citadel 2437
Market off David Street .. 2438
Selling Unleavened Bread 2440

KASHMIR
A Street of Islamabad .. 2443
Stronghold of Dug-Gye, Bhutan 2444
Wooden Bridge, Srinagar .. 2445
Crowded Jhelum at Srinagar 2446
River Jhelum from the Throne of Solomon .. 2448
Hari Parbat from Srinagar 2449
Nomad Shepherd 2451
Gohna Lake in Garhwal .. 2462
Temple at Badrinath .. 2463
Flooded Vale of Kashmir .. 2464
Mani Wall near Leh .. 2467
Mountains near Sonamarg .. 2467
Khatmandu 2468

KOREA
Panorama of Seoul .. 2472
Museum of Seoul 2475
Narrow Alley in Ping Yang 2475
Bridge Across the Taidong 2476
Tiled Roofs of Ping-Yang 2478
Shrine near Keizanchin .. 2480
Site of Stronghold near Seoul 2481

LIMA
Fruit Seller with his Wares 2485
Plaza de Toros 2486
Paseo de Colon 2487
The Cathedral 2488
Line of Stalls and Booths .. 2489
Calle del Mercado 2490
Plaza Mayor 2491
Plaza Bolivar and Statue .. 2491

LISBON
St. Stephen's Square .. 2495
The Harbour 2496
Suburbs of Ajuda and Belem 2497
Convent of the Jeronymos 2498
Tower of Belem 2499
Part of the Old Town .. 2500
Panorama from Botanical Gardens to Castle .. 2501
"House of Points" .. 2502
The Cathedral 2503
Praça do Commercio .. 2504
Square of Dom Pedro IV. .. 2505
Cart Drawn by Rams .. 2506
Lift to the Largo do Carmo 2507

LONDON
Aerial View of City .. 2521
County Hall 2522
Victoria Embankment .. 2523
The Cenotaph 2524
Public Record Office .. 2525
Guildhall 2525
Dean's Yard 2525
Lincoln's Inn 2525
High Holborn 2526
Oxford Circus 2526
Piccadilly Circus 2527
Piccadilly 2527
Knightsbridge 2528
Queen Victoria Memorial from the Air 2528
Berkeley Square 2529
Grosvenor Street 2529
Park Lane 2530
Kensington Gardens .. 2531
Savoy Hotel and Theatre .. 2550
Covent Garden 2551
Law Courts 2552
Kingsway 2552
S. Paul's from Fleet Street 2553
Royal Exchange 2554
The Monument 2555
Panorama from Monument 2556–7
Liverpool Street Station .. 2558
Wentworth Street 2559

LUXEMBURG
The Pétrusse Valley .. 2560
Old Castle, Beaufort .. 2563
The Pont Adolphe 2564
Bridge over the Alzette .. 2565
Luxemburg Town 2566
Valley of the Sure 2567
Ruined Battlements .. 2568

MADAGASCAR
Road to Mevatanana .. 2571
Crossing a River in a Filanzana 2572
Travelling in the Highlands 2572
Beehive Dwellings 2573
Street of Diego Suarez .. 2573
River Bemarivo 2574
Antananarivo 2575
Rue Nationale, Tamatave .. 2576
Palace of Justice, Antananarivo 2578
House in European Style .. 2578
Palace of Last Native Queen, Antananarivo 2579

MADRAS
Street in Native Quarter .. 2583
View of George Town .. 2584
High Court 2585
Lighthouse Tower 2586
Carved Gopuram 2587
Water Front of George Town 2588
Basket Makers at Work .. 2589
Highway of Mount Road .. 2590
Government House .. 2591
Chepak Palace 2592
Central Railway Station .. 2594
The Museum 2595
Victoria Memorial Hall .. 2595

MADRID
The Escurial 2599
View down Calle de Alcalá 2600
Old and New Methods of Transport 2600
Stock Exchange 2601
Calle de Alcalá 2601
View over Plaza Mayor .. 2602
Bank of Spain 2604
Post Office 2605
Royal Palace 2606
Maket in El Rastro .. 2607
The Senate 2608
Puente de Toledo 2608
Plaza de la Villa 2609
Plaza de las Cortes 2609
From the Manzanares .. 2610
Puerta del Sol 2611

MALAYA
Sultan's Palace, Klang .. 2615
Malacca and the River .. 2616
Market in Johore Bahru .. 2617
Railway through Selangor .. 2618
Bridge over Klang River .. 2618
Government Buildings, Kuala Lumpur 2619
Bank in Kuala Lumpur .. 2619
Rubber Plantation 2620
Captured Wild Elephants .. 2621
Forest Path 2623
Harbour of Penang 2624
Penang Hills Railway .. 2625
Tin Mine 2626

Photographs in the Text (contd.)

MALAY ARCHIPELAGO

Old Town Gate of Batavia 2639
Tropical Scene, Java .. 2640
Rice Field, Java 2642
Bamboo Raft, Java .. 2643
Bamboo Bridge at Buitenzorg, Java 2643
Seas off the Timor Laut .. 2645
Hindu Temple on Bali 2645
View on Ternate Island .. 2646
Coaling Station at Macassar 2647
Native House, Sumatra .. 2496
Market at Palembang .. 2651

MALTA

Army Headquarters, Valletta 2663
Panoramic View of Gozo .. 2664
Musta Church 2665
Public Library, Valletta .. 2666
Porta Reale, Valletta .. 2666
Opera House, Valletta .. 2667
The Sakkaja Fountain .. 2667
Entrance to Valletta Harbour, ... 2668
Selmun Island 2669
Fish Market, Valletta .. 2670
Water Cart in a Street of Valletta 2670
Prehistoric Ruins at Tarxien 2671
Ruins at Hagiar Kim .. 2671
Valletta Harbour and Fort St. Angelo 2672
Underground granaries, Floriana 2673
Stairway street, Valletta .. 2674
Stone-walled Narrow Street 2675

MANCHURIA

Modern Hotel, Dairen .. 2687
Port Arthur 2689
Soya Bean Bins at Dairen 2691
Shrine near Ta-shih-kiao .. 2691
Docks of Dairen 2693
Open Cut, Fushun Colliery 2694

MEDITERRANEAN SEA

Looking across Corfu .. 2700

MELBOURNE

From the Air 2704
Flinders Street 2705
Ormond College 2706
Town Hall 2706
Alexandra Gardens .. 2707
Collins Street 2707
River Yarra and Government House 2708
Henley-on-Yarra 2709
Parliament House 2710
Elizabeth Street 2711
Exhibition Building .. 2712
Public Library 2713
S. Patrick's Cathedral .. 2714

MESOPOTAMIA

Ruins of Babylon 2717
Arab Women drawing Water at Hilla 2718
Packing Dates for Export .. 2720
Water-wheels at Hit .. 2721
Kirkuk on the Kissa Chai .. 2722
Native Potter of Kirkuk .. 2722
The Garden of Eden .. 2724
Unloading Grain, Basra .. 2725
Nahr Ashar Canal, Basra .. 2726
Hindieh Barrage 2728
Demolished Houses, Mosul 2729
Caravanserai in Kerbela .. 2730

MEXICO

The Cathedral, Mexico City 2743
Chapultepec Castle .. 2744
Irrigation Canal, Sinaloa 2744
Plaza de Toros, Mexico City 2745
Main Street, Tampico .. 2745
Overlooking Tehuantepec 2746
Water Front of Vera Cruz 2749
Mexican Potter at Work .. 2749
Sellers of Native Pottery .. 2751
Arcaded Street, Progreso .. 2751
Amatlan Oilfields, Vera Cruz 2753
Flower Market, Mexico City 2753
Outskirts of Salina Cruz .. 2754

MILAN

The Cathedral 2767
Scala Opera House .. 2768
The Corso Vittorio Emanuele 2768
The Porta Romana .. 2769
Via Grossi 2769
The Arco Della Pace .. 2770
Piazza dei Mercanti .. 2771
The Grand Canal 2771
Sante Maria Delle Grazie .. 2772
San Satiro 2773
From the Cathedral Roof 2774

MONGOLIA

Lake Toji Kul 2779
Chinese Village on the Borders of Turkistan .. 2780
Mongolian Horsemen .. 2789
Upper Waters of the Yenisei 2790
Gate of Chuguchak .. 2791
Shara Sumé in the Altai 2792
Lamas at the Monastery of Wong 2792

MONTEVIDEO

Esplanade at Pocitos .. 2797
The Cathedral 2798
Plaza de la Constitución .. 2798
Avenida 18 de Julio .. 2799
Calle Misiones 2799
Playa Ramírez 2800
Panorama of Harbour .. 2802

MONTREAL

McGill University 2815
Panorama from the Mount 2816

MOSCOW

House of the Workers .. 2821
Funeral in Kuznetzki Most 2822
The Great Opera House .. 2823
Lubyanskaya Square .. 2824
Novo Devitchi Convent .. 2825
Caricatures of the Priesthood 2826
"Religion is Opium for the People" 2827

NAPLES

Strada del Duomo .. 2839
The National Museum .. 2839
Shipping in the Harbour .. 2840
Coppersmiths at Work .. 2842
Fishermen on Water-front 2843
Strada Santa Lucia .. 2844
Galleria Umberto Primo .. 2845
In the Rione Amedeo .. 2847
Church of San Francesco di Paola 2847
Piazza del Municipio .. 2848

NATAL

Resort of Amanzimtoti .. 2850
Kraal in Zululand 2862
View in Durban 2863
Mouth of the Umkomanzi .. 2864
Type of Native Huts .. 2866
Mat-Covered Kraal .. 2866

NEWFOUNDLAND

St. John's from the Narrows 2868
Boating in St. Paul's Inlet 2871
Village near St. John's .. 2872
St. John's above its Harbour 2874
Fishing Fleet in Port .. 2874
View of the Bay of Islands 2875
Village of Quidi Vidi .. 2875
Lumber on the Ice .. 2876
Dump of Spruce Logs .. 2876
Making Wood Pulp .. 2877
In a Paper Mill 2877
The Lesser Gull River .. 2879
Shores of Conception Bay 2880
Little Codroy River .. 2882
On the Banks of the Humber 2882
Killing Hair Seal 2883
Heap of Seal Pelts 2883

NEW GUINEA

Seaplane off Papua .. 2887
Village on Rambuzo .. 2888
Houses of Wambirimi .. 2888
Pile Huts on Humboldt Bay 2889
Island in Dampier Strait .. 2889
The Kaiserin-Augusta River 2890
Dance Hall at Atabo .. 2891
Fishing near Eissano .. 2893
Parimau on the Mimika .. 2893
Pile Village of Elavora .. 2894
Hut of New Guinea Pygmy 2895
In a Coconut Plantation .. 2896

NEW ORLEANS

Unloading Cotton .. 2898
S. Louis Cathedral 2901
View Over a Lumber Yard 2902
Grain Suction Apparatus .. 2903
Old French Courtyard .. 2904
Canal Street 2905
St. Charles Avenue .. 2906
Chartres Street 2907
Cabildo or Court House .. 2907

List of Maps

India 2188
India Central 2188
Indian Ocean and its Islands 2220
India Southern 2232
Indo-China 2260
Ireland 2286
Italy North 2316
Italy South 2350
Jamaica 2374
Japan 2398
Jerusalem 2424
Kashmir and Other Himalayan Lands 2442
Korea 2470
Lima 2484
Lisbon 2494
London 2518–9
London before the Great Fire 2520
Luxemburg 2562
Madagascar 2570
Madras 2582
Madrid 2598
Malaya 2614
Malay Archipelago 2638
Malta 2662
Manchuria 2686
Mediterranean Sea 2696
Melbourne Environs 2702
Melbourne 2703
Mesopotamia 2716
Mexico 2742
Milan 2766
Mongolia 2778
Montevideo 2796
Montreal 2814
Moscow 2820
Naples 2838
Natal 2852
Newfoundland 2870
New Guinea 2886
New Orleans 2900

INDIA

Landscape of Asia's Central Peninsula

by Sir Thomas Holdich

Author of "The Gates of India"

INDIA, even now, hardly assumes her true geographical character in Western imagination as a continent half as big as Europe, divided into many regional units answering to the "countries" of Europe and differing from each other in physical conformation and geographical detail as do those European countries; and the people in them differing as much as their countries. The rough and hairy highlander of the frontier hills is as far apart from the sleek and obstructive Bengali babu as is the ice-bred Eskimo from the sun-nurtured Neapolitan. Each is now the final product of his ancestral environment, the contrast between them in mentality and physique indicating fairly well the geographical contrasts involved in their natural surroundings.

It will be found that on the whole the limits of race distribution in India are defined by those natural features which form their geographical boundaries, the lines of separation being usually well marked, and there being little or no admixture of peoples on the border such as give rise to so many political complications in Europe. This may be partly due to the different standards of civilization which govern their existence, but chiefly, no doubt, to the fact that there is no cosmopolitanism where Indian creeds and castes are concerned.

Divisions of Caste and Creed

The amalgamation of nationalities such as is common to the republics of the West is absolutely unknown in the East. A man may be Hindu or Moslem by creed, or he may be Rajput (Aryan) or Tamil (Dravidian) by race, but there is no social admixture whatsoever between them and no recognition of race superiority. Democracy and caste can never exist side by side in modern India.

It is this which presents the chief difficulty to the establishment of any comprehensive system of self-rule in India. There is, inherent in India itself, no possibility of governing its three hundred and fifteen million inhabitants of divergent origin and antagonistic principles as a whole nation, nor does history indicate that there ever will be.

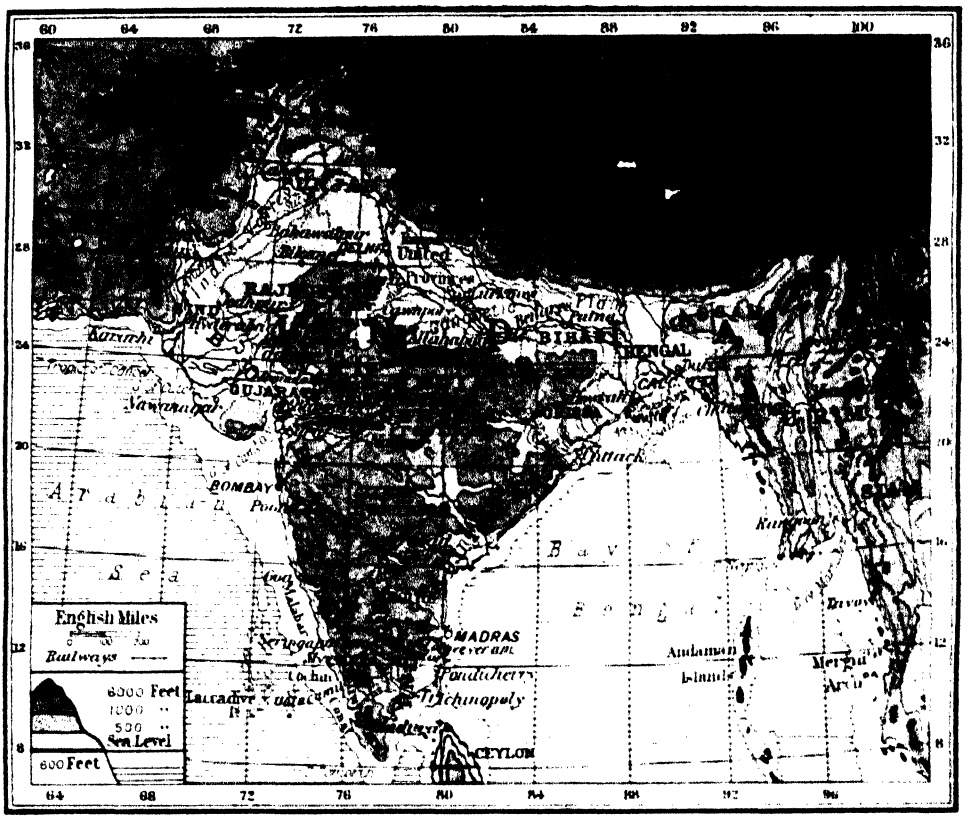
Infinite Variety of Compartments

Self-rule, if it strikes root at all, will be in compartments, that is, in a number of separate and well-defined geographical units as it is in Europe. It is the infinite variety of these compartments, both natural and political, which renders it difficult to describe India in detail as a geographical whole, and for this reason the subject is here considered in parts corresponding to those areas or regions which fall under similar influences of climate and exhibit similar physical conditions of existence.

The generic term "India," as a whole, not only includes the great peninsular area which reaches from the Himalayas to Cape Comorin, but a wide extension of elevated plateau and mountainous country separating the peninsula from the rest of Asia, wherein lie the narrow and difficult land approaches to the vast and teeming plains.

If we would obtain a comprehensive view of India which might serve to co-ordinate all these separate regions and explain something of the primeval methods by which they came to exist in such strange variety, we must turn back a page or two of her geological past and note the basis on which the completed

Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited.



INDIA, RELIC OF AN OLD CONTINENT AND A VANISHED SEA

structure rests. India was first known to the ancients of both East and West as the land of the Indus. There was no general name for a country which embraced so many tribes and races. The hordes of Central Asia who either trickled intermittently, or poured in thin columns, through the difficult northern and western passes of the guardian mountains found, on emerging into the plains, that they were faced by a vast expanse of water which they called Sindhus. The Greeks reduced the name to Indos and explored no farther than the Indus basin. This land of Indos with all the extra-peninsular area, embracing highland and lowland, the plains and hills of Baluchistan, the North-West Frontier Province and the Himalayas, is geologically by far the most recent.

All the land approaches to India now pass through this extra-peninsular area, and all, with the exception of those on the extreme west, pass through formidable mountain gateways whether by the sterile, rock-strewn ways of Baluchistan, the more open defiles leading from Central Afghanistan or the rocky gates of the Kabul basin, and all alike debouch into the Indus valley. Even the exception which admitted the Arab hosts from Syria through Makran leads direct to the Indus, although it is not obstructed by any formidable mountain barrier. In these days, indeed, it would rank for the most part as a route suitable for motor traffic. Quite possibly, in the days when the Indus delta was very young and the great Rajputana desert not quite so much of a desert as it now is on its sea-washed border, a coastal route may have existed which witnessed the slow passage of many strange peoples into India, and amongst them the progenitors of the Dravidian races.

However that may be, it is these mountain ways and passes of the north and west, and the untamed highlanders who still guard them, that constitute the most difficult features of the

north-west barriers and it is these which have afforded much of the romance of modern Indian history and which still awake the echoes of an heroic past.

On the extreme west the Baluch mountain frontier, facing the Indus, consists of a more or less regular system of uplifted limestone strata in stiff and broken ranks ever rising in altitude from the Indus plain to the central upland. It is as if they formed a gigantic staircase of which the top landing leads on to the wide Baluch and Afghan plateau, from which the gathered sources of antecedent drainage break down transversely through the most amazing rock-bound gorges to the hot and sandy plains of the Indus.

Farther north the frontier barrier of hills facing Afghanistan is far more irregular. The mountain masses of Waziristan pile themselves into more irregular conformation, while farther north again, beyond the Kabul river, they touch the foothills of the far extended Hindu Kush spurs. North of Peshawar and east of the Indus, we reach the mighty Himalayan barrier which for 1,600 miles trends south-east to the great bend of the Brahmaputra, being nowhere less than 100 miles wide.

Floor of a Vanished Sea

This, then, represents the marvellous disposition of nature for shutting off the Indian peninsula from High Asia and it represents a barrier such as no other country in the world possesses. Great rivers cradle their sources beyond the Himalayas, such as the Indus, the Sutlej and the Brahmaputra; lesser streams rise in the hill-shadowed depths of the Himalayan folds.

Flanking this mighty extent of mountain barrier, towards India, is a hardly less amazing depression, the Indo-Gangetic basin, which encircles northern India from the Arabian sea to the Bay of Bengal. This is the floor of a very ancient sea. Over the whole of the extra-peninsular area—over Baluchistan, Afghanistan, the Indus valley, Rajputana and even the north-western Himalayas—the tides of a shallow sea once ebbed and flowed. This lasted till tertiary times when the rock area of the peninsula gradually closed up with the Eastern Himalayas. While ocean currents once swept from the Persian Gulf to the foot of the Aravalli mountains in Rajputana there still stood south of them that age old peninsula which was then an extension from Africa. Had man existed in those days, had he stood where the old Jain temples of Abu now stand and looked northward he would have seen a vast silent ocean with an unbroken horizon, desolate as an Arctic sea.

Punjab Created by the Indus

This, then, is the bed rock, the very basis of India's conformation. First, an inconceivably old peninsula south of Rajputana; next the floor of a departed sea which has left many traces behind it, forming an immense depression between the peninsula and the recent formations of the trans-Indus hills and flanking the giant Himalayan spurs; and, finally, the great mountains themselves with a limitless background of uplifted plateau reaching northward to High Asia.

The Indus, after accepting its tribute of five great rivers (with the assistance of which it has laid out the flat floor of the Punjab, filling up with alluvium large tracts of the original depression) becomes, south of Multan, a broad and navigable river, sometimes shaping a much divided course through open plains, occasionally confined within definite and permanent banks till it reaches its huge delta south of Karachi.

Indus Divorced from the Ganges

The Indus basin is practically unwatered by the monsoon rains which pass over and beyond it so that the fertility of the Punjab depends largely on irrigation. It receives, however, certain contributions from the frontier hills. In comparatively recent geologic times the basins of the Indus and the Ganges parted company, becoming a divided system with a definite water parting

between them. The broad area of highly cultivated territory which covers this divide to the north-east of the desert extending from Lahore, past Delhi to the central Indian hills, the first home of the Aryan settlers, is still of primary importance in Indian economics. It is traversed by several important rivers which, draining from the Malwa plateau in the south, between the Aravallis and the central Indian (Vindhya) hills, flow into the Jumna affluent of the Ganges.

Fertility of Mother Ganges

The Ganges basin enjoys the full influence of the monsoon rains and thus it was that the chief kingdoms of the plains were aforetime carved out of the Ganges valley. Here arose the most ancient cities, the earliest centres of civilization, of industry and of wealth. Continually through the ages has this mighty and most sacred river of Hindustan spread life and strength abroad through millions of worshippers. Slowly and majestically the Ganges slides down its smooth bed till it merges into the silt-bearing waters of the Brahmaputra, surrounded by an endless panorama of irrigated fertility supporting the swarming population of lower Bengal. Gradually this links up with the deadly swamps and flats of the Sundarbans at the head of the Bengal bay. The rainfall is certain and abundant, so that from the Indo-Gangetic divide to its delta there is nothing but wide areas of crop-producing land, broken by clustering groves and avenues of palms bordering the fresh verdure of irrigated rice fields.

River Systems of North and South

Such are the prevailing characteristics of Lower Bengal and of those provinces to the south of it which are watered by the Mahanadi.

The striking difference in the primeval genesis of northern and southern India naturally suggests those differences in physical conformation which actually exist. Accepting the Aravalli range as representing the northern rim of that inconceivably old continent which was once an extension from Africa, the Malwa uplands, where rise the rivers of central India, form the link with the forest-clad Vindhya system to the south which traverses India from Indore to the Gangetic delta. Close under the spurs of the Vindhyas runs the sacred Narbada river, separated from the Tapti by the narrow Satpura ridges and both debouching into the Gulf of Cambay. Together they form a hydrographic system in rather striking contrast to that which obtains south, throughout the Deccan, where the drainage takes off from the eastern slopes of the Western Ghats and by innumerable channels swells the volume of the Godavari and the Kistna rivers debouching into the Bay of Bengal.

The Deccan Framed by the Ghats

Approaching India by sea from the west, the vision of a solid wall of mountains overlooking the Malabar coast is the dominant feature. These are the Western Ghats, and it is up the precipitous scarp of these hills that the Bombay railway wriggles its tortuous way to the Deccan plateau. Once on the plateau we are surrounded by some of the most picturesque scenery in India. The trap formation of the Deccan assumes a thousand fantastic shapes. Isolated, castellated peaks and rocky pinnacles distinguish the crest of the Ghats before they begin to slope in comparatively gentle gradients eastward across the continent. Here again are Ghats of the eastern coast overlooking the Bay of Bengal, neither so high nor so striking as those of the west, although much delightful scenery surrounds the passage of the great rivers to the sea.

Beyond and apart from these guardian ranges are the southern groups of the Nilgiris and here, at almost the southern extremity of India, do we find much subtropical beauty combined with open stretches of grass downland, and a climate which renders these southern hills the favourite resort of the European.

While much of northern India consists of either desert or wide, treeless spaces, nearly all of the southern continent, south of the Vindhyas, is either forest-clad or jungle-covered. The forests of the south, which form the habitat of many tribes whose origin is chiefly Dravidian, are not as the forests of the lower Himalayas. There are, indeed, extensive but isolated tracts of real forest capable of producing valuable timber, but for the most part the jungle consists of "bush and small wood," combined with rank grass, dwarf palms and cane brakes which are economically useless. Cultivation does not extend far from the coast-line or the rivers in any but the most primitive form; the deltas of the rivers yielding the chief agricultural wealth of the country.

East of India, and separated from it by a narrow margin of forest-clad mountain ranges at the head of the valley of Assam, is Burma; but that very humid, waterlogged and withal delightful country forms the theme of a separate chapter.

India, which has from prehistoric times held the golden promise of men's desire and has therefore been subject to periodic irruptions of greedy, treasure-hunting Asiatic hordes, has derived therefrom a large legacy of crude, but quite distinct, peoples who have retained their own peculiar characteristics, carving out for themselves a habitat in the continent from which they have been periodically ousted by later and more powerful arrivals. Thus it happens that we find the oldest of the prehistoric peoples in the wildest jungles and most inaccessible hills and the more civilized communities in that part of India with which we are most familiar.

Although it is impossible within the limits of this short chapter to enter into details of the cities, manufactures and trade of India as a whole—they will be found more extensively treated elsewhere—it is interesting to note that commercially India is in a strong position. The rupee stands above its pre-War value and the export trade-figures have similarly increased.

INDIA: GEOGRAPHICAL SUMMARY

Natural Divisions. The peninsula, the Deccan, an ancient plateau, a relic of the ancient continent of Gondwanaland. (Cf. Africa.) The northern mountains, the Himalayan system, the "roof of the world," the highest and most eastern section of the Old World upfolded mountains (Alps, Caucasus, Himalayas). The plains between them, the Indo-Gangetic plain, a complementary trough once flooded, now filled with alluvium.

Climate. The type area of the Monsoon climate; three seasons: (1) November to March, the cool season, with little or no rain; (2) April to June, the hot weather, fierce sunshine; (3) June to October, the rainy season, which begins when the monsoon breaks; during these months from two-thirds to four-fifths of the annual rainfall. The climate is controlled by the height of the sun in the sky in these low latitudes and by the winds of the Indian Ocean, which blow from the south-west over India during the summer months and temporarily displace the north-east trade wind which is normal in these latitudes.

Vegetation. The hot Thar desert in Rajputana and Sind (cf. Sahara), jungles and jungle forests in the rainy areas and on the lower slopes. (Cf. Guinea Lands.) Deciduous forests on the heights. Very little savanna land, such as occurs in the scantily peopled Sudan, for the population is so dense that this natural region is cultivated and frequently yields two crops annually.

Products. Rice, jute, indigo, wheat, cotton, tea. Mica, manganese, coal and iron ore. Cotton, silk and leather goods, with ornamental metal ware of distinctive character.

Communications. In ancient days communications were by land through gaps in the encompassing mountains. As the seas came gradually into use the coast became important, and under British administration the basis of control and traffic as well as the great termini of the inland routes came to depend on the sea and ocean-going ships.

Outlook. A congeries of states, some native, some British, with two definite religions and a prevalent caste system, has a choice between order and settled government by authority based on sea power or anarchy and chaos due to the disruptive tendencies of the numerous distinct peoples set in different and contrasted environments in an area equal to half of Europe or the United States.

SHRINES AND TEMPLES IN VARYING FORMS OF ORIENTAL ARCHITECTURE, LINING THE GANGES

At Benares the Ganges forms a magnificent sweep of about four miles, the city being situated on its outside curve on the northern bank, which is higher than the other. Seen from the river there is a splendid panorama of the innumerable ornate temples, shrines and ghats that comprise the whole river frontage, yet despite its imposing appearance Benares does not possess many buildings of outstanding grandeur nor of any great antiquity, the most prominent buildings being the Aurungzebe Mosque with its two minarets, the Bisheshwar or Golden Temple dedicated to Siva, and the Durga Temple known as the Monkey Temple.

INDIA CENTRAL

From Himalayas to Kistna River

by Edward E. Long

Author of "British Rule in India," etc.

WE have here under our consideration a country of broad, riverine plain, with well-watered fertile lands, densely-populated, where the first Aryan settlers in India established themselves after their great trans-Himalayan trek and built fair cities and founded a great civilization. It is a region of vast tableland, broken up by noble mountain ranges, whose picturesque hills and valleys, often clothed with thick forest, have sheltered aboriginal tribes to the present day, and where warrior chiefs of proud Rajput ancestry, with their sturdy clansmen, exert their sway.

A strict definition of Central India would be all that territory in the centre of the Indian continent which, in the form of a large number of native states under British protection, is known as the Central India Agency. There is, however, such similarity from a physical standpoint between this territory and that of the Central Provinces, mostly British territory, which lie due south of these Central Indian states, that they may be said to form a complete physical unit. When added to Hyderabad in the south and to the wide central stretch of territory to the north which stretches to the borders of Tibet and Nepal and is known as the United Provinces of Agra and Oudh, they constitute a geographical unit which can claim to be defined as Central India.

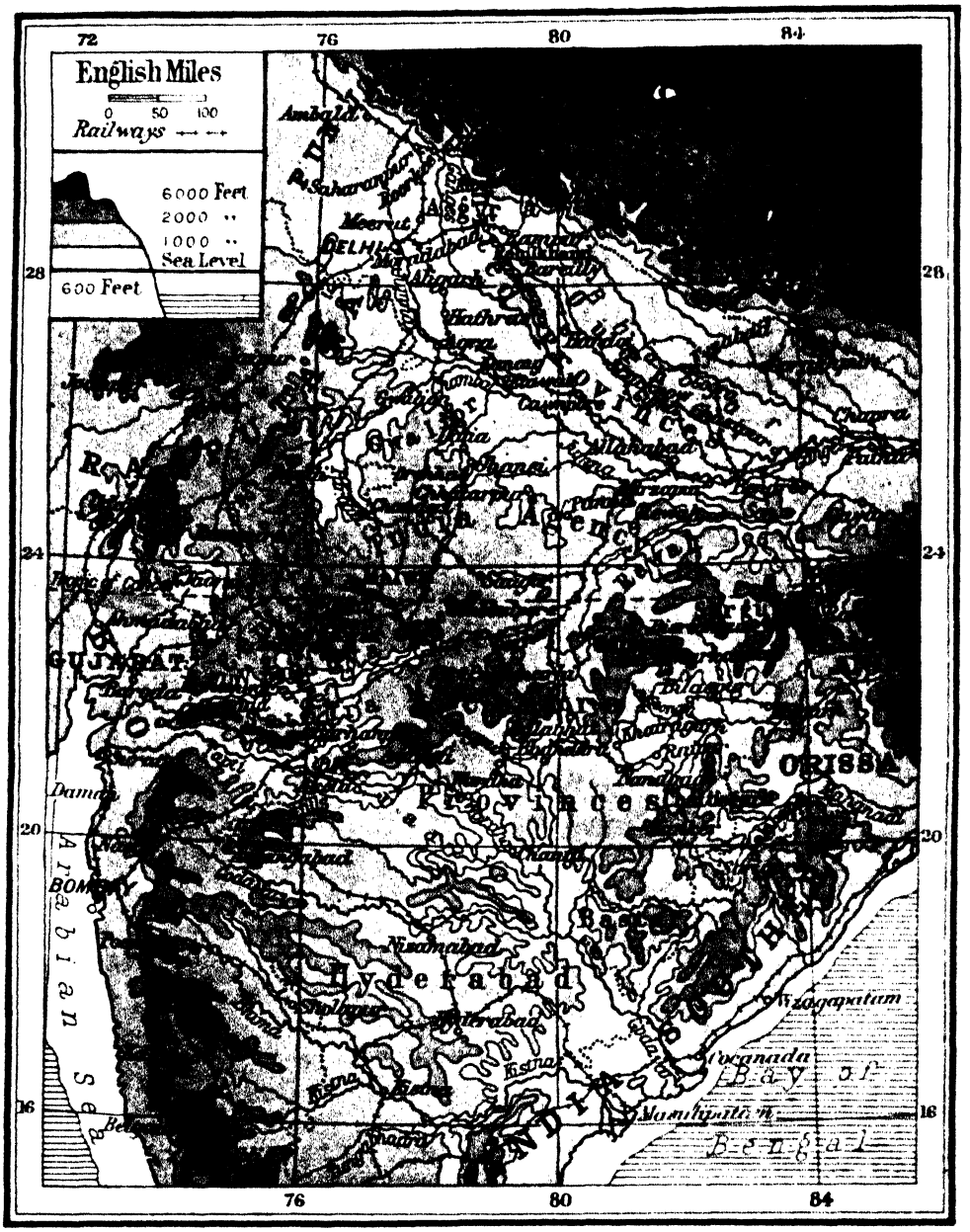
Lands Wrested from the Marathas

The Central Indian states have an area of 77,367 square miles and a population of 9,350,000, and are 153 in number. Principal are: Gwalior, Indore, Bhopal, Rewah, Dhar, Jaora, Datia and Orchha; all, except Bhopal and Jaora (Moslem states), are Hindu; the remainder are grouped together in agencies. The overthrow of the Marathas, in 1818, brought all under British control. The Central Provinces, in area 131,000 square miles, with a population of about 16,000,000, came in part under direct British rule at the conclusion of the Third Maratha War, and the remainder when the Bhonsla Raja Ragoji died without issue in 1853.

Three Well Defined Zones

Included with the Central Provinces are the native states of Bastar, Jashpur, Kanker, Khairagarh, Nandgaon, Rajgarh, Surguja and the province of Berar, originally part of the dominions of the Nizam of Hyderabad, but handed over by him to the British Government in 1853, and in 1902 leased in perpetuity to the British Government. Hyderabad itself, the chief native state of India, has an area of 82,698 square miles and a population of over 13,000,000; and the United Provinces of Agra and Oudh, area 107,267 square miles and population 45,000,000, include the native states of Rampur and Tehri and the independent state of Benares.

In aspect the territory is very well-defined, and falls, naturally, into three zones. First comes the great level cultivated plain of the United Provinces, bordered by high mountain lands in the north, a strip of forest land, the Bhabar, and then a wide belt of fever-stricken marsh, the Terai, and low hills in the south. The second division consists of the tablelands and mountain ranges of the Central Indian states and the Central Provinces, vast upland tracts, with a general elevation of from 1,600 to 2,000 feet, in parts fertile and

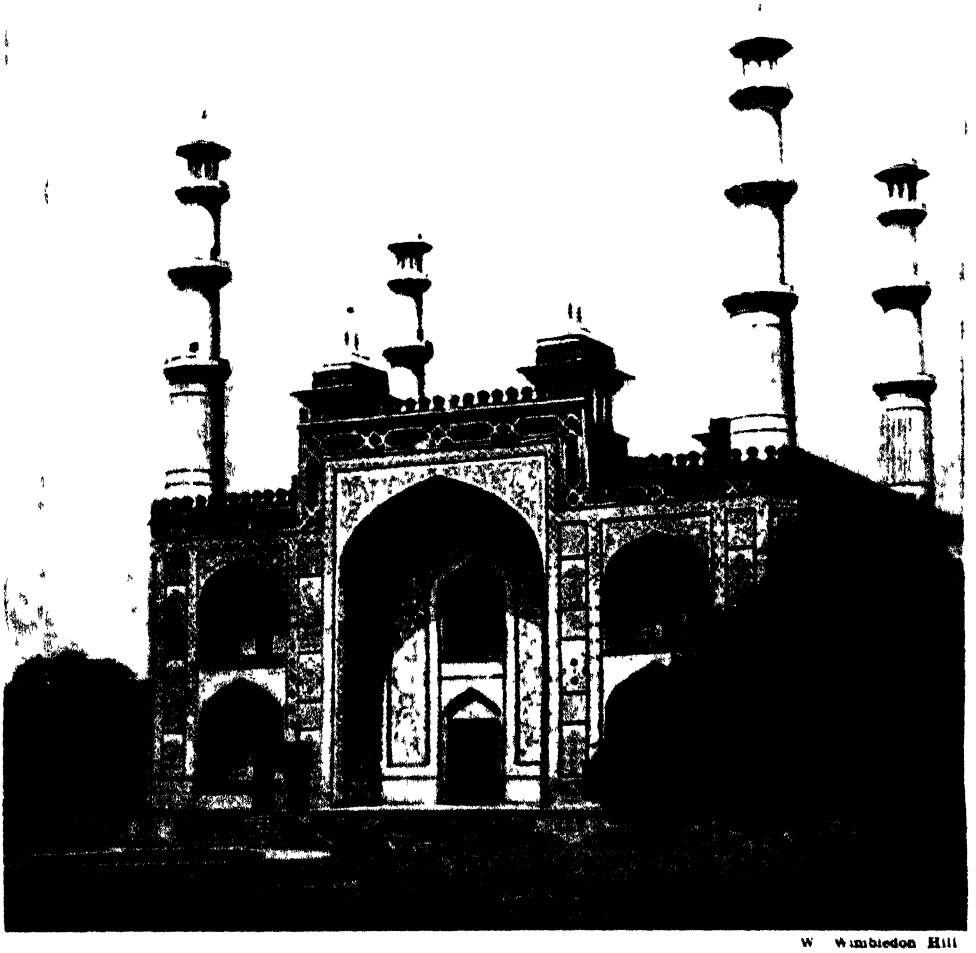


CENTRAL INDIA SPANNING DECCAN MASSIF AND GANGES BASIN

well-cultivated, at other points a stone-strewn plain, and the whole broken up into long, narrow, fertile valleys, with low, forest-clad hills interspersed here and there with bare stony ridges and a few imposing mountain peaks. Lastly there are the wide, well-watered and cultivated plains of Nagpur and Berar, the latter deep-flanked on the south by mountain ranges, the great and less fertile plain of Raipur and Bilaspur (Chattisgarh), and the vast jungle-clad states of Bastar and Kanker, with Chanda, the south-eastern end of Raipur, and Hyderabad in the extreme south. A wild country, 24,000 square miles of dense forest land, it is split up by precipitous mountains with little land fit for cultivation, and, until fairly recently, was the least known part of India.

Mountain ranges are numerous In the United Provinces the Himalayas proper and their low lying ranges form a mighty barrier in the north-west, the chief peak being Nanda Devi, 25,645 feet The older, and low lying, Siwaliks obtrude into the province for some distance in the Dehra Dun district, while in the south-east are the East Satpuras of very moderate altitude, and in the south-west three small ranges, branches of the main Vindhyan system, the dominating mountain range in Central India proper It traverses the entire country from north-east to south-west and divided by the Narbada river throughout its extent into two parallel lines, is known as the Vindhyas north of this river and as the Satpuras south of it, the peaks attaining a height of 3 000 to 4 000 feet The importance of the range lies in the fact that it is the water-shed of the Central India Agency and the Central Provinces, while it has a marked effect on the climate of Central India. In southern Berar there is the Ajanta Range and in Bastar small isolated ranges possess peaks exceeding 4,000 feet.

There are several small but extremely beautiful mountain lakes in the Himalayan district of the United Provinces, and on the plains in the north-east,



W Wimbledon Hill

IMPOSING GATEWAY LEADING TO AKBAR'S TOMB AT SIKANDRA

At Sikandra, a suburb of Agra city some five miles from the cantonment at Agra stands the mausoleum of the Emperor Akbar Giving access to the garden enclosing it is this fine gateway, of white marble inlaid with red sandstone in fantastic patterns, with a three storeyed minaret at each corner and flanked on either side by pierced sandstone grilles

E. N. A.

FATEHPUR SIKRI, THE CREATION OF THE GREAT MOGUL, A ROYAL BUT LONG-DESERTED CITY

Fatehpur Sikri lies 23 miles west of Agra city and was founded in 1569 by the Mogul emperor, Akbar, who abandoned it for Agra. A wall nearly five miles long runs round three sides of the town, the modern portion lying near the western end. On account of its excellent state of preservation it forms an unexcelled specimen of a city in the very condition in which it was occupied by the Great Mogul and his court. In the centre of the photograph is the "Deer Minaret," a circular tower about 70 feet high, studded with elephants' tusks in stone, from which Akbar shot antelope

John Bushby

GOATS AND MONKEYS AT LARGE IN THE TEMPLE-PORCH OF THE GODDESS DURGA AT BENARES

Benares, a city of great antiquity and the religious capital of India from remote times, is famous for its numerous shrines and temples. One of these, the Durga Temple, sometimes known as the Monkey Temple because of the many monkeys which infest the surrounding trees, lies near the Asi Ghat at the southern extremity of the city. It stands in a quadrangle flanked by high walls and contains the image of the terrible goddess Durga, consort of Siva, who delights in bloodshed and to whom many sacrifices of goats are offered. Monkeys are reverenced by the Hindu, Hanuman the monkey god being one of the most popular deities

large jhils, or swamps, which harbour myriads of wild fowl; but it is a land, chiefly, of rivers. Three of the largest rise in the Himalayas and flow through the entire length of the province, from north-west to south-east. The Gogra is the northernmost, the Ganges is in the centre and the Jumna in the south, each fed by a number of tributaries, the most important of these the Gumti, which joins the Ganges at Benares, and in time of flood, and the Gogra, as great in volume, surpasses it in velocity.

The Chambal is the chief river of the Central India Agency, which, joined by the Parbati, flows north-eastward along the borders of Gwalior, separating that state from Rajputana, to the Jumna at Etawah. The whole of the Central Provinces lies in the catchment basin of three great rivers, the Narbada, the Mahanadi and the Godavari. The latter

E. N. A.

GRUESOME PYRES ON THE BANK OF THE GANGES AT BENARES

At several of the ghats, which are used as cremation grounds, wooden pyres may be seen being built, while bodies wrapt up in white or red cloths lie ready to be burnt. It is the dream of pious Hindus to die upon the banks of the Ganges or have their ashes thrown into the water. At one time the actual bodies were cast into the river, but this is now illegal

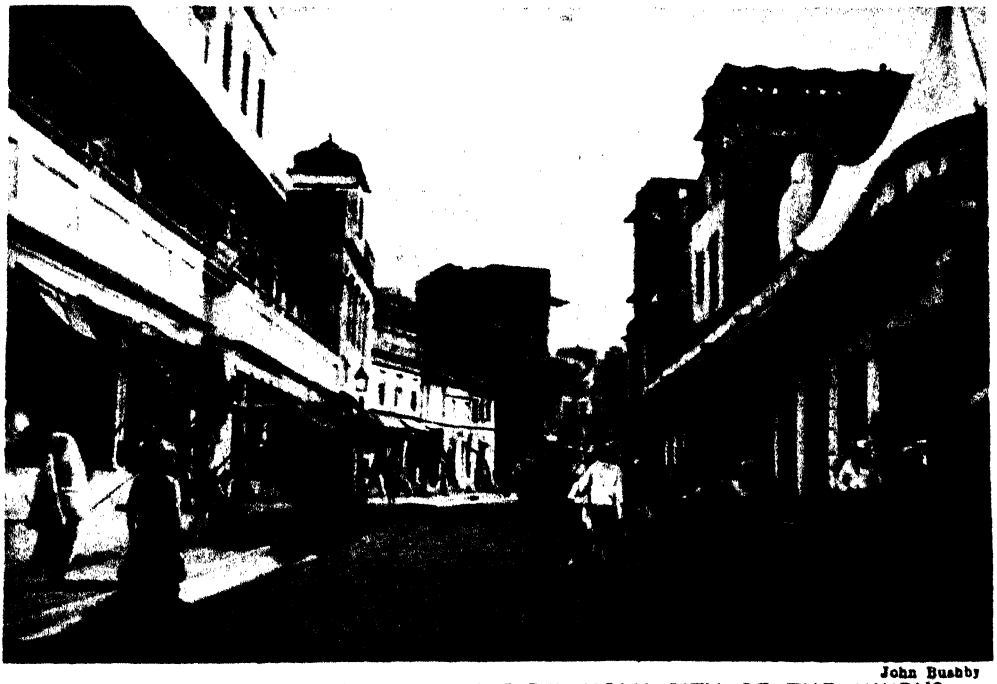
the Ramganga, which joins it nearly opposite Kanauj. All three rivers are majestic in flood-time, always of noble proportion, and between them they provide water for a vast plain-land and enable it to grow prolific crops of a variety of food-staples, and support one of the densest populations on the surface of the globe, and greater than that of any other part of India. The Jumna is usually confined within high, well-defined banks; the Ganges rolls from side to side of a bed often six miles in width

merely skirts the south-western border for a short distance, but the Mahanadi flows northward through the southern portion of the Raipur-Bilaspur plain, flanked by rice-lands; it is joined by the Seonath and eventually bends to the east after a progress of several hundred miles. The Narbada rises at Amarkantak in the east, traverses the province in a westerly direction, and for half its length divides the Central Provinces from the Central India Agency. Like other rivers of this region its source is at such an

John Bushby

GRIM WALLS AND MIGHTY BASTIONS OF THE PALACE AT RAMNAGAR

Ramnagar, a small town of the United Provinces, lies on the right bank of the Ganges and affords a magnificent view of the river front of Benares, which spreads along the opposite bank. The palace of the Maharaja of Benares stands above a fine ghat and seen from the river has the appearance of a stronghold of some marauding chieftain rather than of a palace



John Bushby

STREET IN BENARES "THE SPLENDID," HOLY CITY OF THE HINDUS

Benares is situated on the Ganges, which is here spanned by the great Dufferin Bridge, 3,518 feet long: it is a city of great antiquity, and was a centre of some importance in 500 B.C. The internal streets are rather narrow and winding with the level of the road lower than the ground floors of the buildings The city is a mart for shawls, silks and embroideries and manufactures brass ware, jewelry and toys

elevation that there is a rapid fall of level on its way to the sea, and it cuts a deep bed for itself through the country it drains. In dry weather it is often a small stream, with more or less stagnant pools, but in the rains it becomes a foaming torrent, and the sight of this great volume of water dashing through its tortuous gorge of white marble near Jubbulpore, where there is also a magnificent fall, is peculiarly fascinating.

Fierce Heat both Dry and Moist

For most of its course the Godavari flows through Hyderabad from its source in the Bombay Presidency. The Kistna and its tributary the Tungabhadra divide Hyderabad from the Madras Presidency, and therefore provide the southern limits of this chapter.

In this wide sweep of territory a variety of climates prevails. In the United Provinces, which lie outside the tropics, there is a fierce, fiery heat during May and June and a moist and very oppressive heat from then on during the rains until the end of September; but from November to March there is a delightful climate with no rain, except a few showers at Christmas, sunny days and cold and sometimes frosty nights. A mean of 94° F. in June at Agra and 60° F. in January gives a good idea of the range of temperature, and there is an average diurnal range of 24° to 30° in the winter, 24° to 28° in the hot, dry weather and 11° to 14° in the rains. The rainfall varies considerably, from 27½ inches at Agra to 50 at Gorakhpur.

Wide Range of Temperatures

In the Himalayan tracts it is heavy, 97 inches at Mussoorie and 102 at Naini Tal, and landslips are frequent. The provinces possess several charming hill stations in the Himalayas: Naini Tal is the seat of the government during the summer, Mussoorie is very gay and Ranikhet, Almora and Dalhousie are quieter and more restful retreats.

The climate of the Central Indian states is hot in summer, especially in the north, and cool and bracing in winter, and this applies to the Central Provinces, which seldom have any oppressive heat in summer, possessing one of the best all-round climates in India. Temperatures vary in the Central Indian states from a mean of 60° in January to one of 92° in May, with a diurnal range of 26° in winter and 11° in summer. In the Central Provinces there is a variation from a mean of 62° in January to 92° in May, with the same diurnal range. Rainfall in the Central Indian states averages 30 inches on the plateau and 45 on the low-lying tracts, and in the Central Provinces the annual average is 47 inches, varying from 32 in Nimar to 62 in Balaghat. The Central Indian hill station is Pachmarhi, on a plateau 3,500 feet up, in the Satpuras.

Effect of Climate on Scenery

The variety of aspect and climate extends to scenery. The plains of the United Provinces gleam green in the spring and golden in the harvest-time with fields of waving corn and other food-crops, mingled with wide patches of sugar-cane, and from this glorious carpeting of green and gold, unbroken by aught else, rise, at frequent intervals, groves of dark olive mango trees, tall, slim palms and clumps of brighter nim trees marking a village street. So highly cultivated is this region that this is its general aspect, but there are sandy riverine tracts where only coarse grasses and deep-rooted perennials flourish, and in the drier parts of the south vegetation becomes scantier, trees and plants are thorny and desert types appear.

In the north, bordering Nepal and the base of the Himalayas, are broad tracts of swamp-ground, thickly covered with jungle grass sometimes attaining a height of twenty feet, and belts of jungle-land, some lightly clothed with thin grass and thorny trees, others clad with dense jungle where impenetrable thickets of spiked cane and bamboo make travel, except on elephant-back, impossible and a wealth of orchids lies concealed. And beyond this great tract, extensively flooded during the rains, when it is

Col. W. J. P. Rodd

CLOTHES AND SINS BEING PURIFIED BY THE WATER OF THE HOLY RIVER

Hundreds of thousands of people come to bathe in and drink the waters of the Ganges at Benares, for by so doing they win a remission of their sins. The city is the great northern centre of the worship of Siva and it is estimated that the annual number of pilgrims who visit it exceeds one million, while the population of the town itself is about 200,000

very malarious, stretches ridge after ridge of densely-covered hills, gradually rising and gradually shedding tropical vegetation until the region is reached of deodar and blue pine, spruce and yew, maple and silver fir, birch and willow, dwarf oak and rhododendron, and thus onwards and upwards to the long majestic line of the eternal snows.

Few large trees exist in the Central Indian states, but farther east in a drier region they are more plentiful. The hilly tracts are a mass of tangled jungle growth, tall forest trees and coarse weeds lining the sides of rock-strewn watercourses and deep ravines. An occasional patch of green, by the side of a few coarsely-thatched huts, marks the

homestead of aboriginals, Bhils, Gonds or Korkus. Farther south, the Central Provinces show a remarkable contrast of woodland and tillage, with most pleasing alternation of hill and dale. Dark green hillsides flank wide stretches of corn and rice land, here and there gentle slopes are clothed with grass and dotted with trees of a noble size giving the land a park-like aspect, and from the Satpuras, clothed with forest from base to summit, there is a view of rolling steppes of basalt threaded with fertile valleys and of continuous cultivated plain, with dark forest-clad ranges on the sky-line.

Haunts of the Big Game

The jungles and grassland of the Terai and the Siwaliks in the United Provinces form a veritable paradise for the hunter of big game. Here wild elephants roam in herds, tigers, leopards and black bears are common, wolves and jackals abound, and the rhinoceros and wild buffalo are encountered occasionally. The loss of life and the damage to crops is heavy.

Other game includes antelope, nilghai, black buck, sambar, chital or spotted deer, barking deer, gond or swamp deer and wild hog. These animals are also to be found in the Central Indian states and the Central Provinces, the jungles of which harbour such beasts of prey as the tiger, leopard, sloth bear, wolf and wild dog, the latter being extremely destructive to game. In the eastern native states the wild elephant exists, the wild buffalo in the east and south, and there and on the Satpura Hills the wild bison.

Water Birds and Water Beasts

The whole territory is rich in waterfowl of many kinds, quail, pea-fowl, black and grey partridge, sand-grouse, plover and jungle-fowl, with woodcock and pheasant in the hills. Snakes are common, immense pythons are met with in the jungles and cobras and karaits cause considerable loss of human life and kill cattle. The crocodile, tortoise, iguana and lizard are among the principal reptiles, and tanks and rivers abound with edible fish of many kinds. Chief domesticated animals are horses—the only good ones hail from Meerut in the United Provinces—buffaloes, cattle, sheep and goats. The cattle of Meerut and Rohilkhand in the United Provinces and the Malvi and Nimari breeds of Central India are the best.

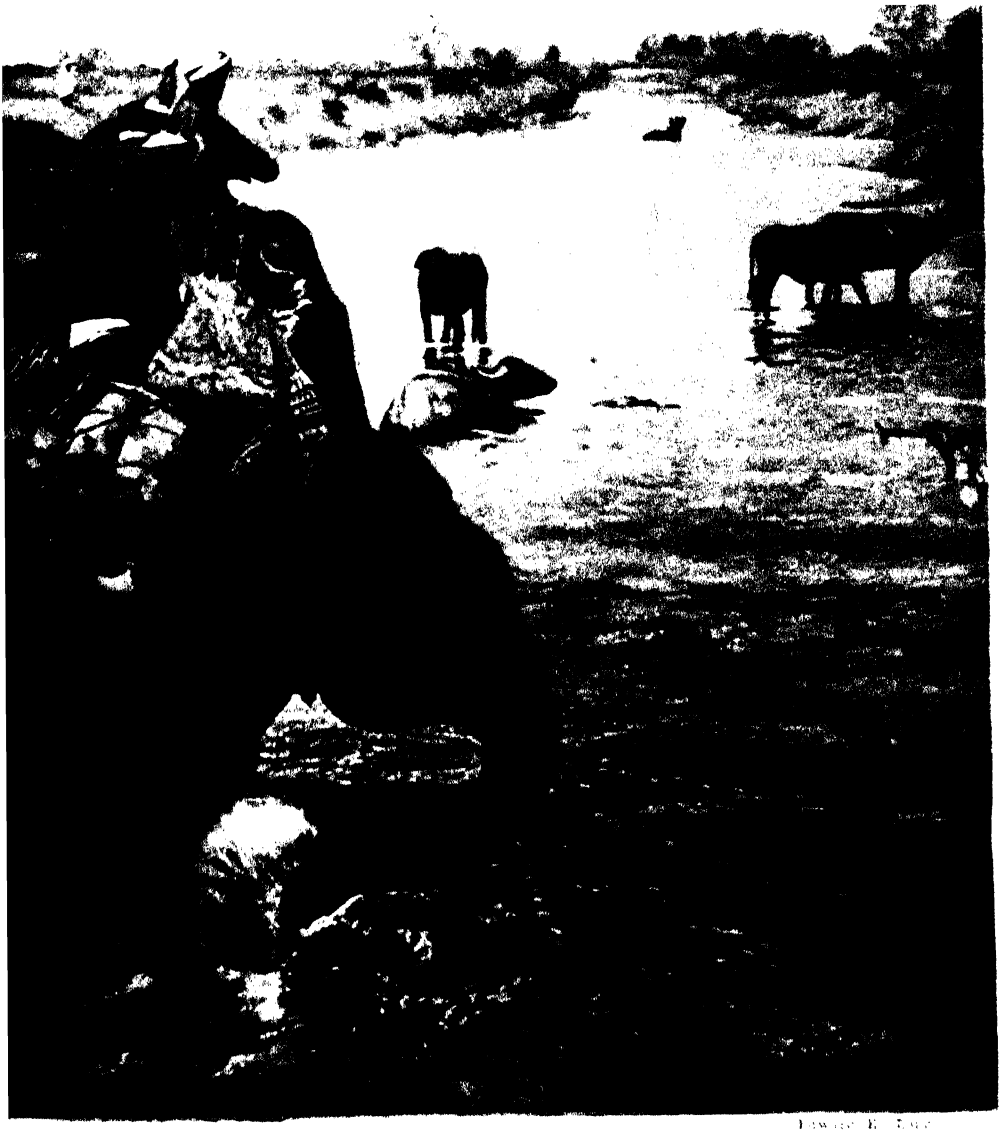
The soil of the United Provinces, for the greater part an alluvium brought down mainly from the Himalayas, is well adapted for almost all kinds of culture. This, combined with an abundance of water from the snow-fed rivers of the north, while the gentle slope of the land makes irrigation easy and therefore general, enables nearly forty million acres to be cropped twice annually. Food-grains are produced in large quantities. In barley, maize, pulses and other secondary crops, the United Provinces stand first, while in the various millets they are exceeded only by Bombay and Madras. Rice grown on the clays is an important crop, and in wheat production the Punjab alone exceeds them. More sugar is produced than in all the rest of India, and cotton is an important crop, as are poppies, linseed, mustard, hemp, indigo and tea.

Fertility of the Black Soil

The Central Provinces have the heavy black soil of the Narbada Valley. This soil is splendid for cotton which is produced in large quantities in the western districts. Rice, however, is the chief crop and the provinces rank third as a wheat-producing area while pulses and oil-seeds are extensively grown. Irrigation is not practised on a large scale, and is mostly confined to tanks.

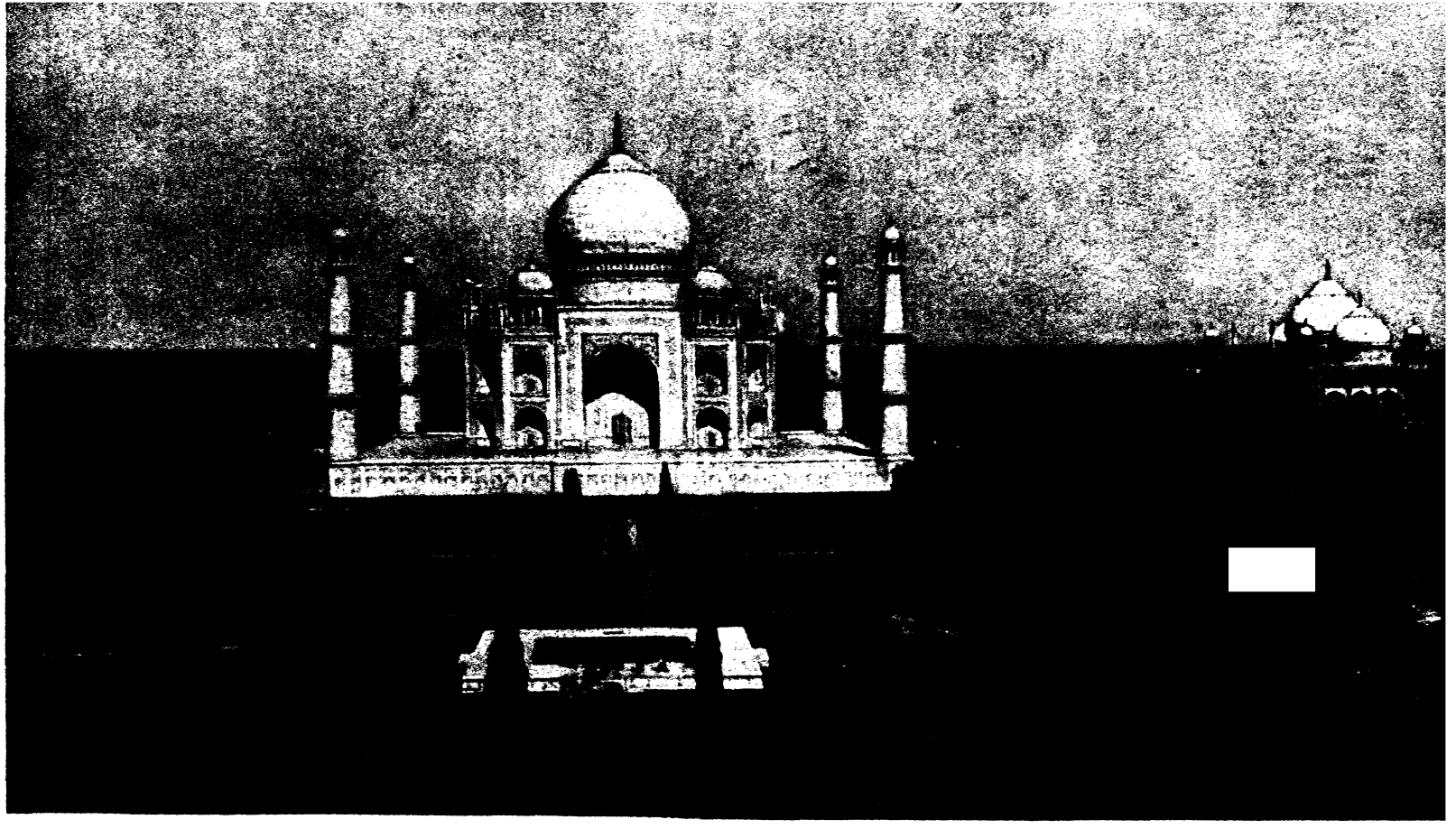
The Central Indian states possess a great asset in the rich, black soil of the Malwa plateau in the west which produces opium, cotton, tobacco, millets and sugar-cane. In the east and south the soil is lighter and here wheat is grown though the irrigation is insufficient.

The mango, plantain, custard-apple, guava, fig, melon, orange, lime, citron, loquat, pomegranate and tamarind are grown generally throughout Central

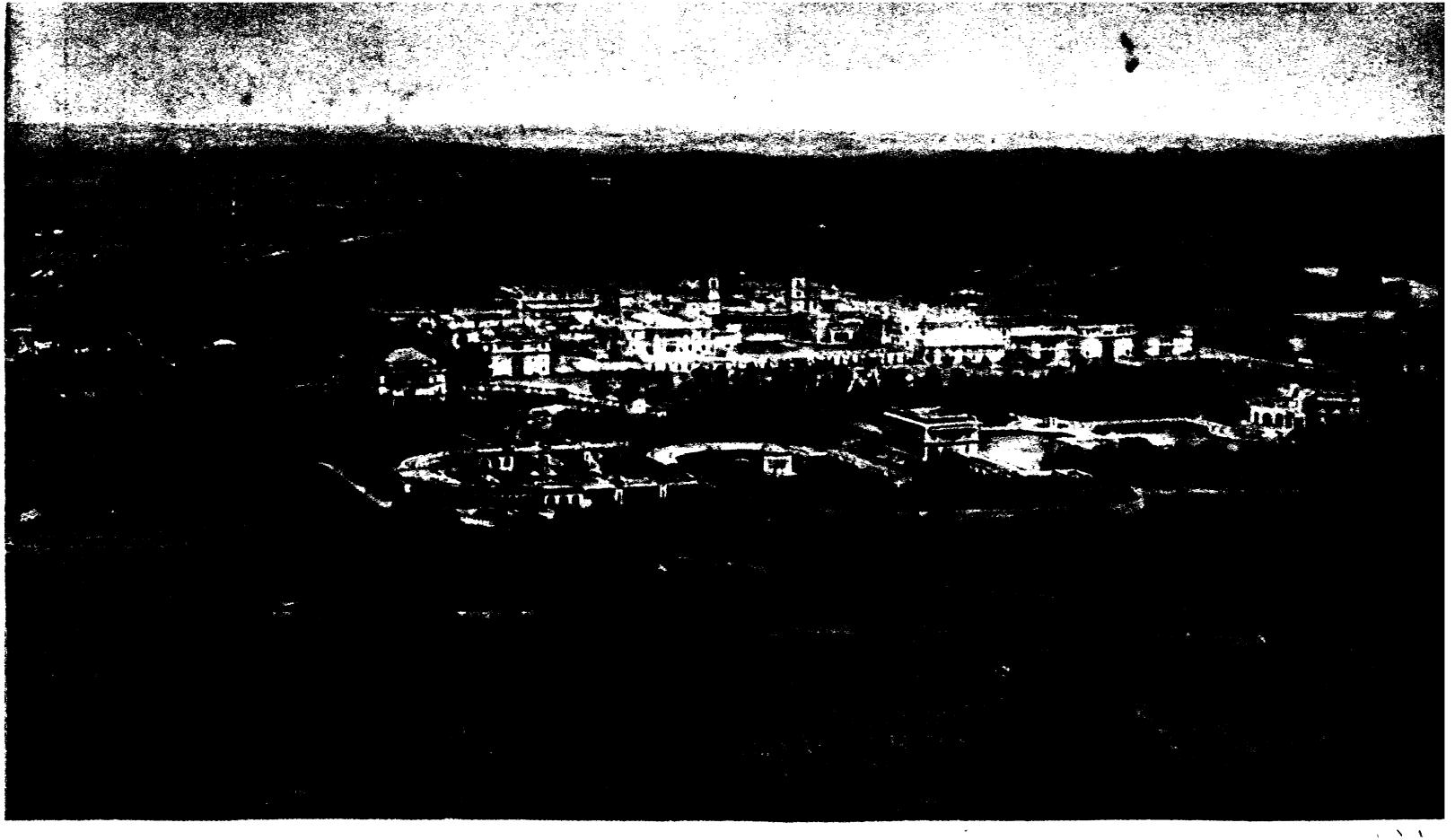


Lewis E. Lee

INDIA CENTRAL. *Where water is at a premium elephants and cattle make the most of every creek to cool their parched hides*



INDIA CENTRAL. *On the bank of the Jumna east of Agra City stands that "Dream in Marble", the Taj Mahal, erected by Shah Jehan as a tomb for his favourite wife, and often extolled as the most perfect work of human hands*



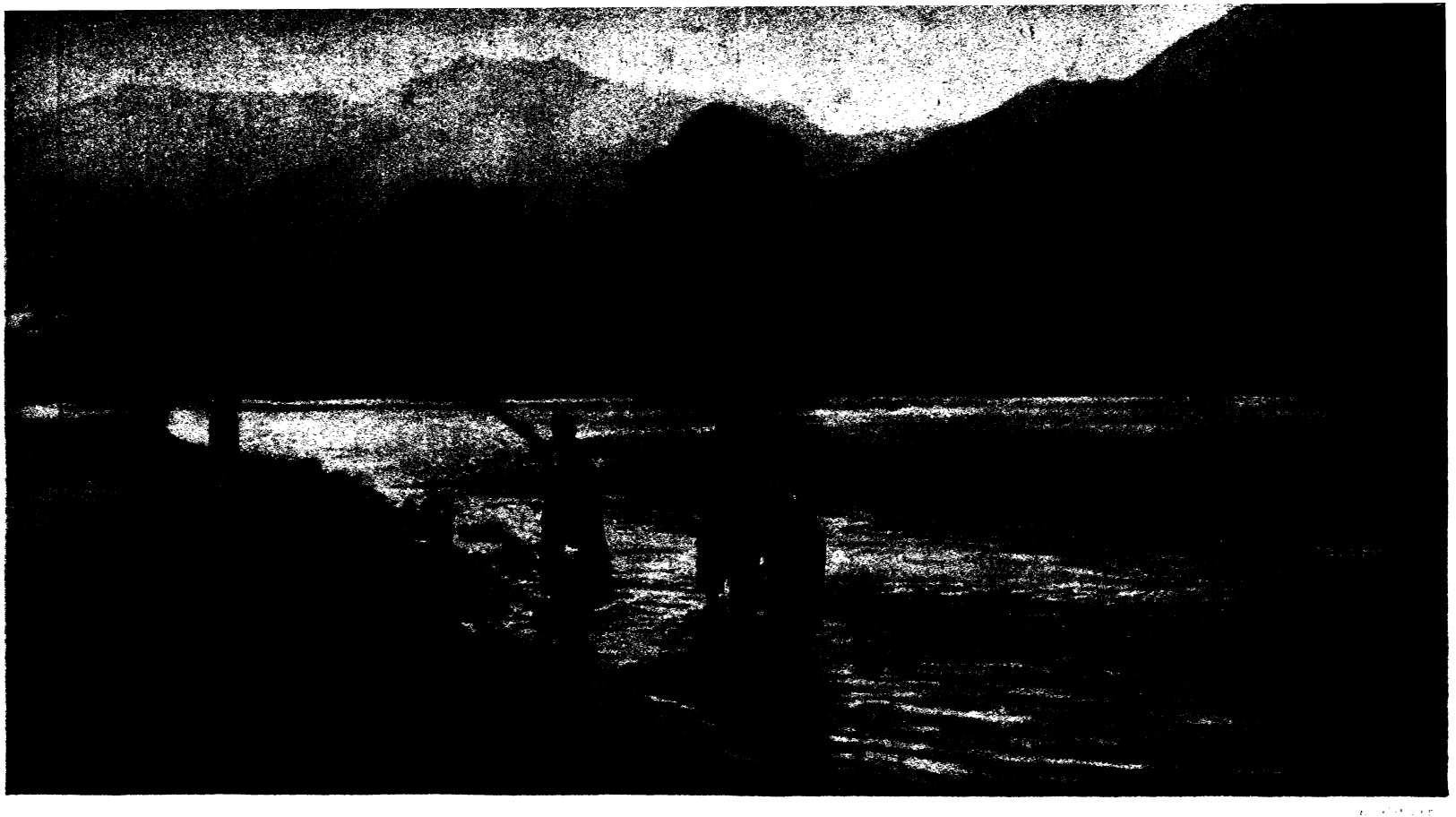
INDIA CENTRAL. *At Gwalior the palace of Maharaja Scindia, called the Moti Mahal and viewed here from the famous old fort, stands within the pleasant spaces of the Phul Bagh, that is, "the Garden of Flowers"*

INDIA CENTRAL. *Veneration for the Ganges, with which no other Indian river can compare in sanctity, is a chief article in Hindu creed.*

2200

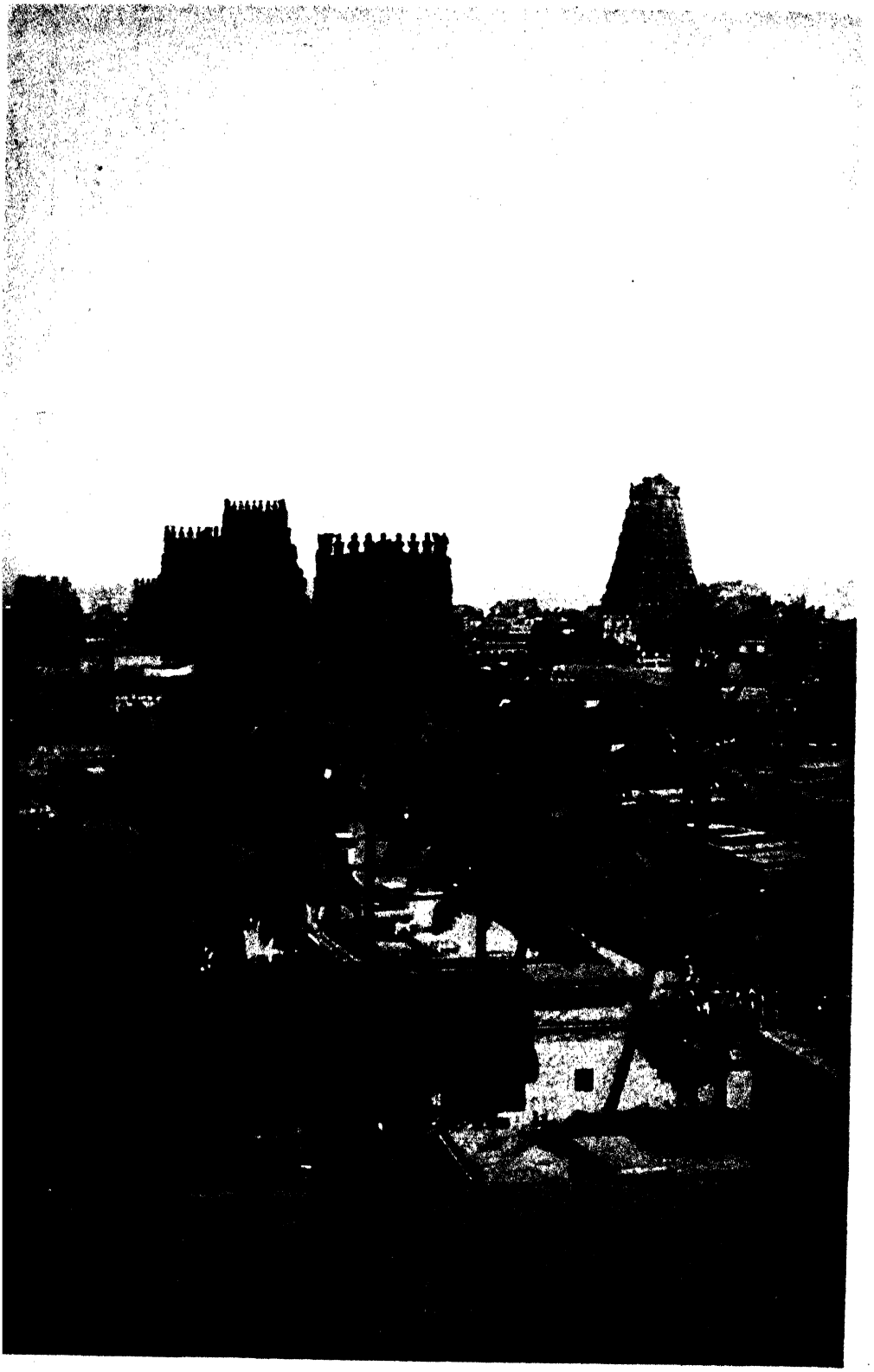
Picturesque ghats and splendid temples line the sacred waters at Benares, the metropolis of Hinduism and resort of countless devout pilgrims

2201



INDIA CENTRAL. *In agriculture, the mainstay of the numerous necessity of the people, more than half the working population is female. Here some housewives are drawn by the river to fill their waterpots and do their washing*

INDIA CENTRAL. *In the Nizam of Hyderabad's dominions is Daulatabad, a fortress of the thirteenth century crowning an isolated conical rock of granite, 500 feet high and made impregnable by a steep natural escarpment*



Underwood

INDIA SOUTHERN. *Pyramidal gate towers of elaborate design, like these at Trichinopoly, are a feature of the great temples of the south*

India. Such vegetables, too, as potatoes, cucumber, cabbage, cauliflower, onions, turnips, garlic, radishes, yams and the egg-plant where cultivated with care are of a very good quality. On the southern slopes of the Himalayas, at a temperate altitude, such fruits as apples, pears, plums, cherries, apricots and peaches are grown, and in the United Provinces quite well-flavoured strawberries during the cold weather.

The principal woods exploited in the forests, which cover over 70,000 square miles of Central Indian territory, are the sal, deodar, teak, bamboo, red cedar, rosewood, ebony, satinwood and saj. The mahua gives myrabolans, the khair cutch, and the lac and wild cotton tree flourish, while the forests also yield quantities of grass for fodder, honey and gum. Most forest land in purely British territory is under scientific management, but despite strict control much wastage occurs owing to indiscriminate burning, grazing and lopping, and it is difficult to get the natives who use the forests to understand the rudiments of forestry.

Complex Geology of Central India

Hyderabad comprises the Marathwara and Telingana divisions, the former, of uncertain rainfall, being characterised by black cotton soil and the latter by rich districts producing rice, pulse and various kinds of cereals.

The geology of the Central Indian states and the Central Provinces is more complex than that of any other part of India. There are six distinct formations: alluvium, the Deccan Trap, and the Gondwana, Vindhyan, Transition and Gneissic systems. A good part of the valley of the Narbada is alluvial, the Deccan Trap covers a large area in the west and there are wide tracts of Upper and Lower Vindhyan rocks. These consist of well-stratified beds of sandstone and shale, with some limestone, and are of the palaeozoic age; the total absence of fossils in them is remarkable. The Transition rocks consist of quartzite, hornstone, breccia and limestone; the denudation of the Deccan Trap gives the country its rich, black cotton-growing soil, while the Gondwana system, which contains very interesting fossils of former ages which denote great changes of vegetation, gives Central India extensive and very valuable mineral deposits.

Rich Dower of Mineral Wealth

Coal measures occur in various parts of the Central Provinces, but chiefly in the Satpura basin and the Wardha-Godavari and Mahanadi valleys. The Wardha Valley field extends for 285 miles, in some of the Mahanadi fields seams 90 feet thick have been found, and the coal area there is not less than 1,000 square miles. Manganese mining is also a flourishing industry. In the Central Provinces and the Central Indian states iron ores of good quality occur, copper, argentiferous galena, limestone and sandstone of a fine deep purplish colour, which last is much prized for building purposes and largely exported. At Rewah, in the Central India Agency, corundum is extracted, asbestos is found in Bhopawar, agates and jasper in several localities, and the little state of Panna yields a few good diamonds. Balaghat has bauxite, plumbago exists at Raipur and Kalahandi, while the Mahanadi and several of its tributaries contain auriferous sands which are washed for gold. Hyderabad contains diamonds and a very large area of gold-bearing rock.

Growing and Spinning of Cotton

The occupation of the people of Central India is mainly that of agriculture. In the United Provinces 72 per cent. are so engaged, in the Central Indian states 52 and in the Central Provinces about 75 per cent., where more than half consists of female labour. The cotton industry ranks first in the United Provinces. Cotton is ginned and spun as an industry, and hand-loom weaving is carried on in most districts. In Benares district there is silk-spinning and the famous kincob brocade is manufactured. Benares city has gold and silver embroidery, also lacquered brass-work, for

W. Wimbledon Hill

OVERLOOKING THE GREAT IMAMBARA COURTYARD AND THE DISTANT JAMA MASJID OR CATHEDRAL MOSQUE

Formerly the capital of Oudh, Lucknow is now a divisional capital and the fifth most populous city in India. The greater part of the city extends along the right bank of the river Gumti and, seen from afar, presents a magnificent spectacle with its numerous domes and minarets. The great Imambara and its mosque, which stand west of the Residency, were built in the eighteenth century by Asaf-ud-daula. The courtyard is entered by a handsome gateway; the colossal structure of the Imambara rises on the south side, the lofty mosque on the west—a portion of it, and of the steps ascending to it, is seen above on the left

E. N. A.

RUINS COMMEMORATING AN HEROIC DEFENCE: THE CHERISHED SHELL OF THE RESIDENCY AT LUCKNOW

The Residency at Lucknow was, as all the world knows, heroically defended against the mutineers from July to September, 1857, at first under Sir Henry Lawrence who died of a shell-wound two days after the siege began. Relieved by Sir Henry Havelock in September, the beleaguered garrison was finally rescued by Sir Colin Campbell in November, and in March, 1858, the whole city was again in British hands. The ruined building is preserved as it stood in the days of the Mutiny and the flag is always flying; the gardens are beautifully kept, and on the lawn a runic cross commemorates the brave men who fell in the defence

E. N. A

LIGHT AND SHADE UNDER AN ARCHWAY IN THE BAZAAR OF LUCKNOW

The climate, parks and gardens of Lucknow make this city of India a very pleasant place of sojourn. Many interesting scenes are witnessed in the bazaars, which, although they have lost something of their old-time prosperity, still fascinate the stranger with numerous articles of luxury in silver, gold and ivory, though clay models have superseded the famous terra-cotta models of Lucknow

which Moradabad, too, is noted. Porcelain is manufactured at Ghazipur, Lucknow produces embroidery and the noted chikan work of silk, cotton or muslin, makes paper, has dye-works and is famed for its leather-work and fireworks. Mirzapur weaves excellent carpets, Aligarh, Meerut and Bareilly have and Bhandara being still in large request. Leather-working employs nearly 100,000 persons.

In the Central Indian states Malwa was once famous for its fine cloths and muslins, and the industry is still preserved at Chanderi where delicate muslins, often shot with gold and silver

John Bushby

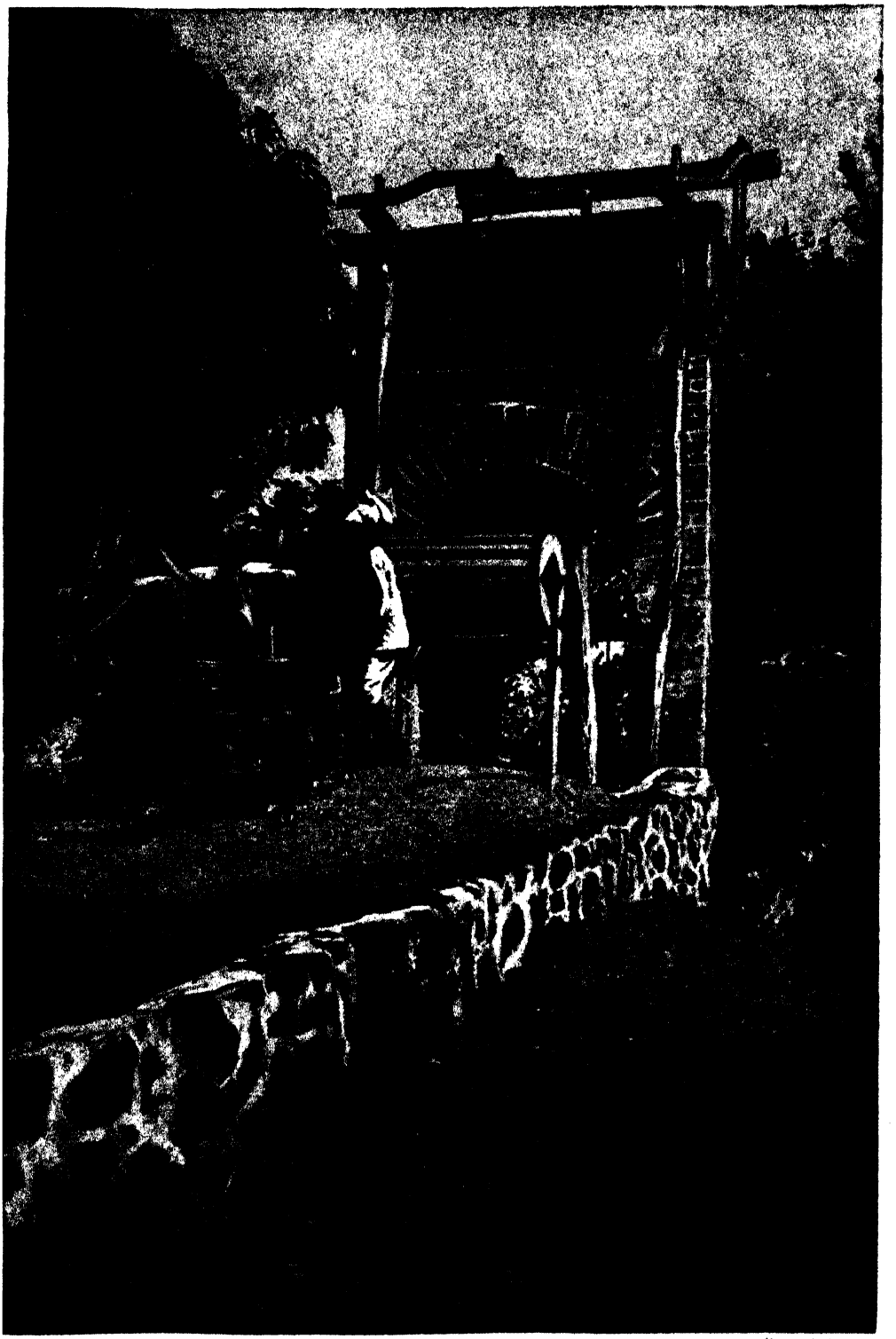
SUTTEE CHOWRA GHAT, SCENE OF THE MASSACRE AT CAWNPORE

This ghat, where the Europeans who surrendered to Nana Sahib during the Mutiny were massacred, is on the bank of the Ganges close to a temple to Siva, of hexagonal shape and rapidly going to ruin. Cawnpore lies on the Ganges 45 miles south-west of Lucknow in the United Provinces, and besides being an important railway junction has tanning, cotton wool and jute milling industries

cotton factories and the latter makes furniture. Hardoi and Hathras have cotton mills and Allahabad stone works.

Industrial life is in its earliest development in the Central Provinces, but Nagpu. is already the centre of a very busy cotton-spinning industry and there are mills in several parts of the provinces. Generally speaking, however, the articles are manufactured by hand and designed to meet the wants of a primitive agricultural population, and have little artistic merit. Silk is woven and the industry supports some 20,000 persons, the silk-bordered loincloths and saris of Nagpur, Burhanpur thread, are made and exported all over India, while the saris and dhotiyadas of Maheshwar have a considerable sale. Inlaid metal-work is manufactured at Rampura in Indore and there is an extensive stone-cutting industry about Gwalior where local sandstone is carved with great skill. Both in the Central and United Provinces there is a government department of industry which assists in aiding new industries and expanding existing enterprises.

Communications are best in the United Provinces, where much traffic is still carried along the rivers, as well as on many of the main irrigation



Kenneth Comyn

DRAWING WATER FOR THE PARCHED SOIL FROM THE BUNGALOW WELL

This simple appliance is a large leather bucket attached to a rope which passes over a pulley above the well-head, and is fastened at the other end to the yoke of a pair of bullocks. They drag up the bucket by walking down a ramp, which is approximately equal in length to the depth of the well. Some kind of well is to be found in the compound of every bungalow

Kenneth Comyn

CRAFTSMAN OF CENTRAL INDIA AT HIS SIMPLE TANNERY

India, generally, is still only feeling her way between medieval and modern methods of manufacture and suffers the inconveniences consequent to the state of transition. At this antiquated tannery red bark is placed in the pits in the ground and water is then added; the resulting liquid is poured into the sewn-up hides hung over the pole, the leather being supplied to the village shoemakers

Kenneth Comyn

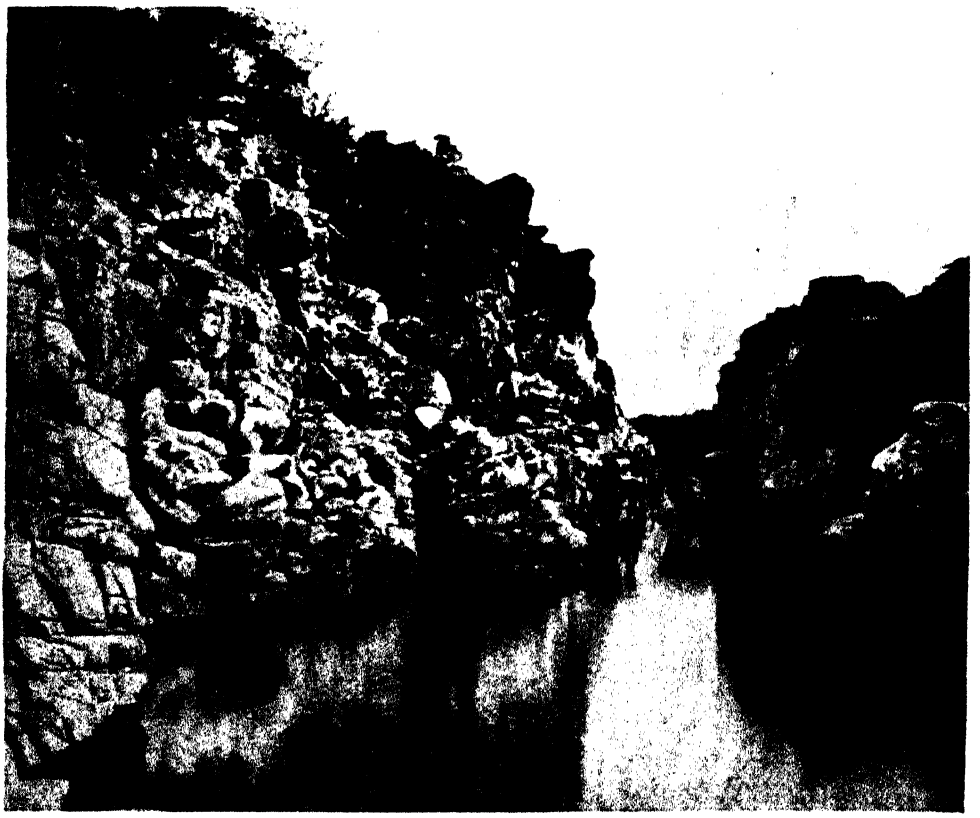
WASHING AND DRYING GRAIN IN A CENTRAL INDIAN VILLAGE

Agriculture is the principal industry of India and crops are cultivated here in greater variety than in any other country in the world. The chief agricultural crops include rice, maize, various species of millet, pulses, many oil seeds, spices, sugar-cane, cotton, jute and other fibres, tobacco and fodder and garden crops; the cultivation of wheat and barley is limited to northern and central India

canals. Good roads exist in all directions. The Grand Trunk Road from Calcutta to the north traverses the provinces and an excellent railway system links up all the chief towns with Bombay and Calcutta, and with south India. The Central Provinces and Central Indian states have water communications of little value, but their roads are good, much fine stone being easily obtainable locally; the main road from Bombay to Agra, an historic thoroughfare, passes through Indore and Gwalior. Both possess good rail facilities in the main lines from Bombay, to the north, and Calcutta.

Central India's very considerable foreign trade is conducted through the ports of Calcutta, Bombay and Karachi, but the United Provinces have a fair trade with Tibet and Nepal conducted by means of sheep and goat transport or by ponies and pack-bullocks; barter is the chief method of exchange. The mechanism of internal trade is very simple. The greater part of it is rural and so markets are held at convenient centres two or three times a week. Surplus produce is either handed over to the village grain-dealer, sold to itinerant buyers, or disposed of in the markets. Banking being confined to large towns small transactions are in ready cash and payment is preferred in silver rupees rather than in government currency notes. The chief exports are: sugar, raw cotton, wheat pulses and millets, oil-seeds, dyes, tans, lac, hemp, hides and skins and timber; imports: piece-goods, rice, salt, coal, railway plant, metals and hardware.

Lucknow is the largest city of the United Provinces—the splendid capital of the Kings of Oudh in the days when



FAR-FAMED MARBLE ROCKS ABOVE THE STILL WATERS OF THE NARBADA

Twelve miles from Jubbulpore, below the smoke cascade, are the Marble Rocks, where the white cliffs of magnesian limestone tower over 100 feet above the river; the effect of the gleaming faces and rifts is inconceivably beautiful, especially in the moonlight. Near the end of the gorge are some curious rocks called the Elephant's Foot, while in the gorge are huge nests of wild bees

TOWN OF NAINI TAL VIEWED FROM ACROSS ITS BEAUTIFUL LAKE

Naini Tal, the summer hill station of the United Provinces administration, lies in the district of Naini Tal on the Himalayan slopes north of Rampur State and is reached by road from the railway terminus at Haldwani. Though not possessing the attractions of Darjeeling, it affords exceedingly beautiful scenery and its lake, nearly one mile long and 400 yards broad, is a most striking feature

Oudh was independent and which, till then little known, rose to influence in Mogul times and to greatness when the Moguls fell. To-day it is one of the most charmingly laid-out and up-to-date cities in India, low-lying by the banks of a pleasant river, the Gumti, and fully deserving its title of "India's garden city." It has broad and regular roads often tree-lined, green-turfed squares, picturesque public gardens and a park where the scenery in places is peculiarly English.

Allahabad, bearing a Moslem name given to it by the great Akbar, owes its importance to its sacred position at the junction of the holy Ganges and the Jumna, and it is this which attracts thither at certain times of the year millions of pilgrims to bathe in the sacred waters. When these two rivers are in flood Allahabad, which lies between them, seems almost surrounded by a swiftly-moving muddy sea. The native city, on the high bank of the Jumna which is spanned by a fine bridge 3,265 feet in length, is a net-work of narrow streets with a few main roads.

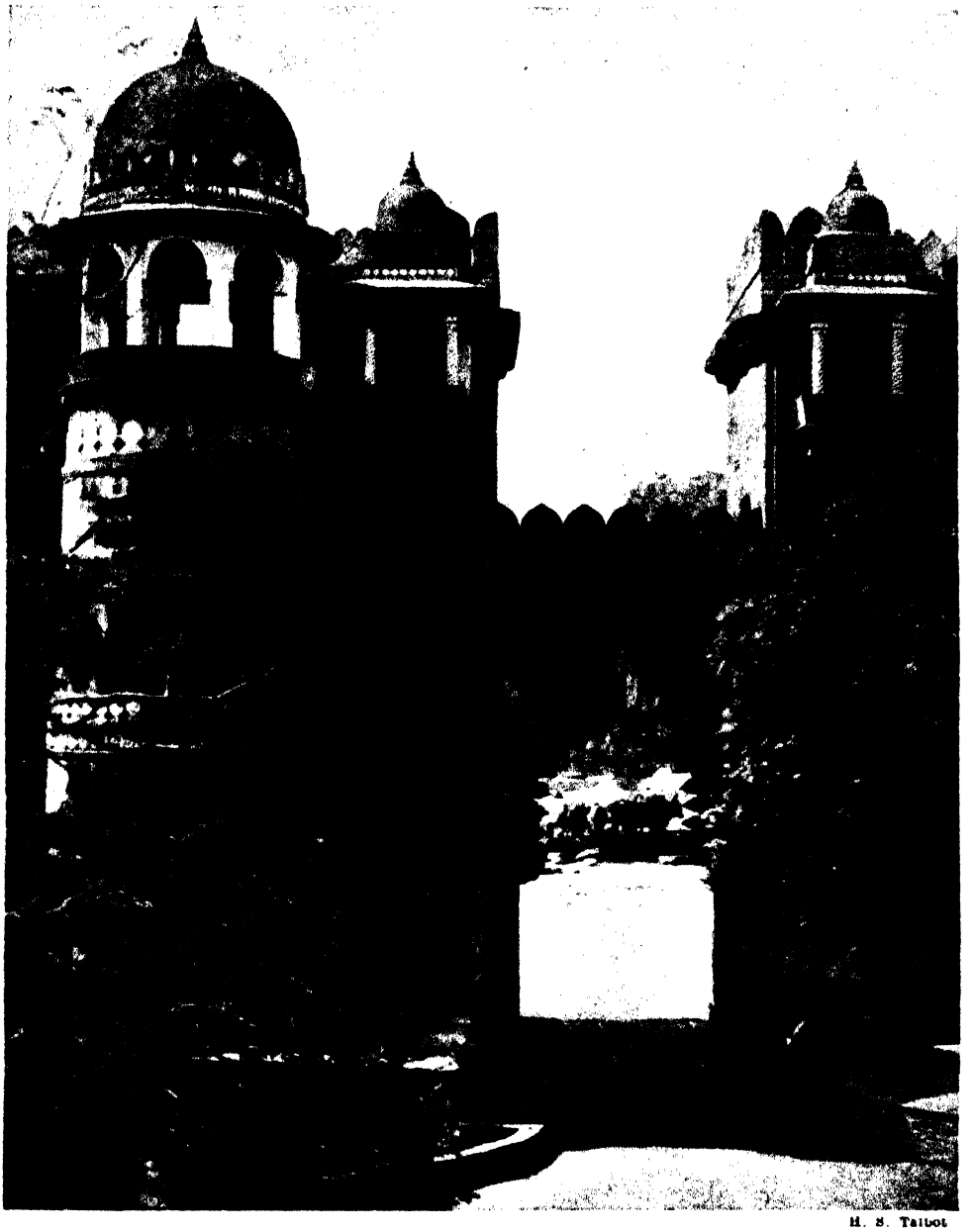
Benares is the most sacred city in India. It lies on the west side of a broad bend of the Ganges. Four miles of closely-packed buildings line the river's bank, their frontage mostly occupied by broad bathing ghats or terraces.

From Benares let us go to Agra, and see its Taj Mahal. This was built at enormous cost by the Emperor Shah Jehan in glorious and loving memory of his beautiful wife Mumtaz Mahal, and is a dream in marble. Seen by moonlight it seems to float in the air, a fairy phantasy, a marvellous conception in

H. S. Talbot

MAHARAJA SINDIA OF GWALIOR PASSING THROUGH LASHKAR IN ORIENTAL SPLENDOUR

Lashkar, the capital of the state, lies two miles to the south of Gwalior, which occupies the site of the old city of Gwalior. Daulat Rao Sindia pitched his camp on the open plain south of the fort in 1794, and as the camp remained the new city of Lashkar sprang up. The street above is the Sarafa, or merchants' quarter, and is one of the finest thoroughfares in India. Since the occupation of Lashkar the Old City, a crowded area of flat-roofed stone houses, has been decaying. The town has about 47,000 inhabitants and manufactures cotton goods



H. S. Talbot

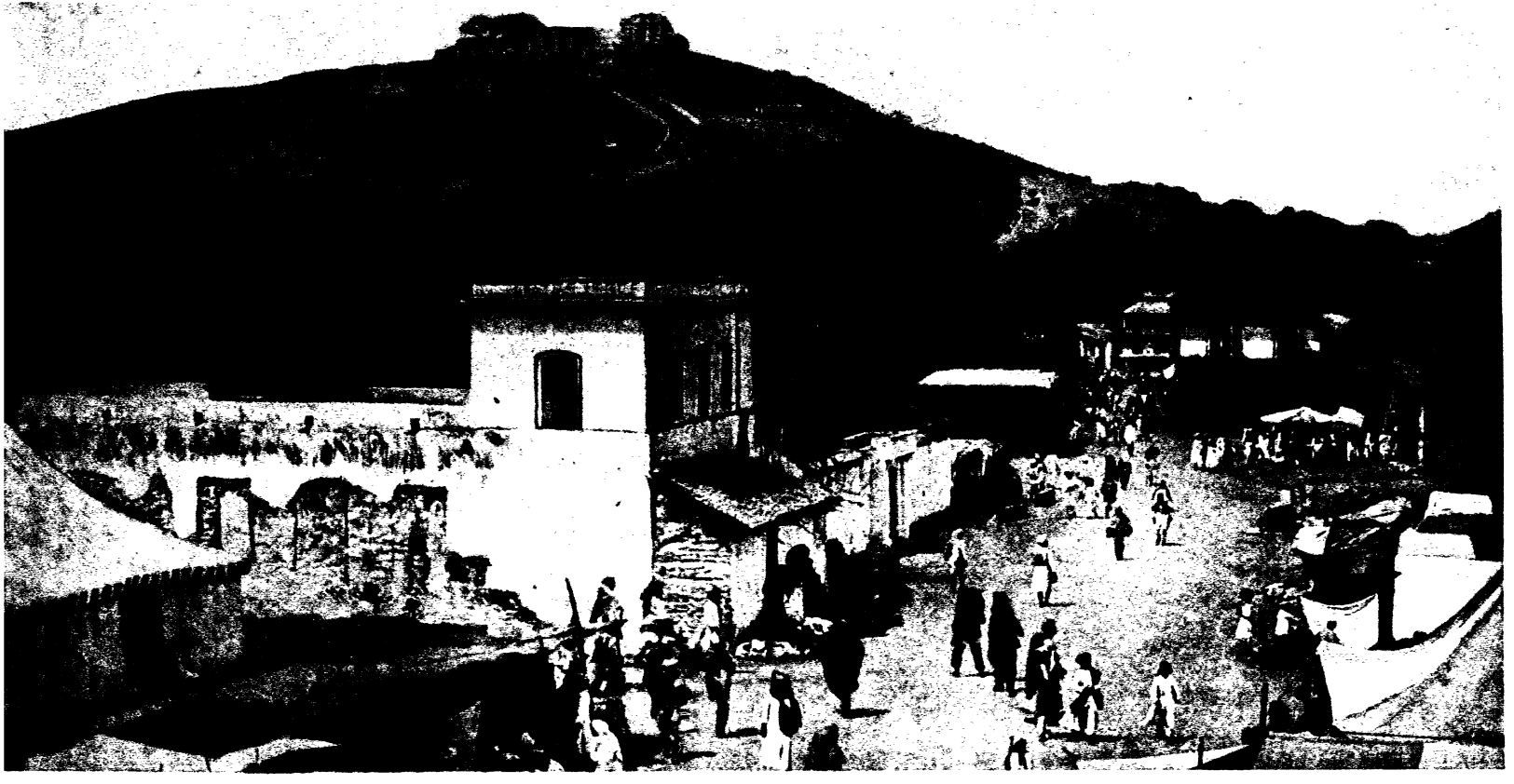
MAIN GATEWAY INTO SINDHIA'S MIGHTY HILL-PERCHED FORTRESS

The famous fortress of Gwalior is situated on the summit of a precipitous flat-topped and isolated hill. The walls are from 30 to 35 feet high and the rock immediately below them is steeply scarped all round the hill. Within the fort is the palace of Man Singh, built in the years 1486-1516, the walls of which are covered with most beautifully coloured tiles

architecture. All that has been written can convey no adequate idea of the spell this building casts, of its simple appealing beauty by day or its witchery by night.

The city proper clusters by the river, round the fine old fort of red sandstone built by Akbar and captured from the Marathas by Lord Lake in 1803, and within the fort, the walls of which are 70 feet high and their circuit a mile and a half, are the white marble buildings of the Diwan-i-'Am, or Hall of Public Audience, and the Diwan-i-Khas, or Hall of Private Audience of the Emperors.

Cawnpore has become not only the leading commercial city in the United Provinces but the leading commercial city in India in the manufacture of



NATIVE LIFE IN A BAZAAR ON THE OUTSKIRTS OF THE GREAT COMMERCIAL CITY OF HYDERABAD

Hyderabad, the capital of the native state of the same name, is the fourth largest city in India. Connected with the great railway junction at Secunderabad and lying on the south bank of the river Musi, it is an important commercial centre, and its picturesque bazaars are crowded with native traders from all parts of India. The city proper includes Anderun and Berun, the former within, the latter without the walls, which are six miles in circumference and have thirteen gates; the whole city area being 50 square miles. On its west side lies Golconda, while the residency and the bazaars are in a suburb called Chadarghat on the north-east

woollen and leather goods, and this, with a huge output from its cotton mills, has earned for it the epithet of the "Manchester of Upper India."

Bareilly is an important military centre, also Meerut, an ancient town, where the Indian Mutiny broke out in May, 1857. Aligarh is a famous centre of Mahomedan learning now owning a university; Saharanpur has noted botanical gardens and is a great fruit-growing centre; Hardwar is on the Ganges where it leaves the mountains, and therefore a great Hindu pilgrim centre and also the site of the head-works of the Upper Ganges Canal.

The Central Provinces have few towns of outstanding importance. Nagpur, the capital and centre of administration, is situated by a small stream, the Nag, in an open plain on the south-east but flanked north and east by basaltic hills. Jubbulpore stands 1,333 feet above sea-level and in a rocky basin surrounded by low hills about six miles from the Narbada river. An important military station and a commercial and industrial centre, it is a well built and prosperous town, with broad and regular streets.

Of the towns of the Central India Agency, Gwalior is the most interesting, on account of its fortress, the most famous in India, which contains the beautiful mausoleum of Mahomed Shah.

Indore, 1,738 feet above sea-level, is of fairly modern foundation, but the old palace is a lofty and imposing structure. The town is one of the largest trade centres of the Central India Agency, and Mhow, not far distant, is an important military station. Bhopal City stands on the edge of a great lake, with a larger one lying to the west, and few cities are situated so picturesquely. From the lake shores the city rises tier on tier to the crest of a ridge behind, 500 feet high, an irregular mass of houses relieved with clumps of vegetation in the many gardens, while in the centre tower the dark red minarets of the Jama Masjid crowned with glittering golden spikes.

Hyderabad, capital of the native state of the same name and residence of the nizam, is the fourth largest city in India, with a population of over 500,000; Secunderabad near by is the great railway junction of the state.

INDIA CENTRAL: GEOGRAPHICAL SUMMARY

Natural Divisions. The middle portion of the Indo-Gangetic Plain, with the edge of the northern mountains (see Bengal). A wedge of the Deccan plateau, with its scarp facing the plain and with the Eastern and Western Ghats on the other edges. The inland heart of India.

Rivers. Across the plains, the Ganges and its two great northern tributaries, the Gogra and Jumna, with minor tributaries from the Deccan. The floods of these three great rivers provide water by irrigation channels for the crops. Across the plateau, the Mahanadi and Godavari, flowing eastwards like the northern rivers. Between them, in sharp-cut valleys, flowing westwards, the Narbada and Tapti rivers.

Climate. Monsoon; cool dry winter, hot dry early summer; late summer rainy and hot, with a relatively small diurnal variation in temperature. The monsoon rains are most definitely marked on the plains where the monsoon advances from the south-east.

Vegetation. Jungle forest on the Terai and Bhabar. Forest on the hill-slopes of the Deccan. Alluvial plains in all the river valleys, naturally grass-land with few trees, generally entirely cultivated, sometimes to yield two crops annually.

Products: Agricultural. Wheat, native food grains, cane-sugar, rice, cotton, opium, indigo, tea, linseed, tobacco. Most of the crops are consumed locally. *Forest.* Teak, satinwood, myrabolams, cutch, lac. *Mineral.* Manganese, coal, bauxite, asbestos. *Manufactured.* Cotton and silk goods. Carpets. Embroidery, leather goods.

Communications. On the plains, roads and rivers are in use in addition to the railway system. Good roads on the plateau supplement a less extensive system of railways. All lines of communication are used to connect this inland area with the coast, especially with Bombay and Calcutta.

Outlook. The striking contrast between the primitive hill-people of the little known hill-country of the southern districts and the energetic semi-industrialised dwellers in the great cities of the plains is typical of India as a whole. The future lies in the gradual development of a self-contained people by training and education towards a higher level of civilized life.

E. N. A.

NATIVES OF THE ANDAMAN ISLANDS SHOOTING FISH IN ONE OF THE MANY TIDAL CREEKS

Lying in the Bay of Bengal, 120 miles west of Burma, the Andamans comprise over 200 islands, the coasts of which are deeply indented and contain a number of good harbours, the chief being Port Blair, the capital, in the South Andaman. The islands are exceedingly hilly, the Saddle Peak in the North Andaman rising to 2,400 feet, with narrow valleys intersecting the hills and the whole covered with dense tropical jungle. From 1858 the islands were utilised as a penal settlement by the Indian government, but this practice has now been discontinued. A small quantity of redwood-timber, coir and fibre is exported

Scattered Relics of a Sunk Continent

by Marion Newbigin

Author of "The British Empire Beyond the Seas," etc.

BEFORE the existing continents and oceans had assumed their present form, a great land-mass is believed to have occupied the site of the Indian Ocean. The plateaux of peninsular India and of the greater part of Africa are broken parts of this old land, the intervening area having sunk below sea-level.

Part of the evidence upon which this deduction is based is derived from the fact that not only in the great island of Madagascar, but also in the smaller islands of Mauritius and the Seychelles very old rocks occur which must obviously have once formed part of a continent. Further, the three areas named, no less than the island of Socotra off the horn of Somaliland, which also contains ancient rocks, are characterised by peculiar floras and faunas which suggest that all formed asylums for land-plants and animals at a time when great subsidence was taking place around them.

Forces Constructive and Destructive

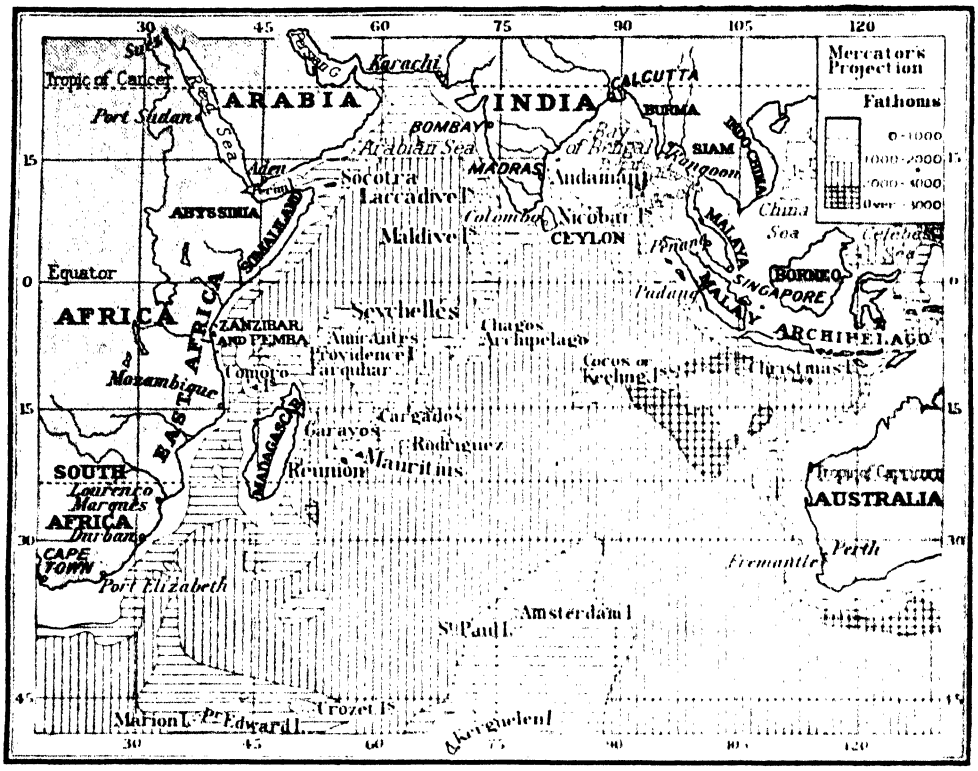
But if we have, in this way, evidence that land was once more extensively developed in the region of the Indian Ocean than at present, and thus that land destruction has gone on, there is evidence also of constructive, or land-making, forces. Thus in Mauritius and, more markedly, in the neighbouring island of Réunion, as well as in the Andamans in the Bay of Bengal, notable volcanic peaks occur. Again, the seas which wash the islands named are warm and well fitted for coral polyps which build up reefs wherever they can find a substratum on which to settle. In some cases, notably in the Laccadive, Maldive and Cocos archipelagoes, no rock other than coral is visible; elsewhere the volcanic or sedimentary rocks forming the bulk of the islands are fringed by coral reefs. In the former case the height above sea-level is slight; the stormy monsoon winds tend here to break away masses of coral rock and there to accumulate sand and fragments. Not infrequently, as in the Maldives, the wearing action of the waves seems to predominate over the building-up processes, so that the total land-surface is diminishing.

Coral and Volcanic Products

In most of the coral islands the coco-nut-palm is the chief plant of economic importance, and the fisheries, usually including turtle, form an important addition to the otherwise limited diet of the inhabitants. Where volcanic or sedimentary rocks occur, on the other hand, the relief is much more marked and the rainfall allows of a heavy growth of timber on the slopes. Where the land has been cleared the cultivation of a number of tropical products, including sugar-cane, is possible.

It is thus apparent that the islands to be considered in this chapter are of two main types, the "high" and the "low," and in the Indian, as in the Pacific, Ocean it is the former which, as a rule, are the more productive. Of the high islands of the Indian Ocean, again, the Mascarene group, including Mauritius and Réunion, is economically the most important.

Mauritius, named by the Dutch in honour of their Prince Maurice, lies in lat. 20° S., about 500 miles east of Madagascar, and has a total area of over 700 square miles. Save in the north it is mountainous, the highest peak



SUBMARINE RIDGES AND CHASMS OF THE INDIAN OCEAN

rising to 2,700 feet, but considerable plains lie between the hills and the coasts are low and fringed with coral reefs. The rocks are predominantly volcanic and weather to make fertile soil which, combined with the warm, damp climate, renders the island remarkably productive. The rainfall is heavy, especially in the months of January and February, that is in the southern summer and the island is continuously exposed to the south-east trade wind which makes the otherwise good harbour of Grand Port, in the south-east, of little value. From the human standpoint, however, the most important feature of the climate—and one shared with Réunion—is the liability to tropical cyclones. These revolving storms originate to the north-east of the islands and sometimes sweep round them in a semicircle, causing terrible devastation. They are most likely to occur in the early months of the year.

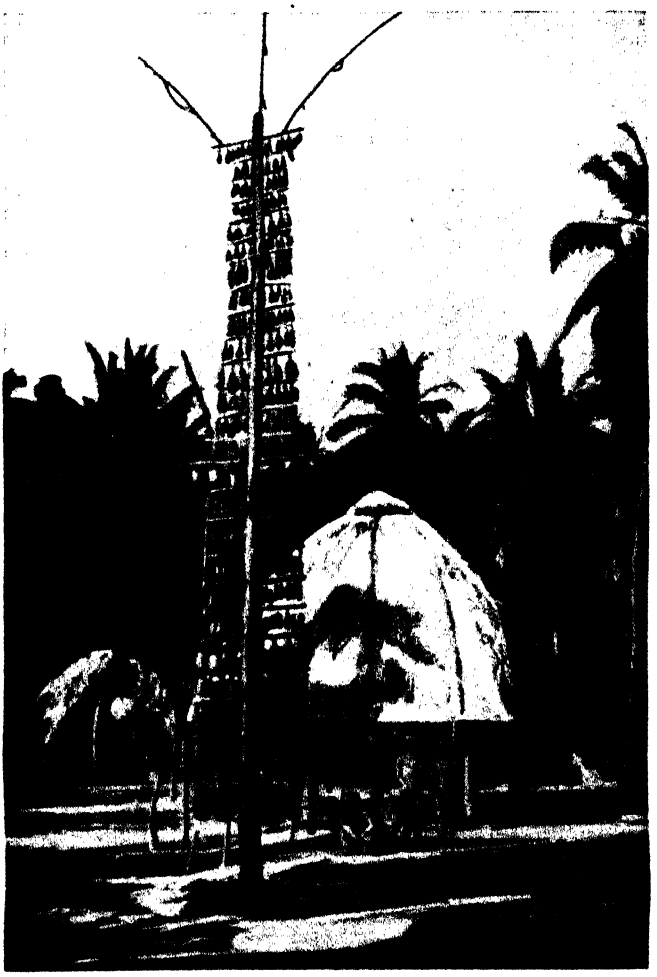
Originally Mauritius was well wooded, but the forests have been largely destroyed and the peculiar native plants to a considerable extent replaced by others introduced from India. The most interesting feature of the native fauna was the presence of gigantic land-tortoises and of the flightless dodo, a large bird related to the pigeons. Both tortoises and dodo have long been extinct. There were no native land mammals save bats when the islands were first discovered—a fact of much theoretical importance—but pigs, deer, hares, rats, monkeys and others have since been introduced.

Many of these, especially the pigs and the rats, have played a considerable part in exterminating the indigenous animals, though the navigators of the days of sailing ships, who used to stop at the Mascarene islands on their way to India to re-victual, were responsible for the disappearance of the tortoises and peculiar birds. Of considerable economic importance is the introduction of many kinds of mosquitoes which have established themselves in Mauritius, breeding

freely in the swamps. Some at least of these are carriers of the malarial parasite, and they seemed to have been brought on ships from India or Africa. The combination of introduced mosquitoes with Indian coolies previously infected with malaria seems to be responsible for the appearance of that disease, which is now endemic and a serious plague in Mauritius.

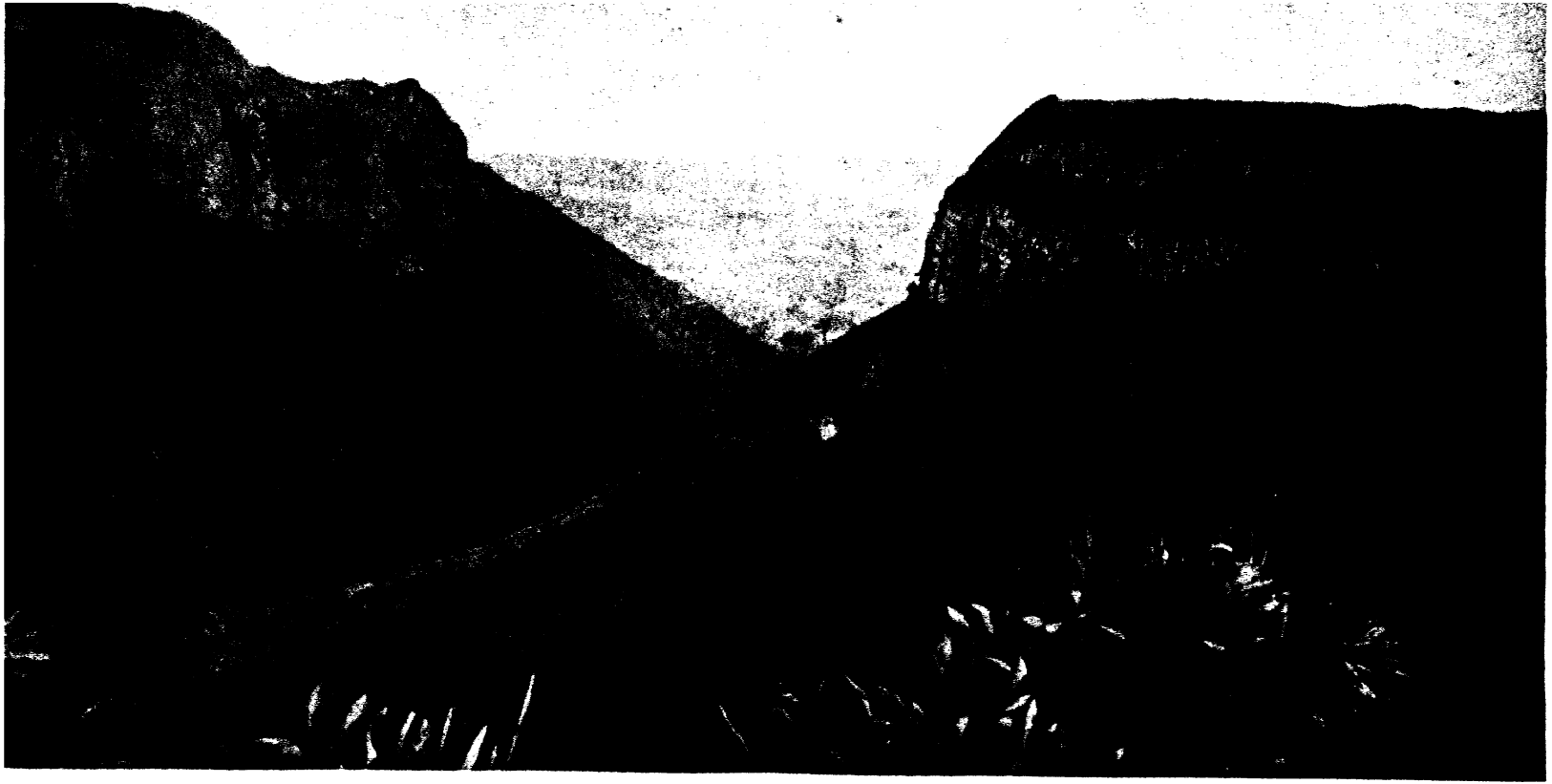
The island contains a dense population of about 385,000, of a highly mixed nature. It was at one time a French colony, and the sugar-cane was cultivated with the aid of negro slaves from Africa. The small European population is chiefly French-speaking, but after the abolition of slavery Indian coolies were introduced to work upon the sugar-cane plantations. Many of them have taken up land on their own account, and they form the predominating element in the population. Cane-sugar is practically the only product of any importance, and in the past the island has suffered, like other tropical sugar-producing islands, from the competition of beet-sugar. During and since the Great War, however, the staple industry has been prosperous. The amount exported in 1922, chiefly to the United Kingdom, South Africa, Australia and India, was valued at over £5,850,000. Port Louis, in the north-west, is the chief harbour and the capital. The island forms a British crown colony and is administered by a governor who is assisted by an executive council.

The French island of Réunion or Bourbon, in latitude 21° S., lies to the south-east of Mauritius, and thus somewhat nearer Madagascar. It is larger than Mauritius, attaining a total area of about 970 square miles, but owing to its rugged and mountainous character has less land capable of cultivation and is much more thinly peopled. The scenery is very striking. In the centre rises the highest peak, Piton des Neiges (over 10,000 feet), which owes its name to the fact that snow often falls though it rarely lies for as much as a week at a time. The flanks of the mountain are seamed by deep radial gorges, carrying many streams to the sea. In the south-west is the great volcano of Piton de la Fournaise (8,200 feet), which was very



NATIVE VILLAGE IN THE NICOBAR ISLANDS

These lie south of the Andaman islands in the Bay of Bengal and consist of nineteen units of which twelve are inhabited. The high pole with many crossbars before the huts is covered with votive offerings to the dead



E. N. A.

FAR-REACHING VISTA IN THE HEART OF THE SOUTH-WESTERN HIGHLANDS OF RUGGED MAURITIUS

At a distance of some 500 miles from the eastern coast of Madagascar lie the three volcanic islands, Mauritius, Réunion and Rodriguez, of the Mascarene group, so named after the Portuguese discoverer, Mascarenhas. When discovered in the early sixteenth century Mauritius was uninhabited, now it is one of the most densely populated regions in the world. It is 39 miles long, 29 broad and its area is 700 square miles, while the population is over 384,000. This beautiful view is of the lofty hills in the south-western range, looking down on the Black River district

active during the eighteenth century but is now more or less quiescent, the last notable eruption being in 1860.

Owing to the precipitation of moisture from the south-east trade wind on the mountain slopes, vegetation is luxuriant, and a considerable area of forest still remains. In climate and in the characters of the original fauna and flora there is much general resemblance to Mauritius, Réunion having formerly had a peculiar species of dodo of its own. But the economic development of the two islands has been different. In early days coffee was the chief crop in Réunion, and though the coffee plantations have been largely replaced by sugar, the latter has never taken the predominating position it has assumed in Mauritius, having suffered more heavily from the general collapse of the cane-sugar industry. Even the Great War did not cause such a revival as in Mauritius, and though sugar and rum form the chief exports, manioc, coffee, tapioca, vanilla and spices are all cultivated on a fairly extensive scale.

Population and its Distribution

The population of about 173,000 is, owing to the rugged interior, chiefly confined to the coast, though health resorts occur among the mountains, especially in the regions exposed to the trade wind. St. Denis, situated in the north of the island, is the chief town, and is connected by a tunnel with Pointe-des-Galets, its port. Railway construction is everywhere difficult, owing to the nature of the relief.

So far as official statistics are concerned, the composition of the population offers a striking contrast to Mauritius, for almost all the inhabitants are entered as Europeans of French origin, there being only about 3,000 British Indians and 1,000 Chinese, with smaller numbers of negroes and Arabs. In point of fact, however, there has been much interbreeding, and families of pure French stock are in a minority. Trade is carried on chiefly with France, and the island, which is represented in the French parliament, is administered by a governor who is assisted both by a privy council and by an elective council-general.

Largest Fruits in the World

About a thousand miles north of Mauritius, in lat. 4° S., lies the Seychelles archipelago, standing on the same submarine "rise" as that which bears Mauritius. The group is made up of a large number of islets, but not more than six are of any importance, Mahé being the chief. The total land area is estimated at over 150 square miles, of which Mahé constitutes a full third. In a sense the islands may be said to be transitional between the "high" and the "low" groups; for although they are mountainous, rising to 3,000 feet, and are composed of granite and volcanic rocks, they are surrounded by wide coral reefs, and the coconut palm is the most important economic tree.

Like the Mascarene group, however, they have, or had, peculiar animals and plants, the former including a large land-tortoise and the latter the remarkable double coconut or coco de mer palm. The fruits of this tree had been found floating in the Indian Ocean by navigators long before their origin was known, and gave rise to a variety of myths. The palm which produces them grows only in two of the smaller islands of the Seychelles group. The remaining specimens are now protected by the government. The fruits are said to be the largest known in the plant world, and take ten years to ripen. It is very difficult to believe that so exceptional a plant could be evolved in a small island area, so that the existence of the Seychelles palm forms part of the evidence of the former presence of a large land-mass in the Indian Ocean.

Strategic Position of the Seychelles

The climate of the Seychelles is hot and wet, but not unhealthy, and a great variety of plants can be grown; coconuts, as already stated, predominate,

IN THE BANKING QUARTER OF THE CAPITAL OF MAURITIUS

Capital of the island of Mauritius, Port Louis is situated on the north west coast at the head of a good harbour, both town and harbour are well fortified the latter an inlet of about a mile in length being sheltered by reefs and protected by forts The town possesses several important buildings, the savings bank is seen above on the left, the Bank of Mauritius on the right

E N A

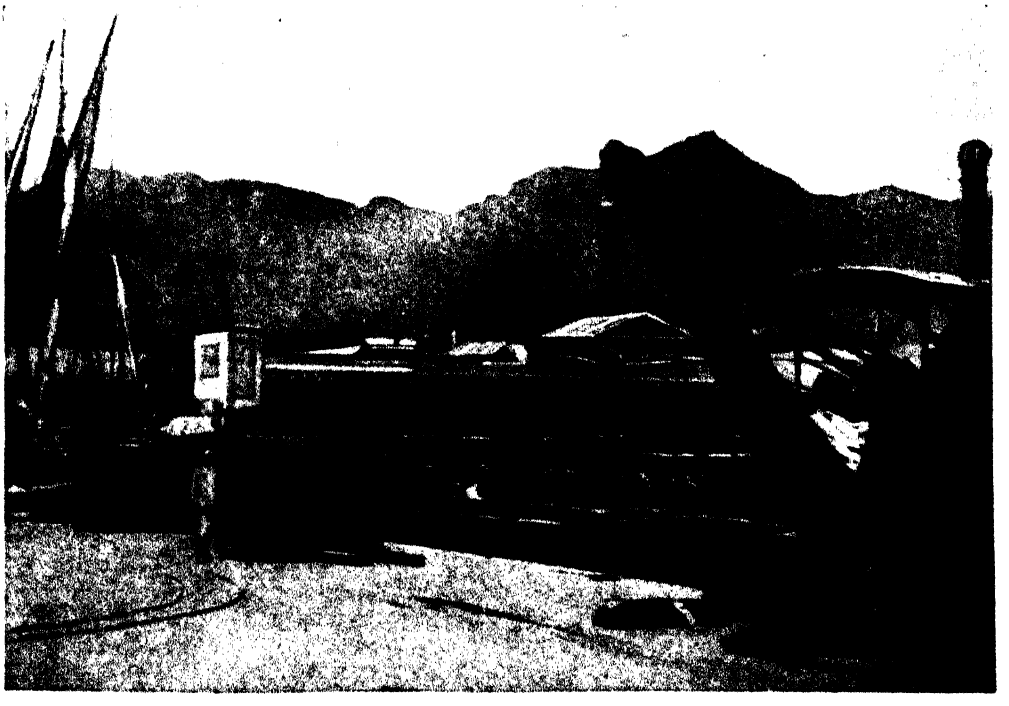
HEIGHTS OF THE NORTH-WESTERN RANGE OVERLOOKING PORT LOUIS

Surrounded by high hills Port Louis is far from healthy and the lack of sufficient tide in the harbour augments the difficulty of an efficient drainage system. One of the three chief mountain ranges of the island lies in the vicinity, known as the Pouce range it consists of several lofty spurs, two of which, Pieter Botte, 2,676 feet high, and the Pouce, 2,650 feet high, overlook the capital

E. N. A.

FOAMING CASCADE IN AN ISLAND FAMED FOR ITS SCENERY

Mountainous in character, with very picturesque and varied scenery, Mauritius is an exceedingly attractive island. It has, however, lost much of its wild aspect owing to the spread of sugar plantations, and many primeval forests have been destroyed, but impressive mountain masses, rippling rivers which in the wet season become torrents, waterfalls and lakes are still its main features



VIEW OF THE WHARVES IN THE HARBOUR OF PORT LOUIS

Mauritius island has 144 miles of railway, no inland navigation, and its capital, Port Louis, has the only good harbour. Nevertheless, there is a flourishing export and import trade, chiefly with the United Kingdom, South Africa, Australia, India, France, Réunion and Madagascar, and the wharves of Port Louis are a centre of activity at all times. Sugar, aloe fibre and coconut oil are staple exports

E. N. A.

BEAUTIFUL INLET ON THE RUGGED MAURITIUS COAST

Mauritius island is a hilly mass of volcanic origin, spread with a wildly luxuriant vegetation, surrounded by coral reefs and intersected by fertile valleys. The hot, moist climate with its sweltering wet season is generally unhealthy, especially around the coast, and the cooler uplands of the interior contain the residential quarters, the town of Curepipe possessing a climate not unlike that of south France

the product being chiefly exported in the form of copra. Vanilla, clove oil, cinnamon oil and tortoiseshell are also exported, and a certain amount of livestock is kept. The chief town is Victoria, in Mahé, and the population, which is of mixed blood, numbers about 25,000. The islands, which are British, have a certain strategic importance, for they lie along the route from Bombay to East Africa and on that from Aden to Mauritius, but their economic significance is not great.

The main interest of the Laccadive and Maldive archipelagoes lies in the fact that both are made up of typical coral islands. In this connexion it is worthy of note that the word atoll, now universally used to designate ring-shaped coral reefs with a central lagoon, is of Maldivan origin. The Laccadives lie off the Malabar coast of India in about lat 12° N., while the Maldives extend to the Equator. The latter group contains a greater land area and has a larger population than the Laccadives, many of which are uninhabited islets. The land rarely rises more than 20 feet above sea-level, and the coconut palm occurs everywhere. Fishing is extensively carried on, the bonito, a kind of mackerel, being especially sought after. Among other marine products mention may be made of the cowry shell, formerly widely prized as an ornament and means of exchange, and still exported from the Maldives to Africa to serve as money.

Exports from the Maldives

The islanders are all Moslems, and apparently of very mixed stock. In the Maldives, apart from the ubiquitous coconut palm, a little mixed cultivation is carried on, but grain, in the form of rice, has to be imported. The exports consist of the produce of the palm, smoke-dried fish and small amounts of manufactured goods, such as coir-ropes, mats, sails, baskets and so forth. The water-supply presents difficulties; wells containing brackish water occur, but rain-water is also collected as it trickles down the trunks of the lofty palms.

The Andaman and Nicobar islands lie to the east of the Bay of Bengal and are of different origin from any of those yet discussed. The Arakan Yoma of Burma, a chain of young fold-mountains of the same age as the Himalayas, is broken off short at Cape Negrais, but beyond Preparis Channel the same chain appears to be continued in the "festoon" of the Andamans and Nicobars, which are separated from one another by Ten Degree Channel. Both groups consist of recent sedimentary rocks with marginal coral reefs, but the Andamans contain volcanoes of which that of the small Barren island was active in 1857 and 1858.

Wet, Unhealthy Andamans

The highest point of the Andamans reaches 2,400 feet, the Nicobars being somewhat lower. The former, with a total area of 2,260 square miles, consist of the Great Andaman group with three large islands, the southernmost containing the capital, Port Blair, and of Little Andaman to the south. All are densely wooded, producing a valuable timber called redwood. The much smaller Nicobars consist of three groups, the largest being Great Nicobar in the south. Here, too, the coconut palm flourishes, giving rise to a small export trade in copra and coir fibre. The Andamans have in the past been used by the government of India as a penal settlement, but no more convicts are to be sent. A certain amount of planting has been done, including coconuts, rubber, hemp and aloes, and it is hoped that this may be increased, though the climate is wet and unhealthy.

Dying Race of Pygmies

The real interest of the group, however, lies in its native inhabitants. The Andamanese, who are steadily dying out and do not exceed a thousand, are oceanic pygmies or negritoes, also found in the Philippines and in the Malay peninsula. They are under five

C. C. Ross

VAST QUANTITIES OF COPRA DRYING UNDER THE SCORCHING SUN IN THE COCOS ISLANDS

As the name Cocos Islands implies, the coconut is the chief product and is cultivated on all the islands, which are covered with forests of coconut palms. Copra is the broken and sun-dried kernel of the coconut and is obtained for the sake of its oil which is extracted by pressure or slow boiling and constant skimming. In the East the oil is used for lamps and in unguents and in Europe it is used in the manufacture of margarine, candles, medicine and soap. There is a good harbour at Port Refuge which handles the trade of the group, exporting coconuts and coconut oil and importing foodstuffs

C. C. Ross

ONE STAGE IN THE IMPORTANT INDUSTRY OF THE COCOS ISLANDS

The Cocos or Keeling group, some twenty coral islands in the Indian Ocean 700 miles south-west of Sumatra, has been a dependency of the Straits Settlements since 1903. The climate of the group is very healthy, the temperature never going to extremes, though terrific storms sometimes break over the islands. In the photograph native women are breaking the coconuts and extracting the kernels

C. C. Ross

TRAYS OF SHELLED COCONUTS READY FOR THE DRYING PROCESS

After the kernels have been extracted from the nuts, they are placed on trays mounted on trucks, running on light lines, to be transported to the drying-ground. To protect the copra from any moisture at night the trays are moved into thatched sheds constructed of rough poles and matting made from palm leaves. On North Keeling island there is a very valuable deposit of phosphates

feet in height, vary from deep brown to black in skin colour and have short, frizzy hair. They are exceedingly primitive, carrying on no cultivation, possessing no domestic animals and having no knowledge of metals. Curiously enough no pygmies occur in the Nicobars, the inhabitants of which seem to be of Malay type, with a considerable intermixture of Burmese and Siamese stocks. They are more advanced than the Andamanese and carry on a few simple industries, such as the making of pottery.

Socotra is a mountainous island with a generally dry climate, though it gets monsoon rains in July and December. It is definitely African and not oceanic in character; thus the coconut palm is absent, dates form almost the only crop, and the Arab inhabitants keep large flocks of cattle, sheep and goats, and use the camel as a transport animal. The hill slopes bear aloes, dragon's blood tree (Dracaena), frankincense and myrrh, as well as other aromatic and resin-producing plants, all of lesser importance now than in the earlier days of the world's history. The island is under British protection, for the position gives it some significance in connexion with the seaway to India.

The Cocos or Keeling islands, lying in about 12° S. latitude, some 700 miles from Java, are a British possession of little importance save for the historical fact that Darwin, who visited the area in the Beagle, based his theory of the origin of coral reefs on observations made here. They are typical "low" islands, the coconut, as usual, being the predominant plant. They were first settled by a Captain Clunies-Ross, whose descendants—much intermarried with Malays—still inhabit the group, to the number of about 800. Good water is present, and there is a cable station. Like Christmas island the islands are attached to the settlement of Singapore.

Christmas island, which lies some 600 miles farther east, is remarkable for its rich deposits of phosphate of lime, which are extensively worked, chiefly with Chinese coolie labour. The phosphate works occupy practically the whole of the population of about 1,000, very little cultivation being carried on. The island has a basis of volcanic rocks overlaid with limestone, and despite its small size rises to over 1,000 feet above sea-level. There is a rich flora which remains practically untouched. Flying Fish Cove provides good anchorage and the working of the phosphate deposits is carried on by modern methods.

Very different in appearance from all the islands hitherto described is the desolate and uninhabited island of Kerguelen, which lies in about 50° S. latitude almost due west of Prince Edward island and the Crozet group. It is a French possession. The climate, though cold, cannot be described as severe, and there is relatively little difference between summer and winter. Lying as it does, however, in the region of the "Roaring Forties," the island is constantly wind-swept. It has been visited by more than one Antarctic expedition, and, since the surrounding seas are rich in whales and seals, it attracts whaling vessels; but no attempt has been made to effect a permanent settlement upon it.

INDIAN OCEAN: GEOGRAPHICAL SUMMARY

Natural Divisions. Western islands, Mauritius, etc., relics of the ancient Gondwanaland. (Cf. India.) Andamans, Nicobars, a continuation of the Burmese fold mountains. "High" islands, volcanic, coral-fringed, such as Mauritius. "Low" islands, coral atolls, such as the Maldives.

Climate and Vegetation. Oceanic, tropical, with a rainy windward side to the "high" islands in the track of the south-east trades of the South Indian Ocean. Palm trees, chiefly coconut.

Products. Cane-sugar and rum, copra, coir. Turtles. Phosphates. Spices, vanilla, cinnamon, cloves. Dates in Socotra.

Outlook. Much depends on the world supply of sugar from beet and cane and the prices at which sugar is sold in the world's markets.

INDIA SOUTHERN

Crowded Panorama of Temple & Town

by Edmund Candler

Author of "A Vagabond in Asia," etc.

MANY varieties of climate, and therefore of scenery, are included in southern India. A large part of it is tropical and luxuriant, India as one pictured it without knowing it, a realization of the vision of the country one conceived in childhood through books and travellers' tales, a kind of gorgeous fairyland.

The north of India, apart from the Himalayas, is certainly not beautiful. Vivid and interesting it may be, but it is very far from picturesque, save sometimes in colouring and atmosphere. The rivers, burnt-up sand beds of a blinding whiteness or turbid yellow floods, according to the season, lend no refreshment to the eye. The jungle itself is little more than a colourless brown tangled undergrowth, sapless stalk and brittle leaf. To enter India for the first time by Calcutta or Bombay —as nine travellers out of ten do— invariably leads to disenchantment. The outlook from the train during the long journey into the interior is most depressing, a thousand miles or more of flat, featureless country, much of it desert, and even the sown land monotonous and unlovely.

The "Benighted Presidency"

The Madras Presidency has its desolate tracts, its rocky, infertile Deccan, its black cotton country and its sandy, saline coastal belts, as in Madura and Tinnevelly; but these disfigurements are occasional, exceptional rather than characteristic. If the degree of natural beauty in the plains of India could be analysed and estimated, I have no doubt that more of its essence would be found in an average square mile of Madras than in fifty elsewhere.

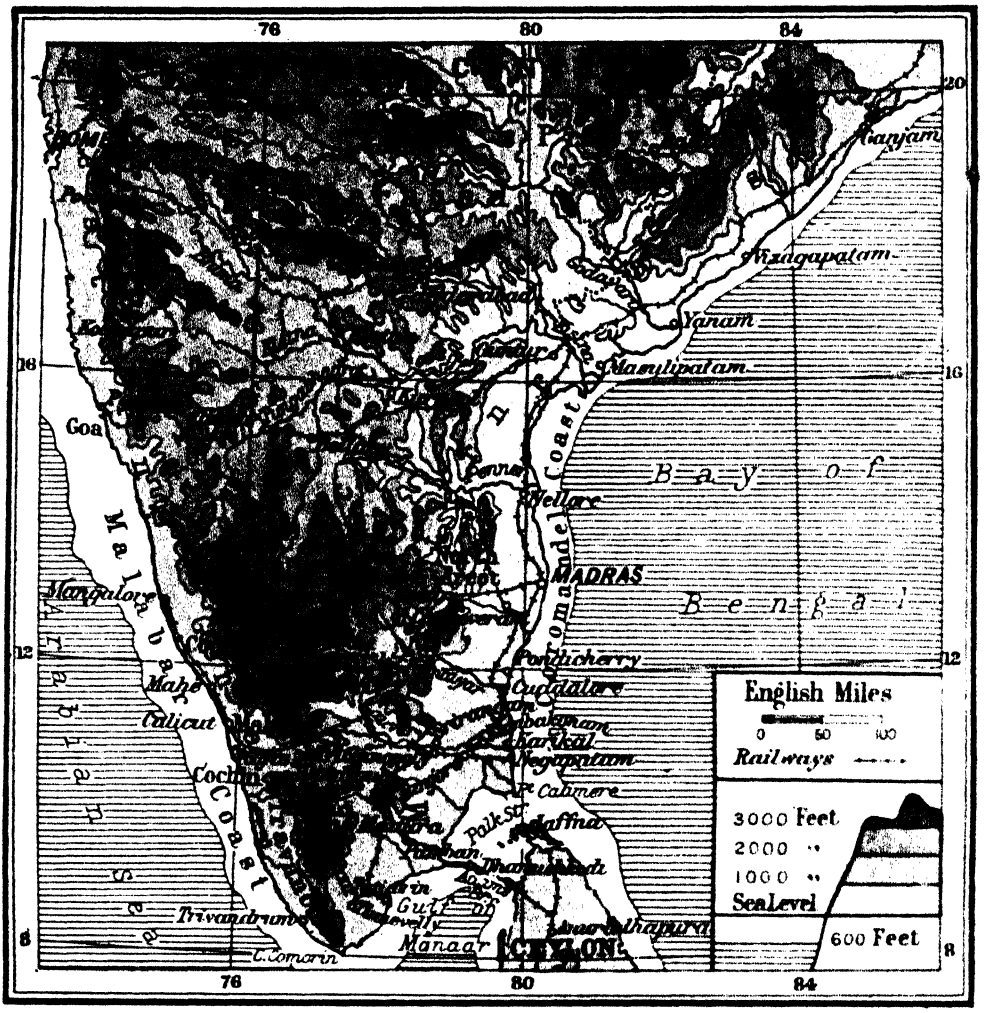
The south of India has never been so visited and explored by travellers as the north. It is a little out of the beat of the rapid cold-weather visitor.

Though the most progressive, and incidentally the richest, province in India, Madras is commonly regarded as a backwater. One hears it spoken of in the north as the "benighted Presidency." That is to say, it is self-contained, and has been until quite lately detached from the main line of communications. It has no frontier question, and has been relatively immune from the serious political disturbances of other districts.

Where the Revenue Comes From

But Madras, as the Madrasis will tell you, finds the revenue, and the north spends it. The central government is naturally content with this order of things, and interferes very little with the local administration. The "benighted Presidency" owes a great deal of its character, individuality and homogeneity to its isolation. It has always been "advanced," and that is perhaps why it has suffered less than Bengal, Bombay and the United Provinces from the speeding up of the wheel of political and social evolution.

Before the East Coast railway was completed, the journey from Calcutta to Madras involved a detour almost to Bombay, and passengers bound south from Madras to Ceylon had to face the dreadful crossing from Tuticorin to Colombo. But the presidency is more accessible now. The Indian-Ceylon railway connexion via the Manaar peninsula, Dhanushkodi and Pamban, opened shortly before the Great War, has brought Madras into the direct line of communication between Colombo and



SOUTHERN INDIAN PLATEAU FROM MALABAR TO COROMANDEL

Calcutta. The railway journey is interrupted by one short break of 20 miles, where the ferry steamer skirts the chain of sand banks known as Adam's Bridge. This was Hanuman's Causeway, built by the Monkey god to afford a passage to Rama to retrieve his wife, Sita, abducted by Ravana. The exploit is celebrated in the Ramayana. The modern traveller who wishes to see the best of the country in a restricted time would be well advised to enter India by this legendary approach. It is not only in scenery that southern India has a greater variety of appeal than the centre or the north.

In the Madras Presidency one is seldom out of sight of mountains. Southern India may be defined geographically as a tableland enclosed between two mountain walls, the Western and Eastern Ghats, facing the Indian Ocean and the Bay of Bengal. The two ranges meet at an angle in the Nilgiris. The Western Ghats extend the whole length of the presidency at a distance from the sea varying from 40 to 100 miles, bold forest-clad peaks with smooth green summits. At one point in the range, to the north of Malabar, they form a veritable sea-wall. A little south of this the chain is broken at the famous Palghat Gap, a depression of some 16 miles. This amazing gateway through the barrier is the only break in its continuity.

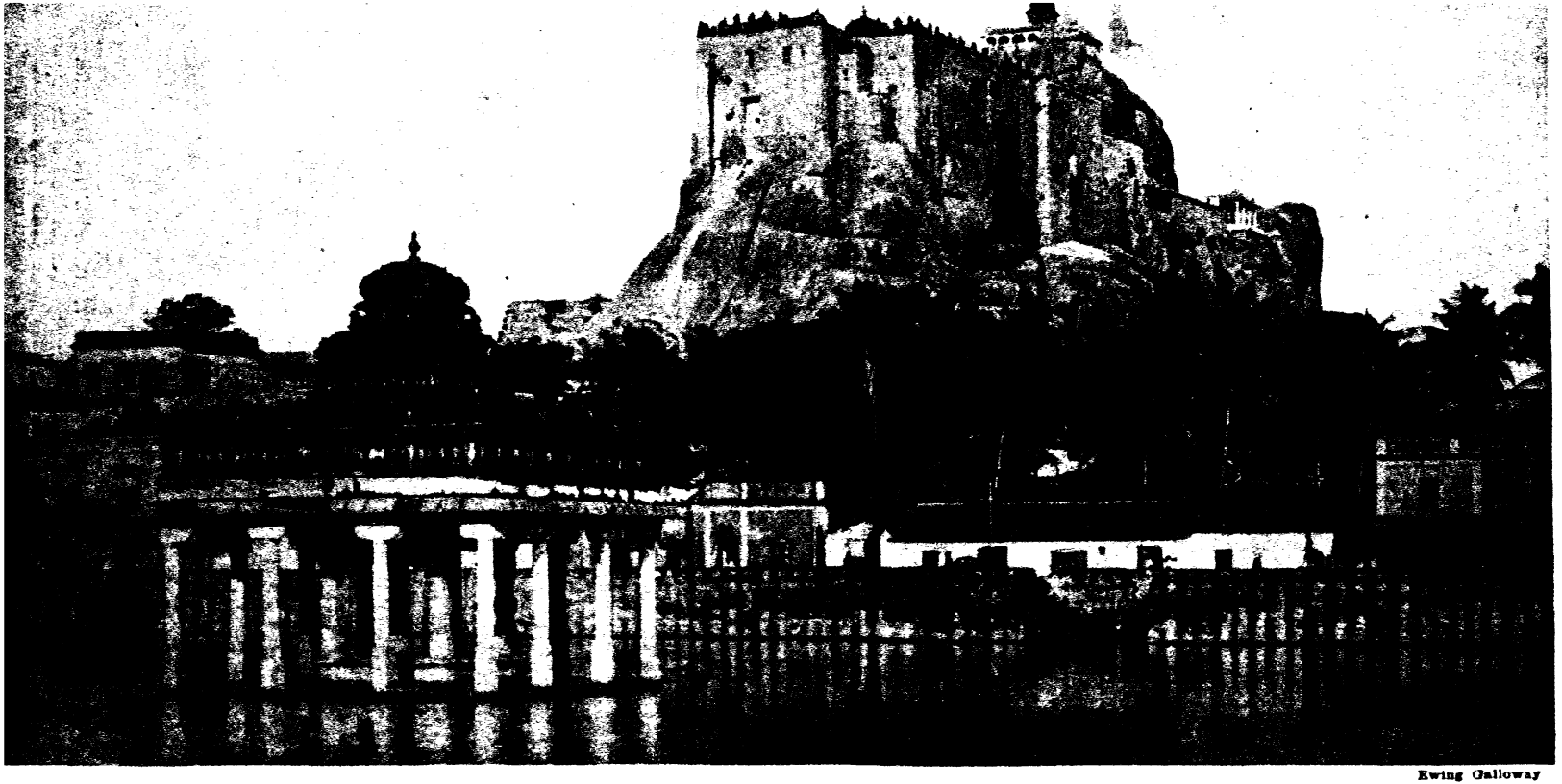
"Ghat," it should be explained, is an Indian word which, among other meanings, has come to designate "steps," "pass," or "approach," in the same sense as the Spanish "puerta" in the Pyrenees. The word came to be associated with the whole range, the eye and the mind of the traveller being fixed on the particular points of the barrier that allowed him a passage to the interior from the coast

The western wall of the southern peninsula both in altitude and in vegetation is far more spectacular than the eastern. It contains the finest forest preserves and the most magnificent scenery in India outside the Himalayas. In elevation it ranges from 2,500 feet to nearly 9,000 feet, reaching its highest point in the Anaimudi peak (8,837 feet) in the Travancore State. The Western Ghats owe their tropical luxuriance to the south-west monsoon; the Eastern Ghats forming the corresponding mountain wall facing the Bay of Bengal are not so favoured On the west the rainfall varies from 100 inches on the coast to 250 on the highest peaks of the range On the east the heaviest annual fall is from 50 to 80 inches in the northernmost district. The peaks are not so bold; the forest is nowhere so

Kenneth Comyn

INTRICATELY CARVED ENTRANCE TO A TEMPLE IN MYSORE

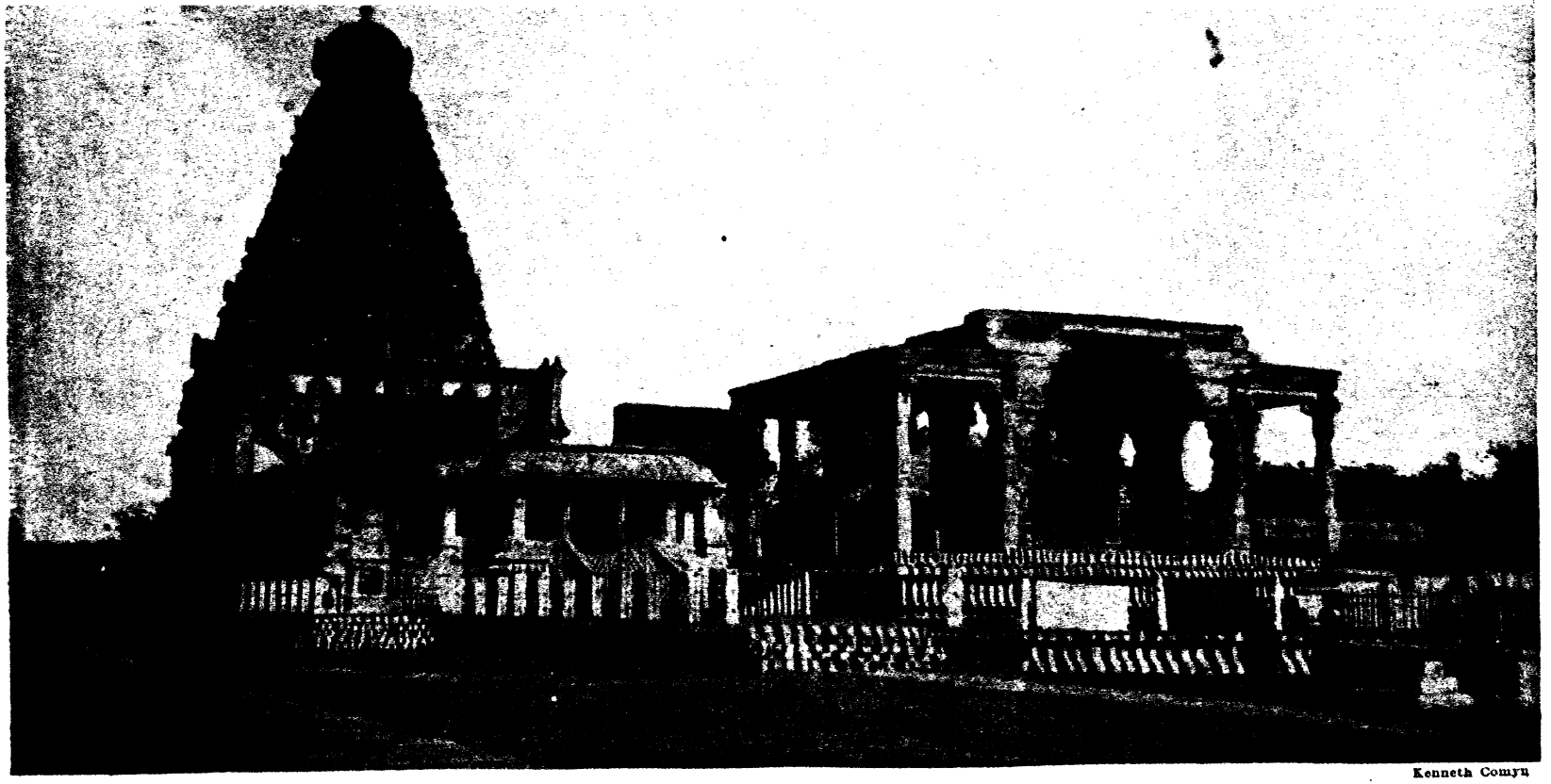
Mysore, the capital of the state of the same name, is situated near the mouth of the Cauvery, 100 miles south-west of Bangalore. The city is built in a valley formed by two ridges and to the south-east is the temple-crowned Chamundi Hill, 3,489 feet, with a colossal recumbent figure of Nandi, the sacred bull of Siva. The manufactures include jewelry, carpets, cotton and silk cloths



Ewing Galloway

ROCK OF TRICHINOPOLY WHICH RISES IN THE OLD FORT HIGH ABOVE THE CITY AT ITS FOOT

The town of Trichinopoly is situated south of the Cauvery river at the delta head and is a railway junction on the Madras-Tuticorin line. This great mass of granite, 273 feet high, crowned by the Temple of Mathubuthesvara, rises on the north side of the town; at its western base is this handsome tank with a mandapam, or pavilion, in the centre. The rock is ascended by a flight of stone steps which leads up to the summit from the south; the temple was built in the seventeenth century and the adjoining pavilion affords a remarkable panoramic view of the plains of India



Kenneth Comyn

GIGANTIC PYRAMIDAL TOWER OVER THE VIMANA OF THE GREAT TEMPLE AT TANJORE

This temple in the Madras Presidency is one of the most beautiful and effective Dravidian temples in the south of India; it is also one of the oldest and has been preserved with but little alteration. The tower is 190 feet high, including the great monolithic dome shaped top and the sikra or spiked ornament; the upper portion is decorated with the images of innumerable gods and demons. To the right in the photograph, surrounded by a carved portico, is an enormous nandi (bull) in black granite, 13 feet high and 16 feet long, sculptured out of a solid block of rock

dense or high; the system contains no summit of 6,000 feet, and is broken up into disjointed groups of hills receding farther from the coast towards the south of the peninsula. Between Madras and Pondicherry the easternmost spurs of the chain do not approach within 150 miles of the sea.

Hunting in a Hill Station

There are numbers of other ranges of hills in southern India, some isolated, others offshoots of the western and eastern systems, groups of which are known in various districts by local names, as the Maliahs at the extreme north of the Eastern Ghats and the Cardamum Hills at the extreme south of the western range, accurately described in the old eighteenth century maps as "high wavy mountains covered with dark, impenetrable forests." The Nilgiris, or Blue Mountains, in which the two chains meet in the south may be described as the garden of the presidency. Ootacamund, the summer headquarters of the Madras government, enjoys the enviable distinction among hill stations of standing on a plateau. Nowhere else in the hills of India can one hunt. It stands in an amphitheatre of the hills surrounded by an expanse of rolling grassy down of an average of 6,500 feet above sea-level. The nooks and folds of the plateau are known locally as "sholas," and are quite like England in their vegetation. With an annual rainfall of 67 inches and a mean annual temperature of 57° F. Ootacamund is happy in an English climate and flora.

Mountain Influence on Economics

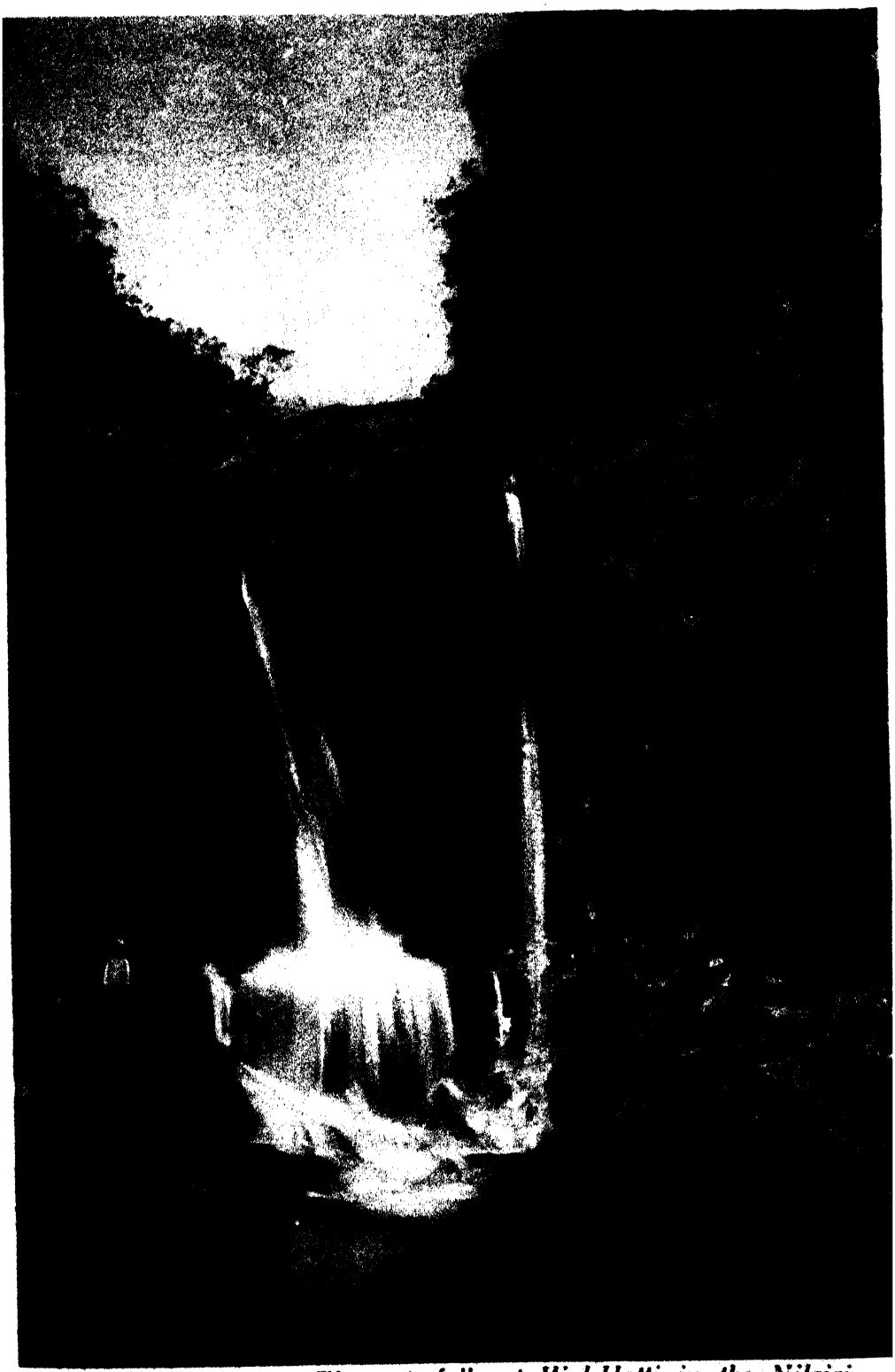
Very different from the almost European vegetation of the Nilgiris is the tropical luxuriance of the west coast ranges. In the north-east corner of the presidency again the mountain scenery has a beauty of its own which has more in it of sternness. Here the distinctive charm of the coastward ranges lies in the blending and compromise of opposites—in the promontory of smooth rock jutting into the rice-fields, in the swampy inlet or marsh penetrating into the bed-rock of the hills, the harmony of grey, red and green, barren and fertile, "the desert and the sown," the metallic glitter and soft tropical sheen, each standing as the happy relief and complement of the other.

The climate, rivers and canals, the productiveness, and indirectly the history and civilization, of southern India have been influenced, one might say determined, by its mountain system. The eastern mountain wall, as we have seen, is more easily penetrable than the western, and leaves a much wider area between it and the coast.

Holy Rivers in Harness

The great rivers of the south flow from west to east, cut their way through the Eastern Ghats, and empty themselves into the Bay of Bengal. Both the Godavari and Kistna reach the east coast after a course of between 800 and 900 miles from their sources in the western wall. The Cauvery rises in Coorg high up in the Western Ghats and flows right across the peninsula to its delta below Tanjore. All three rivers are of extraordinary sanctity in Hindu eyes. They and most of the shorter rivers of the south have been harnessed in the latter part of their courses by great masonry dams, and their waters distributed into a network of irrigation channels throughout the deltas.

Six thousand dams had been thrown across the Madras rivers in 1908, and 4,900,000 acres brought under irrigation, as well as above a million acres of second crop. And this reclamation work is expanding. No river has forced its way through the Western Ghats into the Indian Ocean. Thus the fertile irrigated tracts, independent of local rainfall, are found in the deltas of the east coast. On the west the narrow strip of land between the mountains and the sea receives sufficient rainfall from the south-west monsoon. The forest produce here yields a rich revenue; the hillsides are perennially green; the cultivated valleys at the foot of the ranges bear luxuriant

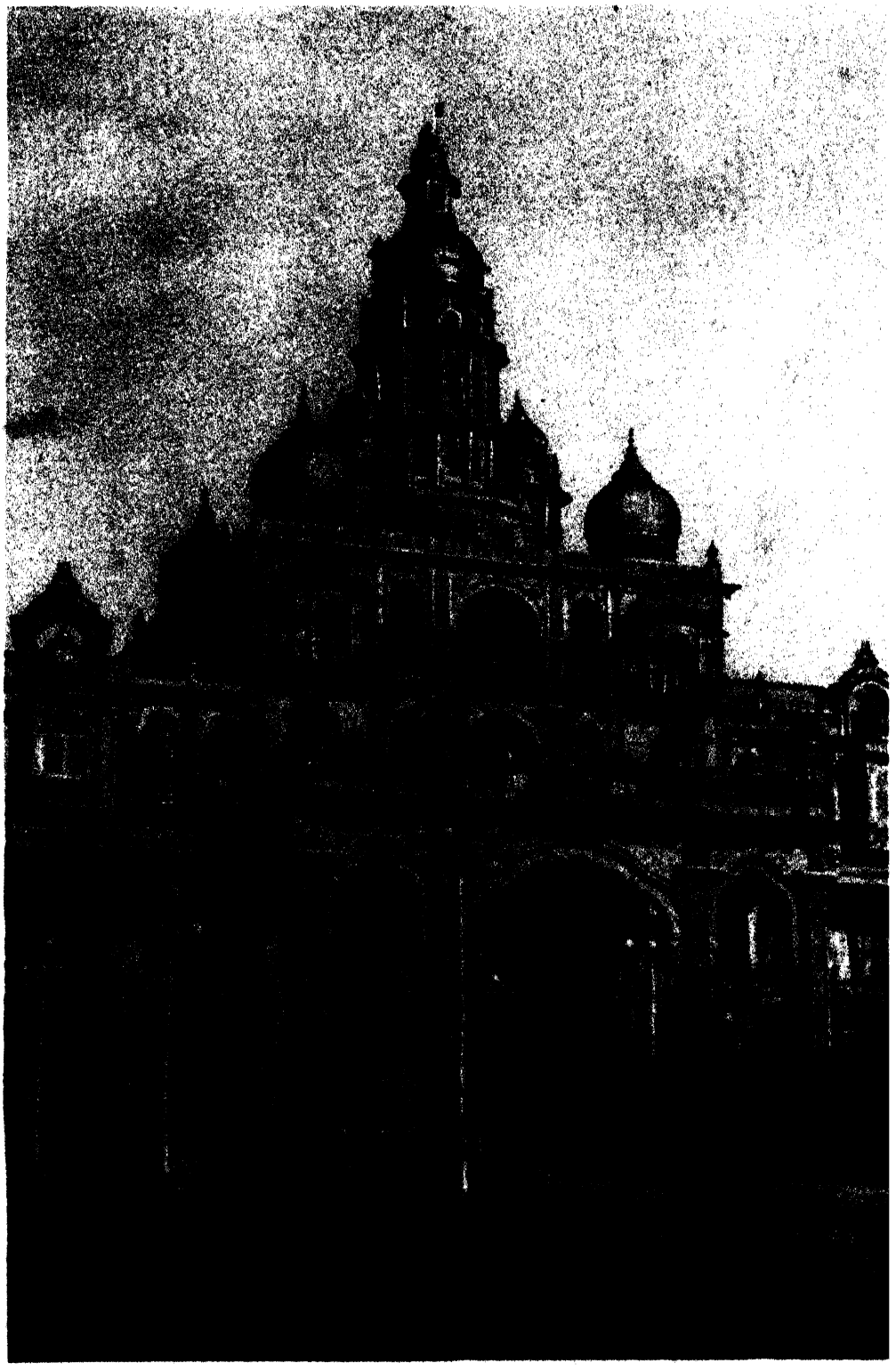


INDIA SOUTHERN. *The waterfalls at W'al-Hatti in the Nilgiri Hills fret their way through the rocks where time has cracked them*

Photos in pages 2240—2244, Kenneth Cowie

INDIA SOUTHERN. *Ootacamund, by the gently sloping banks of the lake, is a hill station set in the midst of the park-like Downs, with their grassy slopes and dales interspersed with woods and streams*

INDIA SOUTHERN. *Confined between precipitous cliffs crowned with luxuriant vegetation, the Cauvery is called the Ganges of the South by devout Hindus and abounds in scenes of romantic beauty*

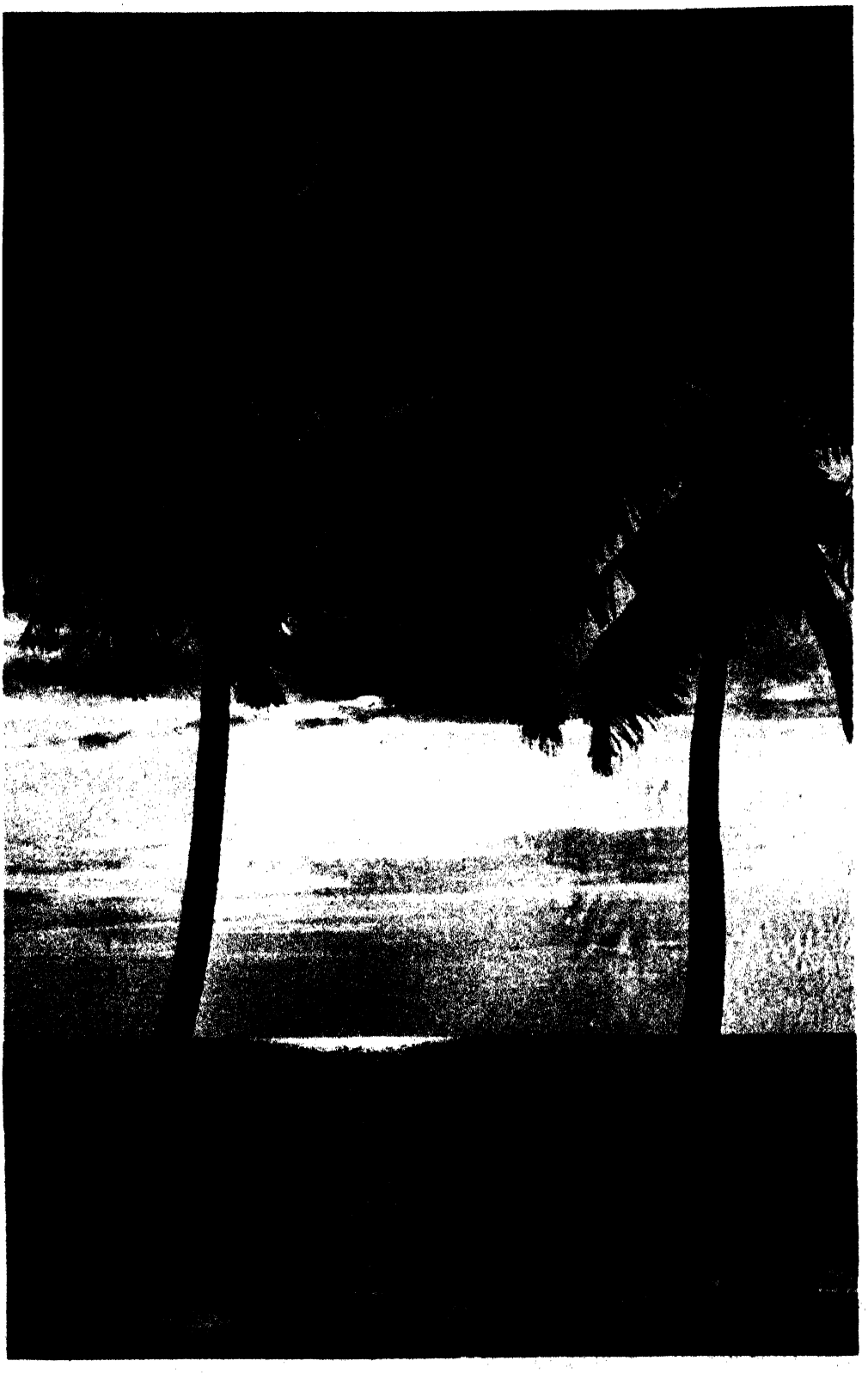


INDIA SOUTHERN. *The Maharaja's Palace at Mysore, whose lofty golden cupola is seen from all points of the city, is garishly modern*

INDIA SOUTHERN. *At Seringapatam rises the High Mosque of Tippoo Sahib, slain when the British stormed the fort in* 1799

INDIA SOUTHERN. *Once the stronghold of Tippoo Sahib, Seringapatam is now a town of mean, deserted streets lined with irregularly built and dingy houses, while over all tower the twin minarets of the Mosque*

INDIA SOUTHERN. *This crude press, the power supplied by a yoke of bullocks, shows that despite several generations of British rule the ryot, or peasant, adheres to the methods of his forefathers for crushing oil-seeds*



INDIA SOUTHERN. *The golden blaze of afternoon is tempered with sea salt and the frayed green feathers of palms on Malabar Coast*

crops. For hundreds of miles along the coast one passes rice-fields alternating with palm-fringed lagoons. This has always been a land of natural wealth. The cultivation of the soil needs little artificial aid. Ibn Batuta, the Arabian traveller of the fourteenth century, wrote of the Malabar coast: "The whole of the way by land lies under the shade of trees, and in all the space of two months' journey there is not one span free from cultivation; everybody has his garden, and his house in the middle of it."

The local distribution of rainfall depends on the conformation of the ranges. In the south there may be a difference of 50 inches or more within a distance of 20 miles on two sides of a mountain barrier. In Coorg, for instance, you may get 300 inches, or you may get 200, or you may get 60; it all depends in what part of the province you are. The climate is determined by the mountains, and the fertility by the climate. The crops depend mainly on the south-west monsoon which blows from the Indian Ocean from the end of May to the beginning of October. The rain clouds, as we have seen, are held up by the Western Ghats, but the rivers issuing from this system irrigate much of the cultivated land in the dry zone of the peninsula.

Tragic Zones of Famine

The north-east monsoon, which drives in from the Bay of Bengal during October, November and December, is more capricious and partial in its distribution. The district that benefits most from it is the seaboard of the Coromandel Coast from a little north of Madras to Point Calimere in Tanjore. The central and southern tablelands receive very little rainfall from this current. Moisture from the rare showers soon evaporates in the sun-baked soil. These are the "famine zones."

The Madras Presidency has a tragic record in famines. In the Guntur famine of 1832-4, 15,000 out of a population of 500,000 died. The famine of 1876-8, which lasted 22 months, is calculated to have caused the death of three and a half million. A deficient monsoon must inevitably be attended with want in the dry zones where the population depends almost entirely on the land for bread, but owing to the provisions of government actual starvation is rare at the present day. The famine relief system in Madras has been developed to an elaborate and exact science. But the greatest safeguard against distress is the improved railway system by which grain can be distributed over the affected areas. Rapid communications are vital in a land of such extremes of climate.

Where Mildew Grows in a Night

They are also a little sensational. Within a few hours you may be translated from a place where you can see the cover of a book warp visibly in the dry heat when you take it from the shelf, to a place where your boots left on the floor of the room in which you sleep become covered with mildew and green fungus, the growth of a single night.

The varied configuration of the terrain naturally implies different kinds of temperature and climate. On the high ranges, of course, the climate is that of a temperate region; but leaving altitude out of the account, the climate of southern India may be described as hot and damp and equable on the coast, and hotter, drier and not so equable in the interior. The mean annual temperature in Madras is 83° F.; in Tinnevelly, the hottest district, it is 87°.

Winds from Nature's Furnace

The presidency is spared the fierce heat of the north, but owing to the humidity of the air, 96° F. in Tinnevelly is less supportable than 116° in Lahore. And Madras has none of the compensations of the revitalising "cold weather" which converts the firepit of the north into a paradise for nearly five months of the year. Ganjam on the Orissa border is the only district that enjoys a brief cold season. Even in the dog days the wind on the actual coast is tempered with freshness, though a few miles inland the same wind blowing over a surface of

Kenneth Comyn

IN THE PADDY-FIELDS OF SOUTH INDIA; PLANTING THE YOUNG RICE SEEDLINGS SEPARATELY BY HAND

In India it is possible to cultivate crops all the year round, for so long as they are watered they can defy the fierce heat of the hot summer months. Two crops off the ground in one year is not unusual; in north India a maize crop is not infrequently followed by a wheat crop, while in south India two and sometimes three rice crops are grown. The finer varieties of rice are grown from transplanted seedlings; and as rice usually requires to stand in water during part of its growth, the fields are levelled, embanked and accordingly flooded

sun-baked rock and sand becomes as hot as a furnace blast. This wind is a true sea wind and blows from the east; the hot weather longshore wind of the Coromandel coast blows from the south; moist and steamy, it brings no relief.

Seventy per cent. of the population of southern India are engaged in agriculture, and a large part of the remaining 30 per cent. are indirectly dependent on it. Rice, millet and pulse are the staple food products. Where the water supply is sufficient nothing but rice is grown. My memories of the south are of an immense, vivid green expanse of rice fields bordered and islanded with palms, the coconut, the palmyra and, more picturesque than either, the graceful, tapering areca-nut palm. All three trees are of economic value. The Tamils have a proverb that the palmyra palm is useful in eighty different ways.

Many Uses of the Palmyra Palm

A large proportion of the population of the southern districts subsists by industries connected with it. The toddy-drawers form a considerable caste by themselves among the Telegus and Tamils, and are as active as squirrels in "shinning up" the naked trunk of the tree. Toddy is the fermented sap of the palm; it is obtained by making an incision in the bark and hanging a pot below to catch the sap as it exudes, just as resin is collected from the pine trees in the Landes. From the unfermented sap a coarse brown sugar is produced, and the fibre is the basis of the mat industry. I have never been able to discover the seventy-seven other uses of the palm.

The thought of the Madrasi at work always calls to my mind a picture of the paddy-fields, and the ryot, naked above the loins, drenched to the skin and up to his knees in mud, often with a boat-shaped umbrella on his back, but in a state of complete felicity. For here the life-giving rains do not fail. In the parched and arid Deccan it is another matter, and the cultivator with his primitive agricultural implements and ill-nourished and insufficient stock scrapes a bare subsistence from the soil only by the most arduous application. Away from the favoured rain-fed or deltaic areas cultivation is made possible by irrigation from wells and tanks. The tank is an artificial lake, and it has often all the beauty of a natural one. According to official statistics there are 75,000 tanks in Madras and Mysore, but these cannot include the thousands of reservoirs which one sees wherever there is water to be tapped, and which are sometimes no bigger than the village pond.

Sheets of Faerie Water

The scenery of southern India owes much of its beauty to the tank. Imagine a great expanse of water covered with pink and purple lotus flowers, haunted by innumerable aquatic fowl, and encompassed by wide stretches of swampy ground frequented by snipe. In the background rise gaunt and splintered hills, a chaos of rose-coloured loam and rock that bevels off into the lemon-green of the plain, while behind them tower the thickly-forested ranges of the Eastern Ghats that extend far west into the Central Provinces. Above the lake soar grey gulls and great fish eagles with brown plumage and white heads, and if it is near sunset legions of grey homing paddy birds pass overhead to the tamarind trees by the embankment and burden their boughs with a weight as it were of snow.

Ingenious Irrigation Wells

But these lakes, or tanks, become rarer and smaller as one recedes from the coast. Cultivation is sparse and depends on wells. The Persian well with its patient bullocks walking round in a circle, or up and down an earthen ramp, is a familiar sight all over India; the picota, a sort of seesaw with a bucket attached, suspended over the well and set in motion by the ryots walking from one end to the other of

the tilting beam, belongs more peculiarly to Madras. In the drier districts of the interior not more than 2 per cent. of the total area is irrigated. Such is Bellary with its vast expanses of treeless, dreary black cotton soil—the cotton, happily, thrives without irrigation; and such, or only slightly more favoured, is the whole of the granitic calcareous region of the Deccan, or the southern central tableland, undulating uplands of red, or grey, or brown soil, broken by long ridges of equally barren and almost treeless hills.

Country of Stone-Strewn Hills

It is a picturesque country owing to the colour and chaotic confusion of the vast masses of stone split into enormous boulders which cling to the parent stock, or lie tossed about at the foot of the hills in fantastic disorder. It extends for hundreds of miles into Bombay and the Central Provinces.

Cotton and various oil seeds and sugar-cane are the most important industrial crops of the south. In the Madras Presidency they take up about 15 per cent. of the cultivated area. Tobacco is grown with well irrigation. The famous Trichinopoly cigars are made of leaf imported from Dindigul in the Madura district. But of late years Madras and Dindigul, where there is now a local factory, have quickened competition by the manufacture of cigars wrapped with the milder leaf grown in Java and Sumatra.

Coffee and Tea Plantations

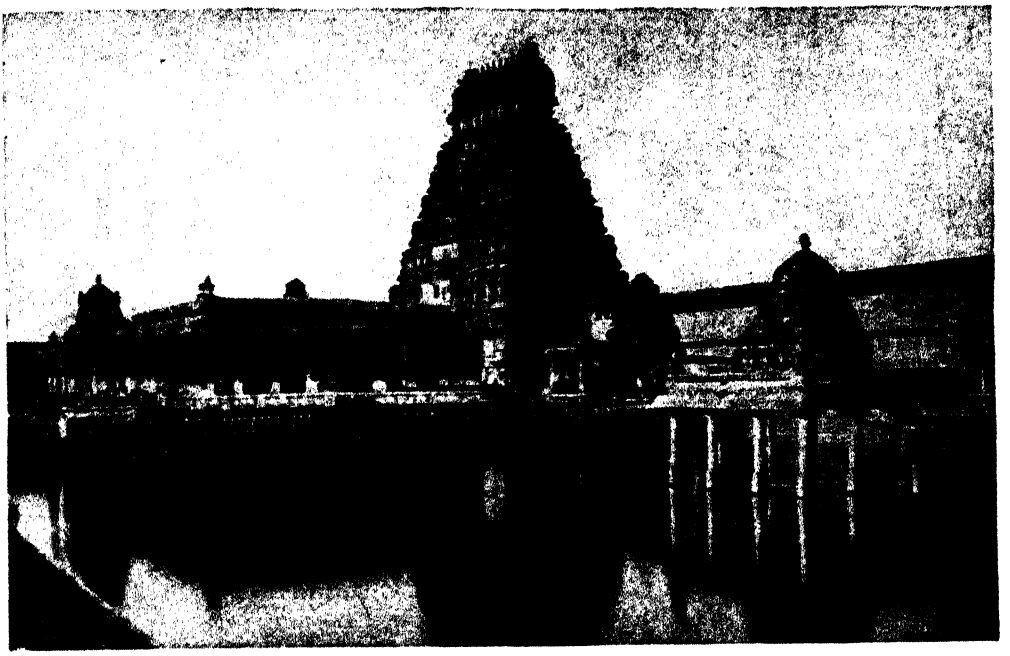
Fortunes are no longer made in coffee. Leaf disease and the borer insect have spread havoc in the plantations, and the competition of the overstocked Brazil markets have hit the planters hard. Still, there is a livelihood in coffee-planting, and it is a pleasant life whether in Coorg or Mysore or the Nilgiris. Tea cultivation has increased with the decline of coffee; the largest and most compact tea districts are in Travancore. The tea and coffee estates are almost entirely in the hands of Europeans. The planter is enviable in that his work lies in the hills, where in addition to the advantages of climate and scenery he may enjoy extraordinarily good sport.

With the exception of the Nepal Terai the forest-clad hills of southern India and the jungle tracts at their foot afford the best hunting in the peninsula. Elephants, which are numerous, are preserved. In Malabar they are caught in pits by the forest department; in other districts they are driven into keddahs and, when caught, trained for transport, timber-dragging and ceremonial processions in the temples and at the courts of rajas. Tiger, bison, bear, sambhur and other kinds of deer are found in most districts where there is thick jungle; and the "black buck" and ravine deer in the plains to the southernmost limits of the Deccan.

Rare Beasts of Hill and Jungle

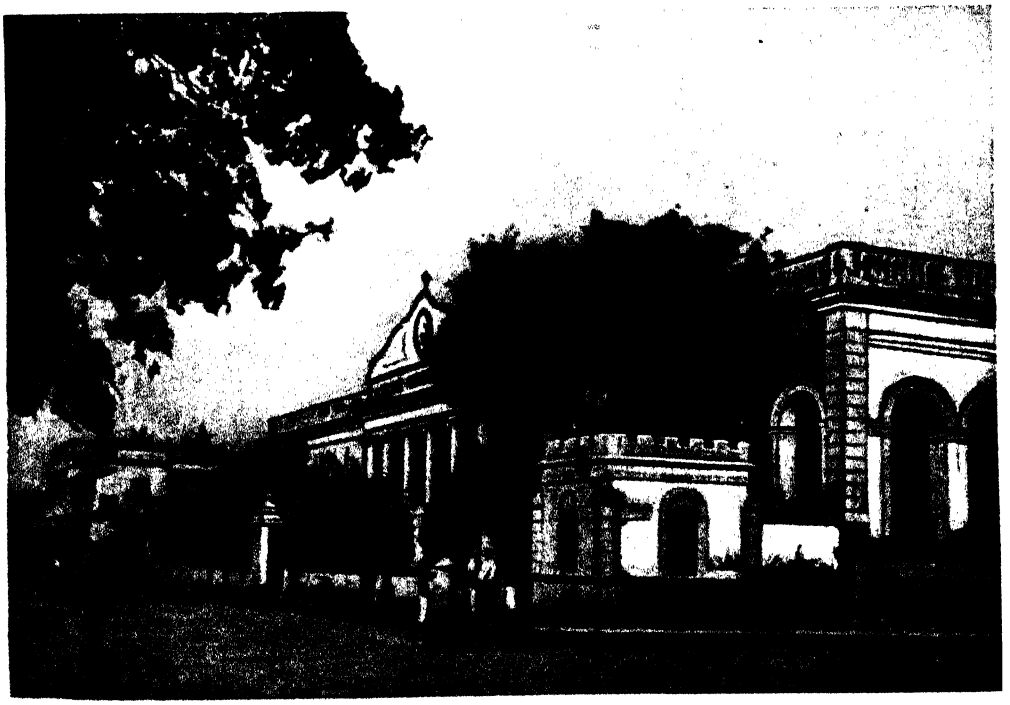
The tiger, though abundant in Travancore and many other districts, is not so ubiquitous as it was, and one hears no longer, as in the old days, of it being shot in the neighbourhood of the Ootacamund Club. Among rarer animals are the Nilgiri ibex, only found on these hills, and the hunting leopard, or cheetah, believed to be descended from tame ones which belonged to Tippoo Sahib. They are easily tamed and trained to hunt antelope. The buffalo is almost extinct and is only found in the jungles of the Jeypore Agency.

In spite of the legendary discovery of the Koh-i-Nur and the Pitt (or Royal) diamond in the Madras Presidency the diamond bearing vein seems to be exhausted. The richest gold-fields in India are in the Kolar district of Mysore. In the Madras Presidency, save in a single shaft sunk in North Arcot adjoining the Kolar gold-fields in the Mysore State, gold-mining operations have not met with success; nor have the iron or coal deposits proved commercially profitable. Manganese is the chief mineral export of the south. Immense quantities of ore are obtainable in the Vizagapatam district and



SCULPTURED SPLENDOUR OF LITTLE CONJEEVERAM'S ARCHITECTURE

The town of Conjeeveram is one of the most ancient settlements in India and ranks among India's seven sacred cities. Numerous temples are scattered in and around this Benares of south India, and at Little Conjeeveram are the magnificent structures seen above, the pyramidal gopuram, or gate tower, and part of the Hall of Pillars which contains a forest of profusely carved columns



COLONIAL COLLEGE IN THE FRENCH TOWN OF PONDICHERRY

Pondicherry is the chief of the French settlements in India and the capital, Pondicherry, is the centre of administration. The town is divided into two parts by a canal; one portion is called the Ville Blanche and the other the Ville Noire, the former with a European appearance derived from its tree-lined boulevards. There are five cotton mills in the town and oil seeds are the chief export

Mysore, and there has been a rapid development of mining and quarrying during the last few years.

But the most profitable mineral product of southern India is salt, the manufacture and sale of which is a government monopoly and forms the most considerable source of income after the land assessment. The salt pans, in which the salt is evaporated from sea water, are distributed along the margin of the east coast.

Fish for Manure and Cattle-food

Saltpetre is manufactured under licence from the salt department, which also supplies salt to the fish-curers and is in control of the industry, which is of growing importance. The fish salted for the market is mostly for native consumption. The exports are few—pearls, not a very thriving or regular industry, and such picturesque items as sharks' fins and trepangs, or sea-cucumber (bêche-de-mer), which are shipped to China and the Straits Settlements. The sacred conch shells of the Hindu temples, more often heard than seen by the white man in India, are gathered by divers from the sand of the sea bottom off the pearl banks of Tuticorin. Fish-meal, which is favoured by cattle-breeders and poultry-farmers, is a new industry. It is prepared at Tanur. Sardines are sold both for food and manure.

Riding the Surf off Coromandel

On the west coast in the fishing season—not in the monsoon, that is to say—one may see fleets of outrigged sailing boats, most of them from Bombay. On the east coast the commonest craft is the curious catamaran, a primitive contraption of two logs lashed together. The catamaran is uncapsizable in the sense that it does not matter if it capsizes. The boatman rides his craft through the surf as a jockey a steeplechaser over stiff country; boat and man often part company, then one sees two black dots in the white breakers instead of one. But they soon join; in a moment the navigator, who is as much at home in the waves as a porpoise, is on top again and ready for another fall. No one will deny hardiness to "the soft southerner" who has seen a Madrasi fisherman navigate a catamaran.

The mountain scenery of the Malabar coast is a relief to the eye after the monotonous level sands and rice-fields of the Coromandel. The east coast, since it was the centre of the earliest civilizations, is more interesting for its human and historic associations and for its prodigies of architecture, the colossal Stone Bull of Tanjore, for instance, or Tirumala Naik's palace at Madura, or the temple of Rameswaram with its immense corridors, 4,000 feet in length, their flat roofs upheld by square pillars with the heads of grinning monsters for brackets, the holiest place in India after Benares and Puri. But it is in the temples of Tanjore, Srirangam and Madura that one finds the most perfect examples of the Dravidian style of architecture.

Immense Dravidian Temples

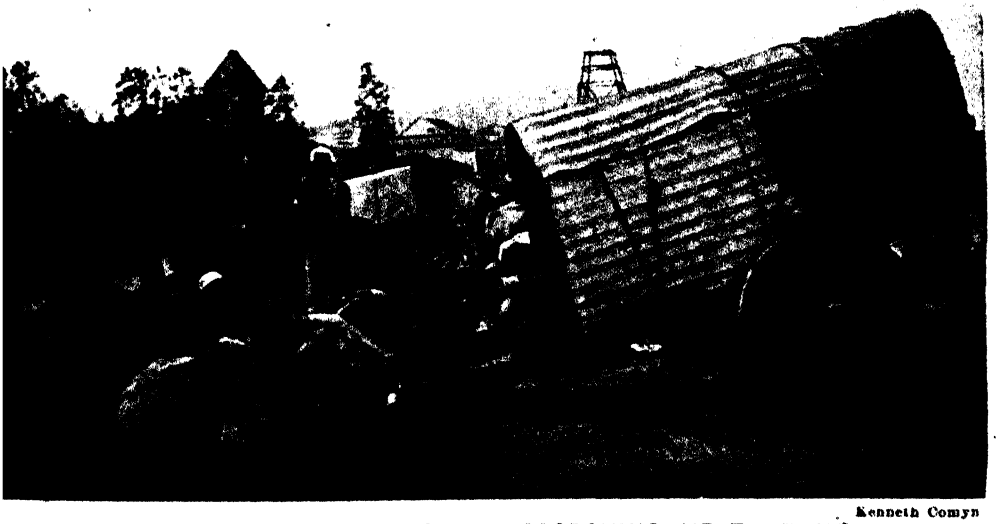
These shrines are immensely impressive by virtue of their size and originality and the complicated grotesqueness of their elaborate ornamentation, though a little monotonous and fatiguing to the spirit for the same reason. Their most distinctive features are the gopurams, or great gateways surmounted by a huge storeyed structure with sides sloping to a narrow ridge, pyramid-wise. These great towered porticoes form the entrances to the high-walled quadrangles, and are repeated in the walls of each enclosure, diminishing in size as one approaches the innermost shrine. Thus the outer wall of the temple of Vishnu at Srirangam, a few miles from Trichinopoly, is 2,475 by 2,880 feet and 40 feet high.

The holy of holies is the smallest and least ornamented feature of the shrine. At Madura in the court round the central enclosure is the famous Hall of a Thousand Pillars, granite monoliths 18 feet high. The real temple lies

T. A. Herbert

WHEELWRIGHT'S SHOP IN A TINY VILLAGE OF MYSORE

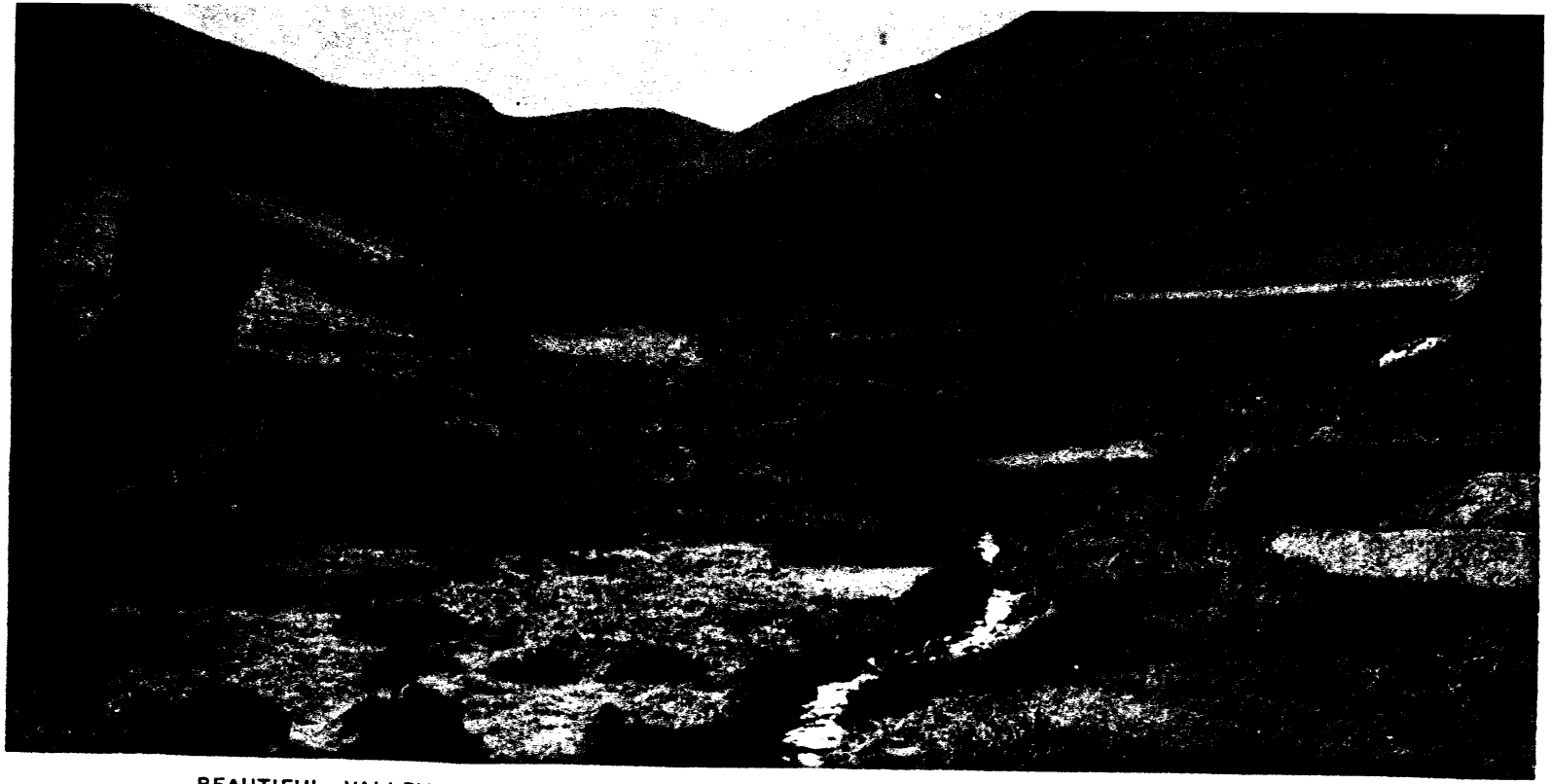
This is one of the many small villages which lie off the main roads in Mysore. It is situated about ten miles from Bangalore, is not much larger than what is seen in the photograph and contains no temple—a rare occurrence even among the poorest community. The wheelwright is assured of a certain amount of custom even though he set up his business in a remote village



Kenneth Comyn

WELL-EARNED REST DURING THE SCORCHING HEAT AT MID-DAY

From March to May there is a period of continuous increase in temperature throughout India, during which temperatures exceeding 100° F. occur in the Deccan. While this period of intense heat lasts Europeans and natives alike seek shelter from the sun until the comparative coolness of the evening. Bullocks are the chief draught animals in India, and in the south many carts have solid wooden wheels



E. N. A

BEAUTIFUL VALLEY OF THE NILGIRI HILLS NEAR COONOOR IN THE MADRAS PRESIDENCY

Called the Blue Mountains because of the haze that overhangs the summits when seen from the plains, the Nilgiri Hills, with their open grassy slopes separated by forested glades, are a hot-weather resort for Europeans with many sanatoria such as Coonoor and Ootacamund. Coffee cultivation was introduced in the nineteenth century and the Ochterlony valley and Wynood tableland, which were once entirely forest-clad, are now studded with coffee and tea plantations, while cinchona, jalop and ipecacuanha are grown upon numerous estates. The hills are at the junction of the Eastern and Western Ghats

within. The penetralia of Madura, Srirangam and other Hindu shrines, are closed to Europeans; indeed, the holy of holies can only be entered by the officiating Brahmans, but one is allowed to approach near enough to catch a glimpse of the dim twinkling lights of the altar, which are the more mysterious for the shadowy darkness of the vast corridors that enshroud them. The jewels of Srirangam and other temples are sometimes exhibited for a fee. They are of fabulous value, but being uncut they are lustreless and ineffective. The Tanjore shrine, which is believed to date from the sixteenth century, is the oldest temple of the south. Very few of the others can vie in antiquity with English cathedrals. Most of them date from the sixteenth or seventeenth century, though there is no doubt that earlier temples have stood on their sites from time immemorial, parts of which may still exist in the superimposed structure.

Madras's Artificial Harbour

The traveller in the south of India often limits his itinerary to the temples of the Coromandel coast and misses the fascination of Malabar. Of the scenery, climate and fertility of the west coast we have spoken, and oddly enough the superiority in natural advantages of this favoured region extends to the sea. In its fisheries the Coromandel coast can not compete with Malabar. The output of the west exceeds that of the east by nearly three to one. As regards anchorage there is nothing to choose between them. Neither possesses a real port. It is an astonishing fact that the Madras Presidency in the whole length of its 1,700 miles of coast can not boast of a single natural harbour which will admit ocean-going ships. Madras alone, through which half the sea-borne trade of the south passes, possesses an artificial harbour. This consists of two masonry breakwaters converging to a narrow entrance of 500 feet. At all the other ports on the coast ships have to lie up in open roadsteads two or three miles out at sea and discharge their cargo into light boats capable of negotiating the surf. On the west coast during the monsoon maritime trade is often entirely suspended. Many of the historic roadsteads on the east coast have been, or are becoming, silted up owing to the copious discharge of alluvium from the estuaries.

Coast and Lagoons of Travancore

The first belt of seaboard on the west coast, stretching north 174 miles from Cape Comorin, lies in the Travancore state, which is bounded on the east by the Western Ghats. Travancore is the largest of the native states in direct political relations with the Madras government, territories held by their rulers under treaties made with the East India Company, generally as a reward for fidelity or military service, or through an arrangement by which protection was afforded against aggression in return for a subsidy. The geographical change as one turns the corner of Cape Comorin from the arid district of Tinnevelly is most marked.

Travancore has been the theme of many eulogies and is generally described as the most fertile and picturesque area in southern India. A gauge of its fertility is the density of its population, 416 to the square mile, and 94 per cent. of these villagers. A peculiar feature of the coast is the chain of backwaters or lagoons separated from the sea by a bar of level sand from seven miles to about half a mile in width. These with their connecting canals form a water communication of 200 miles navigable for flat-bottomed boats.

Maharaja's Weight in Gold

Travancore has its own currency minted in the state mint at Trivandrum. One of the most picturesque ceremonies observed in native states is the tulabharam at Trivandrum, when the maharaja is weighed in the scale against gold coins which are minted for the purpose and distributed among the Brahmans.

Wedged in between Travancore and the Malabar district is the native state of Cochin, the second in importance of the five little principalities attached to the Madras government. In its physical aspects it resembles the surrounding districts; one reaches it by the same canals and backwaters, an unbroken avenue of mile after mile of coconut and areca palm.

Tiny, Favoured State of Coorg

The minute and hilly district of Coorg, nestling between Mysore and the Western Ghats, is remarkable in that it is ranked as a fully and separately constituted province. Provinces in India may exceed in area the territories of European Powers. Madras, for instance, with its 143,330 square miles, is 22,000 square miles larger than the British Isles, including Ireland, and larger than Italy with all its islands. Hyderabad state is more than two and a half times larger than Ireland. Coorg is barely 1,600 square miles in area. But for its excessively heavy monsoon, it is one of the most favoured spots in India. It is a highland country of exceeding beauty inhabited by a race of mysterious derivation, who have been likened by their British admirers —and they are many—to Highlanders.

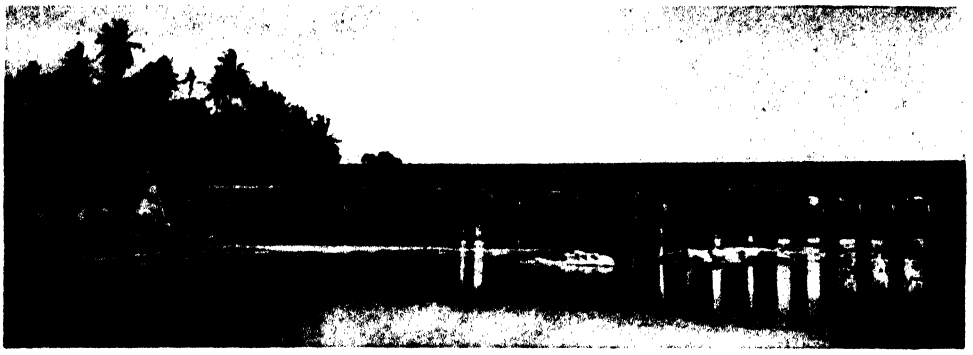
Hues of the Middle Ages

Mysore, often spoken of as "the Model State" by reason of its prosperity and excellent administration, divides itself geographically into two distinct zones of mountain and plain. In each zone its physical features are a repetition of the surrounding British districts and need no independent description. The British resident of Mysore has official relations with the government of India. Travellers who wish to see the India of the past should make a point of visiting these native principalities, where the atmosphere is still medieval. Hyderabad, actually in India Central, is the best example; at the festival of the Moharram three hundred elephants and two hundred camels, caparisoned in scarlet, and the state army, 25,000 horse and foot with the Arab irregulars—romantically irregular—file past the nizam, preceded by standards and music. But the native states of the south are scarcely less interesting.

Mysore, happier in natural scenery, is not so picturesquely medieval. The maharaja's palace has been described by a competent observer as "the most painfully inartistic building in the world." "In that edifice stained-glass windows and macaw-hued cast-iron columns are engaged in a polychromatic struggle of so frightful a character, that the eye turns almost with relief towards the heavily massed gilding. That, however, is as the sun in its mid-day power." Of such are the interiors of most maharajas' palaces from Kashmir to Travancore. But we must not forget the Mysore throne of figwood overlaid with ivory and silver and gold, engraved with the Hindu pantheon. Legend has it that it was originally the throne of the Pandus and that it has been preserved from the dawn of time.

Small and Scattered French Posts

All the French possessions in India excepting the four square miles of Chandernagore (that is to say, Pondicherry, Karikal, Yanam and Mahé) are located in the Madras Presidency. Pondicherry (115 square miles), the headquarters of the governor of French India, comprises more than half the total area. The other small, scattered settlements, to quote an eminent French traveller, form merely "a modest and honorific legacy of the magnificent heritage of Dupleix, Bussy, Mathé de la Bourdonnais and Lally-Tollendal," and their economic importance is almost nil. "If in each of these settlements," to quote the same traveller, "you count up the administrator, the druggist, the missionary, and two or three good sisters, you will obtain the total of the six or seven persons of our nationality." A most practical project was raised a short time ago by M. Anton Bonhoure, an ex-governor, for an exchange of



Kenneth Conyn

PERIAPATAM BRIDGE BETWEEN SERINGAPATAM AND MYSORE

Seringapatam is situated on an island in the Cauvery river nine miles north-east of Mysore. This substantially constructed bridge on stone uprights is the Periapatam bridge, of the Southern Indian railway, which connects the island with the south bank of the river. The Cauvery is one of the largest rivers in south India and provides the electric power, over 9,000 h.p., for the Kolar gold-fields

Karikal, Yanam, Mahé and Chandernagore in return for an enlarged Pondicherry. This excellent scheme of centralisation would have given the French in India one port and one railway system instead of the dissipated enclaves which have always been a cause of disagreement and litigation. But M. Bonhoure's plan was howled down by the Chauvinists in the French Chamber who regarded it as a national betrayal.

Official statistics enable one to speak of the population of the south and its distribution without too fanciful generalisations. Roughly 90 per cent. of the people live in villages, and 10 per cent. in towns. Neither in Madras, nor anywhere else in India, does one see isolated houses. The village is the unit, and 600 is the average village population. One hears talk of the spread of civilization and progress as an incentive to migration from the villages to towns, but, happily, the census statistics give little appreciable evidence of this tendency. The Madrasi, obedient to the call of the land, is essentially an agriculturist, and there is no danger of his becoming industrialised.

In the whole of southern India there are only four cities with a population exceeding 100,000. These are Madras, which forms the subject of a separate chapter, Bangalore, Madura and Trichinopoly. Bangalore is the seat of the government of the Mysore state, and contains the winter residence of the maharaja. The town is divided into two main quarters, the native town and the civil and military station under the control of the British resident. The cantonment, which is almost surrounded by tanks, parks and gardens, is the largest in southern India, and very attractive on account of its situation and climate. Regiments think themselves lucky to be quartered there. But Bangalore will leave but a faint impression on the traveller coming from Trichinopoly or Madura, the ancient and holy cities of the south.

Trichinopoly is famous for its rock, which one ascends by a roofed passage to the sanctuary on the summit, 273 feet above the street at its base. From the crag-perched temple one obtains a view over a vast expanse of country. The shrine of Srirangam is visible two miles away, half hidden in dense groves of palms. A mile and a half farther east is the temple of Jambukeshwar, or Siva, a smaller but more delicately elaborate shrine of the pure Dravidian type, remarkable for its grotesquely ornamented stonework. Trichinopoly is famous for many things, from its cave temples of the seventh century to its crag-perched pagodas only a century or two old. It is imperishably associated with the name of Clive. It is also famous for its cheroots and colleges, and its goldsmiths and silversmiths, whose filigree work is unequalled in the south. But Madura surpasses Trichinopoly in

holiness. It is the Tamil Benares. There is more to see in Madura than in any city in southern India. Of its temple we have spoken. Its secular buildings are equally imposing. There is the seventeenth century palace of Tirumala Naik—the hall of which is now used as a court of justice—remarkable for its vast colonnades. More remarkable is the Pudu Mandapam, known as Tirumala's Choultry, an oblong wall-less

B. N. A

ANCIENT STONE TEMPLES NEAR MAHABALIPUR IN MADRAS

These weirdly carved monolithic temples, known as Raths, are the works of the Pallava kings and reputed to date from A.D. 650-700. The figure of the elephant, like the temples, is carved out of the solid rock, and behind it is the Rath of Nakula, carved after the model of a "chaitya" or Buddhist chapel, with a porch supported by two pillars in front of a cell at the north end

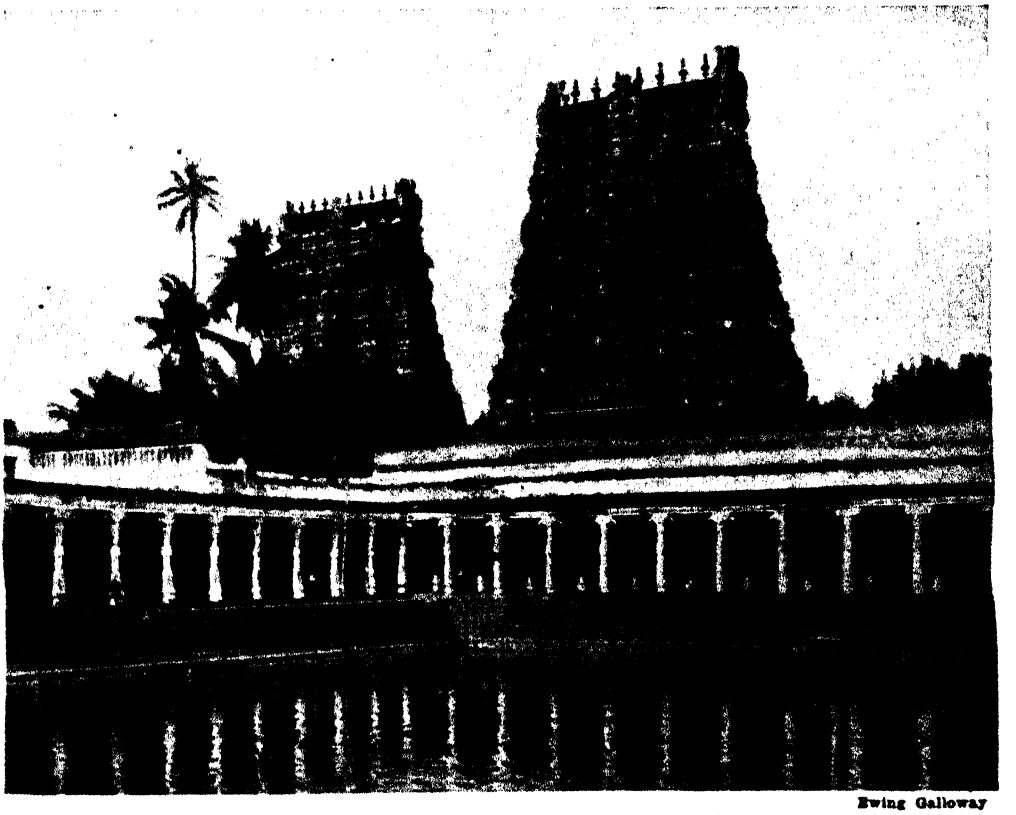
structure, 333 feet long, its flat roof supported by four rows of columns of stone on which are sculptured figures of rearing horses and fabulous monsters. It is the grandest mandapam in India. In fact, everything in Madura is on the grand scale. The Teppakulam, or tank, with the island temple, is immense—a perfect square measuring 1,200 feet each way with parapeted granite walls beneath which runs a continuous paved gallery. On festivals the temple in the centre of the tank is lighted by 100,000 wicks. Near the tank is the historic banyan tree, also immense. The main trunk is 70 feet in girth, and its branches and aerial shoots cover a rough circle, in diameter about 100 yards. Even holy Madura has its industrial side, old and new. It is famous for its weavers whose fine cotton silk cloth is unmatched in Europe. Close by the quiet alleys inhabited by this ancient guild, and the fabricators of brass lizards, cobras and frogs, are the steam cotton-spinning mills which absorb and emit daily their industrialised thousands. Happily the old style is in no danger from the new.

Occidentalism, it has been said, has taken a firmer hold of Madras than elsewhere. If this were true in more than a very partial sense, the charm of the people of the south would be lost. But fortunately it is only true in the sense that the classes which have received a Western education are more really educated and quicker in assimilating Western thought and customs than the college-bred intelligentsia of other parts of India. This superficial leavening is likely to give the casual traveller

Mrs. Lyndo

SMALL TODA VILLAGE IN THE MIDST OF THE NILGIRI HILLS

Sprinkled over the Nilgiri Hills are the small hamlets or mands of the Todas, which usually consist of about six huts of an oval shape built of bent bamboos laid close together and fastened with rattans, the hive-shaped roof being thatched. The Todas are pastoralists and each mand has its own simple dairy some little distance away from the dwelling huts



Ewing Galloway

"TANK OF THE GOLDEN LILIES" IN THE GREAT TEMPLE AT MADURA

This vast temple forms a parallelogram about 847 feet by 729 feet, and is surrounded by 9 gopurams or gates, the largest being 152 feet high. These ornate pyramids are embellished with row upon row of carvings of gods, goddesses, peacocks, bulls, elephants and an intricate mass of symbolical ornamentation all coloured and gilded, the whole being surmounted by a stone trisul

a false impression of the people as a whole. For the conservative forces of India are nowhere stronger than in the south. The Brahman of Madras is much more a Brahman than the Brahman of the north. The best place to study Brahmanism as it has existed intact with all its minutiae of ritual since the days of Manu is some backwater of "the benighted Presidency."

And side by side with the most ancient of existing civilizations—or perhaps we ought not to say "side by side," but "adjacent," for the Brahman still exacts the prescribed distance from "the untouchable"—there are 450 distinct communities included in the census report, representing every grade and condition between the primitive and evolved. And each of these communities is split up into sections, and again into sub-sections, whose members may not intermarry or even eat with one another; for the high-caste Hindu is jealous of his inhibitions, and proud of the number of things which his religion does not permit him to do. There are sub-castes of Brahmans who may not eat mushrooms, but whose wives may, and doubtless sub-castes in which the husbands may eat mushrooms and the wives may not. At the other end of the scale there are jungle-folk and gypsies who will eat anything—lizards, snakes, crows and rats. The mere catalogue of the castes and sub-castes of the Hindus, and of the primitive tribes of animists, and their languages, laws and customs, would fill volumes. It is a fascinating study. But enough has been said to show that southern India is as inexhaustible in its diversity of appeal to the student of ethnology, folklore, philosophy and religion as it is to the naturalist, sportsman and lover of natural beauty.

INDIA SOUTHERN: GEOGRAPHICAL SUMMARY

Natural Divisions. The major portion of peninsular India; a plateau with scarped edges along the Malabar Coast on the west—the Western Ghats, and along the Coromandel Coast on the east—the Eastern Ghats; the coastal sill on the west is narrow and lagoon-fringed, on the east it is wider with extensive deltaic areas at the river mouths.

Climate and Vegetation. The climate is a compound of three elements—the low latitude, the varying elevation of the land, and the S.W. monsoon wind, which blows from May to October. The low latitudes imply great heat and slight variations of temperature; the monsoon wind brings heavy rains on the seaward, windward slopes and hence heavy clouds and less variations in temperature; the interior highlands are less rainy, less cloudy and less hot, with the greatest temperature variations. The vegetation varies with the rainfall, from tropical jungle on the rainy lowlands, through park-like savannas or downs on the drier plateaux, to barren and stony semi-desert where the rainfall is slight.

Irrigation. Regulated supplies of water are essential to the dense village population, mainly because the rains are periodic in season and in intensity. Rivers are dammed, tanks are constructed and kept filled, and wells and more primitive water engines are in steady use. Famine is an ever-present danger when the monsoon fails or is weak and the storage supply becomes inadequate; one of the famine preventatives is the railway system for the rapid distribution of grain. The water supply system compels the occupation of alluvial lowlands, and copious rainfall means flooded rivers and the drowning of many villages and villagers.

Products. Rice and other native food grains for home consumption. Relatively smaller quantities of wheat, cotton, oilseeds, sugar-cane, tobacco, coffee, tea, coconuts and plantation rubber. Salt. Manganese, gold, diamonds. Fish for local supplies.

Communications. Madras has an artificial harbour; other calling-places for ships are mere roadsteads with surf boats. Railway communication, including a short ferry, is maintained with Ceylon; other railways radiate from Madras, serve the Malabar Coast, and make connexions with Bombay and Calcutta.

Outlook. With little interest in the sea and seafaring, self-contained communities have worked out their own localised existence and provide little for the rest of the world. Southern India is not greatly exploited by foreigners. The main function of the extraneous unifying government is the provision of those organized means of ameliorating social conditions and relieving distress which are imperative when the giant forces of nature add to life's burdens. A prudent and paternal power behind the scenes organizes a uniformity of existence which will make for continued growth and progress.

INDO-CHINA

France's Empire in the East

by Robert Machray

World Traveller and Writer on Foreign Affairs

Illustrated, except in pages 2265, 2268 and 2273, with photographs by John Bushby

VOYAGING on the tumbling South China Sea from Hong-Kong, Canton, Shanghai or more northerly Chinese ports, the traveller, as soon as his steamer reaches some harbour of Indo-China, is suddenly yet intensely conscious of an atmosphere curiously different from that which he left behind him.

If the vessel is French, as in the circumstances is likely enough, he will have been aware of the change the moment he has stepped on board. If the ship is British, he may, perhaps on his way to Tong-king, have stopped for a while at Kwangchow Wan, in the far south of the Chinese province of Kwangtung, and have become sensible of that unmistakable difference. The reason is a very simple one—he has come into the sphere of France.

Everywhere, at all points possible, in her now great overseas empire France establishes herself as peculiarly and solidly nationalistic far more than does any other imperial power, not excluding even Great Britain. The traveller cannot but note this at Kwangchow Wan—a town situated in China, but leased to France for a quarter of a century; he will remark it in its streets laid out after the French manner, in its speech, culture, habits and general tone. Kwangchow Wan may truthfully be called France's Northern Gate into Indo-China, and it is typically French.

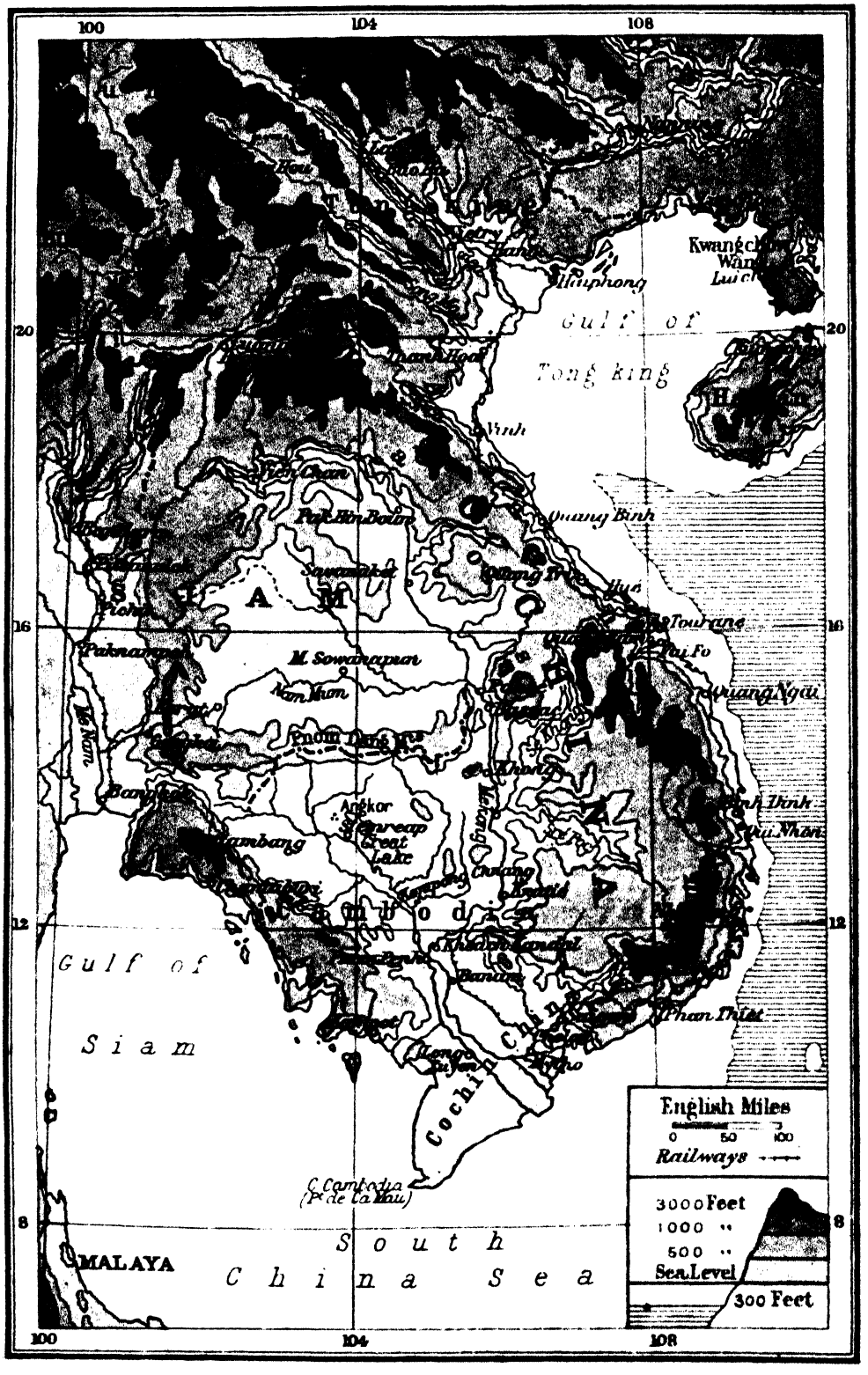
Unit Political and Ethnological

He will find this even more strikingly demonstrated when he is in Haiphong or Hanoï, in Tong-king; in Hué or Tourane, in Annam; or Saigon, in Cochin China. True, the Far East is with him still, but it is the Far East that belongs to France, which has imprinted on it a distinctively French character. And this it is which makes Indo-China a unit—a political unit, helped out by the fact that the vast bulk of its population is of the Annamese race, and that climatically this whole region is in most of its features very much alike.

Mountains Like a Giant Hand

For the sake of clearness it would perhaps be better to denominate this stretch of territory as French Indo-China, for Indo-China, as a geographical term, covers not only this area, but also Siam and Burma, with some extension even into Malaya, all of it being sometimes styled, though not altogether correctly, the Annamese Peninsula. Attention in this chapter is fixed on French Indo-China—"L'Indo-Chine"—Siam and Burma being described separately in this work. Yet in considering French Indo-China it has to be borne in mind that its configuration, or physical characteristics, are in the main the same as those of the rest of the peninsula.

Indo-China, like China and India, has as its essential hinterland the vast mountain masses of Tibet, which have often been called the Backbone of Asia. It is not altogether fanciful to think that a better simile may be found in comparing this tremendous region of lofty mountains and elevated plateaux to a gigantic hand, its palm spread downwards, from which stretch south, east and west broad, enormous fingers, in the shape of continuous mountain ridges, between each of which huge rivers, from their sources in the clouds, roll down to the Pacific and Indian Oceans, carrying with



FIVE-FOLD DIVISION OF FRENCH INDO-CHINA

them, in their age-old courses, quantities of silt and mud to form richly fertile deltas as they approach the sea.

From south-eastern Tibet three lines of mountains can be discerned: that on the east runs through Annam, and is divided from the central ridge by the gorges of the Mekong, while on the west the gorges of the Salween constitute the farther boundary of Burma. Smaller but very important rivers in this area are the Menam, which flows through Siam, and the Red river, or Hong-Kiang of which Tong-king is the basin.

" monsoon " is derived from the Arabic term for " seasons " or " seasonal."

Looked at in this broad way, French Indo-China is not a unit climatically, though it is so politically. It is the military strength of France, first exercised in the peninsula as long ago as 1787, and the genius of her administrators that have given to her this magnificent addition to her empire.

How magnificent an addition it is becomes evident from its mere size. In area it is upwards of 250,000 square miles, or about a fifth as large again as

STRAIT THOROUGHFARE IN HAIPHONG, THE PORT OF TONG-KING

Haiphong, a busy commercial centre, stands on the right bank of the Kua-Kam, a tributary of the Song-ka, 22 miles from the sea. There is a fine harbour with ship-building yards and extensive repair shops. Cotton-milling is the chief industry, but there are also cement and soap factories, distilleries and tanneries. Electric lighting and power stations have been erected

The climate of Indo-China as a whole depends on altitude and varies from that of the relatively cool highlands to that of the tropical lowlands and deltas, with an intermediate range of temperature in the densely forested regions lying in between the northern and the southern parts of the country. Making due allowance for this variation, the climate of the peninsula may be said to be regular. This is emphasised by another climatic characteristic common to a large portion of Indo-China in the prevalence of the monsoons, which regulate the seasons. Indeed, the word

France, and its population is about 20,000,000. It was no barren, uninhabited or sparsely settled country when the French first set eyes on it; on the contrary, it had long been the scene of man's daily struggle for subsistence and the home of arts, crafts and industries for very many centuries. It was, in fact, highly civilized on the Oriental pattern, and the extent and grandeur of its ancient ruins made manifest that earlier it had been the theatre in which powerful kingdoms and even empires had played a great part. Its boundaries suggest the racial,

ONE OF THE LEAFY LANES IN THE SUBURBS ADJOINING HUE

Hanging up on both sides of the road are the long black tunics worn by the Annamese, who represent four-fifths of the total population of Indo-China. Hué is surrounded by a cordon of villages situated in the midst of flat, alluvial land, well watered by streams and canals and largely given up to the cultivation of rice. The procession above is bearing wedding presents to the bride

WILD WATER-BUFFALOES TAMED FOR THE PLOUGH

Water-buffaloes, which are found wild in Laos, have been domesticated in the agricultural districts, and the zebu bull is used for transport purposes. Large tracts of the upland country of Indo-China offer favourable conditions for stock-breeding, especially in the plateaux and certain provinces of Annam, but attempts to acclimatise Arab horses, and sheep from Aden, have been unsuccessful

political, religious and other influences that have moulded it and still mould it, notwithstanding France; these influences had come from India on the west and from China on the east—hence the name of the country. If the wonderful philosophy and venerable civilization of China have set their seal on Indo-China, the most distinctive of the religions of India—Buddhism—has also had a marked effect upon it.

It has often been a matter of comment that in its shape Indo-China—that is, French Indo-China—resembles a capital S, with much thickened top and bottom. This in a way is interesting, but it would possess little significance were it not the case that the thick top, the rather slender curve, and the thick bottom of the S may serve to indicate the three economic divisions of the country. A glance at the map will show that the thick top of the S is formed by Tong-king, the curved body of the letter by Annam and Laos, and the thick bottom by the states of Cochin China and Cambodia.

Land and Water Boundaries

Indo-China consists of these five states, as they may be termed, together with the leased territory of Kwangchow Wan, in China, already referred to. The Battambang district, ceded by Siam in 1907, is now part of Cambodia. The boundaries of Indo-China are as follows: On the north is China and on the east the South China Sea; on the west lie Siam and Burma, through which India had penetrated into the land, and on the south is the South China Sea again and the Gulf of Siam.

Of the five states Cochin China enjoys the full rights of a French colony, and is represented in the French chamber by a deputy. The other states are protectorates and, except Tong-king, have native kings, subordinate, of course, to France, like the Bey of Tunis. The point to notice before leaving the capital S of the preceding paragraph is that one economic division of the country—that corresponding to the thick top of the letter—is tributary to Haiphong; the next, corresponding with the curve, is tributary to Tourane; and the third, corresponding to the thick bottom, is tributary to Saigon—the places mentioned being the chief ports of Tong-king, Annam-Laos and Cochin China-Cambodia respectively. Of the three ports Haiphong and Saigon are much more important than Tourane, for behind them lies far more valuable territory, the best in the country. The reason is to be found in the configuration of French Indo-China.

Rivers Laden with Silt

That configuration is made by two rivers and the mountain range, or rather ranges, between them. On the north is the Red river, or Hong-Kiang, whose rich basin and delta are virtually Tong-king. On the west and south are the basin and delta of the Mekong, not perhaps so rich as those of the Red river, but rich enough, and they form Cambodia and Cochin China. These rivers, of which the lower Mekong is roughly 2,800 miles in length, come down, swift and heavy with silt, through the northern regions of forested highlands, and make the lowlands and deltas of the greatest value to man.

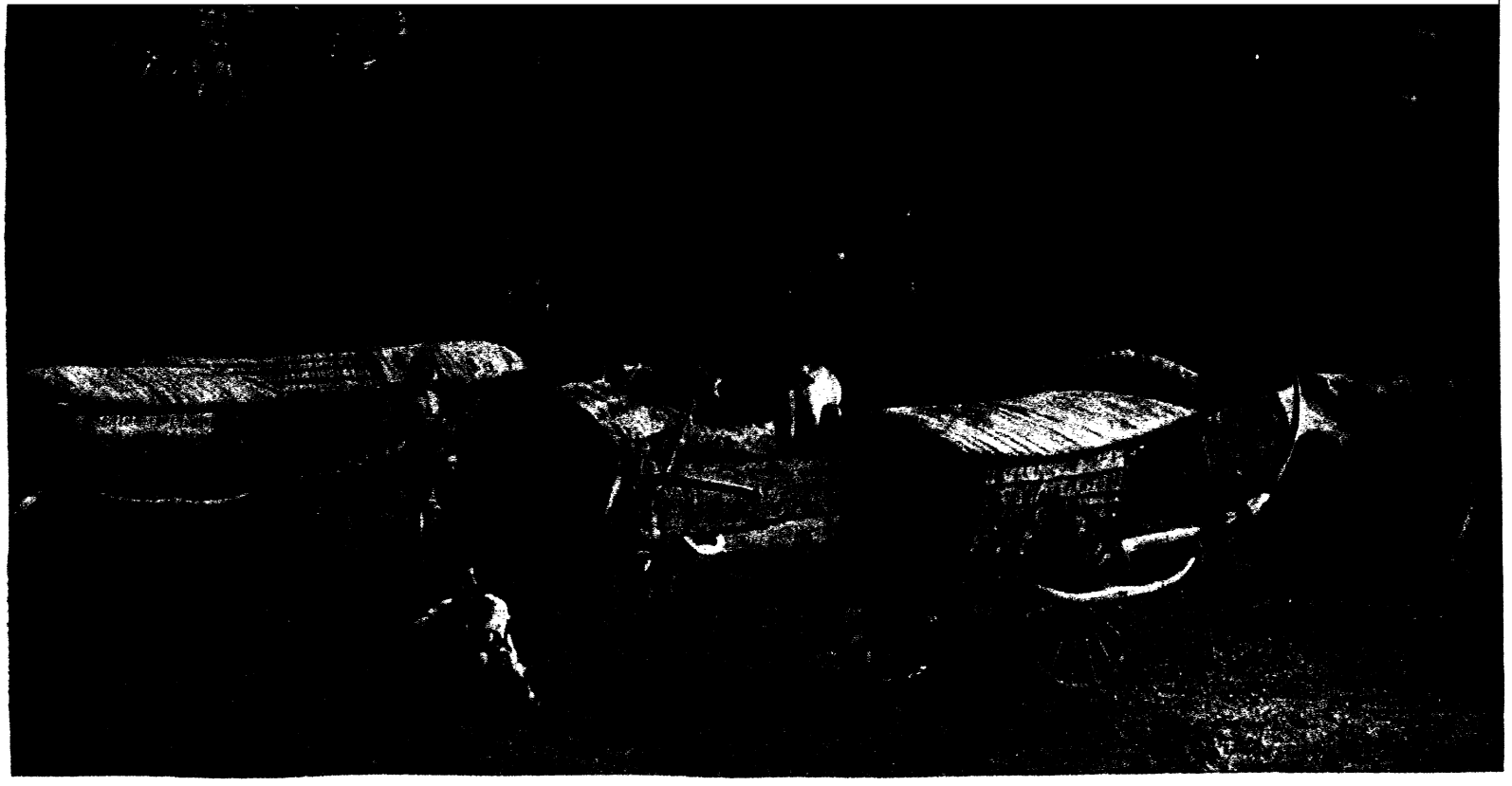
The Mekong constitutes the western boundary of Laos, but has not the same significance for that state as for Cambodia and Cochin China lower down. Annam has no large river. It is a land of mountains and fairly high plateaux, with narrow coastal plains, and Tourane is a comparatively small port; nor is Hué, the capital of the state, and lying along the shore 50 miles to the north, any better; but they serve for the relatively poor area tributary to them.

Renewal of the Fertile Soil

Doubtless long before the dawn of history the fertile lowlands and deltas of Tong-king and Cochin China-Cambodia, which had been created by the two rivers, were peopled by human

MARKET SELLERS AT THEIR BOOTHS WITH MAT SCREENS BY THE WAYSIDE AT HAIPHONG

In Tong-king, which became a French protectorate in 1883-5, the Song-ka delta is a thickly-populated district with several towns and innumerable large villages. Besides Hanoi and its port Haiphong there is Nam-dinh, a town in the southern part of the delta on the railway from Hanoi to Hué and Tourane, which is a flourishing city of about 50,000 inhabitants with a brisk trade in cotton and silks. In Tong-king the principal towns are connected by carriage-roads, though in the mountainous districts rough tracks and bridle-paths are the only means of communication



QUAINTLY SHAPED AND CONSTRUCTED NATIVE CARTS OUTSIDE A VILLAGE IN CAMBODIA

These carts have the body and roof constructed of tightly-woven grass, giving additional lightness over the rough roads, which are not of the best as the thick mud on the wheels testifies, though the highway from Pnom Penh, the capital of Cambodia, to Sisophon is suitable for motor traffic. The numerous rivers and canals are the chief obstacles to road-making, but these are being surmounted by temporary wooden bridges or permanent structures of reinforced concrete. Ox-carts as well as pack-animals are largely used for transport. The chief products of the country are rice, tobacco, pepper, coffee and indigo

LOW-ROOFED NATIVE DWELLING EMBOWERED AMID FEATHERY PALMS IN COCHIN CHINA

Cochin China mainly consists of a vast and rapidly-increasing alluvial plain formed by the deltas of the Mekong, the Don-nai, the Saigon and the Great and Little Vaico, all of which are connected by canals. Under the French much has been done to regularise and extend production by irrigation, and drainage schemes destined to combat droughts and floods. The land is divided up into very small holdings, and the natives cling to the methods and implements of their forefathers, but the value of modern scientific cultivation is being realized, especially as regards sericulture

beings. For nature had given them a soil—the sediment, mostly siliceous clay, carried down from the far highlands—which was eminently suitable for agriculture. More than that, it was a soil that could never be exhausted, for it was being continually renewed and deepened by the recurring floods.

This is constantly exemplified in the case of the Great Lake, known as Bien Hoa, in Cambodia, which overflows into the surrounding marshes and lands with each rainy season and refertilises the district. It is impossible to exaggerate the importance of this perpetual renewal of the soil.

And the primitive settlers, it may be said, found not only a rich soil but a climate on which they could rely. As already indicated, the climate of French Indo-China is much the same as that of the rest of the peninsula—cool in the highlands and tropically hot and damp in the lowlands and deltas. The monsoon winds, the characteristic feature of which is the regular summer rains, have their effect, but there are some local differences.

Hot Summers and Typhoons

Tong-king has an exceedingly hot summer, with the thermometer ranging up to 100° F. by day and going not much lower by night, but it has a cool winter, extending from October to May, with the glass down occasionally to 50°.

Cochin China and Cambodia are not so scorching in summer, the temperature ranging up to about 85°, and there are daily rains. Their winter or dry season extends from mid-October to mid-April, with the glass up to 80° by day and down to 68° or so at night. Annam has a less regular climate: August and July are dry and very hot, but heavy rains fall in September and the temperature decreases. To those unaccustomed to hot, moist tropical regions the climate of Indo-China, away from the highlands, is apt to be very trying. The typhoon, when it rages, is more than trying to everybody. But taken "by and large," Indo-China has a climate that encourages the production of crops. And of these crops the greatest of all is rice. Just as in the prairie provinces of Canada wheat is the king of cereals, so is rice in all the hot, moist tropical lands where it can be grown. It is the chief export of the country, and forms about 70 per cent. of the total exports. About 8,000,000 acres are devoted to its culture, Cambodia and Cochin China having the largest acreage and Tong-king the next, while Annam and Laos have a very much smaller acreage. An immense quantity of the exported rice goes to Hong-Kong and China. But the country has many other products, some of which are exported, including cotton, silk, pepper, sugar, cinnamon, rubber, timber (teak from Laos), tobacco, coffee and tea

Exploitation of the Fisheries

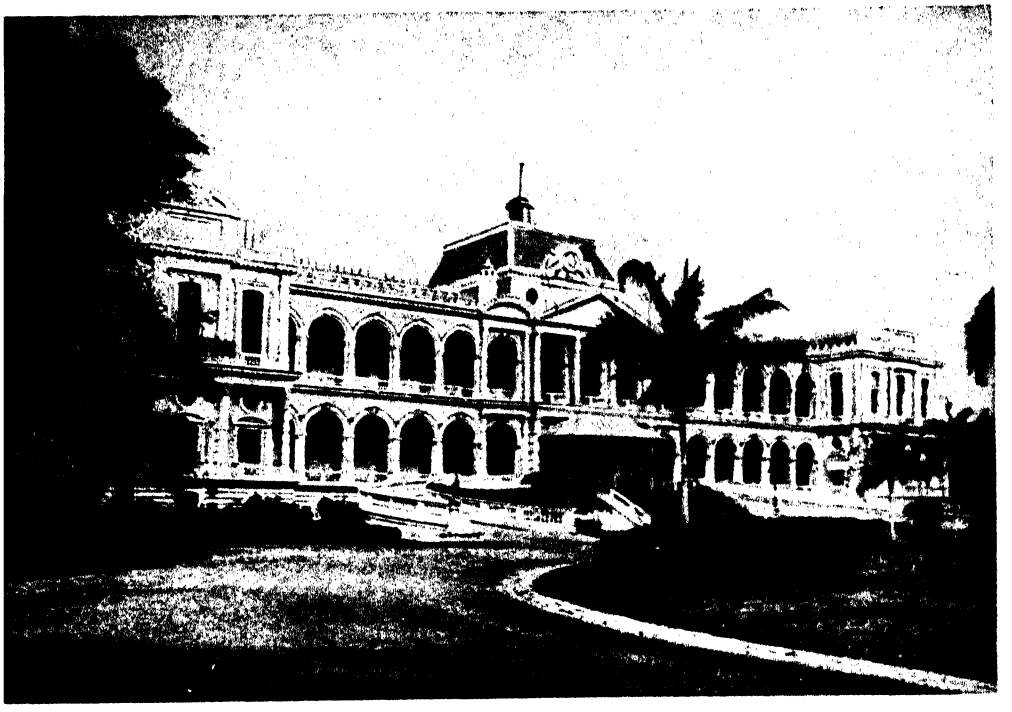
The total exports are worth about twenty-four millions sterling a year, and as the total imports come to about two millions less, Indo-China has the great economic advantage of possessing what is known as a "trade balance." These statistics suggest how great an asset France has in this part of her empire.

But it is not products that alone tell the tale. As might be expected, Indo-China, under French rule, has developed new or increased old industries.

First among these are the fisheries. Not only the surrounding seas but the rivers and lakes abound in fish, most of them suitable for salting and smoking. A distinguishing feature of Cambodia is the huge fish industry connected with the Great Lake or Bien-Hoa. Thousands of tons of fish are sent from this district into China annually.

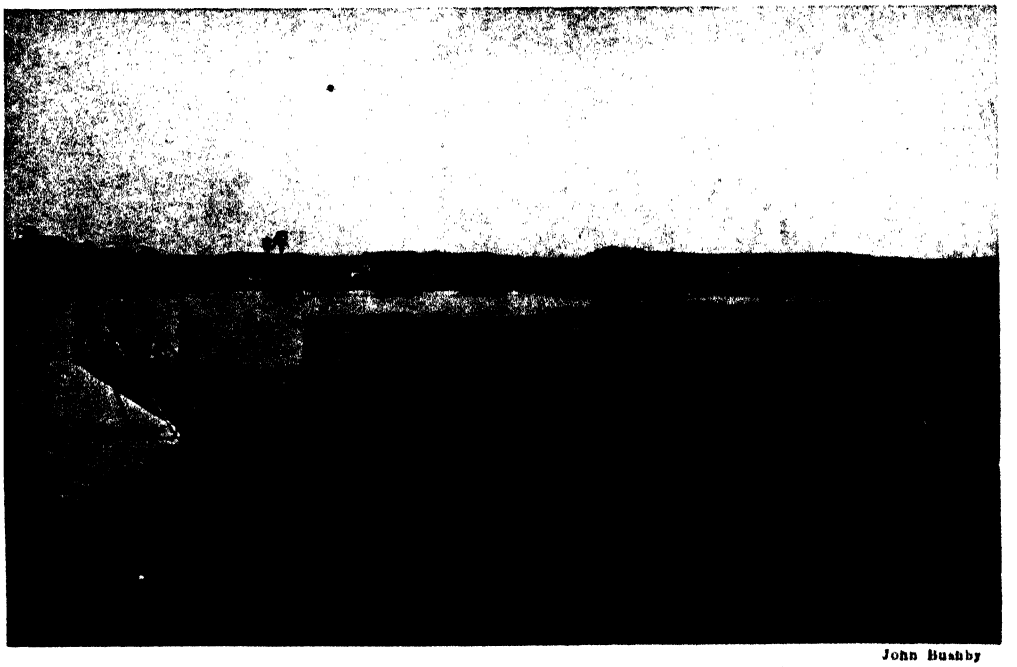
Abundant and Varied Minerals

Indo-China is rich in minerals such as hard and soft coal, antimony, tin, iron, zinc, copper, wolfram, gold and salt. Mining is a growing industry, most of the work being done by the natives, and the working of many mines preceded the French occupation. But the French



SPLENDID AND IMPOSING PALACE OF THE GOVERNOR AT SAIGON

Saigon is a beautiful modern town. Its wide and uniform streets, shaded by trees, and its lovely gardens, make it one of the finest towns in the East. It is connected by a railway and electric trams with Cholon, an important commercial city, and both these municipalities contain over 100,000 inhabitants and have rice mills, saw mills, soap factories, breweries and tile and brick works



John Bushby

RICE BARGE FLOATING DOWN TO THE MARKETS AT SAIGON

Cochin China is very fertile, and two crops of rice, which occupies a quarter of the total area under cultivation, are gathered annually in certain specially-favoured districts. Rice is grown principally in the delta lands, whence it is shipped in barges along the canals to the mills at Saigon and Cholon. The river and sea fisheries are important industries and occupy a large population

concessionaire and the French engineer are now busy. From the limestone quarries of Tong-king immense quantities of Portland cement are manufactured, mostly for export.

Other notable industrial developments are the construction and operation of rice, cotton and silk mills. Add to all this that labour is cheap and abundant, and it will be suspected that there is no exaggeration in saying that France has in Indo-China by far the best part of her overseas empire.

In ancient times, despite the rich soil and the suitable climate, life was rendered harder by reason of the whole country being one vast natural preserve of big and small game, but wild animals, once very abundant, have been thinned out and forced back into the heavily forested interior, where everything remains more or less primitive. First of all among the indigenous fauna is the elephant. Cambodia has been named the Land of the Elephant, sometimes of the White Elephant, that royal beast, though it is not white but a rather dirty grey. Of course, multitudes of elephants are tame, and are employed in Indo-China as in the East generally.

Mosquitoes and Deadly Snakes

Other sorts of big game are the one-horned and the two-horned rhinoceros, the bear, tiger, leopard and panther. The buffalo has been domesticated, except in parts of Laos where it still runs wild. There is a breed of native horses of the size of ponies, but imported horses have not been a success.

Monkeys are numerous and in considerable variety. So, unfortunately, are snakes, many of which are deadly; but perhaps the plague of mosquitoes and other flies is worse. If the Mekong is famous for its abundance of fish, it is hardly less so for its large and voracious caymans or alligators. The whole country is full of birds of all kinds —storks, cranes, peacocks, woodcock, ducks, guinea-fowl and geese.

As for the flora of Indo-China, it is enough to state that it is of the general tropical type, of which the most characteristic feature is the bamboo.

In former days the avenues of trade were the sea, the rivers and a few caravan routes near the coast, or from the coast into parts of the interior. Chinese junks and native vessels of a similar kind, with huge fleets of boats—sampans—on the rivers carried on most of the considerable commerce, both import and export, which then existed. A high proportion of the trading was done actually by Chinese, as it still is. Most of the remaining trade is in the hands of Europeans, the French in the lead, with the British (and Japanese) not very far behind.

Influence of Railways on the East

The new factor which the West has brought into the East in furtherance of commerce and industry, namely railways, is now influential on the destinies of Indo-China. From Tong-king railways enter China at two points, and one of them goes many miles into Yun-nan. From Tong-king, too, a line runs along the coast to connect Hanoï and Haiphong with Hué and Tourane, in Annam. The oldest railway is that between Saigon and Mytho traversing the middle of Cochin China. In all, there are nearly 1,300 miles of railways in the country.

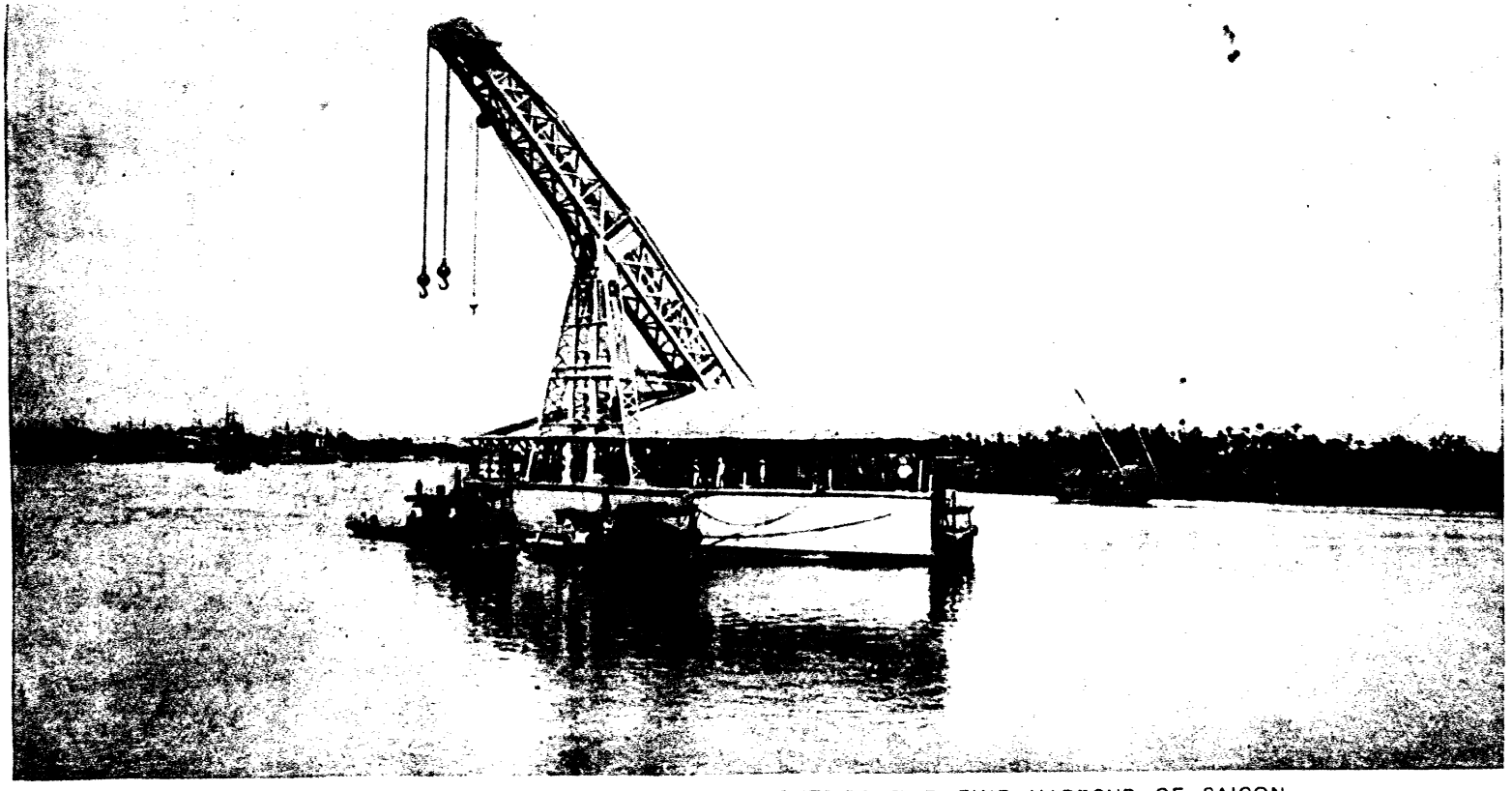
Navigation of the rivers has been improved, docks have been built at inland ports, such as Pnom Penh, the capital of Cambodia, and the roads generally are far better than of old.

A History of Development

France has done a great deal for Indo-China and quite rightly; yet at one time there was a strong political party in France that would have nothing to do with her expansion there or elsewhere—once a similar feeling existed in Britain about her own colonies. That day passed. The story of how France gained possession of Indo-China is extremely interesting, but can only be briefly sketched. That story began with the footing

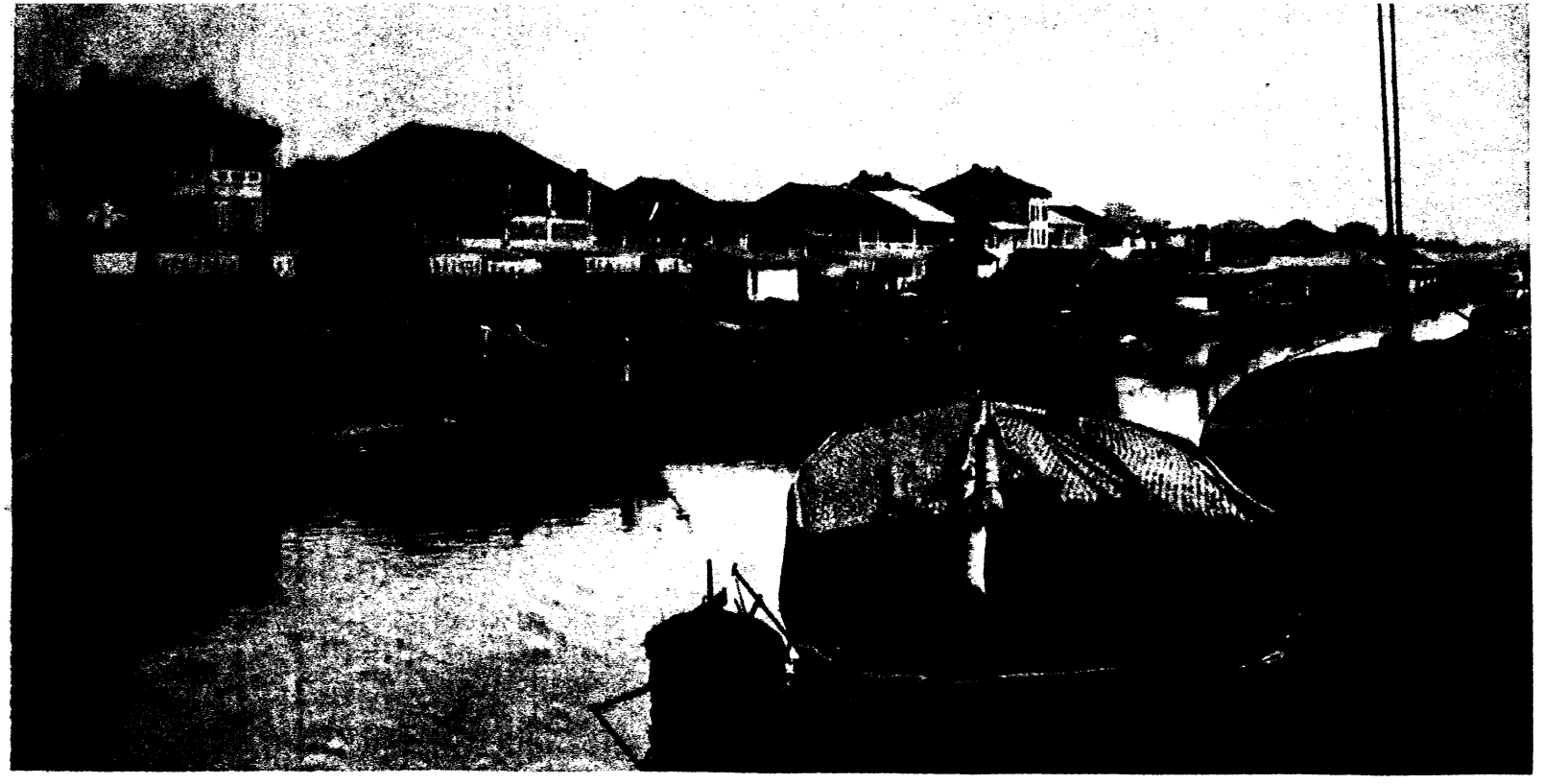
GREAT OPEN MARKET AT HAIPHONG, THE SECOND LARGEST COMMERCIAL PORT OF INDO-CHINA

Haiphong, since it is the headquarters of the river steamboat service of Tong king, is an important centre for local trade, while there is also a transit trade of considerable importance, via this port, between Yun-nan and Hong-Kong. The mountainous region of the north contains valuable mineral deposits, which include gold, silver, copper, tin and zinc, and the forests abound in woods of great commercial value such as iron-wood, ebony and sandal-wood. The lands of the delta are one vast rice-field, and, as a rule, yield two crops a year, nearly 1,000,000 tons being exported



GIGANTIC FLOATING CRANE ON THE RIVER OUTSIDE THE FINE HARBOUR OF SAIGON

In the long coast-line of Indo-China there are numerous small harbours used by junks and coastwise traffic, but there are only two first-class ports, Saigon and Haiphong, both in delta country situated some distance from the open sea, and at both places the docks and harbours are undergoing extensions and improvements. The Saigon is a branch of the Don-nai, which in turn is an affluent of the Mekong, and flows into the China Sea at Song-ngo Bay. The waterways of Cochin China are linked up by means of canals, natural and artificial, to facilitate transport



HUGE AND CUMBERSOME RICE BARGES MASSED ALONGSIDE THE QUAYS ON THE SAIGON RIVER

Saigon, the capital of Cochin China, is situated on the right bank of the Saigon about 40 miles from its mouth. It ranks beside Boulogne and Bordeaux in importance among French ports, and besides being the commercial centre of the colony it is the principal French military and naval base in the Far East. The spacious harbour is accessible to the largest steamers, and is equipped with ship-building yards and repair shops. Rice is the chief article of export, dried and salted fish, pepper and cotton being next in importance, and the imports include woven goods, machinery, wines and spirits

FEARSOME ALLEGORICAL BEASTS FORMING PART OF A FUNERAL PROCESSION IN TONG-KING

Tong-king is the northern portion of French Indo-China; the north is mountainous and covered in virgin forest, while the south, comprising the delta of Hong-Kiang and the shores of the gulf of Tong-king, is flat and marshy. Hanoi, standing on the right bank of the Song-ka, is the capital of the province and is an agglomeration of several villages, the houses being mainly constructed of wood and mud, but the French have erected many fine buildings. The town has a population of about 150,000 and railway connexion with Haiphong and the Chinese town of Lung-chow

FRUIT AND VEGETABLES FROM THE SURROUNDING DISTRICT IN THE QUAINT NATIVE MARKET AT HUE

Hué, the capital of Annam, stands on the left bank of the Huong-giang or Hue river a few miles from its mouth in the China Sea, and is built on what is practically an island, the river flowing on three sides and a canal cutting off the fourth. The town is the seat of the French resident-general, and the European quarter together with the houses of the upper classes on the right bank of the river are connected with the citadel by an iron bridge. The population is about 60,000 and the main industries are glass and ivory working. In the neighbourhood are the tombs of the rulers of old Annam

she obtained by conquest in central Annam a century and a half ago. It was nothing more than a mere foothold —a few miles of coast at Tourane and a small island in the immediate vicinity. For a hundred years afterwards the French empire, in the Far East as elsewhere, remained small and unimportant. In 1850 it amounted to about 200,000 square miles in the whole world. But during the following fifty years there was a prodigious advance, for in 1900, notwithstanding the defeat of France by the Germans in 1870 and its far-stretching reactions, her overseas possessions had grown to 4,000,000 square miles in area, and included nearly all "L'Indo-Chine," as it is to-day. The old Annamese empire, which some centuries before had succeeded in ousting Chinese rule, and which had consisted of Tong-king and Cochin China in addition to Annam itself, was tottering to its fall when it was first attacked by the French.

After obtaining the cession of Tourane, the French fixed their attention on Cochin China, which they seized and eventually made a colony. This was the real beginning of the French domination. After numerous wars, in which some of the southern Chinese took part, and in which the foreigners were not always successful though victorious in the end, France in 1863 forced a treaty on the king of Cambodia that made his country a French protectorate. In 1884 a treaty was made with the king or emperor of Annam which turned both Annam and Tong-king into French protectorates.

Tong-king had been an Annamese vice-royalty, but the French did away with the vice-royalty, and its government is exercised by the resident-general. The king of Annam has a council of ministers, but the real power is wielded by another resident-general. Laos, which is composed of several small states under native princes, became a protectorate in 1893. Six years previously Cambodia, Tong-king and Annam were formed into a customs union. Several rectifications of the frontier have taken place with Siam, but the change effected is not important.

The whole country is now administered by a governor-general, assisted by a secretary-general; there is a superior council with a permanent commission of the council always in session. In the background, however, stands the French

WAITING FOR COOLIES AT A WAYSIDE HALTING-PLACE IN ANNAM

Previous to the French occupation the roads were little better than tracks, sometimes suitable for carts, but more often only fit for foot or equestrian traffic. Many of the tracks have been converted into good roads, some of those in the more populous districts being destined to carry tramway lines. The old mandarin road from Tong-king into Cochin China passes through all the important towns

colonial office in Paris, to say nothing of the French foreign office, ceaselessly vigilant. As a colony Cochin China has a governor of its own, but all the four protectorates have as their head the high French official styled resident-general, who advises or rather directs the policies of the native princes and their subordinate mandarins. The seat of government is at Hanoï, some 60 miles inland from Haiphong, on the Gulf of Tong-king. Formerly the seat of government was at Saigon, about 40 miles up the river of the same name.

With its fine public and other buildings and its wide boulevards adorned with avenues of beautiful trees, Saigon remains in one's recollection as among the most attractive cities of the Far East. If much of its political importance has gone to Hanoï, it is still the capital of Cochin China and a very great port. A very powerful wireless station has been completed there which is in direct communication with the wireless station at Bordeaux.

Neither Hanoï nor Saigon is the largest city of Indo-China. That distinction belongs to Cholon, in Cochin China. Its population is over a quarter of a million, about one half being Chinese. Hanoï and Saigon have about 100,000 inhabitants apiece. The greater part of the former city consists of an agglomeration of native villages, but there are also numerous splendid modern edifices, including the University of Indo-China, established in 1917. With railways into China and along the coast, as well as to Haiphong, it is a brisk trade centre.

Haiphong, with about 20,000 people, is a growing port, and the French portion of it is well laid out with spacious streets and boulevards. The chief city of Cambodia is Pnom Penh on the Mekong, 130 miles north-west of Saigon, having a population of 90,000. Here, too, the French have erected fine buildings and shaped out beautiful streets.

No doubt the most interesting place in all Indo-China is Angkor, the ancient capital of Cambodia, and situated near the Great Lake. It is now a mass of magnificent ruins covering an area of two square miles, and consists of what once were royal palaces and majestic temples, enclosed by walls 30 feet in height and pierced by five wrought gates. To the south, standing in a moated park, is the temple of Angkor Vat, a perfectly wonderful building, dedicated to Buddha, and the finest surviving example of the ancient art of the Khmers or people of Cambodia.

France holds all this great country with a garrison of less than 30,000 men, including native troops numbering 5,000, some of whom were on active service in the Great War. But the natives, whatever they were in the past, are certainly not warlike to-day.

INDO-CHINA: GEOGRAPHICAL SUMMARY

Natural Division. Part of the tangle of elevated ridges and sharply-incised valleys forming the plateaux of South-east Asia which extend from South China into Malaya; the southern extension of the ancient Angara-land. The deltaic river mouths and the alluvial plains of the coastal areas in the north and south comprise debris brought down through many centuries from the anciently higher interior plateaux. These lowlands are the really important section of the whole country.

Climate and Vegetation. In the south, Cochin China-Cambodia, tropical heat with small temperature variations and summer rains. (Cf. Ceylon.) In the north, Tong-king, hot summers, cool winters with summer rains. (Cf. South China, Florida.) In the middle, Annam, quite a different rainy season, October rains from the north-east trade winds. (Cf. the Coromandel coast of South India.) The heights are forested, the lowlands are jungles and swamps. (Cf. India Southern.)

Products. Rice (two-thirds of the exports). Teak, bamboo. Tobacco, coffee, tea, cotton, silk. (Cf. India Southern.) Cinnamon, pepper, sugar. (Cf. the Malay Archipelago.) Fish. Cement. Cotton and silk textiles.

Communications. For native purposes, junks and sampans. (Cf. China.) For Europeans, railways and steam ships.

Outlook. As in southern India an alien organized government keeps the peace while the self-contained and self-centred natives prosper.

From Mon-Kay to the Hong-Kiang the north-east coast of Indo-China is sea-bitten into inlets, as here in the Bay of Along

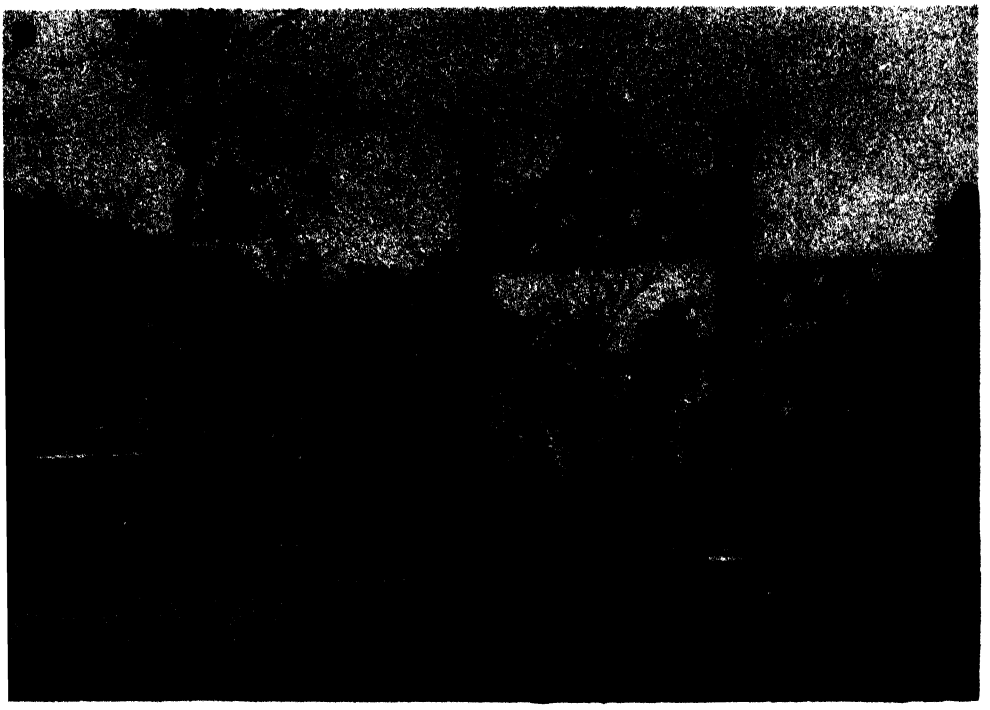
INDO-CHINA. *The blue waters of Along, near Haiphong, are a lovely cruising ground where a litter of islets helps to tame the breakers*

Photos, except in page 2284, John Bushby

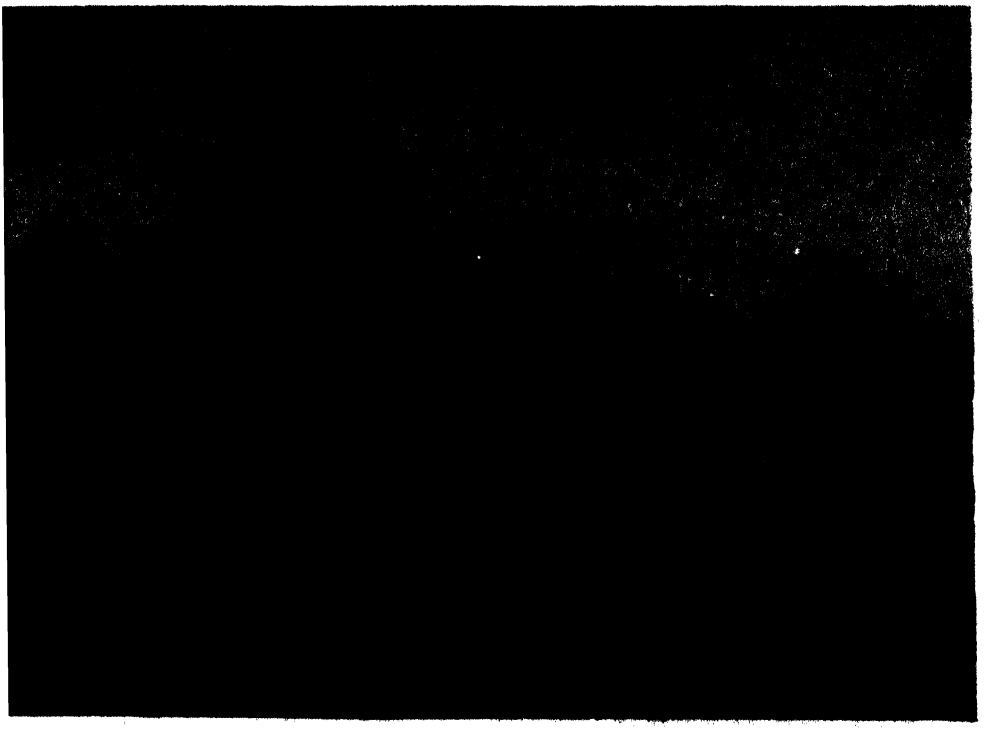
8228

INDO-CHINA. *Haiphong by the banks of the Kua-Kam, which is a tributary of the great Hong-Kiang, still remains irresistibly Oriental amid vigorous French influence. Here is a disreputable Chinese joss-house beneath the palms*

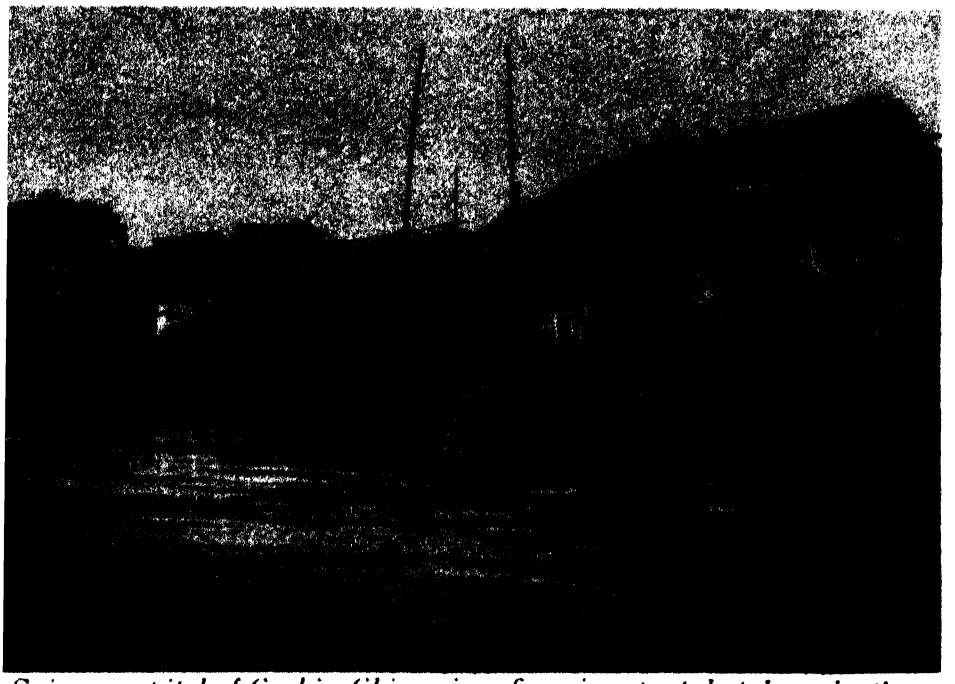
INDO-CHINA. *The Huế river flows to the China Sea and gives its name to the town near its mouth. It is full of fish which are netted, by the Annamese boatmen in their sampans, for the Chinese export trade*



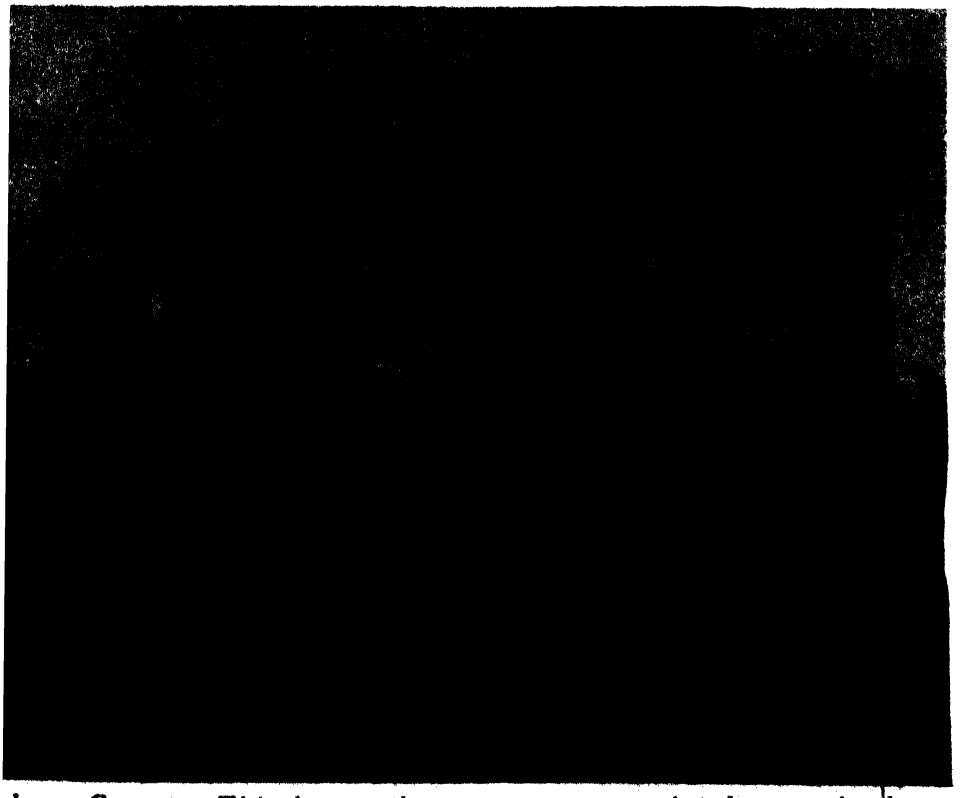
Capital of Annam, Hué is on the left bank of the river. On the other side is the citadel, once sacrosanct but now thrown open by the French



INDO-CHINA. *Hué's citadel has the river on three sides and a canal defends the fourth. Near by are the tombs of the rulers of old Annam*



Saigon, capital of Cochin-China, is a fine river port, but down by the waterside one may still see the pile houses of reed mats and thatch



INDO-CHINA. *This dragon that ramps upon a painted screen in the likeness of some elemental bull guards an Annamese temple at Hué*

INDO-CHINA. *At low tide the creeks that intersect the native quarter at Saigon present a spectacle of noisome mud and stranded boats. The main stream empties itself into the China Sea forty miles away*

INDO-CHINA. *Saigon, on the Saigon river, is the principal commercial centre of French Cochin China, besides being the naval and military base. There is enough water for large vessels and there are convenient shipbuilding yards*

INDO-CHINA. *Beneath the foliage of the banyan tree rise the terraced pagodas of Angkor Vat, a vast Buddhist temple and a remnant of the great empire of Cambodia in the seventh century. It is deserted now save for a few priests*

IRELAND

Isle of Verdure Framed in Mountains

by Robert Lynd

Author of "Rambles in Ireland," etc.

"IRELAND was Ireland when England was a pup," ran a line in a rather boastful piece of nineteenth-century doggerel. The boast is perfectly true, however, in one sense. Ireland is a much older island than Great Britain. Both contain areas which are relics of the very ancient continent of Arctis, but Ireland, geologically akin to Scotland, contains more. The bulk of England is continental in character and akin to the south of Ireland only, with a narrow sea of late formation separating it from France. Hence it is not surprising to learn that Ireland is divided from Great Britain by a greater depth of water than that which divides Great Britain from the Continent.

The distance between Great Britain and Ireland is at one point only thirteen miles—an extremely unlucky number, many of the inhabitants of both countries will agree. Small as it is, the narrow neck of sea is a frontier that has produced many marked differences even in the plant and animal life of the two adjacent islands.

Beasts Unknown to Ireland

You will find no snakes in Ireland, for example, not because S. Patrick drove them out, as the legend says, but because snakes could not swim across the Irish Sea. Nor will you ever see a mole or a molehill in Ireland, or a water-vole, or a common toad or an ordinary brown hare. Ireland, however, has a hare of its own, which will not interbreed with any other kind of hare, and which is said to be descended from an extinct native species whose bones have been discovered by the archaeologists.

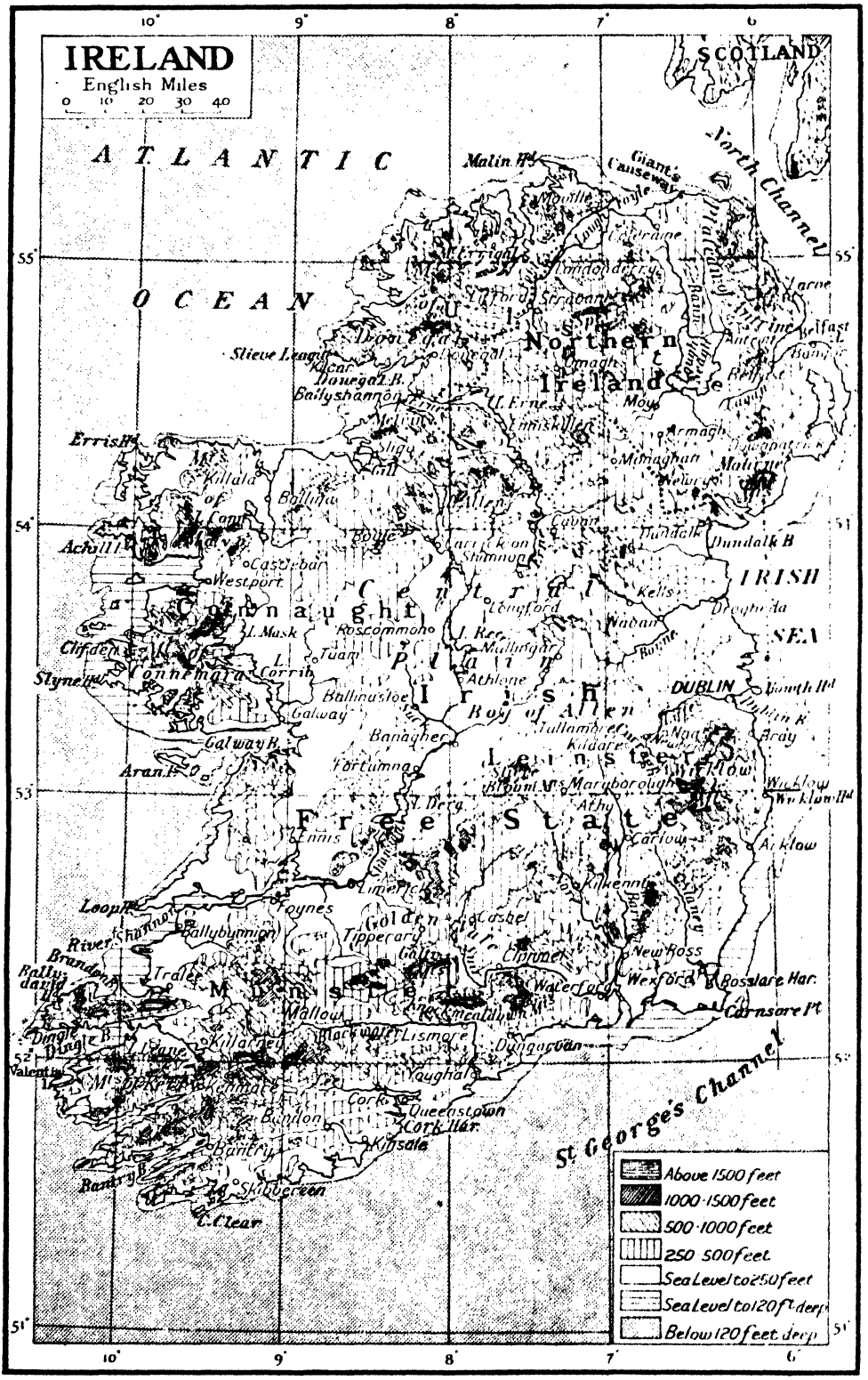
From the point of view of the naturalist, the separation of Ireland from Great Britain was a misfortune, just as the separation of Great Britain from the Continent was a misfortune. In each case the sea prevented the spread of new species of plants and animals. Thus Ireland has only two of England's four kinds of mice, and has only seven species of bats against England's fifteen. Again, among flowers, the common English rock-rose and the wild daffodil never reached Ireland. Nor did the mistletoe ever grow in Ireland until its importation in modern times.

The Evidence of the Shrimp

But there are a few native Irish plants and animals that are not to be found in England; and the fact that some of these are common to Ireland and North America, while others are common to Ireland and Spain, has suggested to men of science the theory that in prehistoric times there was a land connexion, not only between Ireland and Spain but between north-western Europe and Greenland and so with North America. There is a small fresh-water shrimp, for instance, which is unknown in Great Britain, but which is found in the rivers of North America, Scandinavia, Russia and Ireland.

If the Irish Sea and St. George's Channel made a difference to the plants and animals, they made a still greater difference to the human inhabitants of Ireland. Tides of invasion and immigration reached Great Britain that did not reach Ireland, and tides of invasion and immigration reached Ireland that did not reach Great Britain in the same volume. The Roman occupation of

Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited



IRELAND WITH ITS RING OF HEIGHTS AND CENTRAL LOWLANDS

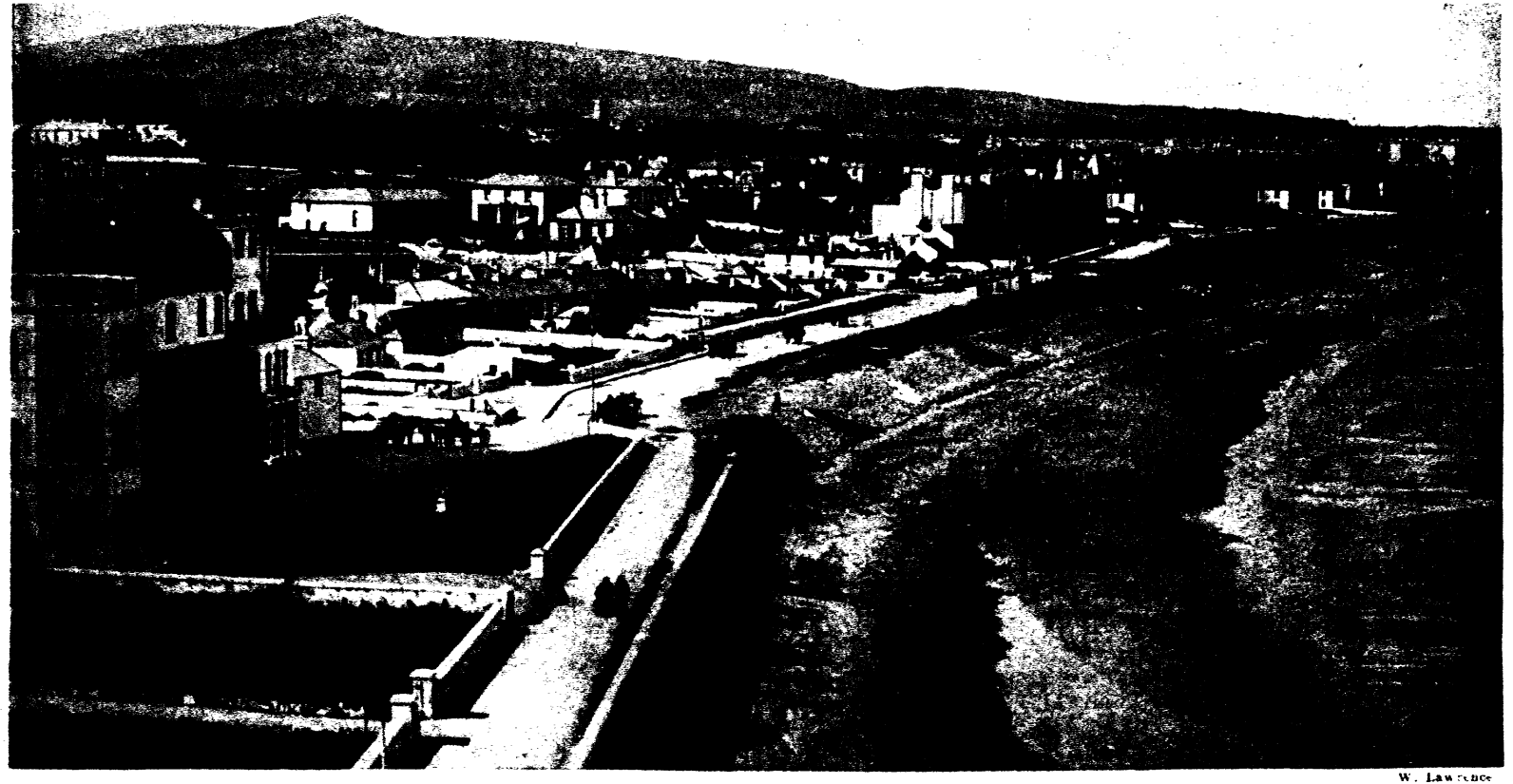
Britain, for example, was never extended to Ireland, though Tacitus tells us that Agricola used to be in favour of a conquest of Ireland on the ground that it "would contribute greatly to bridle the stubborn spirit of the Britons, who, in that case, would see with dismay the Roman arms triumphant, and every spark of liberty extinguished round their coast."

On the other hand, the Irishman has in his veins the blood of conquerors who, even if they invaded Britain, never made themselves complete masters of it. Where the Gaels who invaded Ireland came from is still a matter of dispute. Modern writers will not even allow them to have been Celts. Though speaking a Celtic language, they are said, like the Anglo-Saxons, to have been a branch of the great Nordic race. I have heard Professor Haddon, at a meeting of the British Association, declaring that there was far less Celtic blood in Ireland than

Underwood

MASSED PILLARS OF THE PHENOMENAL GIANT'S CAUSEWAY

The Giant's Causeway is a promontory of columnar basalt on the north coast of County Antrim at Aird Point. There are about 40,000 closely packed basaltic polygonal pillars rising to varied heights, mostly of hexagonal formation but many with five or seven sides. This natural phenomenon —so regular and yet so diversified—is ascribed to the cooling and cracking of a lava stream



W. Lawrence

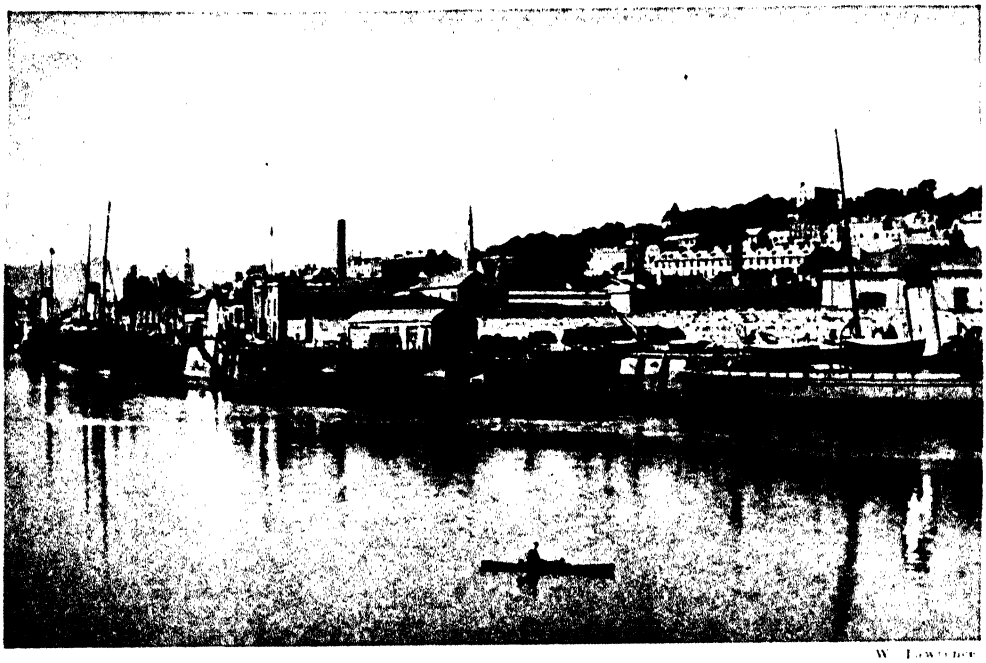
LONG, HILL-BACKED ESPLANADE AT THE SEASIDE RESORT OF BRAY, THE BRIGHTON OF IRELAND

Bray, on the river Bray, is 12 miles by railway south-east of Dublin and is one of the best situated watering-places in Ireland. Since the middle of the nineteenth century the town has developed from a quiet little fishing village into a fashionable holiday resort. Facing the sea is a fine esplanade backed by a long line of hotels and private residences, while the small plain on which the town has been built is surrounded by hills. A magnificent panorama of the Wicklow heights can be obtained from Bray Head, while the inland scenery is of unrivalled beauty

Ewing Galloway

CITY OF CORK COMING DOWN TO THE WOODS AND LAWNS ON THE BANKS OF THE RIVER LEE

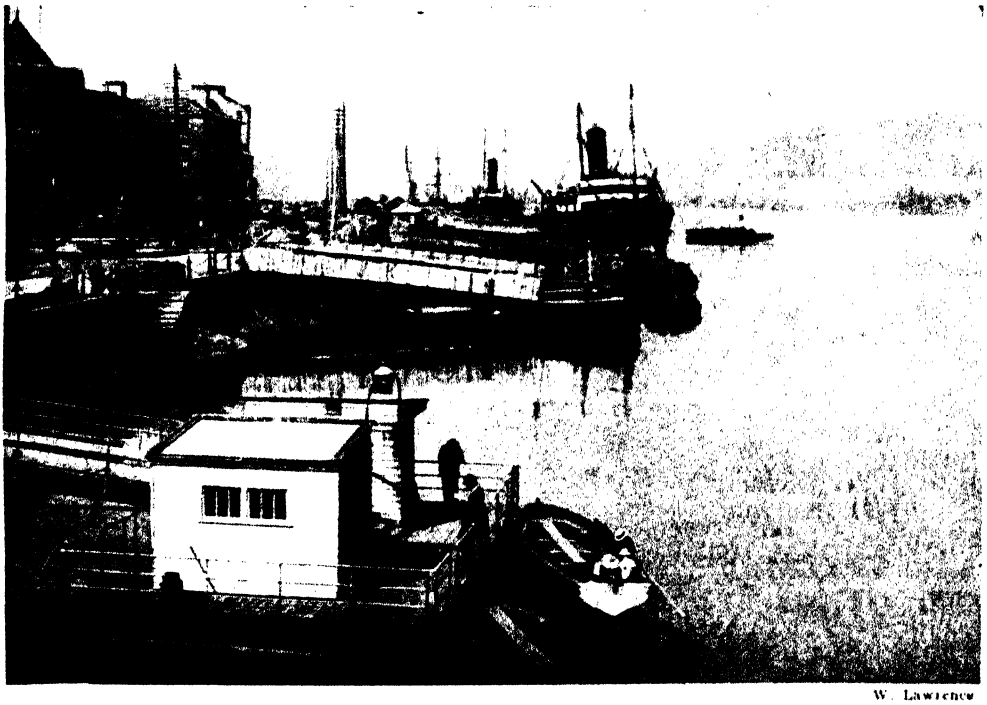
Cork, which is a county of itself and the capital of county Cork, stands partly on an island above the harbour, which is a port of call for transatlantic steamers. The city is an industrial town with leather, flour, ironware and woollen manufactories, distilleries, ship-building yards and bacon-curing establishments, while there is a daily market for dairy produce. West of the town is the Mardyke, a fine elm planted promenade one mile in length between two arms of the Lee, and to the south-east is the City Park, which is chiefly used as a race-course



W. Lawrence

STEAMERS AT THEIR BERTHS ALONGSIDE THE QUAYS OF CORK CITY

Occupying an island formed by two arms of the river Lee, and the rising ground surrounding and overlooking it, Cork is situated 11 miles above the river's entrance into Cork Harbour and holds an important place among the ports of Ireland. The river is navigable for a mile beyond the city and there are more than four miles of quays, accessible to vessels drawing 20 feet of water



W. Lawrence

CROWDED RIVER-FRONT OF WATERFORD ON THE RIVER SUIR

Waterford is situated 94 miles south-west of Dublin near the confluence of the Suir and Barrow. It is an important railway junction and port, having steamer connexion with Fishguard and Bristol. Portions of the city walls still remain, including the eleventh century Reginald's Tower. The industries include bacon-curing, flour-milling, ship-building and ironworking, and dairy produce is exported

W. Lawrence

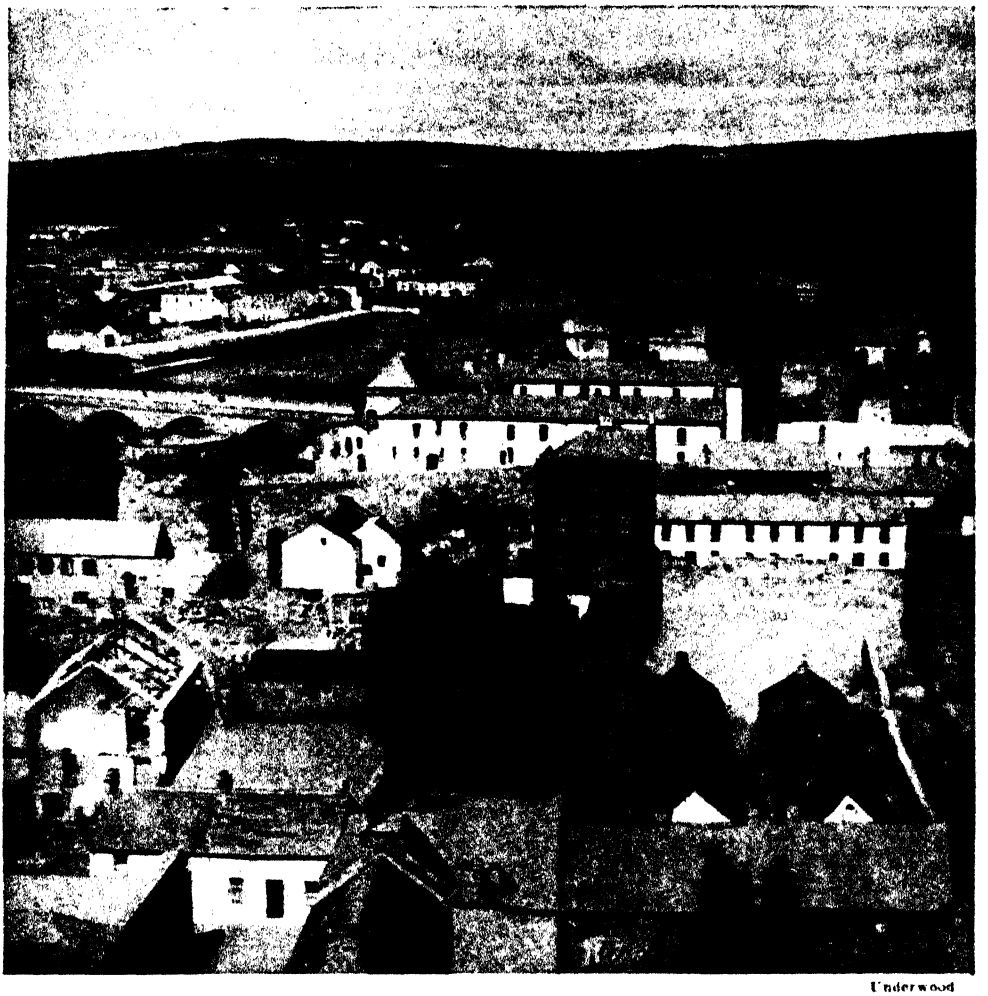
WHITEWASHED IRISH COTTAGES IN WEXFORD TOWN

The old town of Wexford stands on a hill above the estuary of the Slaney about five miles from the sea, overlooking Wexford harbour which covers some 14,000 acres. Herring, oyster and salmon fisheries, distilling, brewing, lime and cement works and iron foundries have encouraged the industrial growth of the ancient town, which still contains, however, rows of real old cottages as here in Green Street

Ewing Galloway

MORNING HOURS IN ONE OF LIMERICK'S MODERN STREETS

Limerick attractively combines historical associations with the improvements of modern times, and is considered one of the neatest and best-built of Irish cities. The southern part is the modern part, and here the fine streets with excellent shops can compare favourably with those of any town in Ireland. The famous lace industry has declined, and the chief trade is now in flour, bacon and butter



Underwood

LIMERICK CITY, PROSPEROUS RIVER PORT OF THE SHANNON

Limerick, the capital of county Limerick, lies on both sides of the Shannon, 129 miles from Dublin by rail. As a port it enjoys considerable importance and owes its prosperity to its situation on the river at a point where it becomes navigable. Graving and floating docks and finely-built quays all add to its flourishing trade, while canals connect the city with the interior of Ireland

in Great Britain. If there is any Celtic blood in Ireland, we are told by some authorities that we must look for it in remote districts such as the western seaboard of Connaught, where the descendants of the race whom the Gaels conquered still survive. The so-called dreamy Celt, it is said, is almost always really a dreamy Teuton. These views on the racial origin of the Irishman, however, are not universally accepted even now, and other authorities insist that the dominant type of Irishman owes more of his qualities to the earlier "Mediterranean" invaders of his country than to the later "Teutonic" conquerors, whether Gaelic or Viking or English.

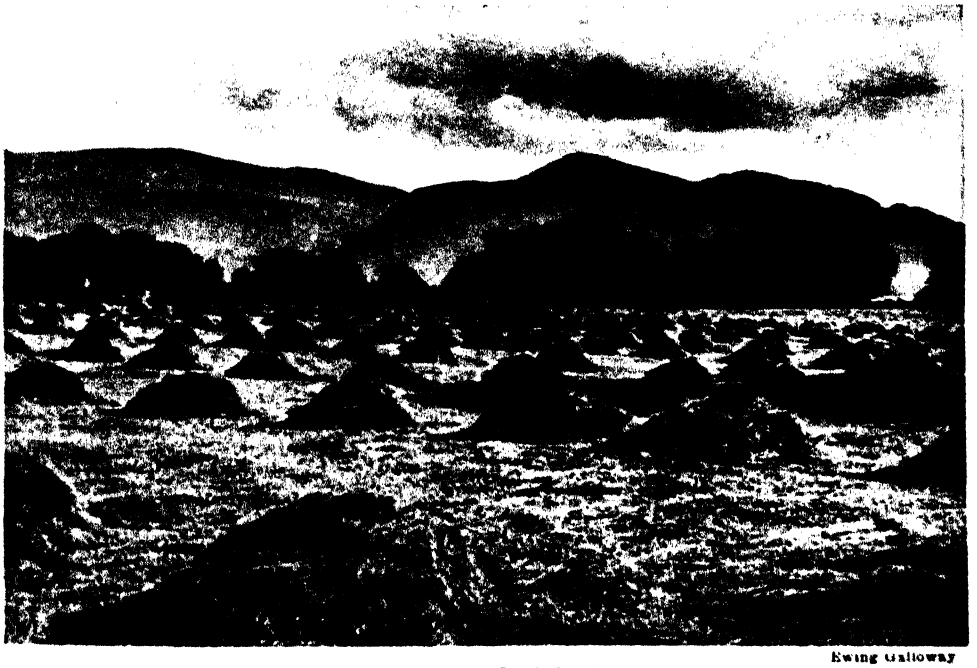
The Irishman inhabits a land which, like himself, runs to extremes—extremes of flatness in the great central plain, and extremes of mountainousness in some of the seaboard counties such as Donegal, Down, Wicklow and Kerry. In Ireland the mountains do not give the country a backbone, but a magnificent frame. In the west they rise above the sea like part of the European barrier raised against the fury of the Atlantic. Here cliff and mountain and rock stand along an irregular front—Europe's first line of

defence against the assaults of the ocean. There are no other cliffs in the British Isles to compare in giddy and frowning eminence with Slieve League in Donegal and the great cliff of Achill.

Ireland is also extreme in having the longest river in these islands—the Shannon—and the largest lake, Lough Neagh. The Shannon, in the course of its 225 miles, is a river that unites all the four provinces of Ireland. Rising in Ulster, it flows through Leinster and Connaught and pours itself into the Atlantic in Munster, idler and less burdened with shipping, I fancy, than any great river in any civilized land. There is an all but derelict appearance about some of the rivers and harbours of the west of Ireland which may be attractive to lovers of romance but which brings home to the modern man, more acutely than roofless church and broken tower, a sense of loss and ruin.

If Ireland runs to extremes in river, lake and mountain, she is nobly moderate in at least one thing—her climate. She is commonly supposed to be an excessively wet country, but there are parts of Scotland that surpass her in the extent of the rainfall. She does not suffer either from the extreme cold of a hard English winter or from the heat of an English summer. The difference between the temperature of the coldest and of the warmest month is 8° F. less in Ireland than it is in eastern England. The Irish summer is a northern summer; the Irish winter is a southern winter.

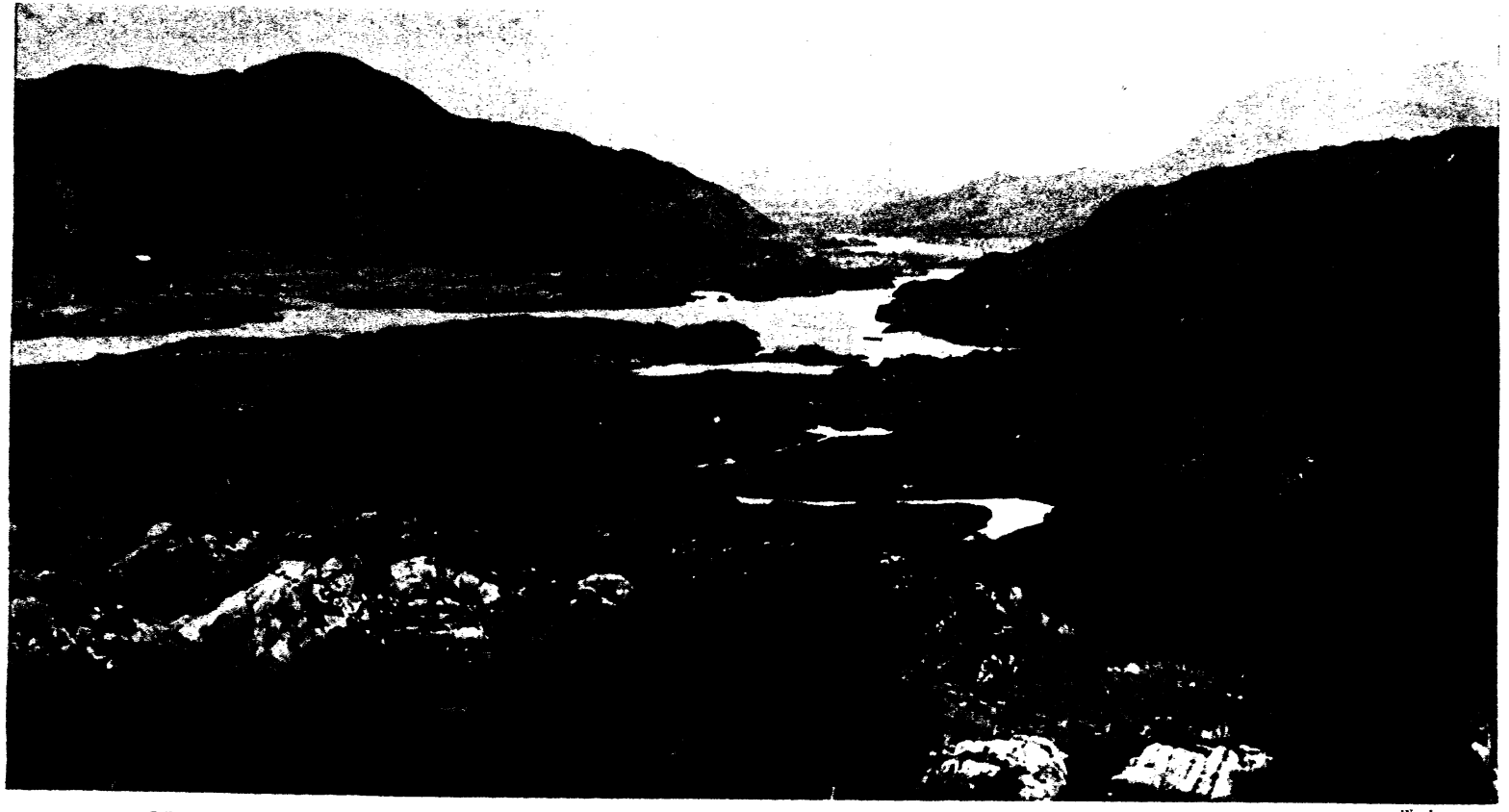
To leave this statement as it stands without qualification, however, would be to paint the Irish climate in too idyllic colours. The west and south-west sea-winds that break on the Irish mountains, and the influence of the Gulf Stream, may keep the thermometer at a reasonable level, but they also make Ireland as moist a country as she is mild. It has been said that in Ireland as a whole some rain falls on three out of four days in the year. This persistent soft rain is good for scenery and produces that greenness of grass and leaf that made every journalist during the



Ewing Galloway

HARVESTING THE RICH HAYFIELDS OF THE KILLARNEY DISTRICT

Three-quarters of Ireland's area are cultivated and nearly two-thirds of this cultivated land are under grass. In the maritime county of Kerry agriculture and fishing are the chief industries. Hay is grown upon much arable land near Killarney, a district whose exquisite lake and mountain scenery has made it the principal headquarters of visitors in south-west Ireland



W. Lawrence

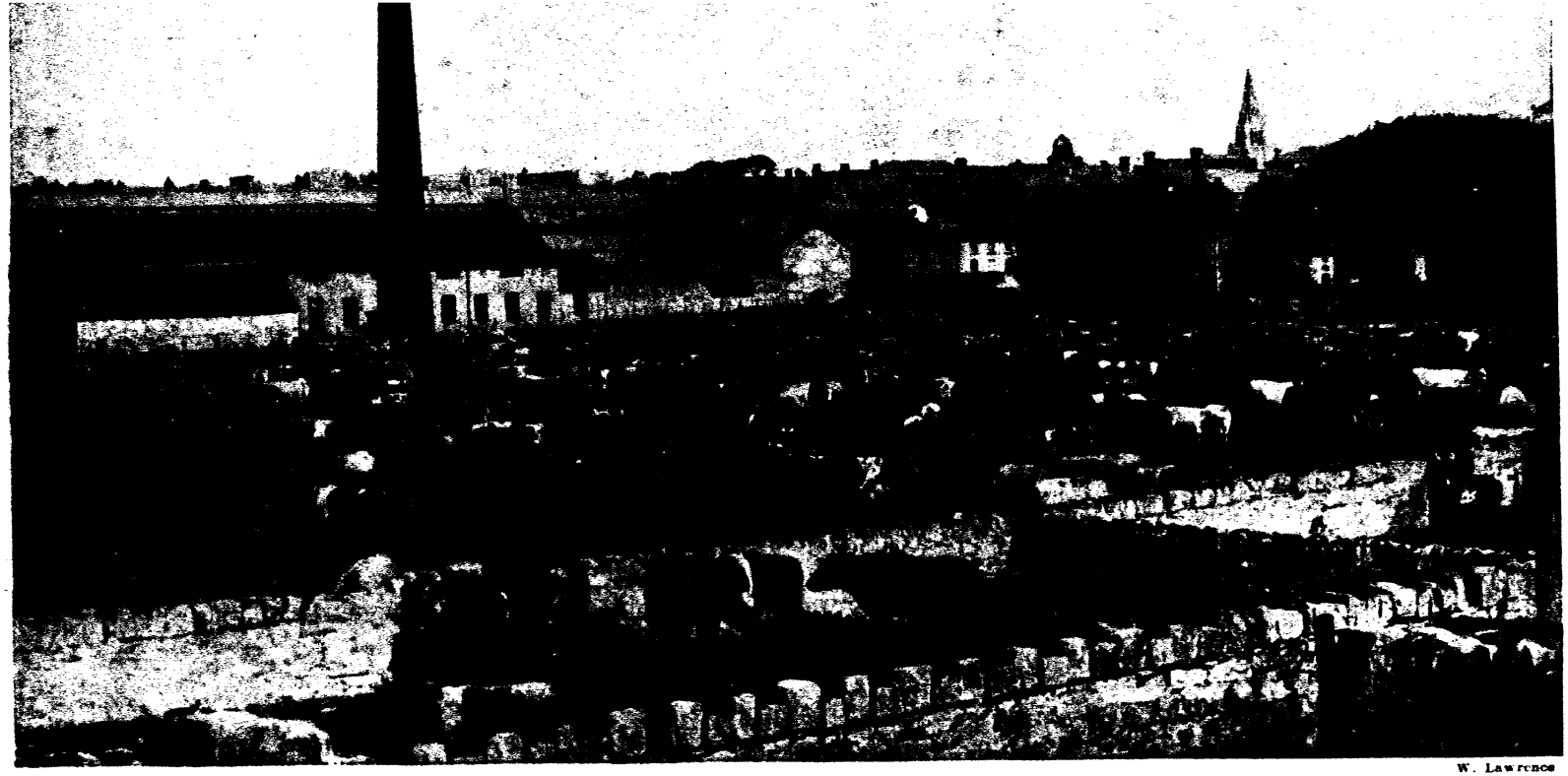
BEAUTY UNIMPAIRED BY MAN'S HANDIWORK AMID THE LAKES OF KILLARNEY IN COUNTY KERRY

Of the lakes of Killarney, a chain of three lakes, Lower Lake or Lough Leane is the largest, being four miles long and covering some 5,000 acres. Its waters are connected with those of Middle or Muckross Lake, 680 acres, at Brickeen and also at the Meeting of the Waters, south of Dinish island; from this spot a narrow channel, called the Long Range, connects the Lower and Middle Lakes with the Upper Lake, 430 acres. Studded with thickly-wooded islands and backed by high mountains and wild ravines, the lakes are celebrated for their beauty. They discharge their waters into the river Laune from the Lower Lake.

W. Lawrence

GENERAL VIEW OF DINGLE ON ITS SHELTERED HARBOUR IN THE RUGGED COAST OF KERRY

Dingle is a seaport, parish and market town of county Kerry. Situated on the north branch of an arm of Dingle Bay known as Dingle Harbour, about 30 miles by rail south-west of Tralee, it is an important centre of fisheries, its main industry in this connexion being mackerel curing. Butter is the chief export and linen is still manufactured, though not so extensively as in former days. There is little about the town that is attractive to visitors; the greater part of it is only a few feet above sea-level, but its situation ranks among the most picturesque on the much-indented coast of Kerry



W. Lawrence

CATTLE MARKET AT TIPPERARY, THE GREAT AGRICULTURAL CENTRE OF ITS COUNTY

Tipperary lies at the foot of the Slievenamuck or Tipperary Hills, 23 miles from Limerick. It is the centre of a fine agricultural district with important cattle and butter markets; there is also a factory for making condensed milk. The town dates from the time of King John, but the gateway of a monastery, founded in the reign of Henry III. for the Augustinians, is the only relic of antiquity. The lofty tower and spire, seen on the skyline to the right in the photograph, is that of the Roman Catholic church of S. Michael, which has an extremely ornate interior.

nineteenth century speak of Ireland as the Emerald Isle. It also produces that exquisite light which, when the rain is over and day is dying, enables you to understand how it is that so many Irishmen have believed that fairyland lay about them and that the world was a legend that had come true.

At such hours every field and every stream is an enchantment, and even a dirty, tumbledown, whitewashed farmstead becomes haunted by presences from a world fairer than we have known. We begin to understand why a modern school of poetry—a little self-consciously perhaps—has made so important a matter of the "Celtic twilight." Even in the full day, however, the blue skies, washed by rain, and the tumult of white cloud above the green earth help to create a landscape that makes the sensitive traveller feel well rewarded for many drenching hours.

What effect the climate has had on the people of Ireland is a question that has often been debated; it has been admitted to have been good for the Irish complexion, but there are critics who maintain that it has been bad for the Irish character. I fancy, however, that if many Irishmen are easy-going or unenterprising, history and diet have done much more than the weather to limit his output of energy.

I think for instance that the discovery of the potato was one of the seven curses of Ireland. It gave the poor one of the worst of the vegetables for those who have to be largely vegetarian. The meat that the poorest of the peasants ate during recent generations was equally bad, for it was the cheapest and worst imported bacon. The Irishman exported good bacon and imported bad. He sold the best in order to pay his rent, and he bought the worst in order to remain alive. It is amazing that, in the circumstances, his vitality has survived as it has.

If you compare an English village with an Irish village, you cannot help noticing that the former—in Sussex, at least—expresses a long tradition of well-being, comfort, while the Irish

W. Lawrence

SAD RUINS OF HOLY CROSS ABBEY BY THE RIVER SUIR

Holy Cross Abbey, in Tipperary, was founded in 1182 for the Cistercian order of monks, and is of pure Norman workmanship in black limestone. The church is cruciform, consisting of a nave with aisles, choir, transepts and a tower rising from the junction of the choir with the nave. The roof of the tower is groined and supported by graceful pointed arches

F. R. P. Stringer

CLOGHANE AT THE HEAD OF BRANDON BAY BENEATH BRANDON

Brandon Mountain, 3,127 feet, is the highest point of a lofty range of hills stretching northward from Dingle to Brandon Head. The easiest ascent is made from Cloghane, passing through a wild glen with precipices on every side. On the summit is a cairn, and on the south slope a mound of earth called S. Brendan's hermitage, while the view embraces Tralee Head and the mountains of Iveragh

F. R. P. Stringer

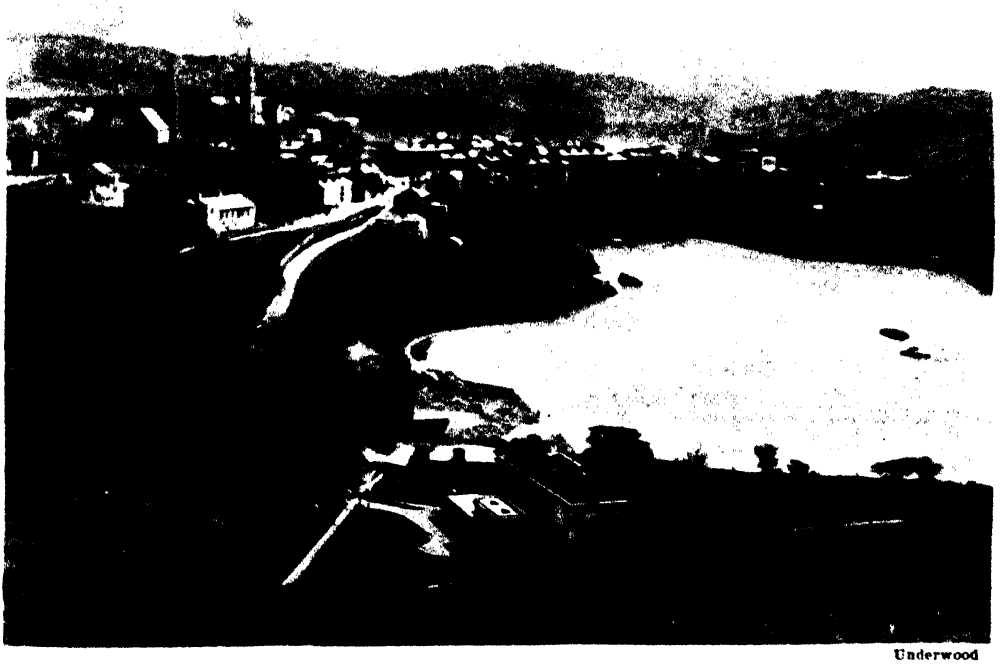
GREAT WILD HEADLAND OF BALLYDAVID NEAR COOSAVADIG

Coosavadig is a very simple fishing village on the Brandon Mountain peninsula of county Kerry. The boats used by the fishermen are made of tarred canvas stretched over a rib framework of wood, and Irish characters are written over the shop fronts, while many quaint old customs remain. The whole coast-line is deeply indented and affords many impressive scenes of savage grandeur

W. Lawrence

NEWBRIDGE IN WICKLOW'S LOVELY VALE OF OVOCA

The quiet beauty of the wooded glen of Ovoca has been somewhat marred by the railway and the mounds of dusky refuse from the copper-mines, but as the "Meeting of the Waters" at Wooden Bridge is neared, the valley becomes an almost perfect sylvan picture. The bridge, which gives Newbridge its name, was built in 1806 to replace one swept away by a flood



Underwood

CLIFDEN OVERLOOKING ARDBEAR BAY ON THE COAST OF GALWAY

Clifden stands on Ardbear Bay near the mouth of the Owenglin river 50 miles north-west of Galway. There is a valuable trade in fish, especially lobsters, and in kelp, while close by is an important wireless station. The scenery in the neighbourhood is very beautiful either along the coast, among the Twelve Pins, or in the lake-studded district towards Roundstone

village expresses no tradition at all or, at best, a tradition of scraping along somehow or other. Even the inns in England seem pieces of comfortable history. In Ireland the public houses look like booths in a temporary encampment. Historical England survives in its inhabited places. Historical Ireland survives for the most part only in its ruins. Each country has an inspiring tradition, but it is only in England that tradition smiles out of the very windows of poor men's houses. This is because the sense of security, in the widest meaning of the words, has been the rule rather than the exception in England, while it is not the rule in Ireland even to-day.

W. Lawrence

WHERE THE BLACKWATER FLOWS INTO KENMARE RIVER

Kenmare river is really an opening of the sea between the counties of Kerry and Cork, being 28 miles in length and from two to six miles in width, and a favourite centre for trout and salmon fishing. The scenery on both rivers is wonderfully varied and exceedingly lovely. It forms a fascinating blend of water and island, wood, mountain and vale

The Irish villages of the west, for all their bareness, have a beauty of their own. The little one-storeyed, white-washed cottages, with the tiny windows, the half-doors and the thatched roofs that are often held in their place with rows of heavy stones hanging on cords from the eaves, blend delightfully with the landscape. The little white, thatched house is, perhaps, the most distinctive feature of the Irish countryside, though cement and brick and slate and even corrugated iron are every day introducing commonness where beauty once was. It is true that many of the old cottages were as insanitary as they were picturesque. They were too small houses for too large families, and in the poorer districts of the west they were sometimes one-roomed hovels, in which the family ate and slept at one end of the room, while a cow or a horse was stabled at the other with the hens to keep it company. Still, it ought to be possible to modernise Irish architecture without abandoning the white house as an ideal. At present, an Irish village visited by moonlight, with its shining house-fronts and gables, the flash of firelight or lamplight and the smell of

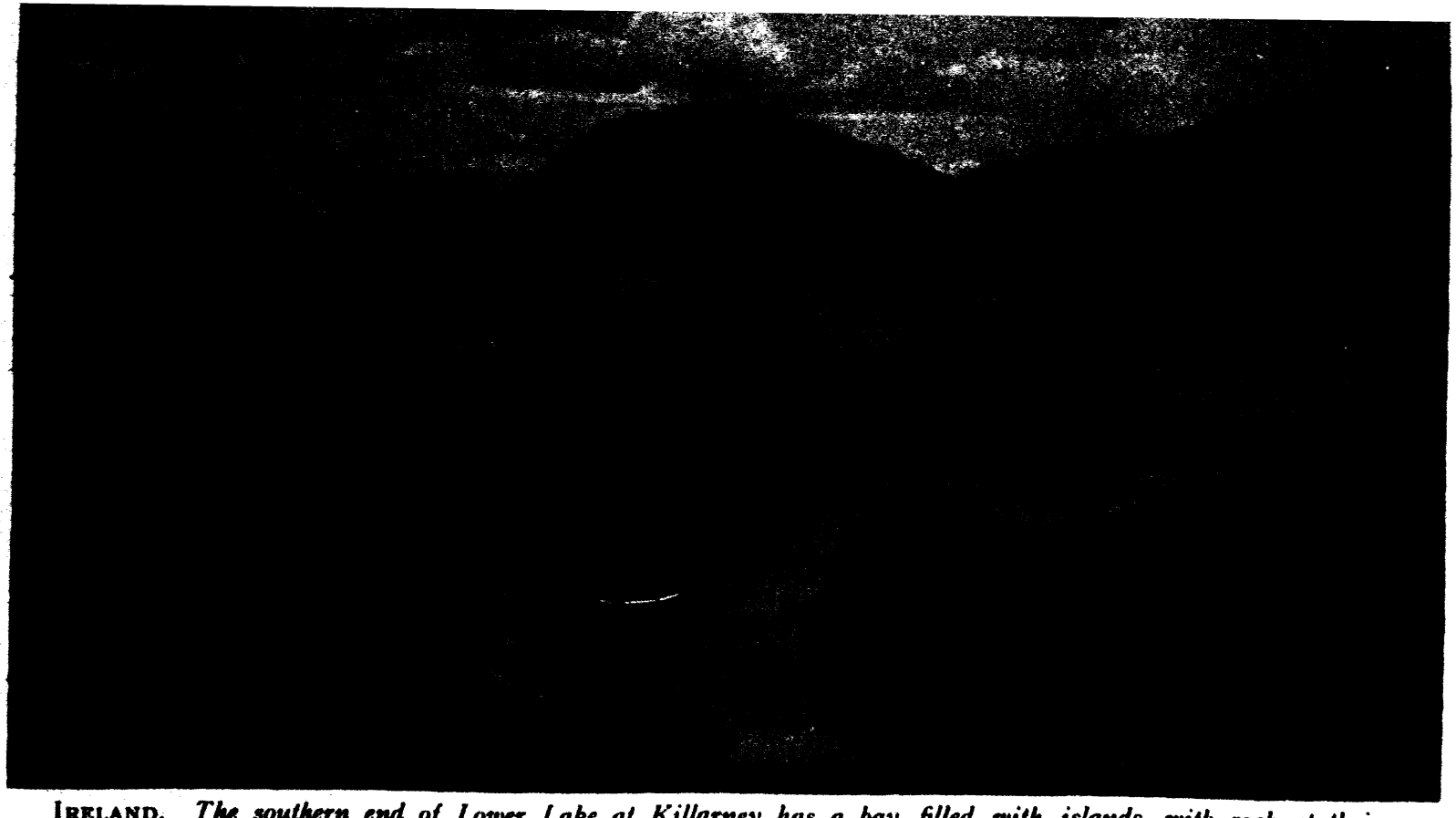
Rising near the source of the Liffey in the Wicklow Hills the Dargle flows through green glens to join the river Bray and the Irish Sea

IRELAND. *Glengariff is an Arcady of blue, quiet water and islets matted with woods, among the rock hills about Bantry Bay*

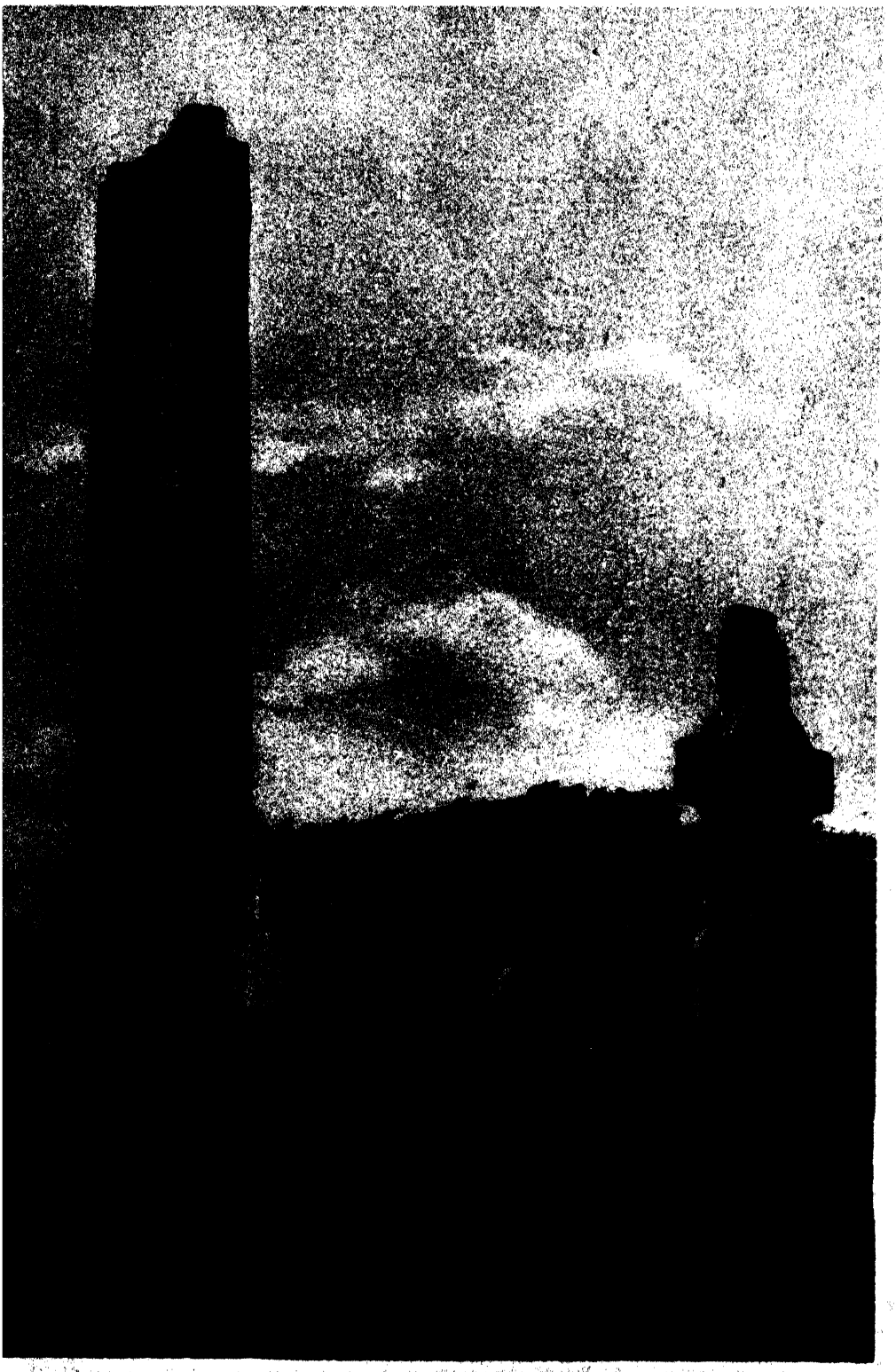
Photos, except in pages 2305 and 2306, W. Lawrence

2302

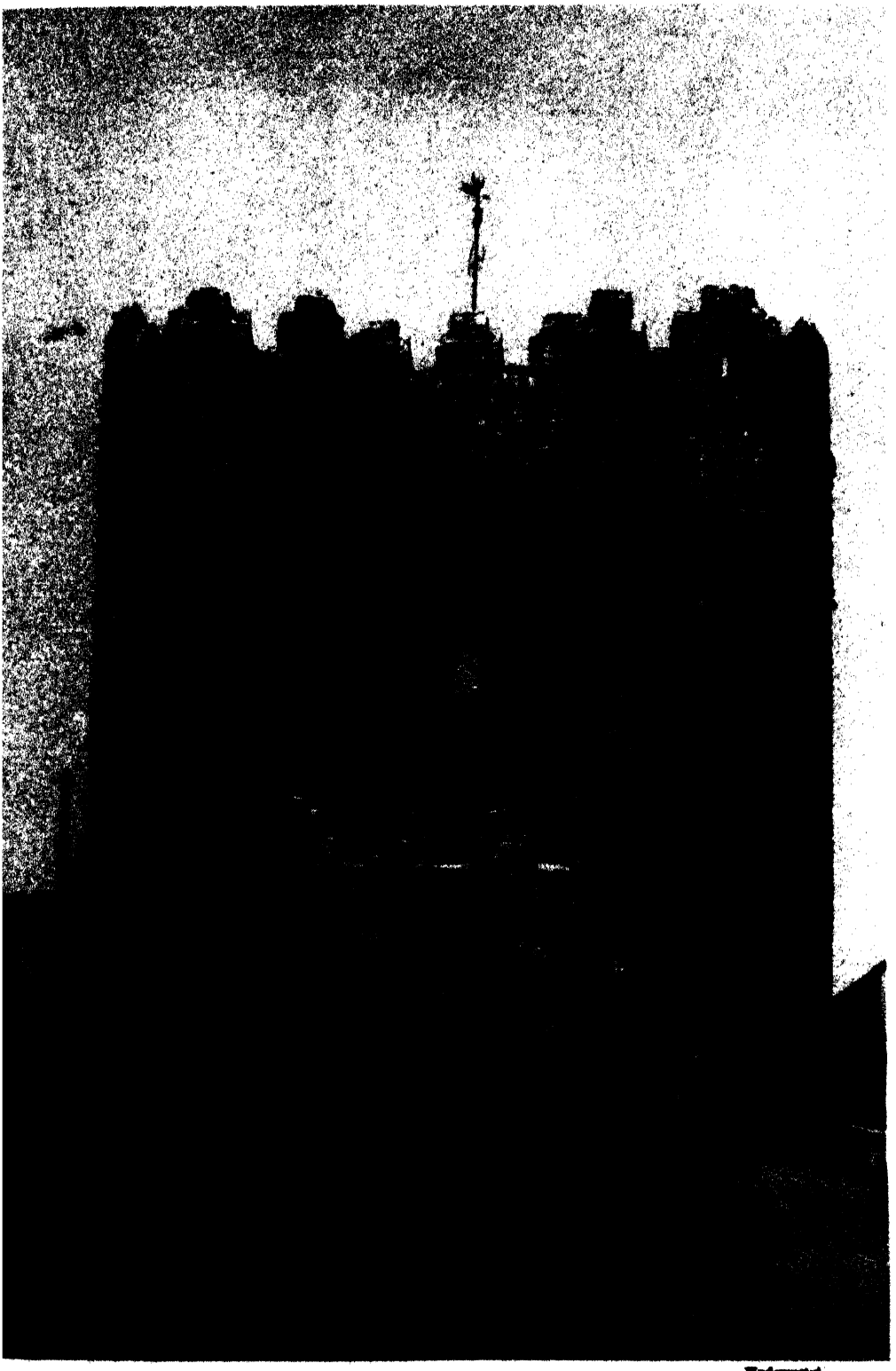
IRELAND. *On a late winter evening, when the storm gathers out of the Atlantic and wisps of low cloud blow past the cold hills, Valentia harbour and its lonely lighthouse know a sad, wild beauty*



IRELAND. *The southern end of Lower Lake at Killarney has a bay filled with islands, with rock at their water's edge and thick leaves against the sky. Round about, the hills keep the secret of its loveliness*

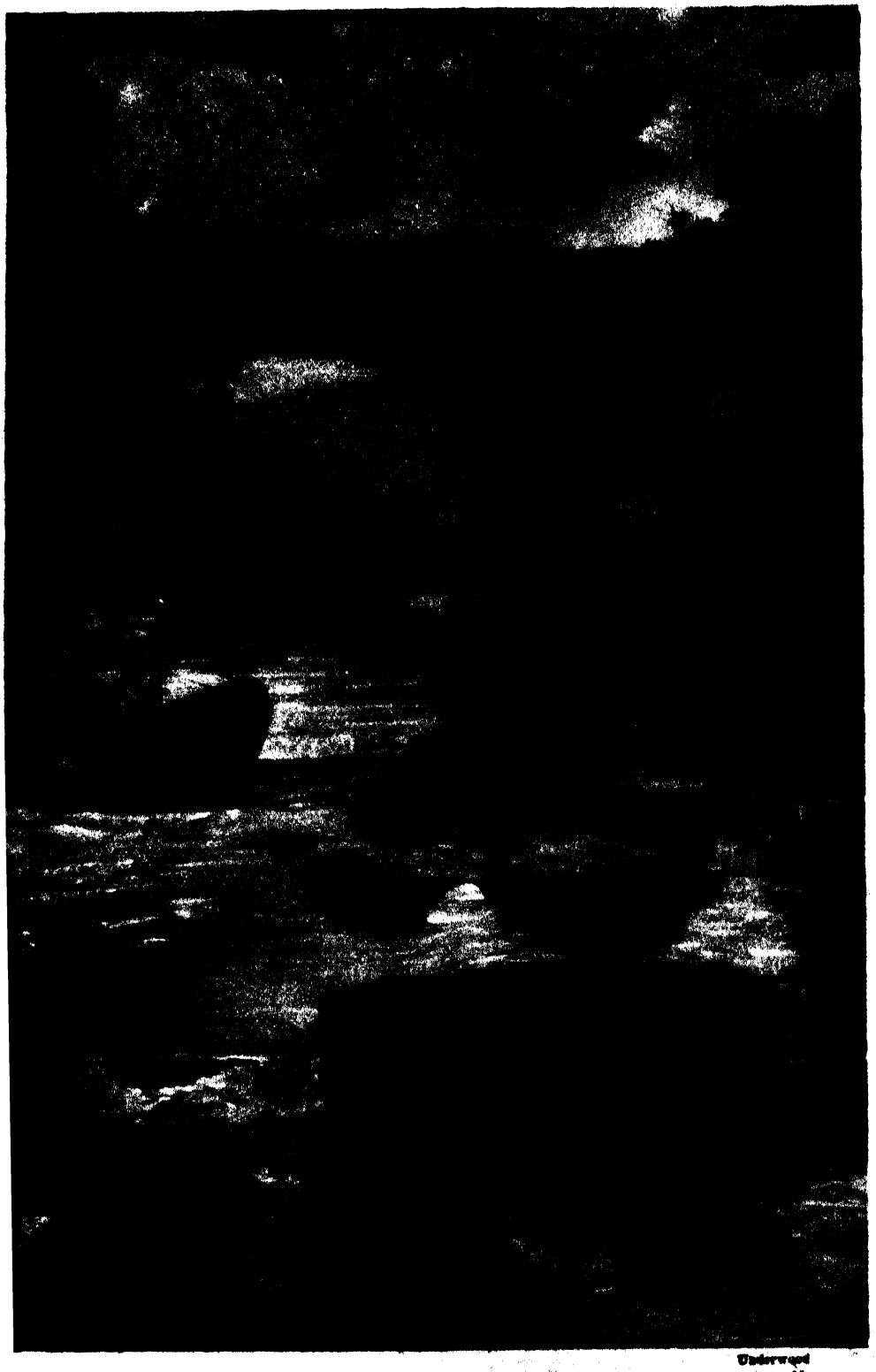


IRELAND. *Near Drogheda are the fifth-century ruins of Monasterboice with a broken round tower and this wonderful Celtic cross*



Underwood

IRELAND. *The towers of St. Lawrence's Gate, reputed to date from the twelfth century, are gloomy relics of the walls of Drogheda*

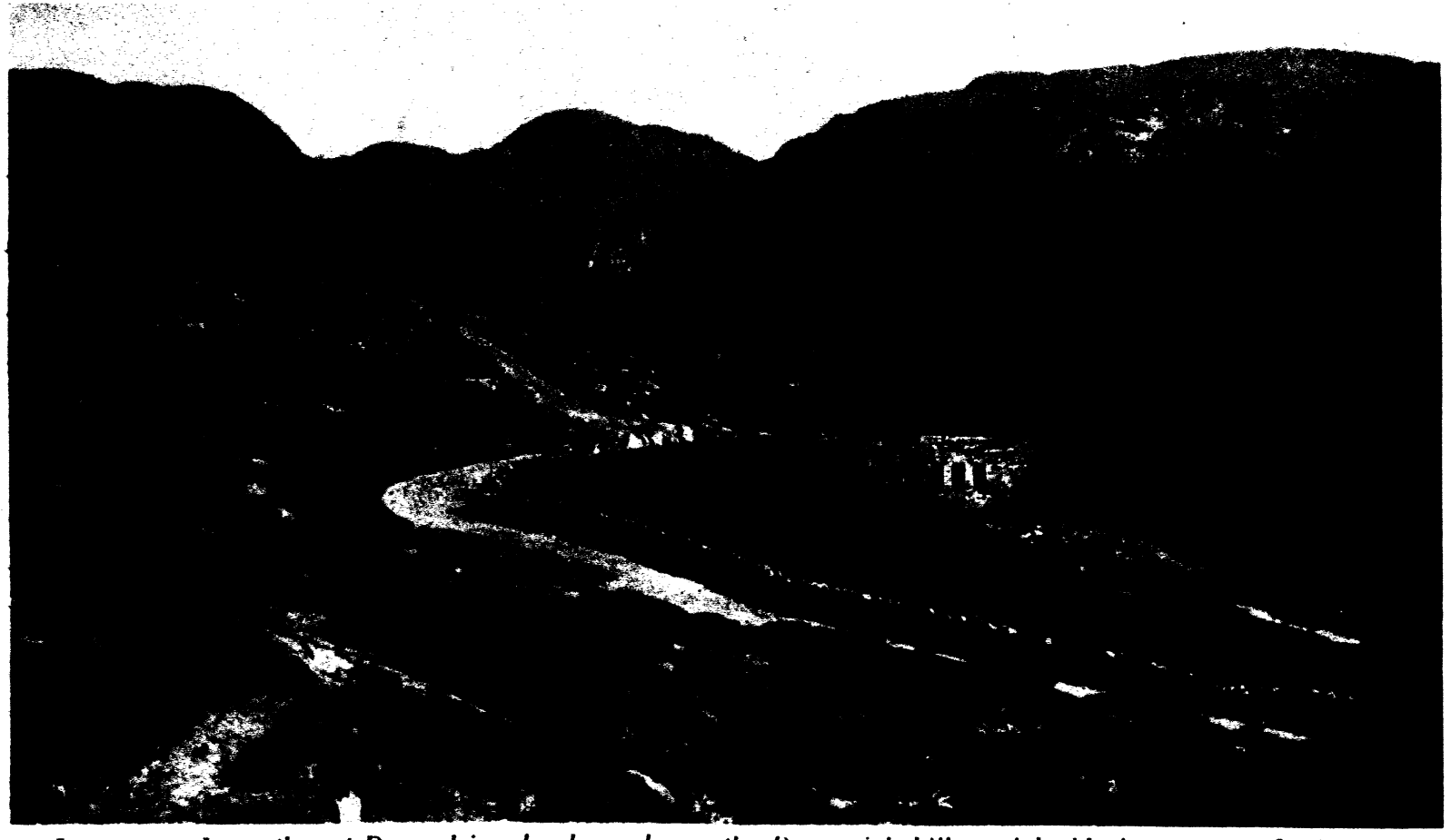


Underwood

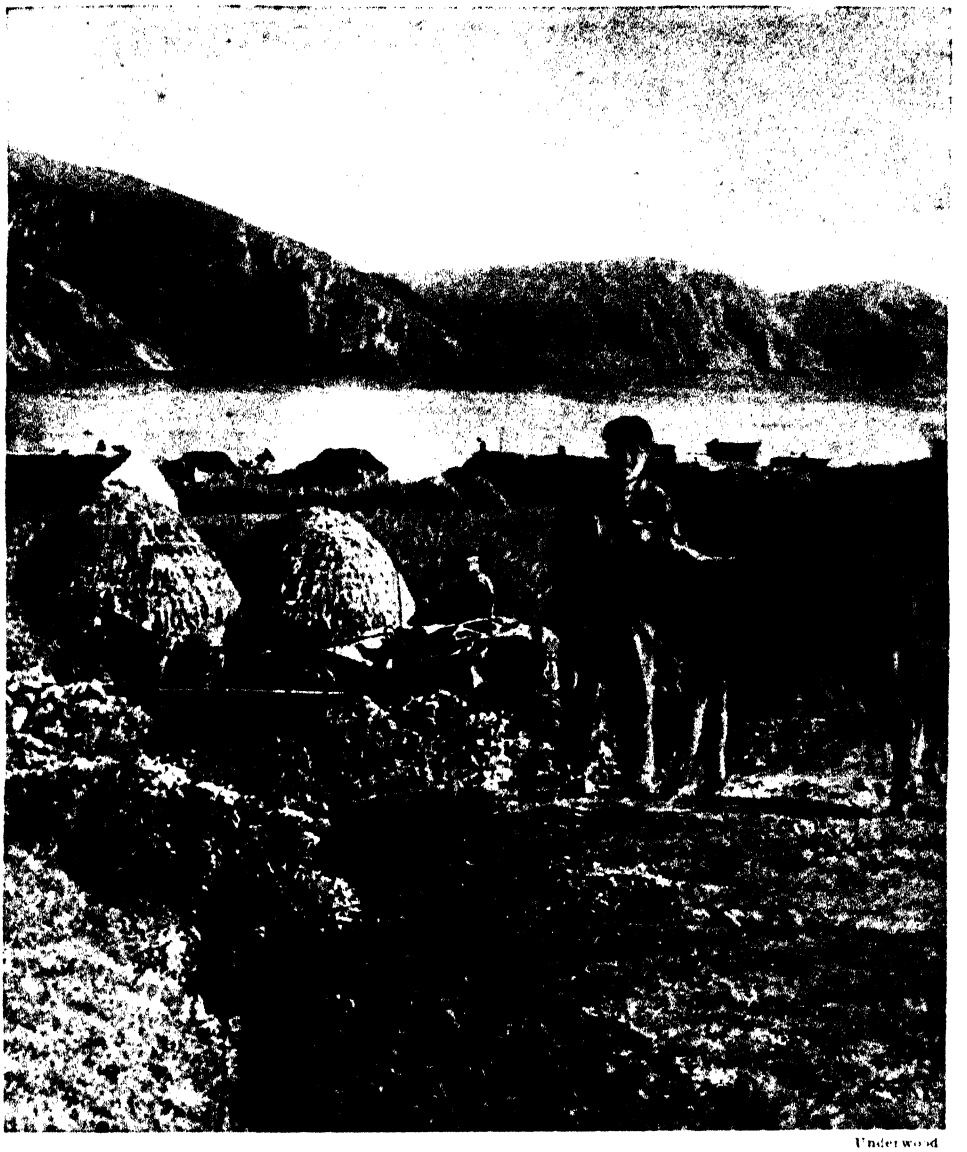
IRELAND. *At Killarney a creek, the Long Range, flows two miles and a half by wooded ways from Upper to Muckross Lake*

2306

IRELAND. *From the cliffs of Doon, by Ballybunion, one looks across a grey space of sea to the farther hills of the Shannon estuary*



IRELAND. *In north-west Donegal is a lonely road over the Derryveigh hills and beside it a stream flowing to Lough Dunlewey. The water is dangerous to drink and they call this wild place Poison Glen*



Underwood

WILD AND BARREN ISLAND OF ACHILL OFF THE COAST OF MAYO

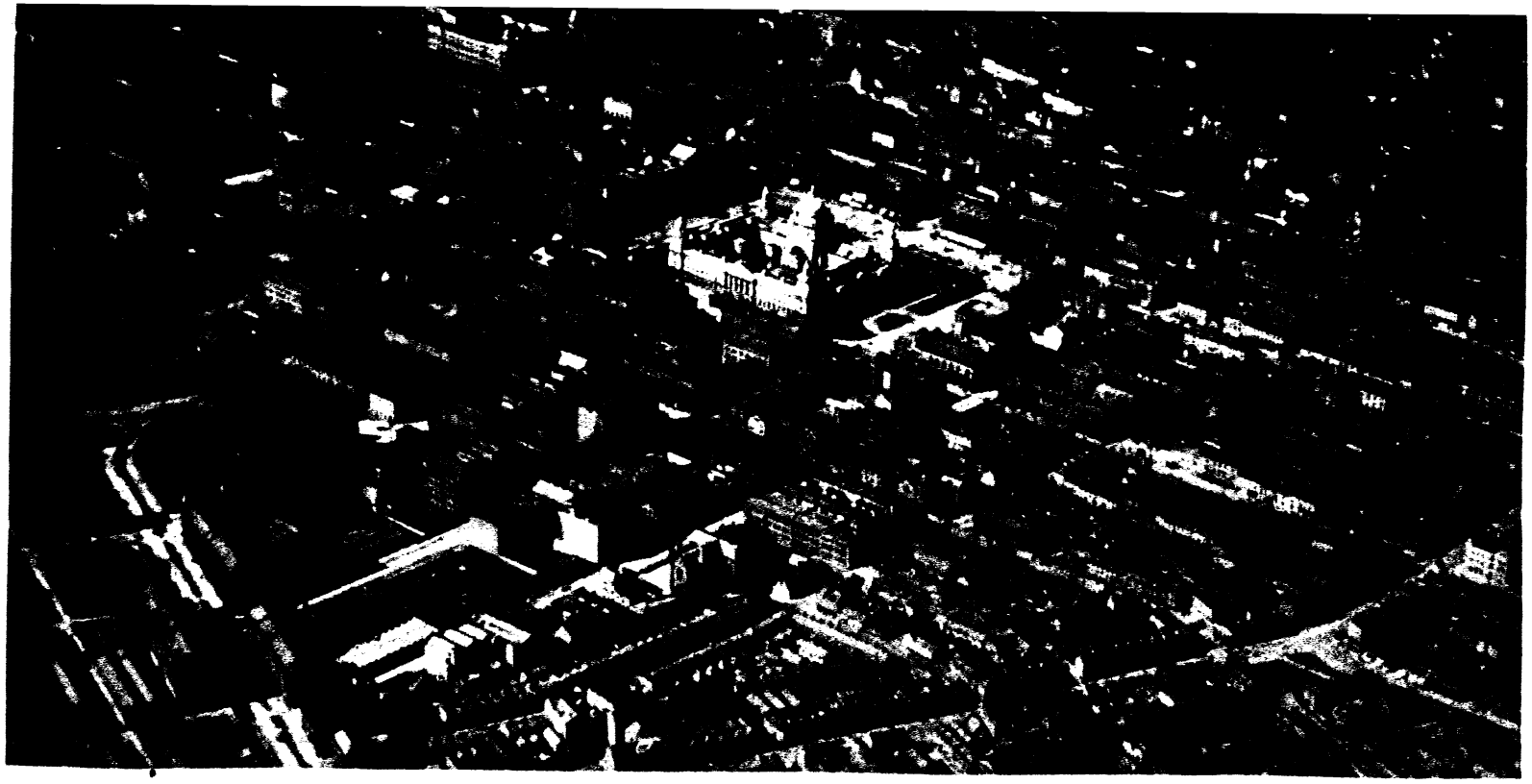
Achill or Eagle Isle is separated from the mainland by the narrow Achill Sound, and the appearance of the island is an almost unvaried mass of heather, covering broad undulating moors that stretch from the high ranges to the western extremity of the island, which culminates in Achill Head, 2,192 feet. The land is roughly cultivated in small patches of oats and potatoes

peat in the air, moves the imagination like some lovely thing in nature. As for the poverty of the western seaboard of Connaught, it is as unlike the agricultural prosperity of Munster as it is unlike the industrial prosperity of north-east Ulster. Cork cannot vie with Belfast in manufactures, but it is a capital of an agricultural province that, in peaceful times, is exuberantly rich. It has even been contended that the south, on the whole, is richer than the north of Ireland. I do not think this is true, but the exaggeration serves a useful purpose in drawing attention to the fact that the south, far from being a congested district of paupers, is a region with resources, rich possessions and all the materials of settled comfort. There are, unfortunately, far too few

W Lawrence

MOUNT ERRIGAL, SHAPELY HEIGHT OF ULSTER, SEEN FROM BARNEY'S BRIDGE, GWEEDORE

Although nearly all the villages of Donegal are of the same mould, the landscape is of an infinite variety. The surface is usually broken and rugged and intersected by hundreds of streams and deeply-wooded valleys, while scattered hamlets and lofty ranges of hills with many bold peaks stand ever within view. Donegal is a mountainous county, and Errigal, the highest point, lies five miles south-east of Gweedore and is over 2,460 feet high. From its summit a remarkably fine view is obtained, extending over a sea of mountains, while many miles of the northern coast with its numberless inlets and creeks lie at one's feet



Aerofilms

VIEW FROM THE AIR INTO THE HEART OF BELFAST: ULSTER'S CAPITAL AND CENTRE OF THE LINEN TRADE

Belfast lies on the banks of the Lagan where it enters Belfast Lough. In the centre of the photograph is the City Hall, in Donegall Square, an imposing stone building in the classic Renaissance style occupying the site of the old Linen Hall, but the city contains few buildings of architectural distinction. Belfast has one of the largest shipyards in the world, where some of the greatest liners and battleships have been built, and ship-building shares with the linen trade the distinction of being the chief industry. Other manufactures are chemicals, ropes, machinery, brewing, tobacco and aerated waters

Underwood

BLEACHING THE BELFAST LINEN OF WORLD-WIDE REPUTATION

An enormous amount of flax is grown in Ulster, for the manufacture of linen is a staple industry; and in 1920 its spinning and weaving trade comprised 40,000 power looms and 1,000,000 spindles, and gave employment to 73,000 persons. It is estimated that the annual value of Ulster's linen trade is 12 millions sterling. Above is a bleaching field near Belfast, showing linen mills in the background

Ewing Galloway

SOMBRE STREET AMONG THE DRAB FLAX MILLS OF BELFAST

As the chief seat of the Irish linen trade, Belfast has long been noted; it has immense manufactories where every description of the finest linen and damask goods can be seen. One of its largest mills is that of the York Street Flax Spinning Company, seen here, a vast building covering about five acres with some 65,000 spindles and 1,000 looms in operation, and employing over 4,000 people

industries, apart from agriculture. Whisky and stout flourish in Dublin, but in the rest of Ireland, outside the northern towns, though there are a number of woollen mills and motor works there is no extensive industrial life as it is known in the south of Scotland and the north of England. Belfast, more fortunate in its history in some respects, early became the capital of linen manufacture, and is now a busy industrial city, with shipyards, rope-works and foundries. She also makes whisky, and has strict laws forbidding anyone to buy a glass of it on Sundays. Set beautifully on the water-side under shadow-patched hills, she has most of the characteristics of a great city, except noble architecture. If only Belfast men gave as much thought to the designing of their houses as to the designing of their ships, what a city they might build!

Not that the modern buildings in the southern cities are any more attractive. The beauty of Dublin, of Cork, of Limerick is for the most part a beauty of past time—a beauty of the eighteenth century. It is beauty in a backwater—not beauty in the full stream of life. As for the beauty of Galway—the tall, grey, broken house-fronts at the end of the bay—it is beauty in ruins. All the famous towns of Ireland are beautiful in their situation, but, if you admire anything else in them, it will almost always be something surviving from the perished centuries.

The horse succeeds in retaining his place in the life of the country to a greater degree than in England. Even so, in Ireland as elsewhere, the horse is giving way to the motor. Already in Belfast there are taxis in the streets, and the old jaunting cars, so terrifying to visitors, are fewer and idler than they were before. The motor-car, indeed, has penetrated even into those far western districts in which the donkey seemed to be eternally supreme as the king of the road. But the donkey with the creels slung over his back—sometimes with a child sitting in one of the baskets—is still a feature of the landscape and, as the friend of the poor, he may well survive the costlier horse.

The problems of the Irish Free State are mainly cultural and agricultural, apart from the merely political issues. In another century the very landscape of Ireland will almost certainly be changed, when trees will have taken the place of treelessness, grassy plains will have been broken up by the plough and richer breeds of cattle will bring new colours into the fields. Even the climate may change as a result of afforestation. Two things will remain, however—the churches and, so long as a word of English is spoken, the Cork brogue.

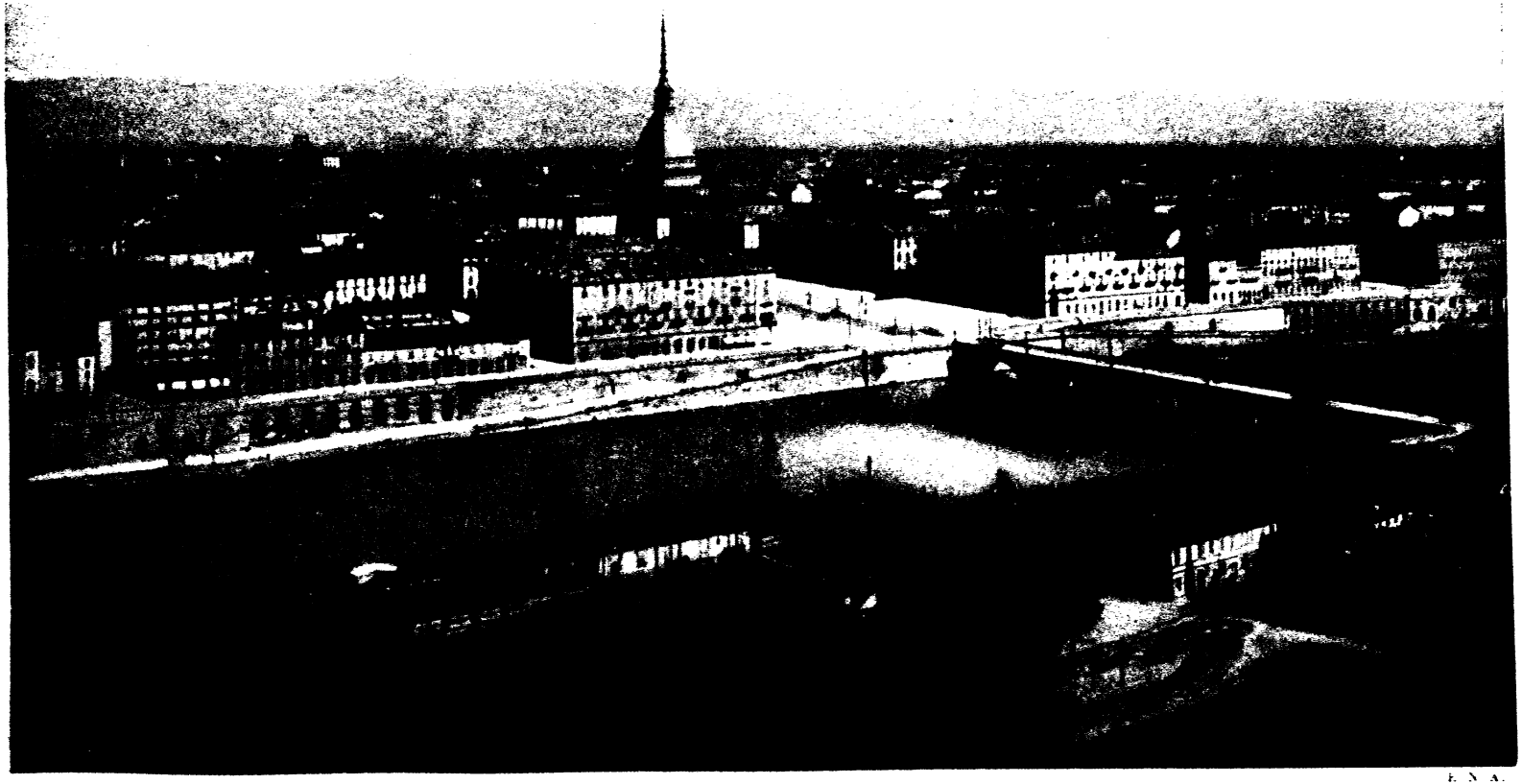
IRELAND: GEOGRAPHICAL SUMMARY

Natural Divisions. The midland plain, a lowland, with coasts at Galway and between Dublin and Drogheda. North and north-west the highlands with a grain lying south-west to north-east in line with the highlands and uplands of Scotland, but without the counterpart of the central lowlands. South, more highlands, those next the plain with a S.W.-N.E. trend and those next the south coast with a trend E.-W. in line with the heights of Southern England. A well articulated coast-line with fjords in the north (cf. Scotland and Norway) and rias in the south-west (cf. N.W. Spain). An old land, geologically older than England, with rocks too ancient to contain extensive deposits of coal.

Climate and Vegetation. The world's best example, except New Zealand, of a temperate oceanic or equable climate. A natural meadow-land, with deciduous and coniferous trees.

Products. Farm products, especially those of the dairy—butter, bacon, eggs and poultry. Horses. Oats grow well in the north-east, potatoes everywhere. Barley. Stout and whisky. Flax and linen goods. Ships at Belfast.

Outlook. Lacking coal, lacking in large measure the educational facilities prevalent in Great Britain, lacking, since the great emigrations, the most enterprising men and women, limited by uniformity of resources and climate, Irelands needs something—it may be assistance or it may be the mere efflux of time—before she can take a place in the world comparable, perhaps, with that of Denmark.



E. N. A.

CITY OF TURIN WITH THE HANDSOME PONTE VITTORIO EMANUELE PRIMO SPANNING THE PO

Turin, a city of north-west Italy with a population of about [illegible], lies on the Po, 84 miles west of the Mont Cenis Tunnel, and is distinguished among Italian cities **for the regularity** of its construction. At one end of the Ponte Vittorio Emanuele Primo is the large piazza of the same name, which leads into the Via di Po, **and the high dome**, 550 feet, to the right of the piazza is that of the Mole Antonelliana, the highest brick edifice in Europe, used for the Risorgimento Museum. The flourishing manufactures include [illegible] trade with motor cars, steel and iron goods, ribbons, velvets and textiles.

ITALY NORTH

Lombard Plain from Alps to Apennines

by Edward Hutton

Author of "The Cities of Lombardy"

A TRAVELLER on his way from northern or western Europe, who shall have the patience or the curiosity to cross the Alps on foot, or at least by road, whether he attempt these mountains by the Mont Cenis, the Simplon, the St Gotthard, the Spluegen or the Brenner Passes, will find, when he has crossed them, a vast green plain stretched out before him as far as the eye can reach, a country wide and gracious, watered by many a great river, scattered with fair cities and lying a little vaguely between always far-away mountains. This plain, with the mountain sides which contain it, we call North Italy; in fact it is the old Cisalpine Gaul.

The country thus defended on the north against the Germanies and on the west against Gaul by the Alps is closed on the east by the sea. From Italy it is divided by those far-away mountains - the Apennines.

Land Dominated by the Alps

This vast continental plain to the north of the Apennines has been separated by nature herself from the true Italy to the south of them, and men have always felt the difference between these two countries. For when we come to examine that plain which expands, like a tree trunk near the ground, as it approaches the Alps, and sends its roots far back into the mass of Europe, we shall be more and more impressed by its non-Italian character. We shall find that it is dominated far more by the Alps than by the Apennines, and that it contains a lowland and a river of true continental proportions which Italy cannot match, and for which indeed there is no room in that narrow and mountainous peninsula. The relation of Italy to Cisalpine Gaul—that is North Italy, the whole great valley of the Po, and Venetia, the valley of the Piave—has been the same for ages.

Where an Empire Rose and Fell

The valley of the Po, all this vast plain, appears in history as the cockpit of Europe, the battlefield of the Celt, the Phoenician, the Latin and the Teuton. Here in this Gaulish country Hannibal waited and recruited before he made his first descent upon Italy, in which the Oriental so nearly overthrew Europe; here Caesar conceived and by a single act founded the Empire, which here in its decay the barbarians pulled to pieces; here Charlemagne re-established it, and here the greatest and the most striking political achievement of the nineteenth century was accomplished: here Italy founded her unity.

The concave chain of the Alps which encloses the plain on the north and west is of a very great average height and indeed consists of the loftiest range in Europe. The Alps fall everywhere precipitously to the plain, are crossed by many difficult passes throughout their extent; and among the foothills at their base is a series of great lakes—Orta, Maggiore, Lugano, Varese, Como, Lecco, Iseo, Idro and Garda, of various extent, the largest being Garda. The Apennines, on the other hand, are comparatively low in height and among the most barren mountains in Europe.

In its origin the vast plain, surrounded on all sides but one by these mountains, was once a huge gulf of the Adriatic and is covered by pleistocene and recent deposits brought down

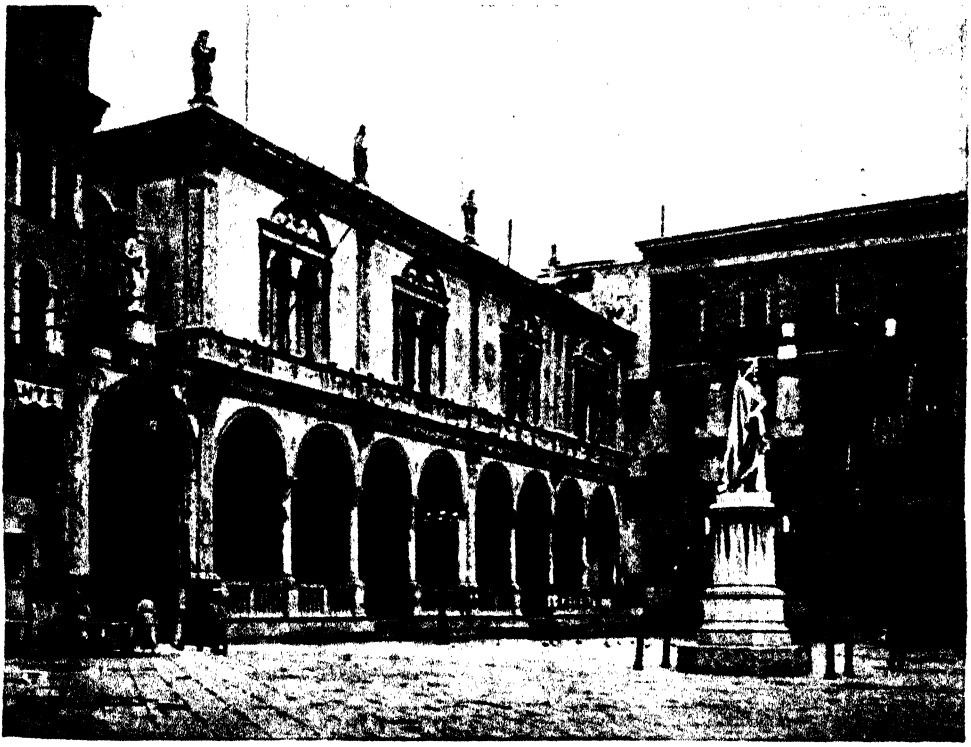
TWO SEAS AND THE LAKE-STUDDED ALPS GUARDING THE PLAIN OF NORTHERN ITALY

by the rivers from the mountains. Its great dominating factor throughout history has been the river Po; North Italy, save in its eastern corner, really consisting of the Po basin and the surrounding slopes of the Alps and Apennines. Such another basin is not to be found in Europe, so great in extent and so clearly defined. The plain is level, unbroken save by the volcanic district of the Euganean hills, a small isolated group extending for some ten miles from near Padua to Este; while the lower slopes of Alp and Apennine which surround it are extremely bold and precipitous.

The whole of this great continental country lies within the parallels 46° 40′ and 44° N. and 7° and 14° 50′ E., and measures, in its greatest length east and west from Susa above Turin to Tolmino above Udine, some 350 miles, which, even now when the eastern frontier of Italy has been enlarged, is still about three times its average breadth, though its greatest breadth from the summit of the Brenner in the Alps to Pracchia above Bologna in the Apennines measures well over 200 miles.

Politically, the whole of this country has always been roughly divided into the following parts: Piedmont, comprising the upper waters of the Po; Lombardy, to the north of the Po as far as the Mincio; Venetia on the north-east coast; Emilia to the south of the Po; Trentino, an Alpine district bounded by the valley of the Inn on the north and traversed by the upper valley of the Adige from north to south; Istria, the peninsula thrust southward into the Adriatic between Trieste and Fiume; Liguria, which does not properly belong to North Italy at all, since it lies on the southern slope of the Apennine and Maritime Alps.

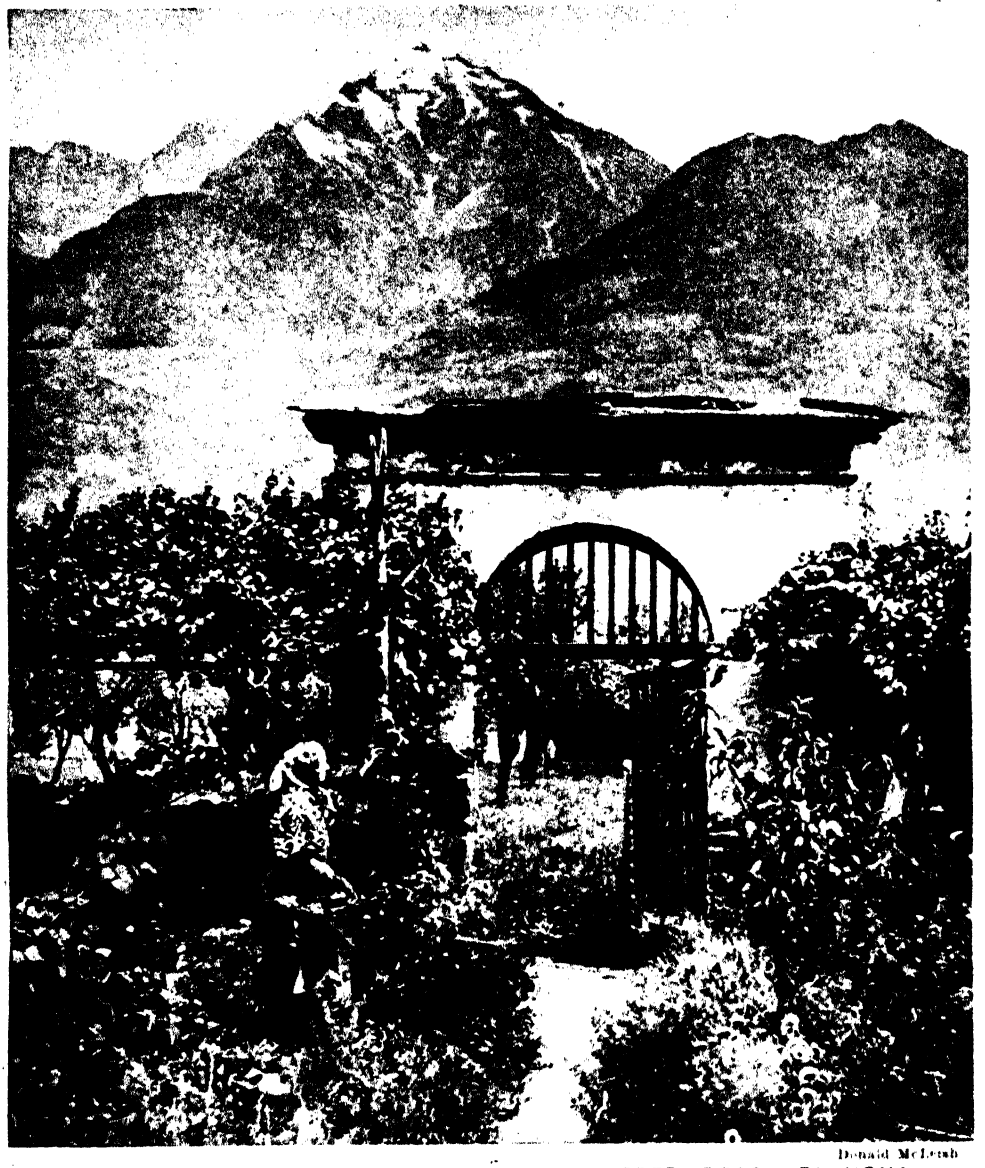
The chief towns of these districts are—Piedmont: Turin (502,000) and



E. A. Crook

GREAT DANTE'S STATUE IN THE PIAZZA DEI SIGNORI AT VERONA

Capital of the province of the same name, Verona lies on both banks of the swift-flowing Adige, 72 miles west of Venice by rail. An ancient fortified city of great historical interest, it possesses many noteworthy structures and picturesque squares. One of these, the Piazza dei Signori, contains Zannoni's statue of Dante, who made the town his first home after his banishment from Floren.e



Donald McLeish

GREEN VINEYARD BENEATH THE SNOW-CAPPED BECCA DI NONA

To the south of Aosta rises the lofty peak of the Becca di Nona, 10,305 feet, commanding a superb panorama of the Alps and the beautiful Val d'Aosta, famed for its pine trees, minerals and mineral springs. Aosta, in the province of Turin, lies at the junction of the roads over the Great and Little St. Bernard, and contains extensive remains of the old Roman fortifications

Alessandria. Lombardy: Milan (718,000), Brescia, Bergamo, Cremona, Mantua and Pavia. Venetia: Venice (171,000), Padua, Udine, Verona and Vincenza. Emilia: Bologna (219,000), Ferrara, Modena, Parma, Piacenza and Ravenna. Trentino: Trent. Istria: Trieste and Pola. Liguria: Genoa (316,000), Spezia and Savona. Of these Milan, Venice and Genoa are described elsewhere.

The Po rises 6,000 feet up, in two little lakes on the north face of Monte Viso at the northern extremity of the great curving Alpine range (Cottian Alps), and crosses the plain from west to east in a course of some 220 miles in a direct line till it falls into the Adriatic.

We have said that this whole country is far more under the influence of the Alps than of the Apennines. The greater

importance of the Alps resides chiefly in their greater height. Moreover, the Alps everywhere come up slowly out of the north and fall steeply southward, presenting a precipitous escarpment to the sun. For this reason all the rivers that rise in them and descend from them upon this side are far stronger and more swift, till the plain curbs them, than those that flow into the plain from the Apennines. For instance, the Po falls 5,758 feet in its first 21 miles.

The result is that the Po has been pushed southward to the very foothills of the Apennines by its own northern tributaries, and the great plain which it divides from west to east is thus much wider upon the northern bank than upon the southern.

Below Turin the Po receives from the north the Dora Riparia, the river of Susa under Mont Cenis, the Stura, the Orca draining Val di Locana, and then its first great tributary the Dora Baltea rising on Mont Blanc and draining Val d'Aosta under the great and little St. Bernards. Some 25 miles lower down the Po receives also from the north another great river, the Sesia, the river of Varallo and Vercelli rising under Monte Rosa. Then 30 miles farther east the great Ticino, which drains Lago Maggiore, joins the mother river. The Ticino rises above Airolo at the foot of the St. Gotthard, drains Val Leventina and enters the lake in the Marsh of Magadino.

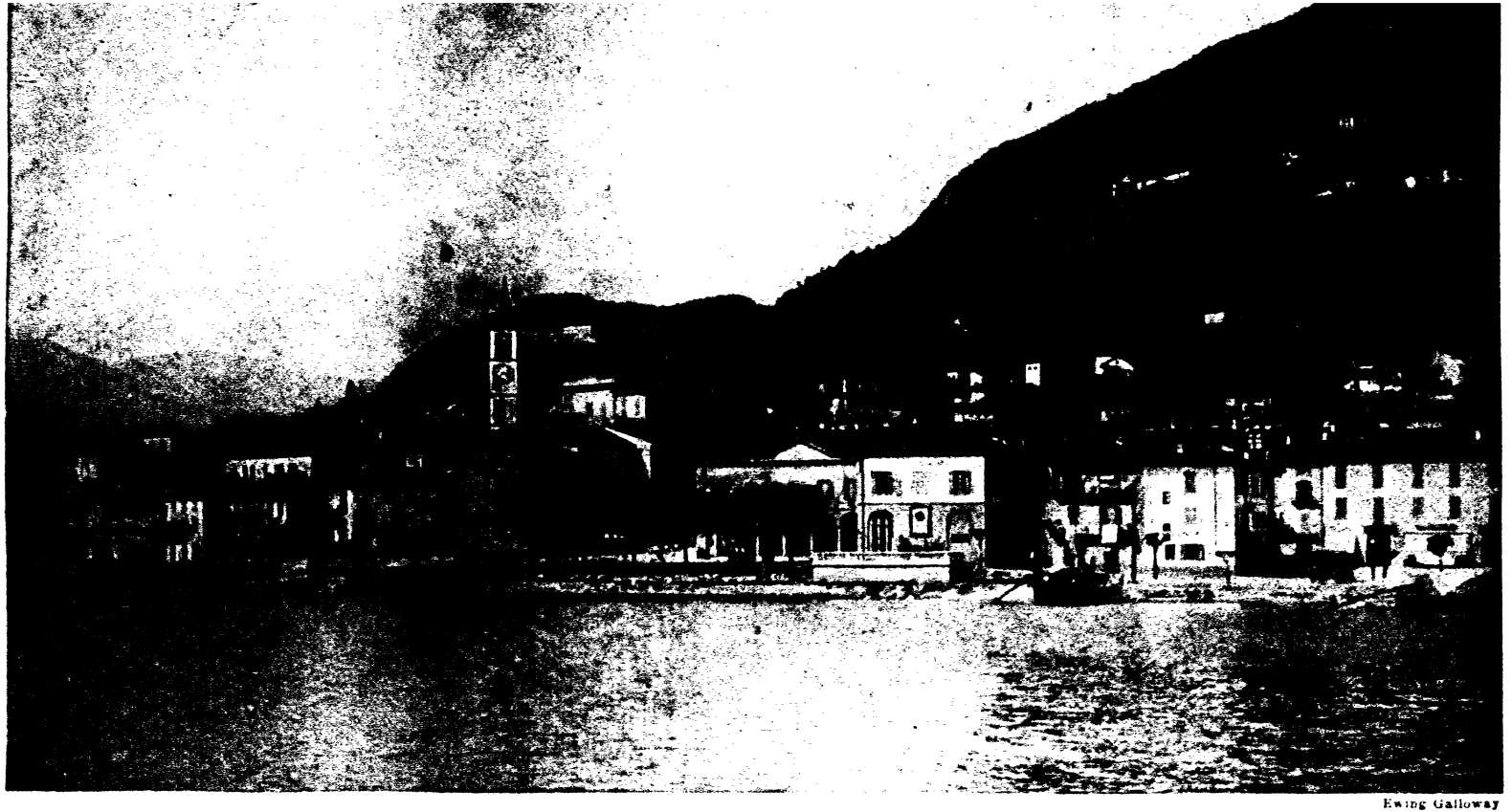
The next great tributary which the Po receives from the north is the Adda, which drains Lake Como. It rises in the Alps above Bormio and drains Valtellina for more than 60 miles before it enters the lake at Colico. Many miles below Cremona and just below Borgoforte the Po receives another tremendous tributary, the Oglio, which rises above Edolo and drains Val Camonica and Lake Iseo.

Finally we come to the last great tributary the mother river is to receive upon her northern bank—the Mincio, which rises in Lake Garda, leaving it

Ad Astra Aero

ITALY'S BARRIER OF SOARING PINNACLES AND ABYSMAL VALLEYS

It is largely owing to these titanic bulwarks on her northern fontier that Italy enjoys a more equable and sunny climate than other countries to the north; yet the skies are not always of the deepest azure nor is the sun perpetually shining, for the plain of Lombardy suffers from inundations and torrential downpours. This is the Glacier de Zigiorenove below Mont Blanc de Seillon



Ewing Galloway

LAVENO ON THE BEAUTIFUL LAKE MAGGIORE, WHICH LIES MAINLY BETWEEN PIEDMONT AND LOMBARDY

The northern banks of Lake Maggiore are bounded by high mountains of south Switzerland; its lower eastern shore is fringed by vineyard-covered hills which graduate away to the level of the vast plain of Lombardy. It is 38 miles long and is from half a mile to five and a half miles in breadth, and has a maximum depth of 1,200 feet and an area of 82 square miles. Laveno, lying on its east bank, is a favourite resort, and has excellent railway and steamer facilities; behind Laveno towers Sasso di Ferro, one of the loveliest mountains on the lake

at Peschiera, meanders across the plain, almost encircles Mantua with its still waters and finally joins the Po, which is here quite 500 yards broad.

The tributaries of the Po upon its southern bank flowing from the Apennines are very feeble streams, in summer little more than torrents, in comparison with the great rivers which come into the mother stream from the Alps upon the north. It is not till the Po has passed Turin and Valenza that it is joined by the Tanaro, the river of Alessandria, a considerable stream. There follow the Scrivia, the very famous, Trebbia, the river of Hannibal's victory that flows by Bobbio and joins the Po above Piacenza; the Nure, the Taro, the Parma, the Enza, the Secchia, the Panaro, the Reno, the river of Bologna; and in ancient times the Santerno, the river of Imola, and the Montone of Forli. We are now close upon the sea and the boundary of the great plain may be said to be the Marecchia, for the Apennines just fail to touch the sea, leaving a narrow pass. Close by flowed the famous Rubicon, both it and the Marecchia emptying into the Adriatic.

Formation of the Lidi

From the Mincio the plain ever narrowing between mountains and sea curls round the top of the Adriatic and finally ends in Istria, a sort of boss to the horn which it resembles in shape.

The peninsula thrust southward into the Adriatic between the Gulf of Trieste and the Gulf of Quarnero has this great advantage over the opposite Italian shore. In its 250 miles of coast-line are many good bays and harbours, only the chief of which are Trieste and Pola.

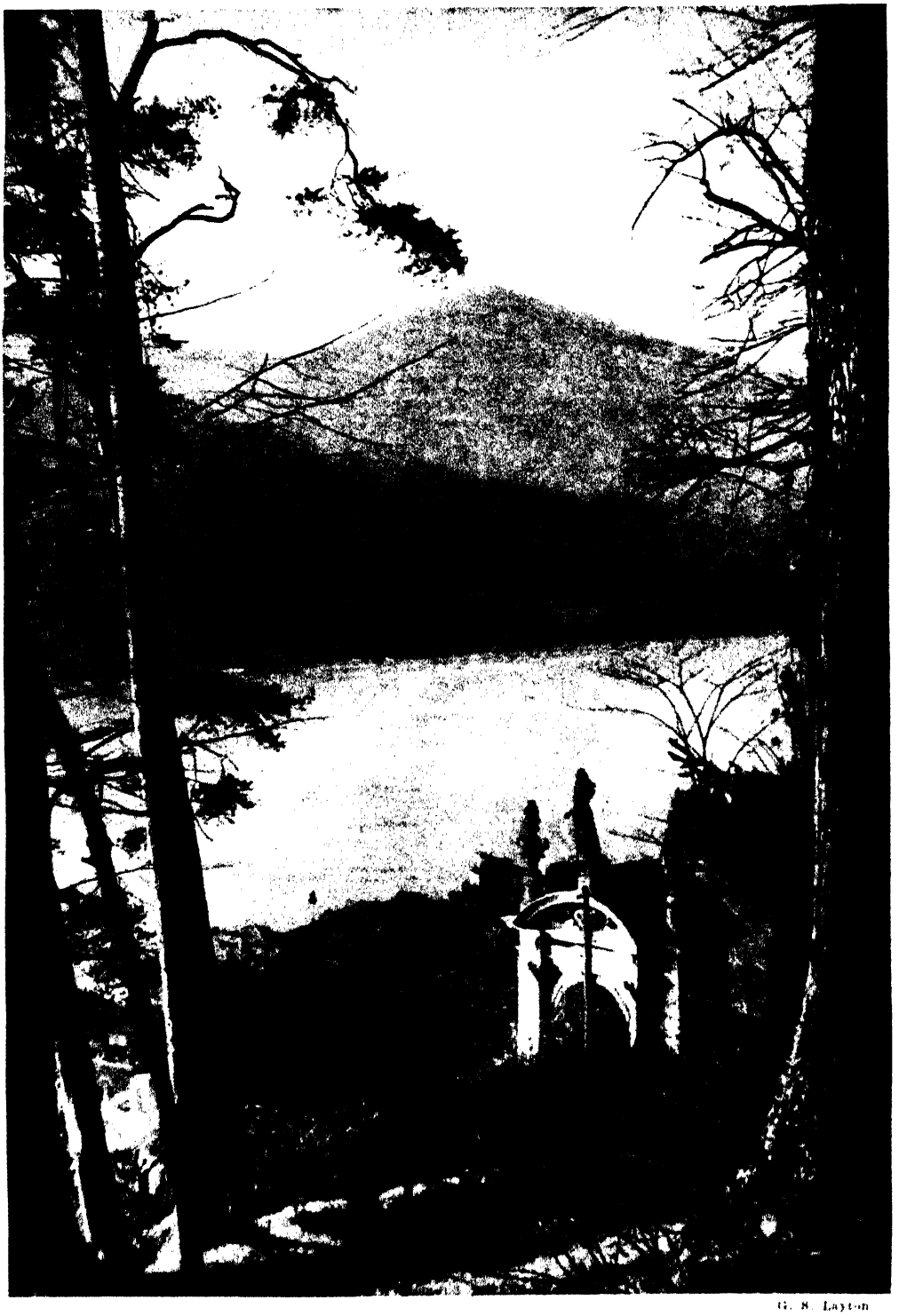
The coast of North Italy from the Marecchia right round the Gulf of Trieste has a uniform character. It consists of a great sandy beach behind which is marsh or reclaimed marsh-land. Often these sandy beaches have silted up into considerable masses and are known as lidi, which the sea and rivers have isolated, finding their way about them and forming vast shallow lagoons, the most famous of which is that in which Venice stands guarded by lidi and built upon islands of mud and sand strengthened with piles. Venice is unique in its size and splendour, but not in its opportunity of origin. A similar formation of coast may be found in other places about the gulf, notably at Comacchio and Murano.

Cold, Fog and Biting Winds

In climate the great plain with its surrounding mountains is altogether continental; in summer it is much hotter than the southern peninsula, while the winter climate has quite a northern character. Cold and biting winds rush down the mountains, fog is very common and snow frequent. The winter is invariably much colder than in England. In Milan for instance the thermometer sinks below zero at times. Of course, places resting right under the southern line of the Alps, such as Locarno or Gardone Riviera, are warmer than Milan or Cremona or Bologna out in the plain. The worst cold is in the Alpine valleys, the inter-mountain valleys. On lake Como they say "if you want to know what hell is go to Belluno in winter and Varenna in summer." As you approach the Adriatic the climate loses much of its continental character and resembles that of the peninsula.

Furnace of Heat and Dust

If the winter is colder, the summer is hotter in the Lombard plain. Indeed in summer it is a furnace of heat and dust, the great rivers shrunken far within their shingly beds. It is as hot as Sicily and without Sicilian advantages and amenities. The mountains, however, offer every kind of refuge in the summer heat, and few refuges can be more delightful than the great lakes and the Alpine stations such as Courmayeur. Rain is to be expected at all seasons, but is more frequent in late autumn, though there are heavy summer rains under the Alps, e.g. at Milan. The plain, however, has this peculiarity,



G. S. Layton

CHAPEL OF S. FRANCIS OF ASSISI HIGH ABOVE THE LAKE OF ORTA

On the beautifully-wooded slope of the Monte d'Orta are twenty chapels, which were erected in the sixteenth century in honour of S. Francis of Assisi, each containing a scene from his history in painted lifesize figures of terra-cotta. By the shore of the charming hill-girt lake lie the white houses of the little town of Orta, set amid scenery of transcendent beauty

A. M. Scott

MANY-DOMED SEPULCHRAL CHURCH OF S. ANTHONY OF PADUA

Padua stands on several branches of the Bacchiglione just above its confluence with the Brenta. It is a triangular-walled city and was once the chief town of Venetia. The church of S. Anthony was begun in 1232 and finally completed in 1424; it has seven domes of which the largest is 125 feet high, and is said to contain a reliquary with the tongue of the saint

that very heavy torrential rains are frequent about the spring or autumn equinoxes. Masses of rain-laden clouds driven by the south wind break up against the Alpine barrier, and these downpours result in frequent floods and inundations. Add to this the fact that the atmosphere is humid, partly to be accounted for by the great and numerous rivers, the innumerable canals, the lakes, rice-fields and vast unreclaimed marshes about the river mouths, and it will be seen that the climate is trying.

Sunny Spring and Autumn

The Po basin in its main part is much cut off from oceanic influences, and consequently extremes of temperature are common. Thus Milan has a normal range of over 40° F. though less than 500 feet above the sea; while Udine has a mean temperature not differing 10° from that of Syracuse. The best seasons for travelling are, however, here as elsewhere in Italy, spring and autumn, when there is everywhere a very large percentage of sunshine.

The zones of cultivation throughout North Italy are three. In the mountains, both Alps and Apennines, pasture; on the foothills and lower slopes, chestnuts, fruit, the vine, the mulberry, the silkworm and the olive; in the plain, rice, maize, flax, wheat, hemp, and also the vine and mulberry.

Olives an Index to Climate

The olive, it should be noted, is found up under the Alps (46° N.). It then disappears, is not found in the plain, but reappears only south of the Apennines. This is a perfect index to climate. The winter cold in the south and least sheltered part of the plain and on the northern escarpment and in the valleys of the Apennines is fatal to the olive, though the summer heat is great enough for rice. The one real drawback to farming in the plain is the hailstorms which often destroy the crops when ripening or ripened. They are due to the effect of a cold air current from the Alps upon the heated atmosphere of the plain.

Of the cereals, the most important is wheat. This is a splendid crop, but on the northern Venetian plain it is often crowded in order to produce a straw for plaiting, the making of straw hats being an industry. The best north Italian straw for this purpose is grown upon the hills of the Piave valley, where the grain is almost worthless but the straw valuable for its pale colour and fine lustre and toughness. About Parma, under the Apennines, the hard wheat produces excellent macaroni. Maize is the chief summer crop of the wet lands, often following hemp, the land thus producing two crops in one summer.

The rice of Lombardy and Piedmont is famous for its quality, but good rice is also grown about Ravenna and the north Italian peasants, indefatigable as they are, know well how to carry out the laborious cultivation necessary for this crop. Pavia and Novara possess the greatest acreage of rice, the best yield being found in Pavia and Mantua.

Where Gorgonzola is Made

The well irrigated pasture-lands of the Po and its great tributaries are the finest in Italy, and are for the most part devoted, especially in Emilia, to dairy cattle. The milk is made into cheese, two variations predominating, the Parmesan and Gorgonzola. A great deal of hay is also grown, these meadow-lands thus watered yielding as much as a crop a month for eight or even nine months.

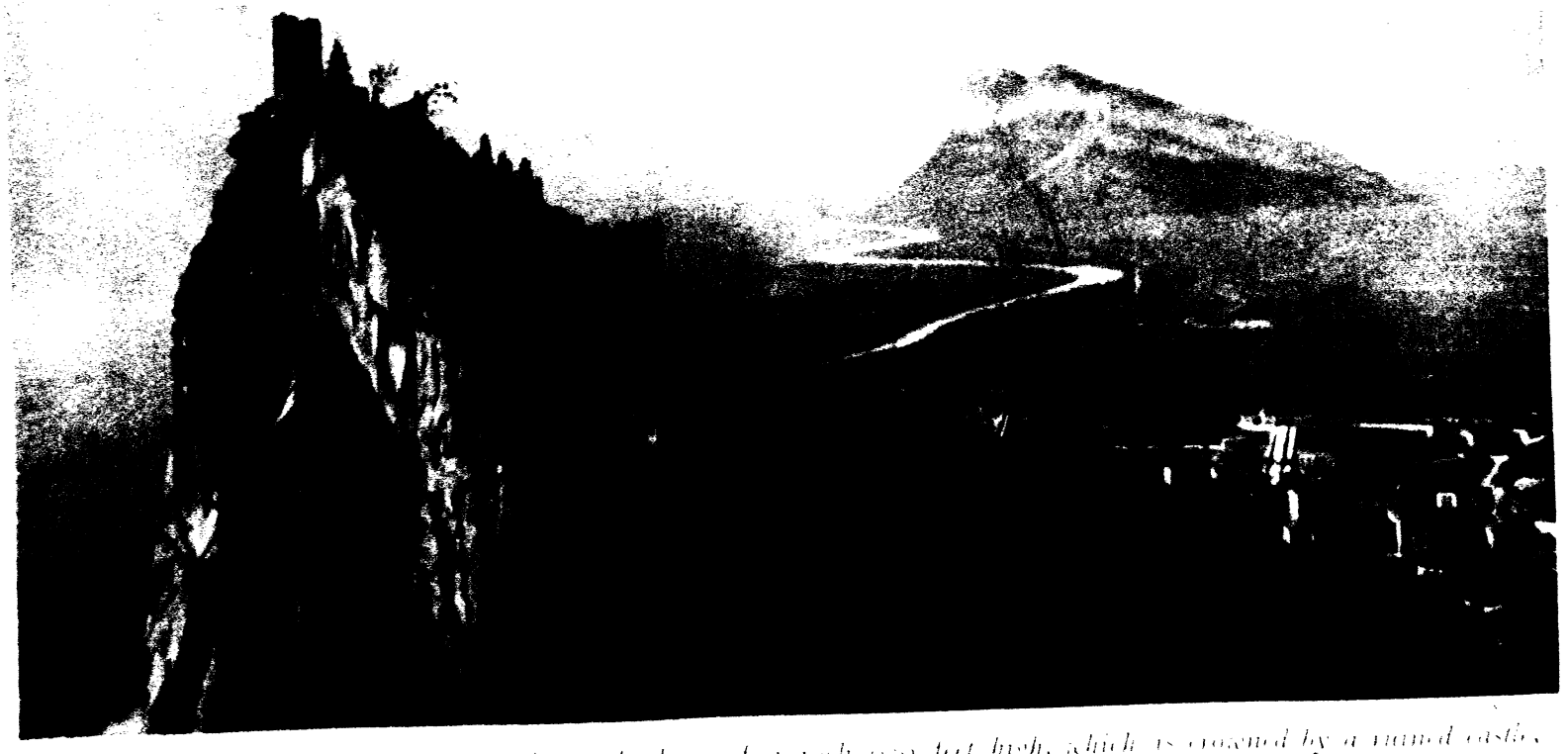
Sheep pasture on the foothills and the highlands, the chief centres being the sheltered Alpine slopes of Piedmont and Venetia. Local industries of the north are dependent upon the wool produced there, which is the heaviest per sheep grown in the whole kingdom.

Italy comes second to France in the quantity of wine she produces. The area under cultivation in the north is much smaller, and all the north Italian wines, while of good colour, are harsh. Perhaps the best wines of Piedmont are

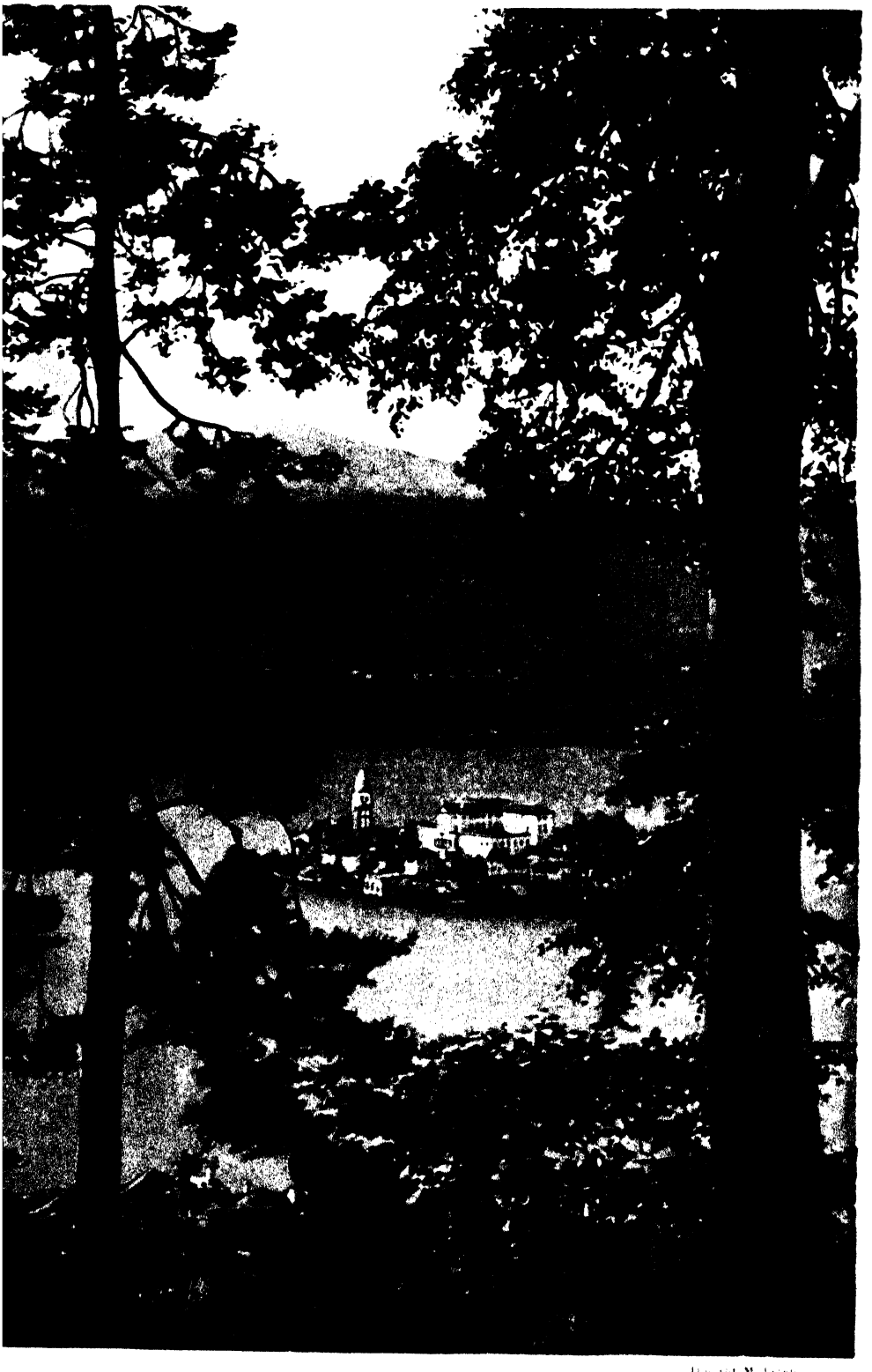
Donald McLeish

ITALY NORTH. *Seen from the woods above Arona the castle of Angera gleams white on its rock plinth by the shores of Maggiore*

2326



ITALY NORTH. *Forming a semicircle at the base of a rock 1250 feet high, which is crowned by a ruined castle; ancient Arches on the serpentine Sava amid clusters of olive trees*

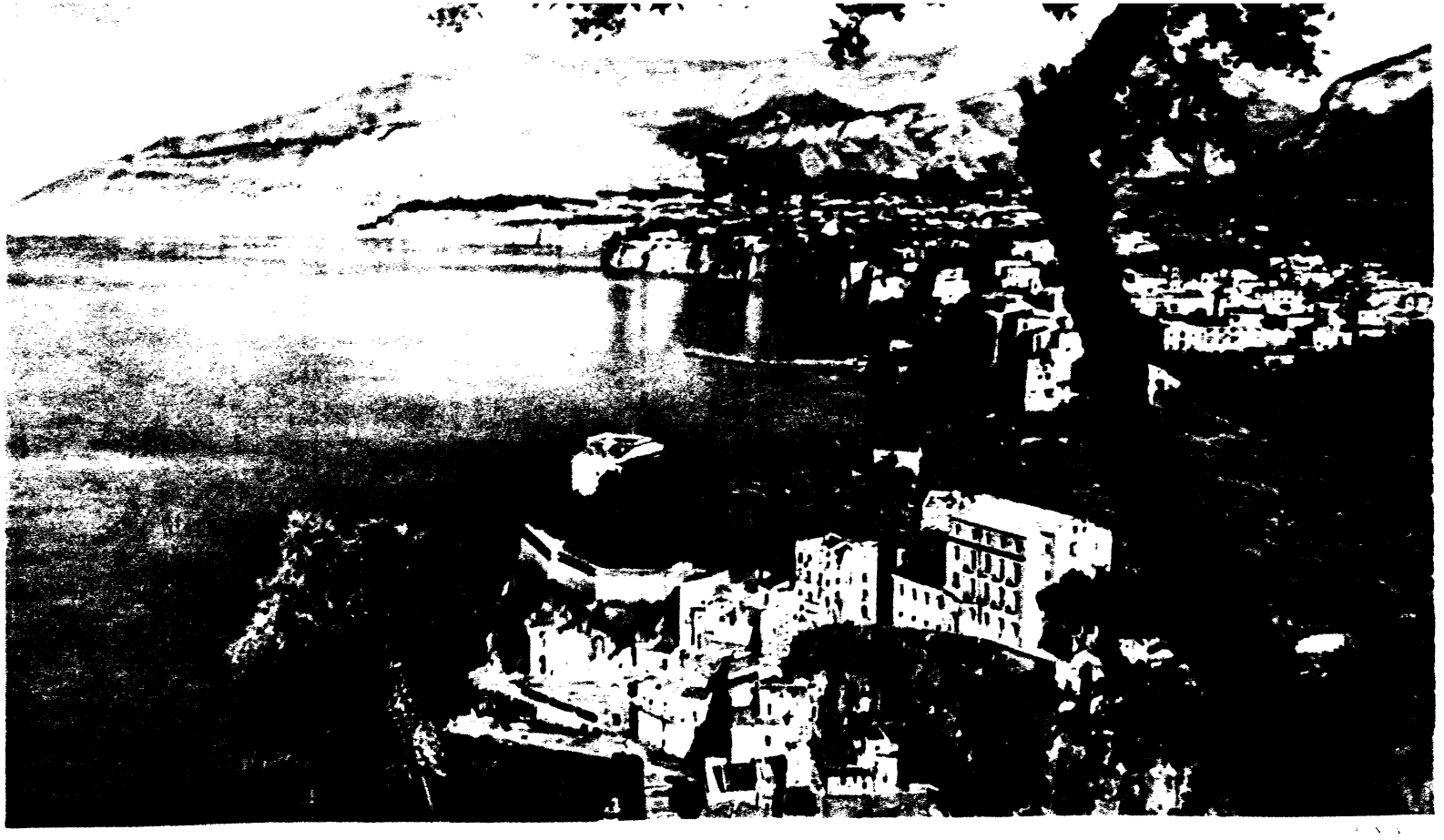


ITALY NORTH. *Through a fretwork of foliage the island of San Giulio seems like a soft mirage on the slumbering surface of Lake Orta*

Donald McLeish

ITALY NORTH. *Here is a little of Como's water-magic, as if the cliff had been enchanted into a pleasaunce. They call it Balbianello*

ETON NORTH. From the Road across the Meadows



ITALY SOUTH. *On a promontory in Campania the lovely town of Sorrento, here viewed from Capo di Monte, lies steeped in the incense of orange and lemon gardens that front the blue sweep of the Gulf of Naples*

ITALY NORTH. *La Rocca, citadel of the mountain republic of San Marino, stands on the summit of the formidable Monte Titano*

the Barolo and the Asti, the latter made from the muscatel and best known in its white and sparkling variety. The best wines of Lombardy are perhaps the Passella and the Valtellina.

The olive is comparatively rare. The mulberry is the great tree of Lombardy. Italy produces more silk than any other country in Europe and the plain sheltered by the Alps and watered by its great rivers is an ideal situation for that tree. Perhaps the Ticino valley is the most important area; a vast industry has now grown up in Milan and elsewhere, and Milanese silk is famous through the world.

Flax and hemp are also very favourably produced, especially in the eastern half of the plain, and Cremona is as well known for her linen as Bologna for her ropes and cordage.

Water Power Replacing Coal

In all these gifts the plain is fortunate, but like the rest of Italy it is very unfortunate in the matter of minerals. Only iron of very inferior quality is found in Lombardy, which accounts for the fame of Brescia and to some extent adds to the wealth of Milan; but the greatest drawback is the absence of coal. This fundamental defect is, however, to be greatly modified under modern conditions by the utilisation of the natural water power so plentiful everywhere in the Alps. The total hydraulic pressure available in Italy has been estimated as being over 5,000,000 h.p. and 40 per cent. of this is distributed in North Italy. Here nearly every village is supplied with power from this source, and the development is being rapidly extended everywhere and applied to every industry.

Communications are everywhere admirable. In Roman times, when Cisalpine Gaul was brought under the Roman administration, it might almost be said to have consisted of, and at least it depended upon, the great Roman highway, the Via Emilia. Leaving the market place of Rimini, it traversed the plain at the foot of the Apennines, passing through Forli, Faenza, Imola, Bologna, Modena, Reggio and Parma, precisely as the great railway trunk line does to-day, similarly crossed the Po at Piacenza and pursued its way to Milan. That great road still exists, and, though it has been gradually superseded by the railway which runs beside it, it is coming into its own again with the development of motor traffic.

Great Trunk Lines of the North

Another great trunk railway line traverses the plain to the north, from Milan to Venice, passing through Brescia, Verona, Vicenza and Padua and on to the north beyond Venice, through Treviso to Udine and Trieste.

From Genoa a great trunk line pierces the Apennines, crosses the Piedmont plain to Turin and proceeds to pierce the Alps by the Mont Cenis tunnel directly entering France.

From Milan two great lines go through the Alps into Switzerland by the Simplon and St. Gotthard tunnels and a third from Verona by way of the Brenner Pass.

The main passage of the Apennines from Emilia depends upon Bologna and proceeds southward via Pistoja and Florence. A vast network of subsidiary lines links all these main routes so that there is no town and scarcely a village to-day that is not within reach of the railway. An admirable post and telegraph service covers this country.

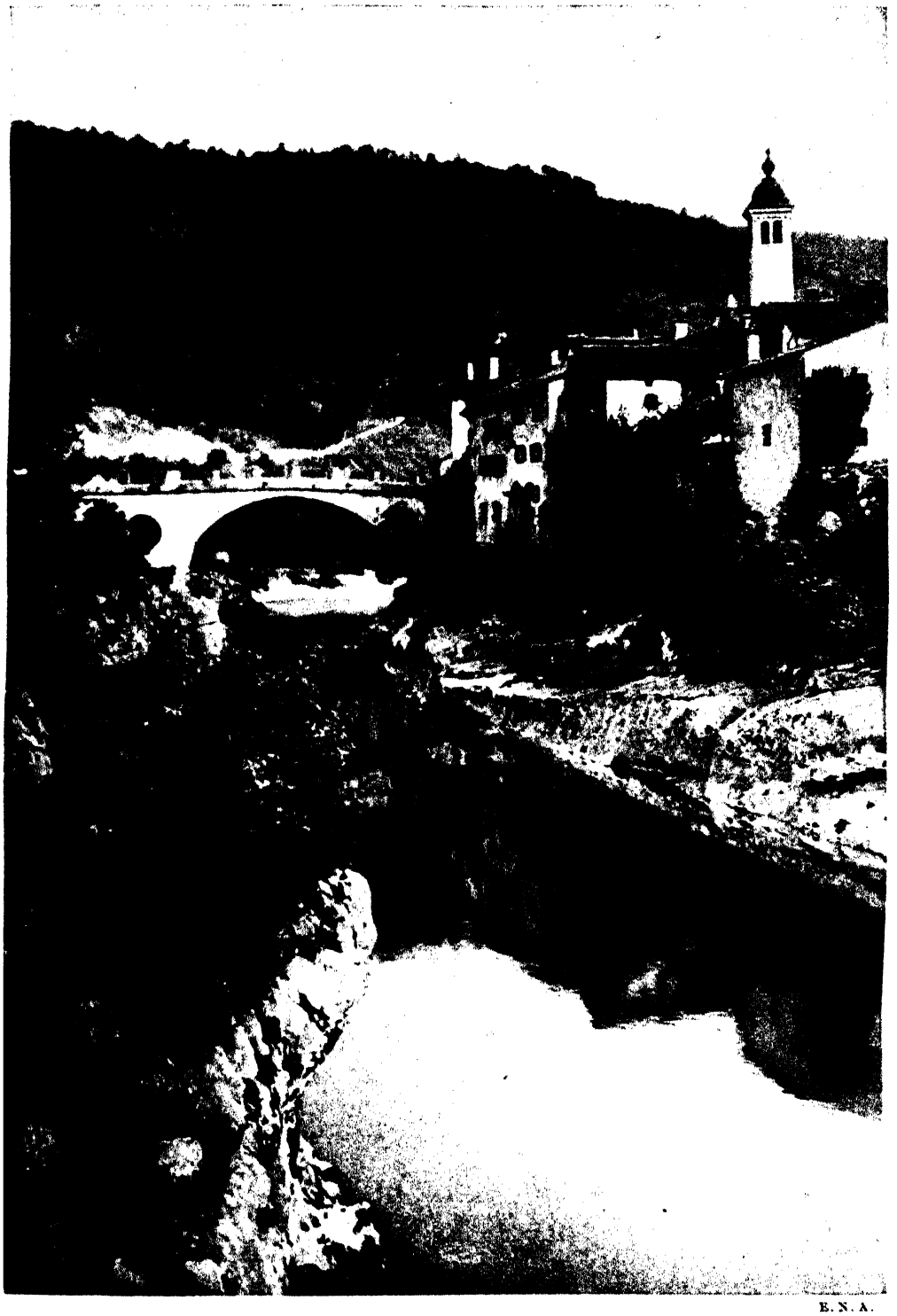
Home of Delicate Craftsmanship

Favoured by the newly developed water power and these admirable communications North Italy has developed great industries. The people are racially and historically fitted for such work. Their silk, their motor cars, their engineering work are known and admired all over the world, and the burgher class of the great cities of Lombardy and Piedmont are among the first in the world for enterprise and intelligence and preeminent for the admirable beauty of their workmanship. Italian hands seem to have an art and a delicacy that

E. N. A.

TRIESTE, ITALY'S VITAL SEAPORT ON THE ADRIATIC

Trieste, an attractively-situated modern port, lies at the north-east end of the Adriatic Sea, 73 miles north-east of Venice. With its large moles and breakwaters the harbour is the centre of an immense maritime traffic. The old town is scattered about the steep castle hill, while the new town borders on the sea; it was transferred from Austria to Italy by the Treaty of St. Germain



E. N. A.

SLEEPY OLD TOWN AND WOODED HEIGHTS ON THE ISONZO

Rising in the Julian Alps near the Predil Pass, the Isonzo pursues a meandering course chiefly through hilly and heavily-wooded country till it issues into the Gulf of Trieste, ten miles east of Grado, being navigable only in its lowest section. The principal town on its banks is Gorizia with a population of about 31,000 which is mainly engaged in the weaving industries

Donald McLeish

STRANGE HANDIWORK OF THE RAIN IN A LOVELY HIDDEN VALLEY OF THE DOLOMITES

The long chain of the Dolomites, of limestone formation, distinguished by jagged peaks, great precipices and hidden valleys, is far-famed for its striking scenery, and alike to the mountaineer and man of science offers an immense and varied field of interest. This lovely section shows the towering mass of the Schlern, over 8,400 feet high, while in the foreground are the remarkable Earth Pyramids for which this district, near the village of Lengstein, is noted. They are columns formed by the action of rain water on the soft material of an ancient glacier moraine, and are preserved from destruction by the stones, acting as umbrellas, on their summits

is lacking in others and in the more refined products of modern industry they particularly excel.

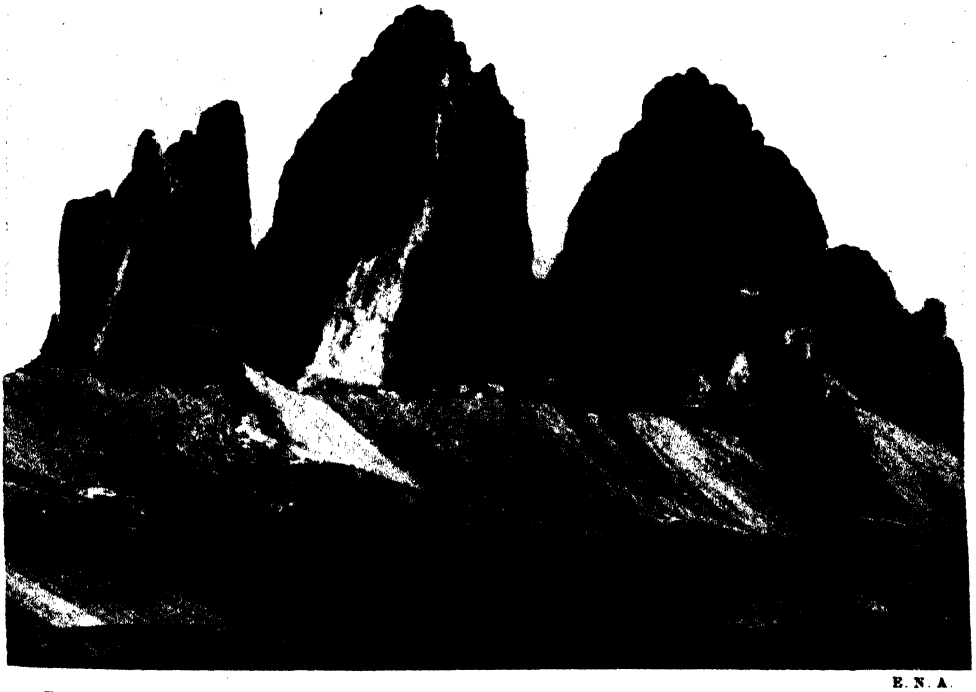
Nor can they be said to be less eminent in science and craftsmanship than in industry. Their professional men, doctors, lawyers, professors, are second to none and in creative ability are among the foremost in Europe, while the working class, artisan and peasant, is notoriously the most intelligent and hard-working in Europe.

We must now attempt very briefly to speak of the cities of all this region, every one of which may be said to be famous.

Turin under the Superga is the chief city of Piedmont, the capital of a province and before 1860 of the Kingdom of Sardinia. From 1860 to 1865 it was the capital of the Kingdom of Italy. It stands in the plain at the foot of the Cottian Alps, 784 feet above sea-level and very conveniently situated in relation to the passes of this range of the Alps. The modern city stands on the foundation of the Roman Augusta Taurinorum, the city of the Taurini, and until the end of the seventeenth century the Roman walls and gates remained. To-day the north gate of the Roman town, Porta Palatina, still stands, while the Roman east gate has been built into the Palazzo Madama.

Turin has a very modern aspect, its straight and often wide streets being very un-Italian in aspect though they stand upon the old Roman ways. The cathedral of S. John Baptist dates from the end of the fifteenth century, and is, as a whole, now the earliest and certainly the best building in the city.

Milan, the capital of Lombardy, is dealt with in a special article, but something must be said here of Pavia. It stands just above where the Ticino joins the Po, and has much to show the traveller. There is a great covered bridge over the Ticino, besides a university and several ancient churches,



E. N. A.

FANTASTICALLY-SHAPED PEAKS OF THE LIMESTONE ALPS OF ITALY

Wonderfully grand in appearance, these bold, jagged peaks with their stone-strewn precipitous slopes stand at the head of the valley of the Schwarze Rienz, about five miles north-east of Monte Cristallo, in Trentino, north-east Italy. Generally known as the Drei Zinnen, or Three Pinnacles, they are found in a division of the Limestone Alps popularly known as the Dolomites

Ewing Galloway

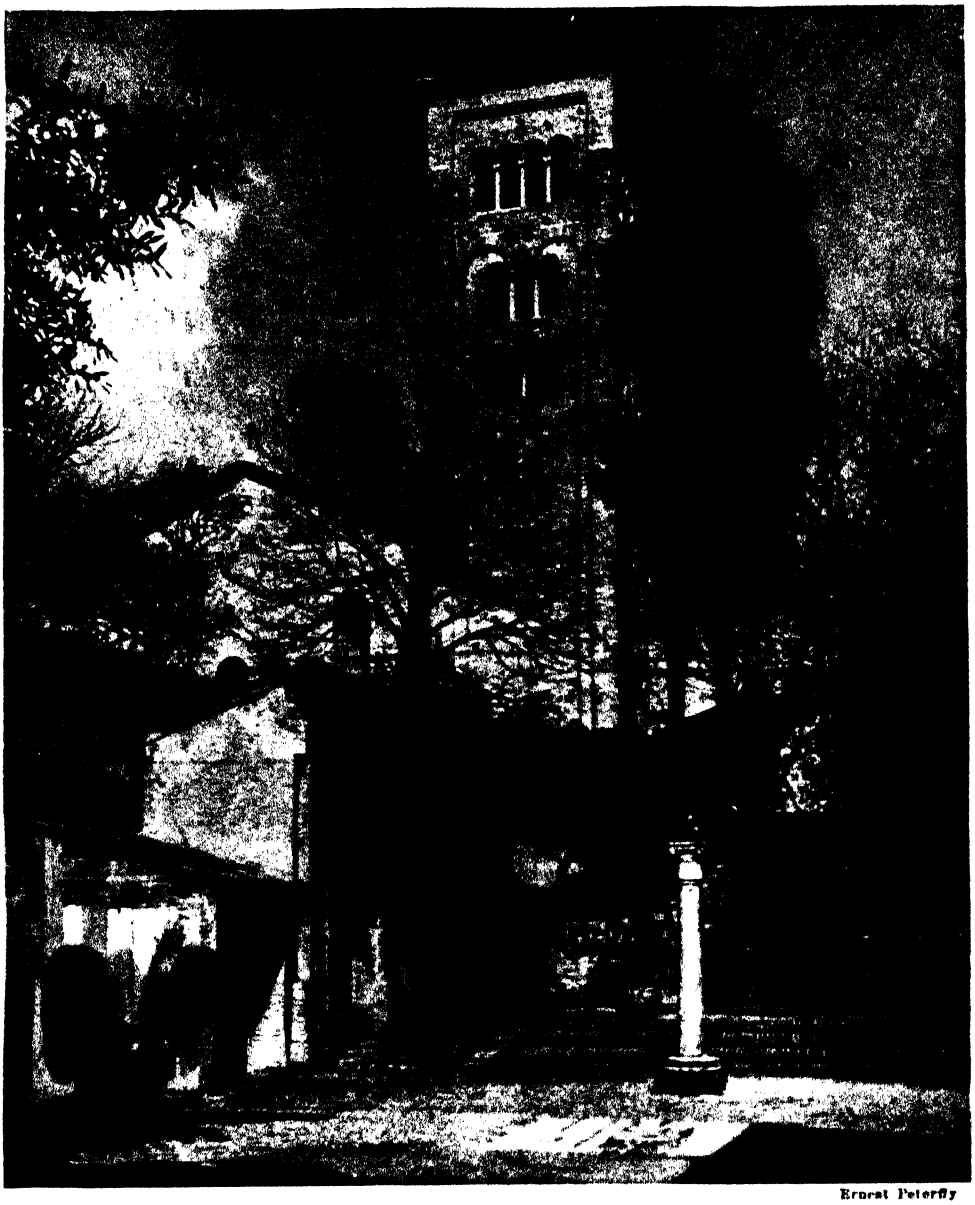
RIMINI AND THE MARECCHIA IN THE MIDST OF A FERTILE PLAIN BENEATH THE UMBRIAN APENNINES

Rimini stands on the river Marecchia, near its mouth in the Adriatic Sea, 67 miles by railway southeast of Bologna. It is the ancient Ariminum, taken by the Romans in 268 B.C., and has a five-arched Roman bridge over the Marecchia, while the Porta Romana is a triumphal arch of travertine erected to Augustus. The church of S. Francesco, originally a Gothic structure of the thirteenth century, was splendidly remodelled in the early Renaissance style in 1447-55, and the public library, containing 25,000 volumes, was founded in 1617 by the jurist Gambalunga. The town has ironworks, silk mills and mineral springs.

E. Malcolm Forth

CLOCK TOWER IN THE PIAZZA VITTORIO EMANUELE. THE PRINCIPAL SQUARE AT UDINE

Udine, the capital of the province of Udine, is situated on the Roja Canal in a fertile, well-cultivated plain, some 84 miles by rail north-east of Venice. It has many flourishing manufactures including silks, velvets, sugar, paper and leather. The capital of Friuli in the thirteenth century, it passed to Venice in 1420, and in 1752 was raised to an archbishopric. The clock tower in the Piazza Vittorio Emanuele, the chief square of the town adorned with a sitting figure of the Goddess of Peace and a bronze equestrian statue of Victor Emmanuel II., resembles that at Venice, with its two bronze giants who strike the hours on a bell



Ernest Peterfly

IN A COURTYARD ADJOINING THE PIAZZA BYRON, RAVENNA

Ravenna is a very ancient city, was mentioned in the history of Julius Caesar, and contains numerous beautiful buildings dating from the fifth and sixth centuries. Above is seen the church of S. Francis, one of the oldest in Ravenna, said to have been founded before the year 450. Adjoining this church is Dante's Tomb, a spot of peculiar sanctity for the many devotees of the great poet

but its most famous sight is not in the city at all, but a few miles away to the north. This is the great Carthusian monastery, the Certosa of Pavia, one of the most remarkable, though perhaps not one of the most beautiful, buildings in North Italy.

Delicious towns and villages border the great Lombard lakes, with their villas and terraces upon the shores of Maggiore, Lugano, Como, Varese, Garda, Iseo and the rest. The chief of all these lake towns is undoubtedly Como, set at the southern end of Lake Como amid a vast amphitheatre of mountains. Apart from its exquisite situation, its chief attraction lies in its noble cathedral, built entirely of marble, one of the finest

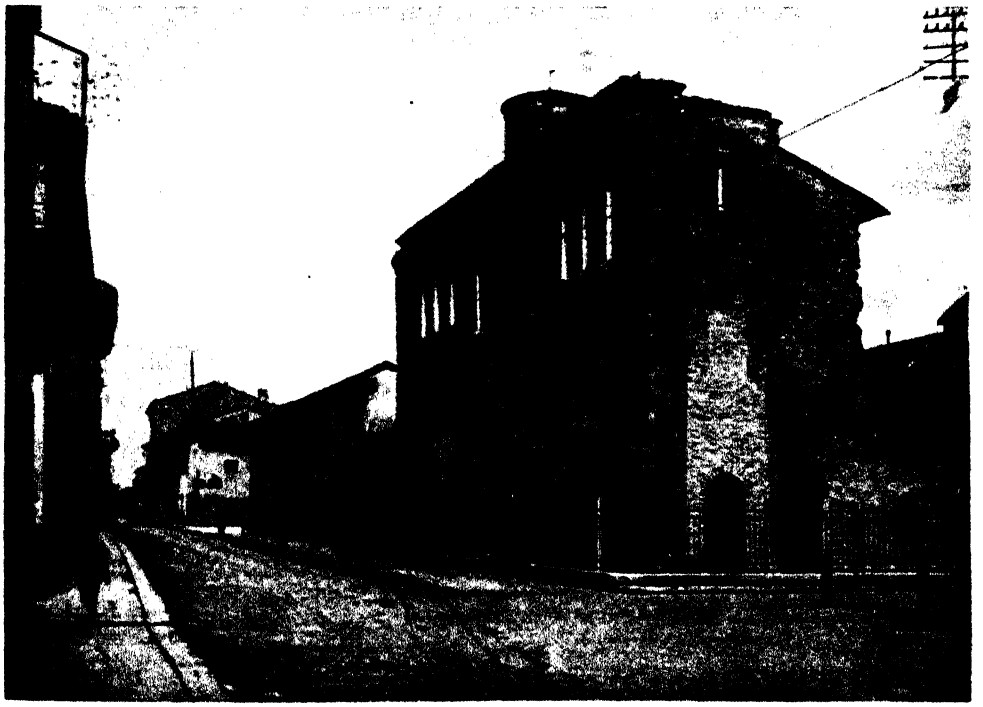
in Italy. The nave dates from 1396 and is in the Gothic style; the transepts, choir and lovely apse are in the style of the Renaissance.

Bergamo, under the Alps to the east of Milan, is an example, rare in Lombardy, of a double city, having a Città Alta and a Città Bassa. The latter is not at all picturesque, but contains some interesting churches and a fine piazza once famous for its fair. It is given over to industry, cotton, silk and other manufactures. The upper town is wholly medieval in character and one may spend several days poking about its fine cathedral, churches and palaces and lounging on the old ramparts enjoying the glorious views of plain and Alps. Here is a famous gallery of pictures.

Brescia, always famous for its manufacture of arms, is situated very beautifully at the foot of the Alps. It is a city of fountains and running waters, with a few fine churches and palaces and a collection of antiquities, the chief treasure of which is the famous statue of Victory, a bronze found in 1826, standing 6½ feet high. The Museum is established in the old Temple of Hercules. There are two cathedrals, the older, known as La Rotunda, dating perhaps from the tenth century, the newer dating from the seventeenth.

Cremona, of old so famous for its violins and violas, the city of the Amati, of Stradivarius and Guarneri, is now famous, if at all, for its silk. It is a beautiful old city, quieter than any other of its size—it has 59,000 inhabitants—in Lombardy. Many of its streets and piazzas are grass-grown, the Po sweeps idly by, and over all towers the noble great bell tower, the Torrazzo of the thirteenth century, 397 feet high.

Mantua is an ancient city that lies in the lazy arms of the Mincio, which almost surrounds it with lakes of still waters, so that it seems like something magical which is floating upon the bosom of these smooth waters. Famous as the home of



Ernest Peterffy

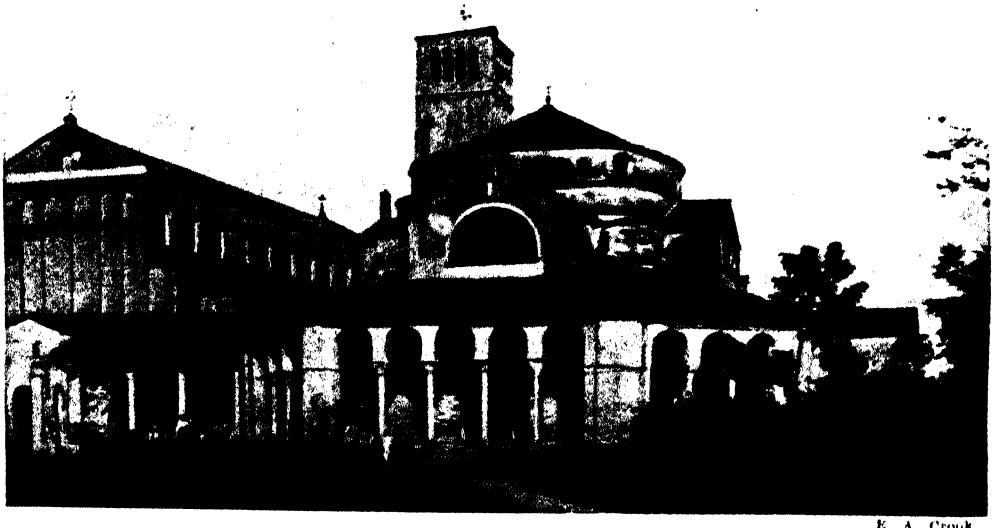
NARROW FACADE OF THE PALACE OF THEODORIC AT RAVENNA

Ravenna stands on a marshy plain 44 miles from Bologna, and for 350 years was virtually the capital of Italy. The Palace of Theodoric was plundered by Belisarius in 539, and in 784 its art treasures and many of its columns were removed by Charlemagne. The remains include a narrow façade with round-arched blind arcades and a colonnade in the upper storey

Ewing Galloway

PIAZZA VITTORIO EMANUELE IN THE HEART OF BOLOGNA

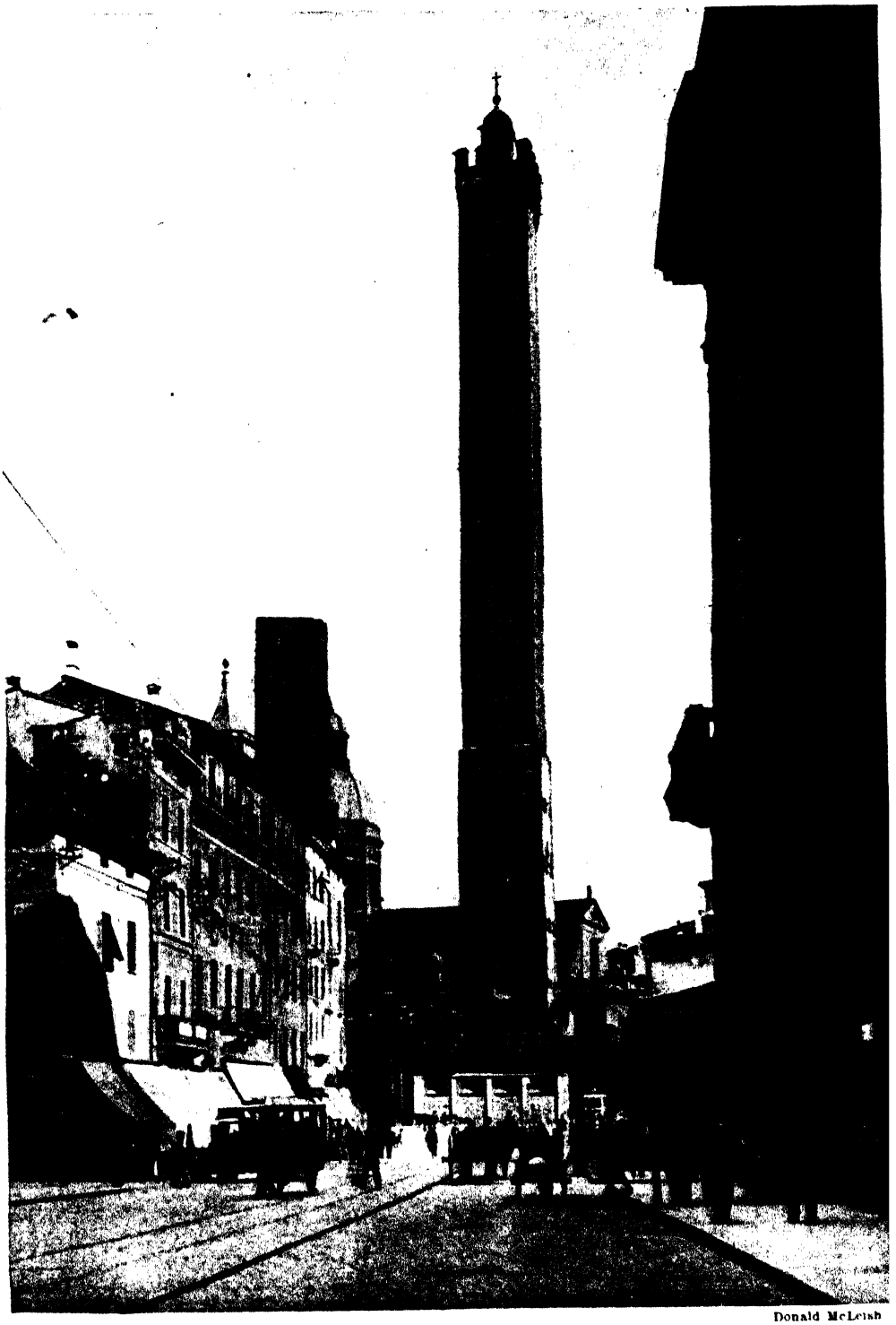
In the centre of the city of Bologna is the Piazza Vittorio Emanuele containing an equestrian statue of Victor Emmanuel II. in bronze by Monteverde, and at the west end is the Palazzo Comunale, a large Gothic building begun about 1290, with a clock tower dating from 1444. Over the main entrance is a bronze statue of Pope Gregory XIII., by Menganti, erected in 1580



E. A. Crook

CHURCH OF SANTA FOSCA ON AN ISLAND OF THE VENETIAN LAGOON

The small island of Torcello, lying six miles north-east of Venice in the Venetian Lagoon, contains many treasures interesting to students of art. Of the several old sanctuaries in the town, the cathedral of Santa Maria Assunta, founded in the seventh century and rebuilt in the ninth, and the twelfth century church of Santa Fosca, externally octagonal with arches on five sides, are noteworthy



Donald McLeish

VIA RIZZOLI AND THE TWO LEANING TOWERS OF BOLOGNA

In the Piazza di Porta Ravegnana stand the Leaning Towers, the most singular structures of Bologna, both plain, square brick buildings. The Torre Asinelli, erected about 1109, is 320 feet high and 4 feet out of the perpendicular, with a staircase of 447 steps to the summit; the unfinished Torre Garisenda, commenced in 1110, is 156 feet high only, but is 8 feet out of the perpendicular

Virgil, Mantua was in the fourteenth century the seat of the Gonzaga House and in the fifteenth and early sixteenth centuries the home of the famous Isabella d'Este, wife of Giovanni Francesco Gonzaga. Mantua then became a treasury of art: all the greatest artists of Italy supplied her palaces and villas with their works; she collected rare books and valuable antiquities here. In 1630 the city was stormed by the Austrians and never recovered itself.

Old Cities of the Plain

Piacenza is the great and ancient crossing-place of the Po from Lombardy into Emilia, and at least from Roman times it has provided and controlled this means of transit. The finest monument in the town is the Municipio, as fine a Palazzo Pubblico as even Italy can show. The great piazza in which it stands, the huge Palazzo Farnese, the Palazzo dei Tribunali, the cathedral and the church of San Sisto, all bear witness to the importance of Piacenza in bygone days.

Much the same interest belongs to the cities of Parma, Reggio and Modena: that is to say, they were all stations upon the great Roman road, the Via Emilia, though not of the importance of Piacenza, for they commanded no crossing.

Of the three, the most interesting is the city of Parma, as it is the most picturesque and beautiful, the city of Correggio and of the Farnese Duchy. It boasts of a noble Lombard cathedral and an even finer baptistery, with several fine churches and handsome palaces, the finest being Palazzo della Pilotta, and an important picture gallery containing several works by Correggio.

Bologna of the Leaning Towers

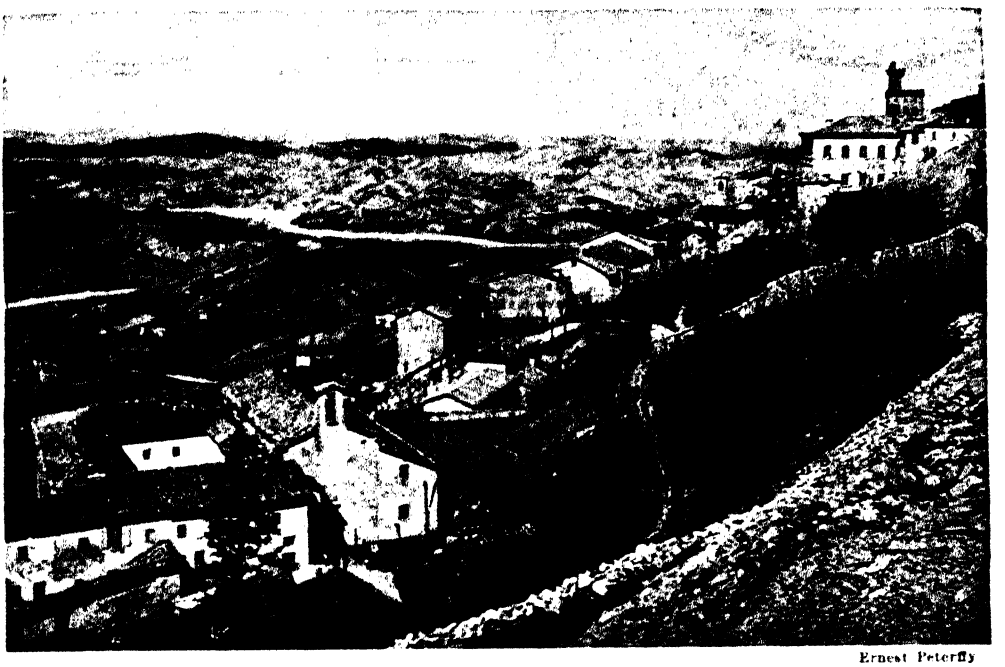
Unquestionably the most important city upon the southern side of the Po is Bologna. It is important for many reasons: it is not only upon the great Roman Via Emilia, but it controls the major passage of the Apennines from the plain into Italy proper. It is the capital of Emilia, possessing a very ancient and famous university. But it can never have been, with its grotesque leaning towers, one of the more beautiful cities of Italy, though its narrow and arcaded streets, its many palaces, piazzas and churches, give it an Italian character beyond any other city of the plain.

Ferrara belongs wholly to the plain; indeed, to the marshes into which the plain degenerates about the last reaches of the Po and the lagoons of Comacchio. The city of the great Este family, princes here and patrons of poets and painters, Ferrara has memories of Tasso and Ariosto.

If Ferrara seems often half deserted and full of mist, what are we to say of Ravenna, which, lying here within a few miles of the most desolate of seashores, where the Emilian plain fades away at last into the Adriatic, is like a marvellous reliquary beautiful with many fading colours and encrusted with precious stones? It was the Roman Classis—with a seaport, the Roman naval station upon this sea, which then was the fault, as it were, between East and West.

Ravenna, the Tomb of the Empire

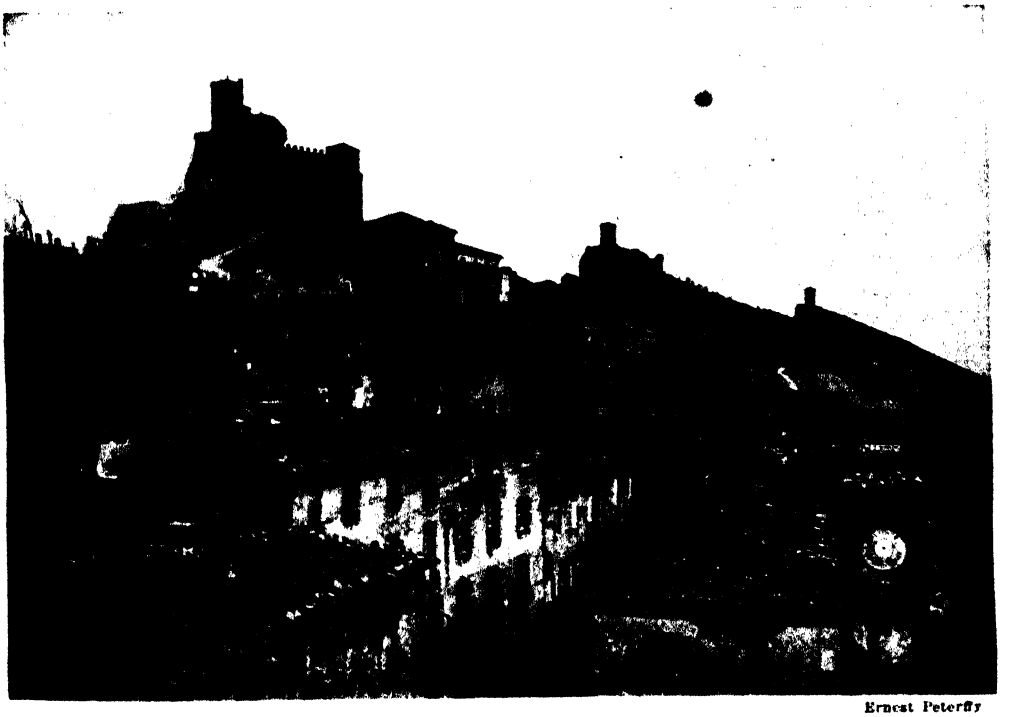
But its greatest days began with the failure of the Roman administration when, commanding as it did the main way into Italy, in fact the only way (for the Apennines are a barren range), it became the great fortress of the defence, and during the long years of the reconquest of Italy from Byzantium, the seat of that government and its representatives the exarchs. These facts explain the great churches and monuments still gorgeous with mosaics which date from these centuries, including the tomb of Galla Placidia, sister of the Emperor Honorius, the tomb of Theodoric and the chapel in the Archiepiscopal Palace. Ravenna is a city of the past, the tomb of the Empire—a glorious tomb; and there lies the poet who could not believe that it had vanished, Dante Alighieri.



Ernest Peterffy

LOOKING ACROSS THE DIMINUTIVE HILLY STATE OF SAN MARINO

Entirely surrounded by Italian territory, the tiny republic of San Marino, lying 12 miles south-west of Rimini on the Adriatic, claims to be the oldest state in the world. Certainly the smallest republic in the world, it has an area of only 38 square miles with an estimated population of 10,000. The Capuchin Monastery is seen below on the left, above on the right towers the government palace



Ernest Peterffy

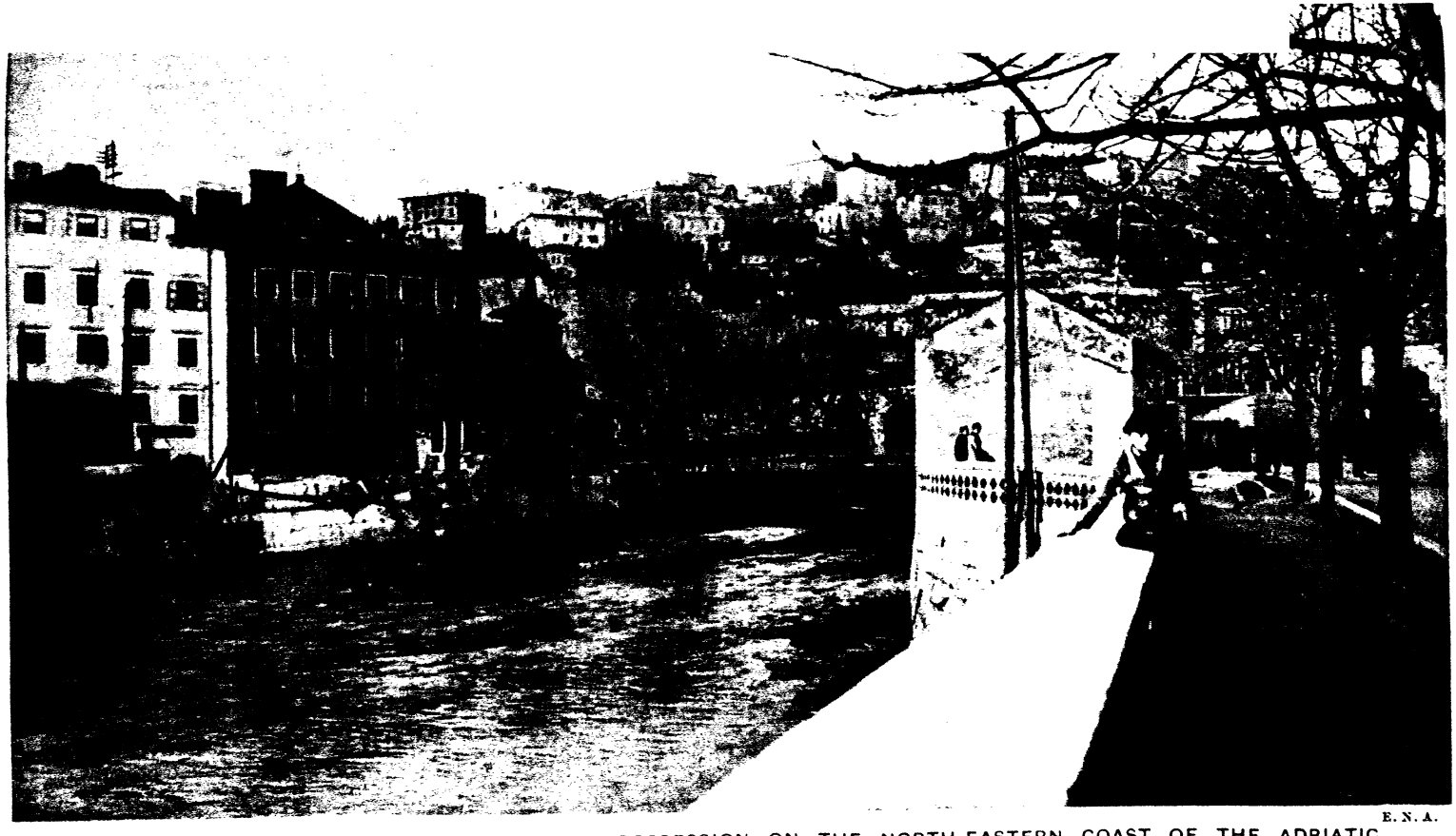
TRIPLE CRESTS OF MONTE TITANO CROWNED WITH TOWERS

San Marino state embraces several spurs of the Apennines, on one of which, Monte Titano, 2,650 feet high, is situated San Marino, the capital. The three crests of this mountain are crowned with towers, that on the left forming part of the citadel of La Rocca, now used as a prison; all three towers are found in the coat of arms of San Marino since the earliest times of its existence

E. N. A.

LOOKING DOWN THE CORSO, THE MAIN STREET OF FIUME WITH THE POST OFFICE ON THE RIGHT

Fiume was handed over to Italy by the Treaty of January 27, 1924, with Serbia. It stands on the river Recina at the north-eastern extremity of the Adriatic. The town has several harbours—the Fiumara canal, used by coasting vessels; the Baroso harbour; the main harbour, protected by a mole; and the free and petroleum harbours to the west. Practically the whole of the shipping trade of Hungary passes through the port, and there are valuable fisheries in the Bay of Quarnero. The town possesses distilleries, petroleum refineries and mills, while there is trade in fruit, chemicals and soap



E. N. A.

PLEASANT CORNER IN FIUME, ITALY'S NEW POSSESSION ON THE NORTH-EASTERN COAST OF THE ADRIATIC

The population of Fiume is mainly Italian, but in Susak, the suburb on the opposite side of the river Rečina, the inhabitants are composed chiefly of Croats. This bridge, which lies under the shadow of a high-arched railway bridge, connects these Italian and Slav sections of Fiume. In the background the picturesque Monte Calvario, ascended by the Via Monte Calvario with 230 steps, is seen studded with numerous villas and buildings from which a fine survey of the town and sea is obtained. A very ancient seaport town, Fiume was known as S. Vitus in Flumine in the Middle Ages, and has long been a centre of coastwise trade

Rimini is the last of these cities of North Italy upon the southern frontier. In its market place the Via Emilia meets the Via Flaminia. Its river, the Marecchia, is the frontier of Italy proper. But in Rimini you do not think of such things as these, you think of Sigismondo Malatesta who built, or rather transformed by the hands of Leon Alberti, the old Gothic church of S. Francesco into the glorious Renaissance building we see: a pagan temple rather than a Christian church. Close by Caesar crossed the Rubicon and thereby founded the Empire.

Verona is first and foremost a great fortress like Bologna, but much more formidable. It holds the passage of the Alps by the Brenner into the Germanies. It holds the first, the outer gate. You would not perhaps guess that it had so mighty a responsibility, so well is the steel hidden under sheer beauty. The swift Adige rushes right through the city, washing her dark and venerable houses and walls. Like nearly all of these cities she is Roman, only here you never forget it by reason of the vast amphitheatre, more impressive, I think, than the Roman Colosseum, which stands in her midst. Still, what you chiefly think of in Verona is not Rome but Romeo and Juliet, and you are quite right, for the city is wholly medieval, and all its beauty is owing to that time. It is those dear ghosts that haunt you as you pass through the noble piazzas and palaces and in and out of the many great churches, the cathedral, S. Zeno, S. Natasia and S. Maria in Organo.

One returns to the Middle Ages on coming into Padua with its ancient university, and its frescoes by Giotto and church and tomb of S. Anthony.

The plain with these its cities has played a great if not a determining part in European history in the past, and the future in all probability holds for it no less a destiny.

ITALY NORTH: GEOGRAPHICAL SUMMARY

Natural Divisions. Continental Italy, the plain of the Po, once a gulf of the Adriatic. The peninsula of Istria and the connecting land link round the north of the Adriatic and, to some degree, the Trentino are natural outliers of the plain. Unity is given to the whole by the curve of the Alps all round the northern boundary. Only Liguria lies south of the Apennines, Italian in allegiance it is physically part of the Riviera (q.v.).

Rivers and Lakes. The Po has filled and is filling the ancient gulf of the Adriatic; powerful rivers bring a weight of water and alluvium, which has forced the Po to the foot of the Apennines. (Cf. the Ganges and the Deccan.) The delta should be compared with that of the Danube. (Cf. Dobruja.) The lakes in the Alpine rock basins are characteristically long and narrow. (Cf. the fresh-water lochs of Scotland.)

Climate. The climate is continental, not Mediterranean; note the rains at both equinoxes. The main feature is, however, that of aspect: the Alpine slopes facing south are storehouses of warmth and sunshine and permit of the cultivation of olives; the Apennine slopes facing north are inclement and barren. In winter Milan and other cities are almost as cold as Hamburg or Bergen; in summer they are as hot as Marseilles and Palermo. Summer hailstorms are typical of a continental climate.

Vegetation. The variety of aspect produces three east-west vegetation zones: chestnuts on the Alpine zone; maize, wheat and rice on the lowlands, and a barren zone on the Apennines.

Products. Vines, mulberries, silkworms, olive oil, wheat, and macaroni, maize, rice, flax and linen. Manufactures, increasingly based on water-power, silks, linens, metallurgical products (especially motor cars).

Communications. The plain is a passage-way with an east-west route, once seriously considered as an alternative to the Central European route between Paris and Constantinople; with cross routes from Mediterranean ports, Genoa, Naples, Brindisi, through Alpine tunnels to Central and Western Europe. Sea traffic by the Adriatic from Trieste and Venice.

Outlook. One of the world examples of an alluvial lowland occupied by a dense population congregated in many famous cities (cf. the Ganges valley), continental Italy has great land resources, on which with the help of water-power can be built an enduring prosperity based upon the energy and industry of its people. One of the lands of increment where labour achieves a large return.

ITALY SOUTH

Paradise of Vineyard and Olive Grove

by Cecil Headlam

Author of "Venetia and Northern Italy," etc.

ITALY is divided geographically into two distinct parts, north and south, and southern Italy is in many ways a different country from that which lies to the north of the Apennines. It is different in climate and in shape; its geological formation is different. These differences are reflected in the life of the people, their art and architecture, and in the productivity of the soil.

Below the great plain of Lombardy stretches a long peninsula, shaped like a boot and terminating in a heel (Apulia), a toe (Calabria), and an instep formed by Basilicata and the Gulf of Taranto. Its dominant features are an immense length of seaboard and a prolonged range of mountains. For the limestone ranges of the Apennines, which form the southern wall of the Lombard plain, pervade the whole peninsula, dividing it into east and west and governing its physical character. Roughly speaking, they consist of two curved lines. The first, starting from the Ligurian shore in the north-west, runs in a south-easterly direction into the neighbourhood of Ancona, about one-third of the way down the Adriatic coast. Thence the southern bend crosses the country in a south-westerly direction, pointing to the toe of Italy, filling the whole of Calabria and reappearing, after the dip of Messina, in the north of Sicily (Etna), and again in Tunis.

Marsh-bordered Coast-line

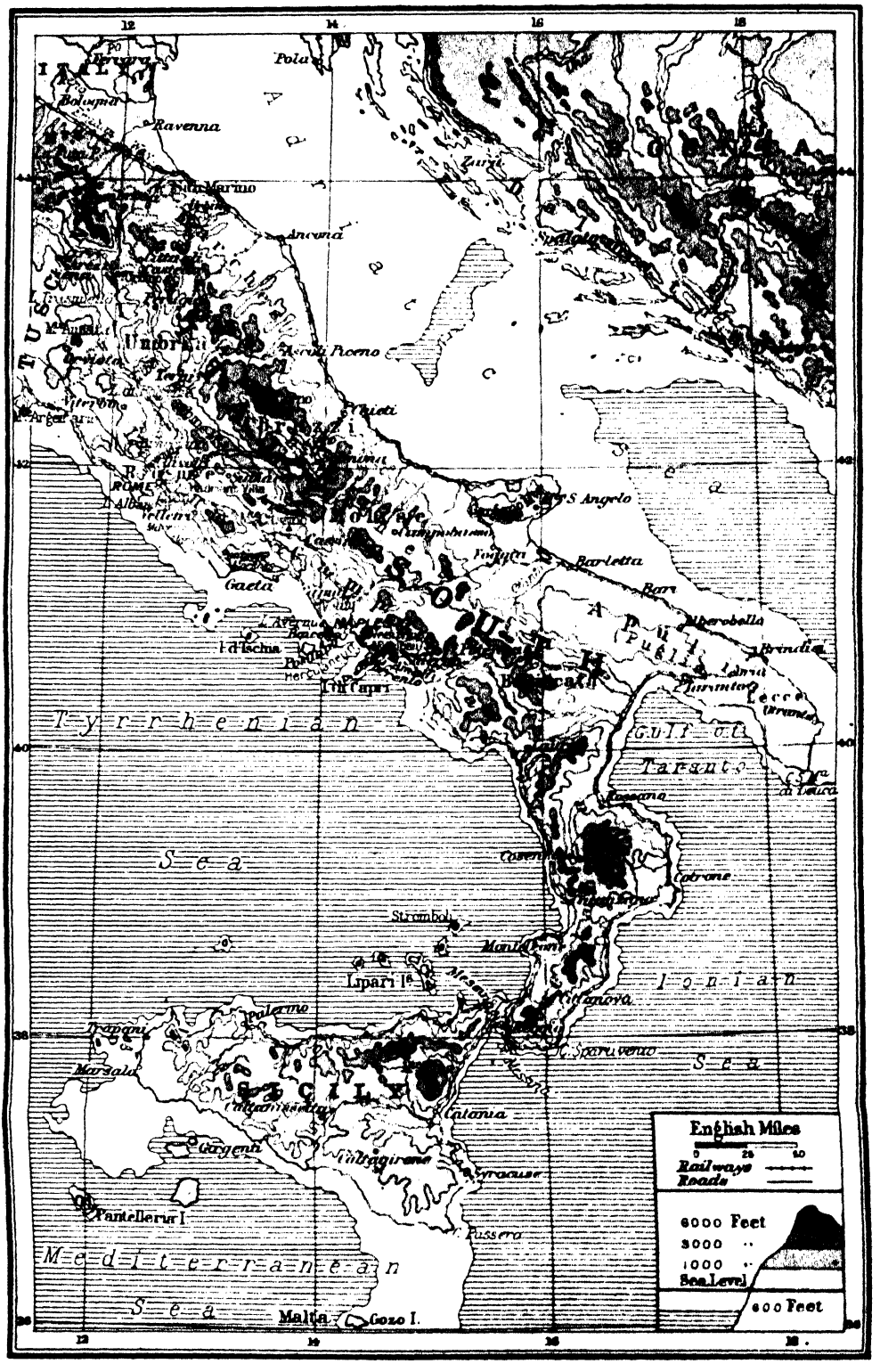
On the western side of the northern curve lie the lowland provinces of Tuscany, described elsewhere, and Latium. Their coast-lines are bordered by the marshlands of the Maremma and the Roman Campagna, partly formed by deposits of the rivers Arno and Tiber. The islands of Elba and the Tuscan Archipelago carry on the mainland scheme to Corsica. Umbria, the central basin of which was once a great lake, but is now drained by the river Tiber and its tributaries, forms the central province between Tuscany and Latium on the west and the Marches and the Abruzzi on the east coast.

Lakes in Extinct Volcanoes

It is in the Abruzzi that the Apennines are highest, Monte Corno (Gran Sasso d'Italia) rising to 9,583 feet. Between Latium and Calabria lie Campania and the fertile gardens which surround the lovely city of Naples. To the west of the Central Apennines, between Perugia and Rome, is a series of lakes, Trasimeno, Bolsena, Bracciano and Albano. Like Lake Avernus, near Naples, they occupy the craters of extinct volcanoes.

The geological formation of southern Italy is of exceptional interest. There is an old "block" extending from Pisa to the south of Naples. Fitting into it is the broken chain of the Apennines, consisting of remnants of the old rock which, as the earth's surface cooled and contracted, were thrown up into enormous folds.

This is, perhaps, the most recent great "fold" in the world. The area east of the Apennines between the "heel" and Gargano is really a continuation of Dalmatia, as a chain of islands indicates. The two countries have been separated by the sinking of the land and the formation of the Adriatic. Here the layers of rock are not folded, but lie almost horizontal. The Tyrrhenian Sea has also been



HOW THE 'APENNINES THRUST A SPUR INTO THE MEDITERRANEAN

formed by a sinking of the old "block." As the sinkings of the seas which encompass Italy, and the upheavals which caused the southern mountains, are of comparatively recent date, it is not surprising that the crust of the earth is unsettled, and that along the shores of the Strait of Messina earthquakes and eruptions of volcanoes occasionally occur. Etna and Vesuvius, Volcano and Stromboli are great volcanic cones

has been a bulwark of the south-west against the east and a double bulwark against the north. But by impeding communications mountains react upon the development of society. In broken and inaccessible country there is always a tendency towards the growth of small communities. Small groups of men develop apart or remain in stagnation where mountains bar access and no great rivers provide a waterway for

S. J. Beckett

ANCIENT WINE SHOP AMONG THE POMPEIIAN RUINS

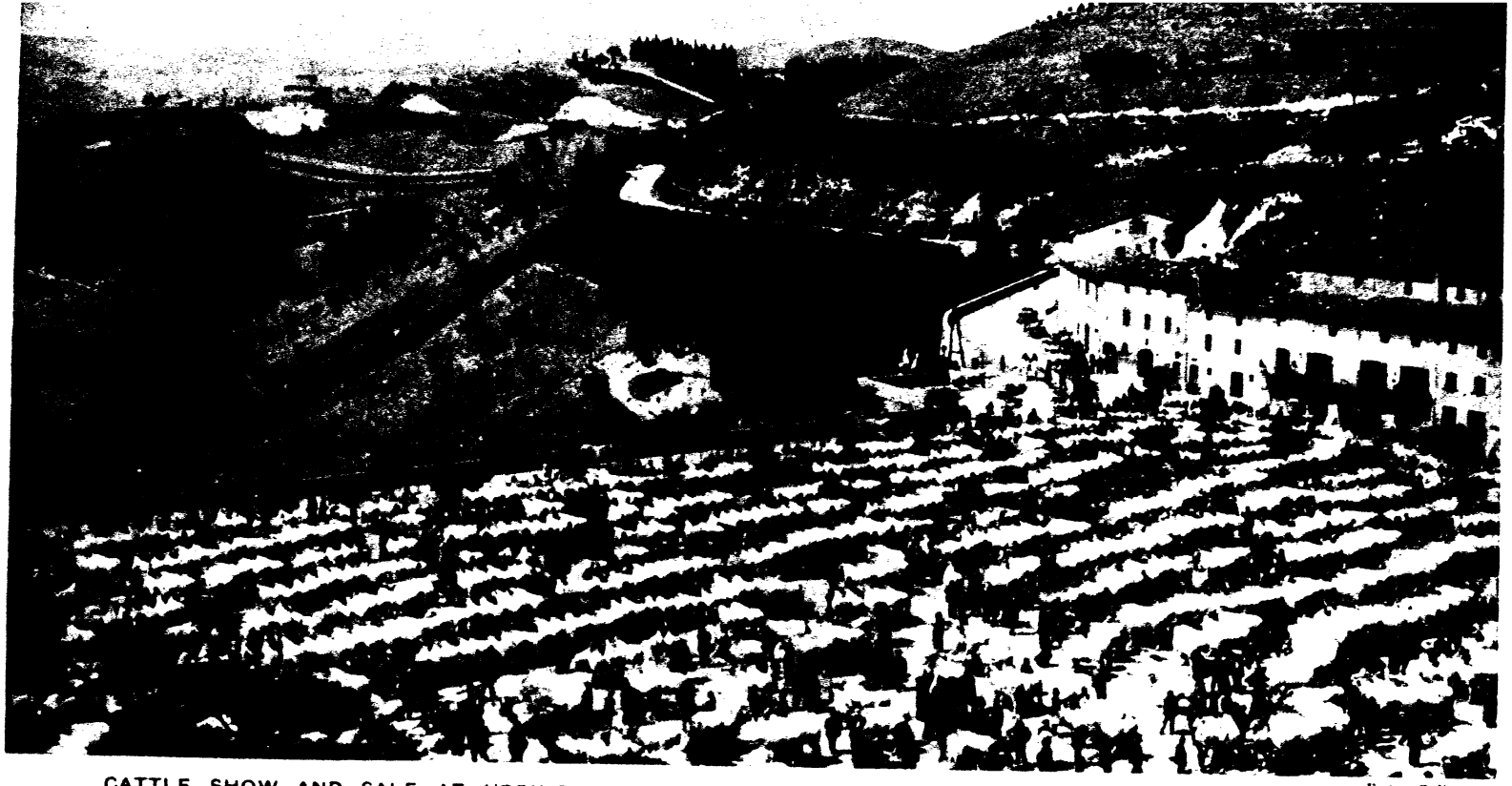
The ruins of Pompeii lie at the south-east base of Mount Vesuvius. Overwhelmed by an eruption in August, 79, Pompeii was completely obliterated, but "the earth, with faithful watch, has hoarded all," and the systematic excavations of the nineteenth and twentieth centuries revealed more than half the town with its private houses, shops, principal buildings and temples

still spasmodically active. Their eruptions sometimes deal death and destruction, as at Pompeii, Herculaneum and Messina. But they intensify the fertility of the soil, as the vineyards, orange and lemon groves and vegetables and flowers of the Campagna Felice about Naples testify. The volcanic region extends as far north as Parma.

Mountains serve as barriers against invasion. The bend of the Apennines

trade. For centuries Italy was divided into little independent states.

While acting as barriers, mountains also provide refuge. Little hilltop villages are a characteristic feature of southern Italy, with which the great painters of Umbria, in particular, have made everybody familiar. Steep and rocky fastnesses, they hover above rich plains intersected by streams, and over all is the clear blue bowl of the Italian



Ewing Galloway

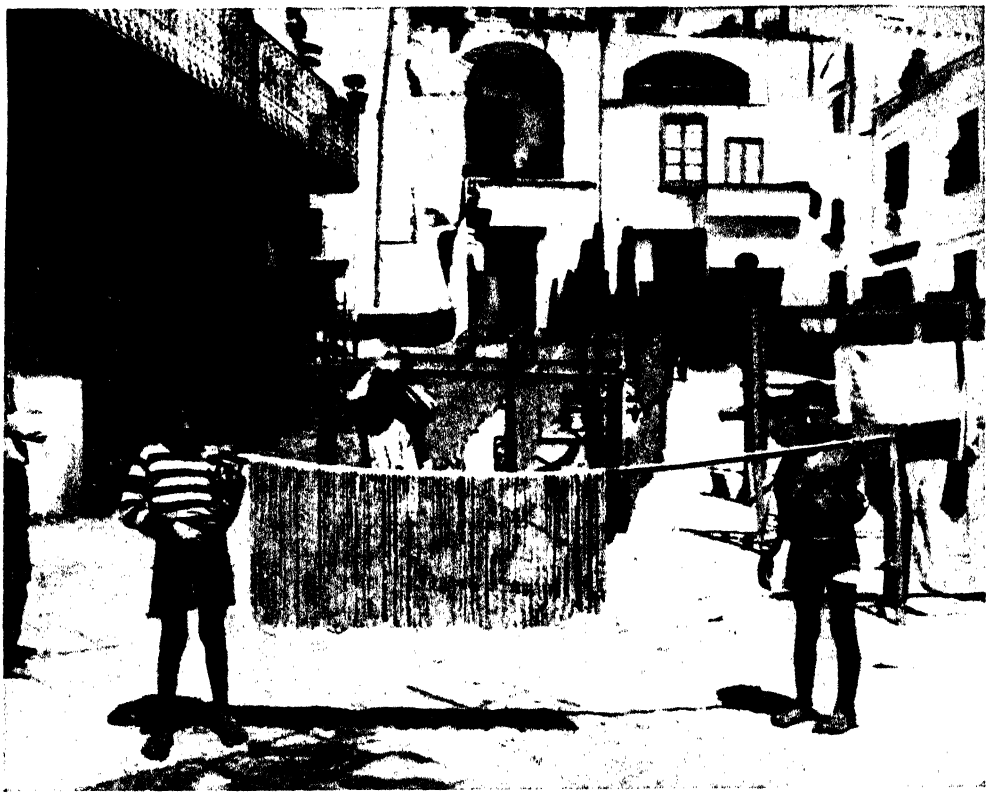
CATTLE SHOW AND SALE AT URBINO, AN ANCIENT CITY ON THE EASTERN EDGE OF THE APENNINES

The city of Urbino is situated in the province of Pesaro e Urbino on the side of a hill among the barren eastern ridges of the Apennines. As a celebrated centre of art and literature it was well known in the fifteenth and sixteenth centuries, and a certain dignity attaches to it as the birthplace of the immortal Raphael. The main products include silks, olive oil, majolica and cheese. This picturesque cattle show, held on the outskirts of Urbino, comprised upward of two thousand head of fine beasts, chiefly draught oxen, sent from farms in and about the neighbourhood; not one coloured animal was on the field

E.N.A.

EVENING ON THE ROCK-BOUND COAST OF CAPRI, THE PICTURESQUE ISLAND IN THE GULF OF NAPLES

Capri, the exquisite little island situated at the south end of the Bay of Naples off the Sorrento peninsula, is a great attraction to foreigners, of whom some 35,000 annually visit the two small towns, Capri and Anacapri, and the famous grottos, or sea caverns, chief of which is the Blue Grotto, with a length of 175 feet and a height of 39 feet. The area of this extremely mountainous island is about five square miles; its scenery is very beautiful, and its climate mild and salubrious. Olive, fruit and excellent wine are produced abundantly, but the island's main source of income is afforded by the tourists



Ewing Galloway

MACARONI BY THE MILE: A DRYING-GROUND AT AMALFI

The chief source of industrial prosperity at Amalfi is concentrated in the paper mills, but the manufacture of soap and macaroni is steadily increasing. Macaroni, as all the world knows, is a staple article of food of the Italian people. The paste, made from the flour of a hard wheat, is formed into tubes or strips, cut into lengths and then hung up to dry in the open air

sky. The plains themselves are almost destitute of dwellings.

Perhaps the most picturesque of all these hilltop towns is Orvieto, long used as a refuge by the Popes from turbulent Rome. Set upon a circular tufa rock, and looking down over its precipitous sides upon a fertile valley aglow with flowers and vegetation, it is crowned by the towers of a medieval castle and a Gothic cathedral whose sculptured façade is a blaze of lustrous colour. In such hilltop towns the thick-tiled roofs keep the houses cool. Cold is combated by the use of a charcoal-box passed from hand to hand.

These mountain retreats give security against brigands and afford a refuge from the malaria bred in the lowland marshes. Lack of water is their chief drawback. On the arid hillsides the small rainfall quickly escapes, except where it is stored in cisterns cut in the rocks. But many such villages depend upon a single well or spring at the foot of the hill. Some in Calabria have no local supply at all. Their water is brought daily by rail and carried on mules from the nearest station. This lack of water is partly responsible for the incredibly filthy conditions and absence of all sanitation which generally prevail.

Naturally the methods of agriculture which obtain in such surroundings are backward. On the larger estates machine ploughs, reapers and tractors are being introduced. But on the smaller mountain holdings the one-handled wooden plough described by Virgil is still in use, and men, women and children reap and garner the crops by hand. The shepherds are largely nomadic. The dry

summers wither the grass, so that few cows can be kept. But sheep and goats are reared, and provide wool, milk and hair for clothes; mushrooms and fungi are gathered in the woods.

Pine forests yield cones for fuel and nuts for confectionery, while sweet chestnuts and olives provide the staple diet of the inhabitants of the steep slopes of the Apennines. The mountains are terraced for the growth of vines and olives. The forests of beech, evergreen oak, pine, willow, poplar, alder and ash, which recently covered one-seventh of the total area of Italy, upheld the mountain soil and precipitated rainfall, have been to a large extent cut down for fuel. Generous schemes of afforestation and reservoirs for irrigation are urgently needed to restore the prosperity of the countryside. Apart from an important yield of quicksilver from the mines of Monte Amiata and of Monte Argentario the minerals which are obtained from the southern mountains are few. The iron ore from Tuscany, the Abruzzi and Elba (800,000 tons a year) scarcely meets 40 per cent. of the requirements of the steel industry. The chief yield is marble.

The seas which surround the peninsula are the Ligurian, the Tyrrhenian, the Mediterranean, the Ionian and the Adriatic. All round the coast fishermen ply their craft, working hand-nets from the shore, or harvesting the deep from boats picturesquely painted and with sails dyed a rich orange colour and adorned with bold devices. Over 100,000 people thus gain a poor livelihood, which the adoption of more modern methods might improve. But the fish of the tideless Mediterranean cannot compare with those of the Atlantic and North

E. N. A.

QUIET SCENE IN BEAUTIFUL AMALFI ON THE GULF OF SALERNO

On the Gulf of Salerno, 23 miles south-east of Naples, lies Amalfi, far-famed for its lovely coast scenery with wonderfully impressive mountains and rocks and terraced gardens. A prosperous seaport in the Middle Ages, Amalfi gave to the Mediterranean traffic a code of maritime law which was recognized for many centuries, but its fortunes declined after a terrible inundation in the fourteenth century

Sea. The tunny, a large coarse fish which is preserved in oil, is the chief item of the Italian fishery. Anchovies and sardines are caught in the Northern Tyrrhenian Sea. The best fishing grounds are in the neighbourhood of Naples. Corals and sponges are collected between Sicily and Sardinia.

Italy's Bid for Sea Trade

The south of Italy was once the centre of the sea-borne traffic from the Levant to the Strait of Gibraltar. Modern Italy is striving to regain a large share of Mediterranean traffic and trade with the Near East. The acquisition of the ports of Trieste, Zara and Pola will further this purpose. With the same end in view she is making a series of commercial agreements and developing her merchant marine. The gross tonnage of Italian steamships rose from 933,000 in 1914 to 3,000,000 in 1920. She is also expanding and modernising her ports, notably Venice, Palermo, Naples and Genoa. Bari and Brindisi are other southern ports which will develop with the eastern trade. At present imports largely exceed the exports. For the principal exports being chiefly perishable and of no great bulk, such as eggs, cheese, silk, manufactured cotton, wine, fruit and flowers, are consigned to central Europe by rail, while the imports, for the most part bulky, such as coal, iron, timber, machinery and raw cotton, come by sea from Great Britain and America.

River Blessings in Disguise

The majority of the rivers which rise in the Apennines are of little importance. Short, steep slopes render their courses short. After the heavy rains in winter and spring, they swell into torrents which wash down the sparse and precious soil and cause disastrous inundations. In the dry summer months they shrink to a mere trickle, and their stony beds alone indicate their winter force. They are of no account for navigation, but for irrigation and water-power they have immense possibilities.

Southern Italy can only boast two rivers of real importance, the Arno and the Tiber. Their sources are adjacent in the central mass of the Apennines. The Arno, which rises near Arezzo, is described under the heading of Tuscany. Not far away, by Città di Castello, the Tiber has its beginnings. It winds southwards for 210 miles through the mountainous region of Umbria and then finds its way along the northern edge of the flat, marshy district of the Roman Campagna. The Tiber is sometimes, like the Arno, a very turbulent stream. It forms no natural harbour at its mouth, but small steamers can ascend it as far as Rome, 14 miles from the sea. The Tiber valley is the one great natural entrance into central Italy from the sea.

Roads that Lead to Rome

"All roads lead to Rome," because Rome, the capital of the civilized world, was connected with the rest of Italy and the provinces by a series of magnificent military roads. From the south, ways converge naturally towards the lower reaches of the Tiber. But northwards the position is peculiar. Here the governing factors were the passes into the Apennines and the difficulty of surmounting the high mountain barrier in the north-west about Genoa. In modern times a road has been cut along the face of the cliffs and the rocky headlands. But the line of least resistance for the traveller to the north was either to ascend the valley of the Tiber or to follow the coast to Pisa, and cross over by the low La Futa pass to Bologna and the valley of the Po.

It was on these lines that the Roman engineers drove their roads, and modern railways follow them in the main. But they have developed a more definite system of east and west coast routes. On the east coast, the railway hugs the shore almost the whole way to Brindisi, the port for Alexandria. Special fast "ferry" boats bring hither the mails from the East via Port Said. On the west coast the line also follows the

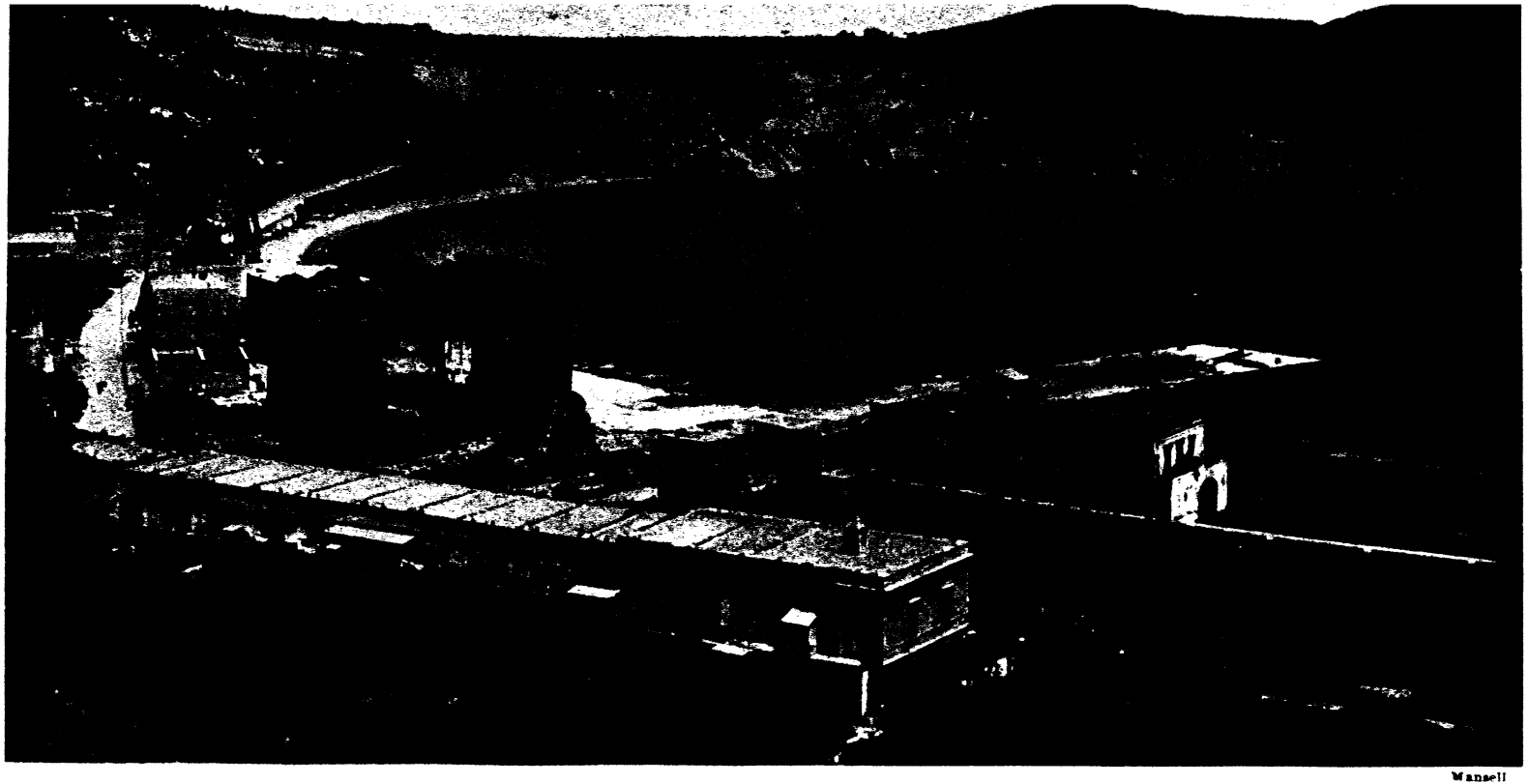
Mansell

TWIN WATCH TOWERS OF ORIA IN THE APULIAN PENINSULA

Some 25 miles almost due east from Taranto, lies the old-world town of Oria, the ancient Uria, at an altitude of 540 feet. Like many another small town in the province of Lecce, Apulia, it has a beautiful situation and possesses many buildings of interest, including several palaces and these hoary old towers, which are said to date from the fourteenth century

coast, skirting or burrowing under the Apennines where they reach down to the sea. The northward route runs through the Apennines by the river Reno to Bologna. The railways in this mountainous country, "profusely decorated with tunnels" and interspersed with difficult gradients, give ample proof of the genius of Italian engineers. Electricity is most suitable as the motive power in such conditions.

Owing to the comparatively recent geological formation of the southern peninsula, the strata of vegetable origin are not in an advanced state of fossilisation. Coal is therefore practically



Mansell

VIEW OF BAIA, SET AMONG THE DESOLATE RUINS OF ITS PAST SPLENDOUR, ON ITS LOVELY BAY

The small town of Baia, the ancient Baiae, lying on a bay of the same name ten miles west of Naples, contains only a few relics of its old-time importance. Now little more than a thinly populated village, it was once one of the most famous and opulent watering-places of ancient Rome; its lovely situation and hot sulphur springs making it a popular resort of the Roman Emperors and the wealthy folk of the Empire. Only a few fragments exist of the imposing buildings of the Romans; these ruins include the remains of three Roman baths which were once wrongly supposed to be temples

non-existent. Italy imported 11 million tons in 1913. But the rise in the price of coal, owing to high wages and freight and adverse exchange, has led to a great increase in the mining of lignite. Lignite is plentiful, but its heating power is small. Attention has therefore been turned to water power and electricity. The construction of reservoirs to conserve, and of plant to distribute the electric energy latent in the varying volume of the mountain torrents will go far to solve the problems of heating, lighting, traction and manufacture. As the volume of the southern streams is highest in winter and spring, while the northern rivers are swollen by melting snows in the summer, the interchange of electric power offers great possibilities. An immense amount of capital has recently been invested in the development of Italian "white coal."

The Mediterranean Climate

Although the roads are very indifferent in some parts, notably in Calabria, elsewhere they are comparatively good for motor traffic. You can reach the heart of the Abruzzi in a couple of hours from Rome. A postal air-service has been established between Rome and Naples. The aeroplane industry, which languished after the end of the Great War, has again revived.

The climate of Southern Italy differs markedly from that of the north. It is a "Mediterranean climate," moderately wet winters with prevailing westerly winds being succeeded by very dry summers caused by the trade winds. A diagram of the rainfall would show a curve descending, approximately, from four to three inches per month from October to March, dropping from two in April to one in May and June and practically none in July, and rising again to one in August and two in September. Thus the rainfall of Naples in inches is: January, 3.4; February, 3.0; March, 3.0; April, 2.8; May, 1.8; June, 1.3; July, 0.8; August, 1.2; September, 2.9; October, 4.3; November, 4.9; December, 4.2. The mean annual temperature of Florence is 59.4° F., of Rome 60° F. and of Naples 62.2° F. A pitiless sun scorches the land for five months in the year. But since no part of the country is more than 60 miles from the sea, the summer heat is tempered by cool sea breezes.

Winds of Little Comfort

Less pleasant is the piercingly cold tramontano, which blows from "the mountain tops that freeze," the gusty bora, which beats up the shallow waters of the Adriatic into sudden, choppy seas, and the enervating sirocco, which blows from North Africa. Heavy fogs rise from the marshes, but for the most part the air is clear and dry, and the skies are blue with that azure intensity so enchanting to northern eyes. On the whole, it is an out-of-doors climate, and the Italian is never so happy as when lounging in the city square and discussing affairs in the piazza.

The Italians are a prolific race. Births exceed deaths by three-quarters of a million yearly, and the country is one of the most densely populated in Europe. But it cannot feed itself, for one third of its area is unfit for tillage, and the greater part of the sterile land lies in the south. Fertile regions about Lucca contrast sharply with the marshes of the Campagna or the barren, rocky hills and unkindly clay soil of the extreme south. Emigration has therefore assumed enormous proportions and constitutes one of the peculiar problems of southern Italy. While the "Americani" bring back or remit large sums of money, whole districts, such as Basilicata, are practically depopulated during the summer months. Development of the country is thereby impeded.

Reclaiming a One-time Garden

Yet much of it was once a garden. Measures are slowly being taken to reclaim it from the desolation caused by centuries of foreign oppression, brigandage and Papal misgovernment. The chemical industries, stimulated by

the Great War, are developing the production of nitrogen from the air for fertilisers. The parched lands of Apulia are being irrigated by the great Acquedotto Pugliese. In Calabria a huge reservoir on the Sila is to store water for irrigation and electric energy. Education of the peasant in modern agricultural methods, cooperation and the wise use of capital would greatly increase the productivity of the soil. Drainage may reclaim the marshy low-

E. N. A.

SMALL CONE OF VESUVIUS IN A CRATER-BED OF TWISTED LAVA

Rising in isolated majesty from the plain of Campania, on the shore of the Bay of Naples, to a height of some 4,000 feet, Mount Vesuvius is the best known volcano in the world. It has two summits, the cone of Vesuvius proper and the old crater of Monte Somma; this photograph was taken 500 feet down in the active crater and shows the small 200-foot cone surrounding the central funnel

lands which lie within the curve of the Apennines, and, with the destruction of mosquitoes, relieve Sicily, Sardinia, the Maremma, Roman Campagna, Basilicata, Calabria and a large portion of Apulia from the scourge of malaria. Where land has been so reclaimed, as in the case of Lake Fucino, the valley of the Liri, the marshes of the Piombino and the Pontine Marshes, it has proved very fertile.

In the Roman Campagna and the south, land is divided into large estates (latifondi). The owners usually let them to contractors who farm through agents (fattori). There has recently been a revolutionary movement for expropriating such lands and converting them into peasant-owned smallholdings or cooperative enterprises. In any case, capital is needed for working and improving such farms.

Except in a few favoured districts the agricultural south is poor. Socially, economically and industrially, it lags behind the industrial north. It has, moreover, been penalised by the high protective tariffs which foster the manufactures of the north. It is gradually becoming less true that Italy is a country "where two stages of civilization coincide in the same state." But fifty years of political unity have certainly not yet bridged the gulf between a Lombard and a Sicilian, a Piedmontese and an Apulian. The general statement may be made that while the northerners have many of

Mansell

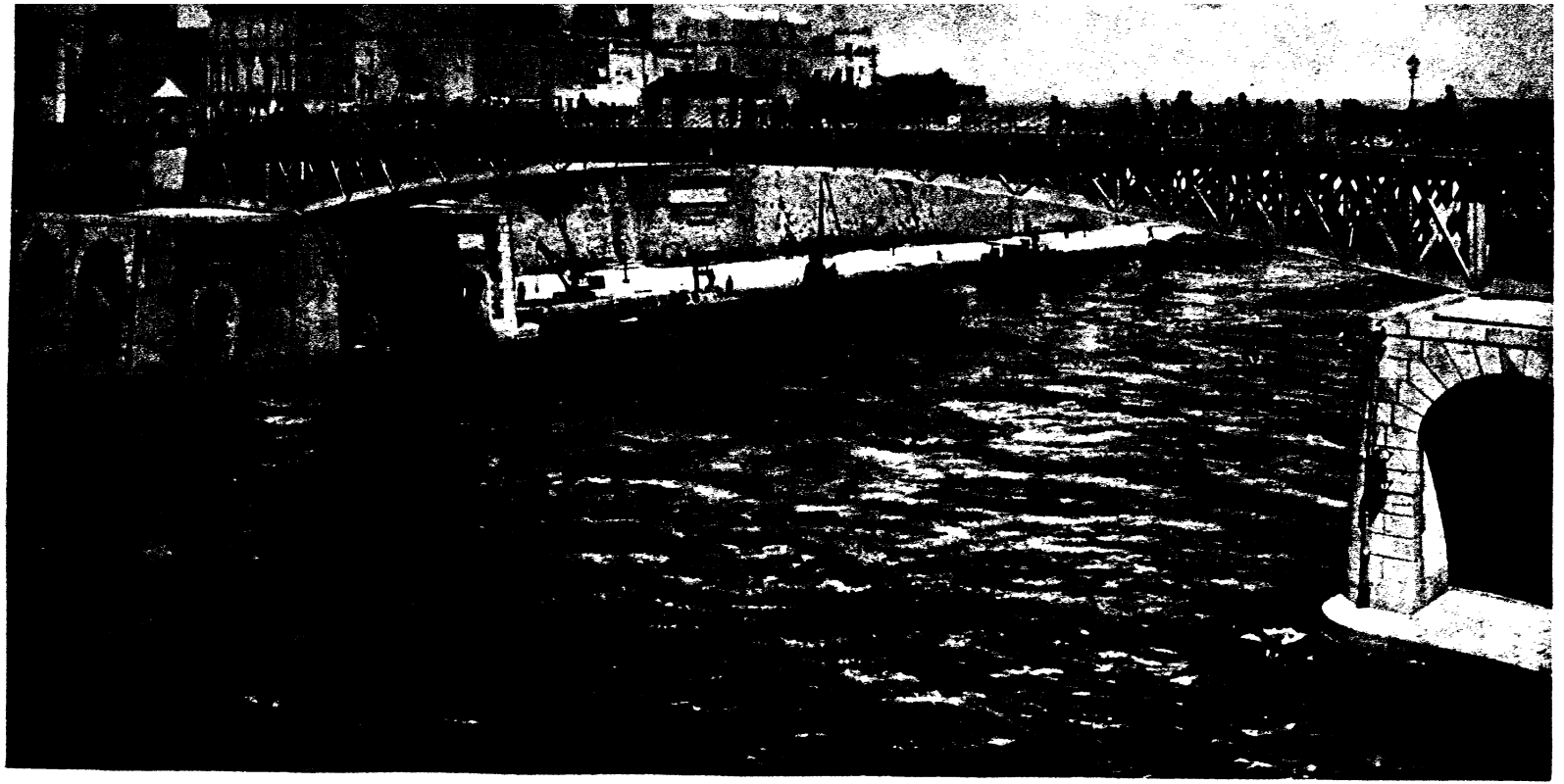
BRINDISI, A SOUTHERN ITALIAN PORT, SEEN ACROSS THE HARBOUR

The old town of Brindisi, the Brundisium of the Romans, a famous place in ancient history, lies on the Adriatic in the province of Lecce. The well-protected harbour, which encloses the town in two arms, is sheltered by several islets and is accessible to large vessels. Brindisi carries on an enormous trade, and as the land terminus of the overland route to India enjoys considerable prominence

Mansell

PECULIAR BEEHIVE ROOFS OF APULIAN ARCHITECTURE

Alberobello, a delightfully quaint place, half town, half village, is situated in the Apulian peninsula not far from the seaport of Bari. Although it contains a few buildings which strike a more modern note, the prevailing type of architecture is seen in the so-named " trulli," or small houses, with vaulting and cone-shaped roofs, a popular style among the peasantry who erect it everywhere in their fields



Mansell

IRON SWING BRIDGE OF TARANTO, A CITY OF GREAT ANTIQUITY ON THE SOUTHERN COAST OF ITALY

The pleasant town of Taranto, the ancient Tarentum, is set on an island at the head of the Gulf of Taranto, an arm of the Mediterranean which separates the so-called " toe " from the " heel " of the boot-shaped extremity of the Italian peninsula. It is chiefly noted for its important fortified harbour—one of the safest in the kingdom—and its extensive docks. Here is seen the great iron swing bridge across the canal which, 230 feet wide and admitting the largest war-vessels, separates the rock on which the town is built from the mainland, and connects the Gulf of Taranto with the inlet known as Mare Piccolo

the characteristics of Teutonic races, the southerners approach the Oriental.

Italy has recently become a large exporter of yarn and manufactured cotton goods, chiefly to Balkan states and the Near East. To this industry Naples contributes a daily output of 110,000 pounds of yarn and 164,000 yards of goods. The wool industry of central and southern Italy produces durable materials, not of the highest grades, which supply most of the home market and are beginning to be exported.

Produce includes fish, salt, quicksilver, iron ore, lignite, sulphur, wheat, maize, barley, fruit, flowers, vegetables, hemp, flax, fodder, potatoes, wine and olive oil. The use of polenta, flour made from maize, has decreased since the Great War, while the consumption of bread has increased. The acreage under wheat is very large, but Italy has now to import two million tons per annum. The wheat grown in Apulia is very hard and chiefly used for making macaroni. The Neapolitan district produces oranges, lemons, figs and grapes and flowers; Calabria, figs and almonds. Broad beans, haricot beans, peas, etc., are grown in the gardens adjoining every country house, and in the neighbourhood of towns and villages.

Harvests of Wine and Oil

Other vegetables, such as tomatoes, cabbages, cauliflowers, artichokes, onions and asparagus are raised in large quantities and form a considerable item of export. Potatoes are being cultivated increasingly in the mountainous districts of the Abruzzi and Campania. The dried fruit trade amounted to 84,000 tons in 1918. Fodder is grown in the lowlands to supply the deficiencies of mountain pasture.

Italy is the largest wine-producing country and second only to Spain in the production of olive oil, though the latter is decreasing owing to disease and waste of the trees. Grapes and olives are grown practically all over Italy. Olive trees supply fuel as well as the fruit and the oil pressed from it. Like the vines, they are grown upon the mountains, which have been terraced for that purpose, even up to 3,000 feet above sea-level. The best oil comes from Lucca, Florence, Naples and Apulia. Wines vary greatly in different districts, ranging from red to golden and from thin, flat and acid to sweet, aromatic and sparkling, from the strong alcoholic vintages of Apulia to the delicate wines of the Castelli Romani. The brands of southern Italy best known abroad are the Tuscan Chianti, Sicilian Marsala and Neapolitan Capri, Marino, Lacrima Christi and Posillipo. The value of both wine and oil harvests might be greatly increased by better organization in growth, manufacture and marketing.

Emigration and Depreciation

Since the Great War every economic and social problem has been rendered acute in southern Italy as elsewhere. The curtailment of emigration and depreciation of the lira have raised serious problems. Upon Signor Mussolini's advent to power, through the Fascisti, strenuous efforts were begun to balance the budget by economy in administration, conclusion of commercial treaties and encouragement of production by private enterprise.

Before turning away from this delightful land, let us glance at some of the spots which through the ages have drawn the pilgrim's feet towards them

A Pilgrimage to Monte Cassino

One such pilgrimage leads us to Monte Cassino, overlooking the rich valley of the Liri. Here, half-way between Rome and Naples, on a shelf of the mountains, lies the mother of all Benedictine monasteries. It was founded by S. Benedict in A.D. 539 To reach Monte Cassino from Rome one must first pass along the banks of the Anio, through groves of olives, and vineyards, and avenues of cypresses, by the splendid ruins of Hadrian's Villa (A.D. 130), and by enchanted Tivoli, with its cascades, which now supply the electric power of Rome, its grottos,

temples, churches, villas and gardens. More entrancing than Tivoli itself are the views from the hill on which it is perched, for it looks over the great prairie, the Campagna, which surrounds Rome like a sea of colour.

So, through fields and groves among timber-clad mountains dotted with walled villages, the Sabine mountains beloved of Horace, you come to the picturesque medieval hill-town of Subiaco. Here was the first hermitage of Benedict, and here are the remains of the great lakes constructed by Claudius and Nero. Here Nero built himself a lordly pleasure-house for feast and song.

Rome the Eternal, Florence the City of the Lily, Naples the Siren City, are described in other sections of this work. But if the traveller turns his steps to Central Italy he will find in Assisi and Siena, amid the loveliest surroundings of Umbrian and Tuscan scenery, the homes of Francis and Catherine, saints who are among the greatest spiritual leaders of the world. At Assisi he may trace the early developments of the national style in painting in the works of Cimabue and Giotto. At Siena, amid dazzling marbles and delicate pavement-work, he may study the Sienese school of painting. Or at Perugia, that ancient Etruscan city, with its steep and winding medieval streets, which broods over Umbria like an eagle in its nest, he may learn to love the grace, vivacity and sentiment of the Umbrian school.

Very different from the attraction of these shrines of medieval saints and cradles of modern art is the appeal of Pompeii and Herculaneum. There Roman civilization has been preserved in miniature, as it were, by the ashes and lava of the great eruption of Vesuvius in A.D. 79.

Every town in Italy, indeed, has an individual character and charm; almost every town its particular artist of repute. And for mere variety of beautiful scenery southern Italy can scarcely be surpassed. You may dream of the delights of bygone emperors, by the grottos of Capri, sunlit in the singing sea, or wander among the wild gorges and barren hilltops of Calabria and the Abruzzi. Or from Viterbo, famous for its lovely fountains and beautiful women, gaze over the Ciminian forest and upon the hills which are covered in early summer by yellow flowering shrubs, as it were with a cloth of gold.

ITALY SOUTH: GEOGRAPHICAL SUMMARY

Natural Divisions. Italy has three regions, the continental plains (see Northern Italy), insular Italy (see Sicily and Sardinia) and peninsular or Southern Italy. The peninsula is that part of Italy which is due to the upfolded mountains, the Apennines, which lie between two areas, once land now sea; on the west Tyrrhenia and on the east Dalmatia (see Mediterranean Sea). The land is still unstable, Vesuvius, Etna and Stromboli being active volcanoes.

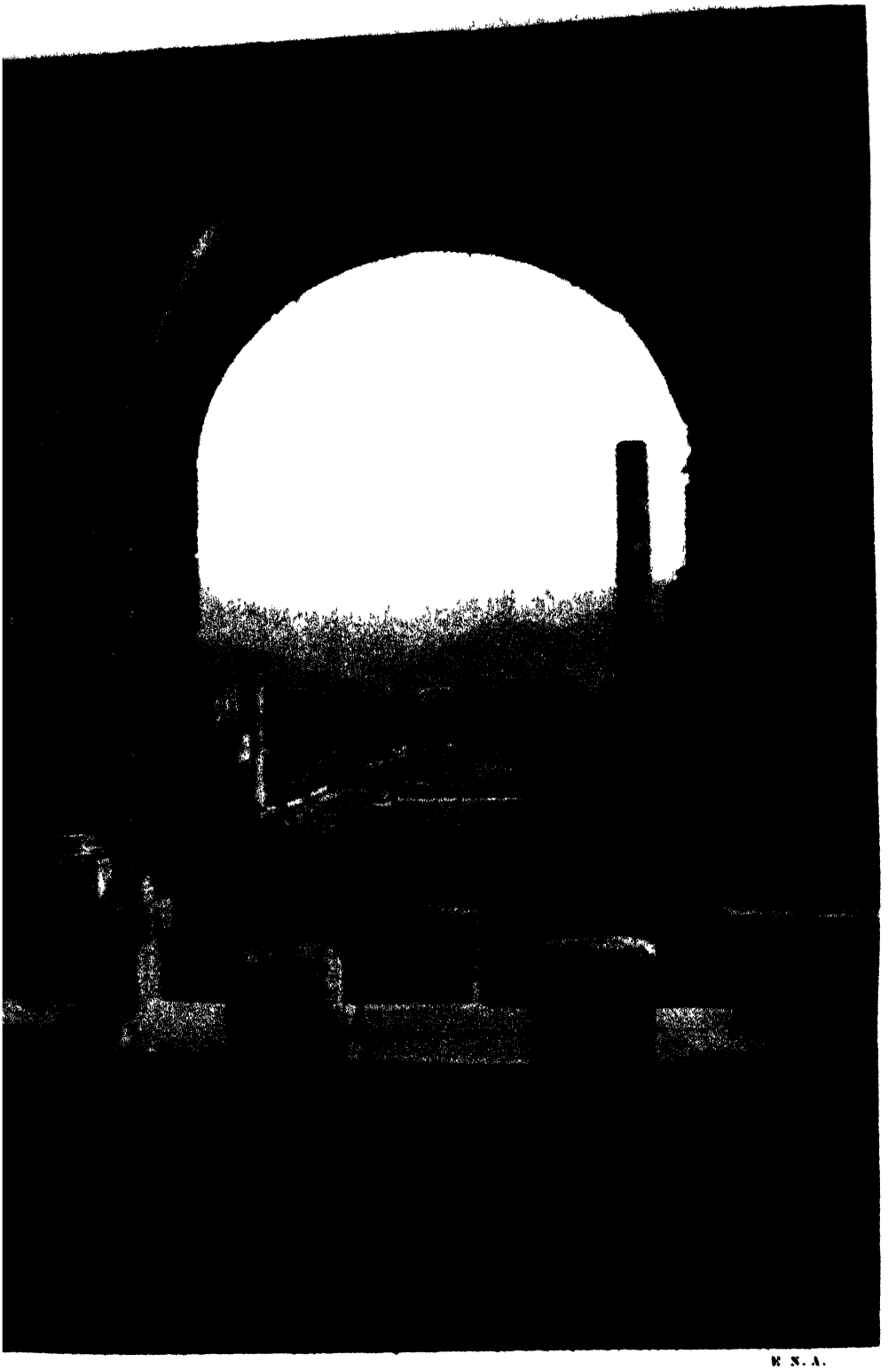
Climate. Mediterranean type—a hot, dry summer, when the sun parches everything for five months, and a cool winter with moderate rains. (Cf. Corsica, Crete.)

Vegetation. Forests (chiefly chestnut) which still occur and are to be replanted. Grasses requiring cultivation on the alluvial flats. Maquis thickets. (Cf. Corsica.)

Water supply. The rivers are short, almost dry in summer and torrents after the rains. Hence water must be conserved, and irrigation schemes are imperative needs; hence, also, the possibility of hydro-electric power installations. A more copious, and more regular, water supply is essential for agriculture and sanitation. On the other hand the coastal lagoons and marshes require to be drained and reclaimed to remove the incidence of the scourge of malaria.

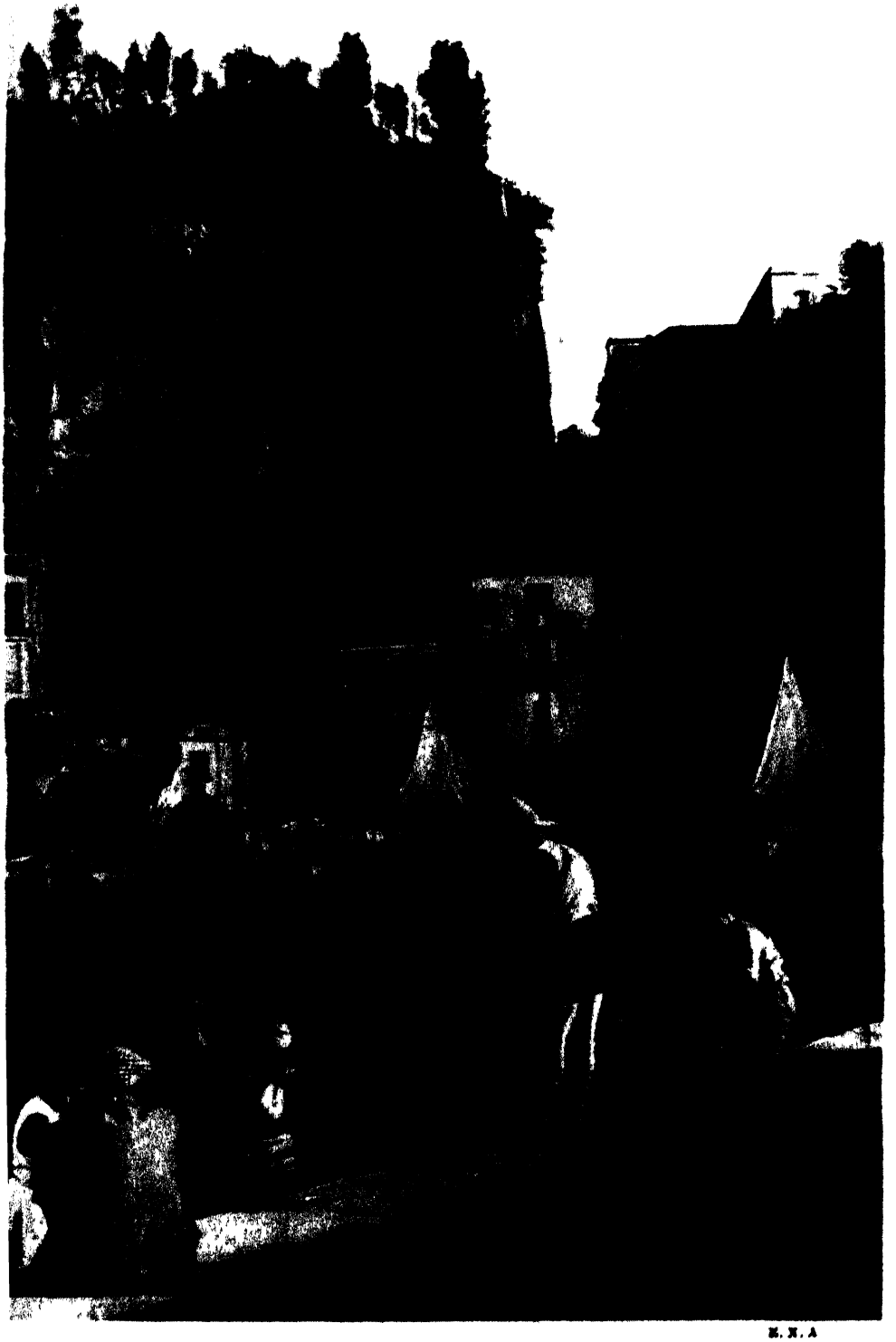
Products. Typically Mediterranean. Wheat, wine and olive oil (cf. Spain); citrous fruits (cf. Sicily); barley, figs, dried fruits (cf. Greece). Iron ore from Elba. Tunny, anchovies, sardines, corals, sponges. Yarn and cotton goods, coarse woollens.

Outlook. With less favourable resources and a less favourable water-supply than Northern Italy, the South suffers from a population surplus which emigrates to the Americas, both north and south, and to other parts of the world, to serve as labourers on great construction contracts; under better home conditions more could be made of the home country.



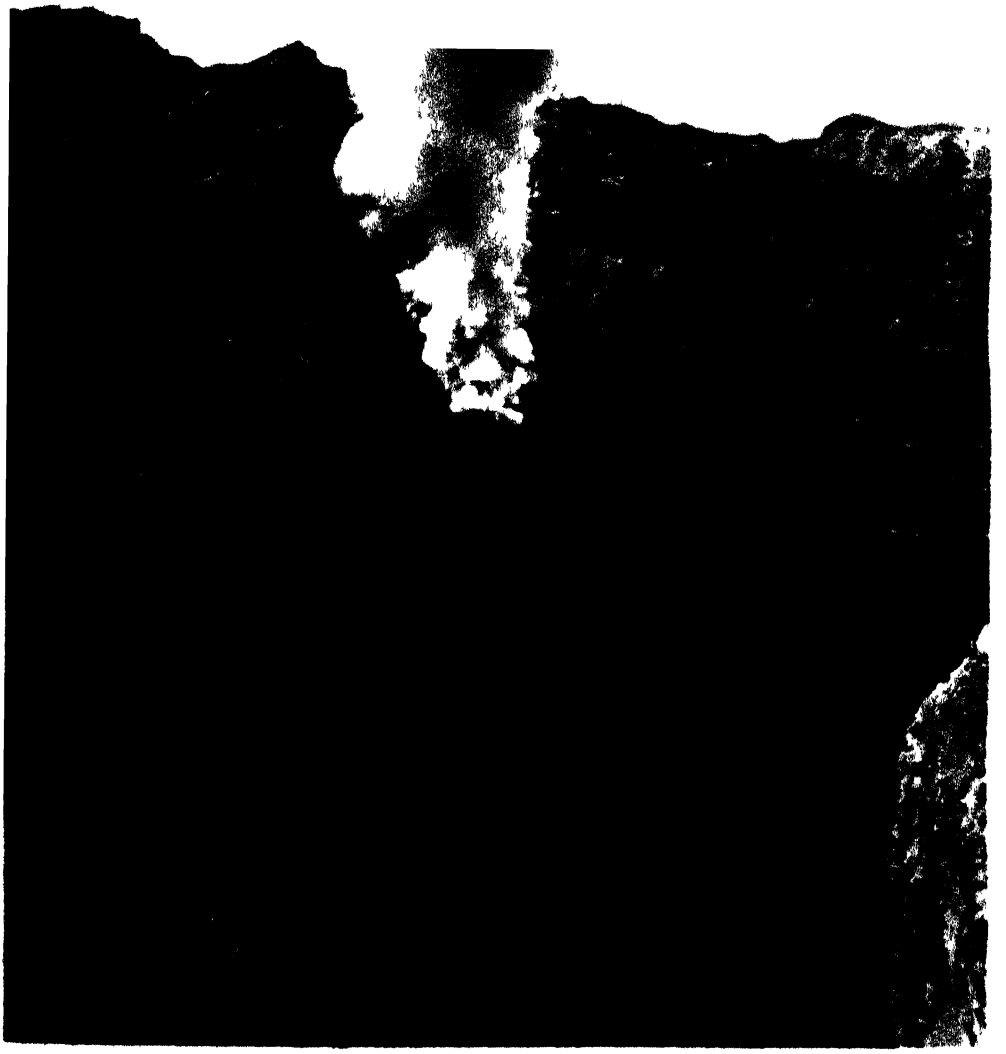
R. N. A.

ITALY SOUTH. *Ashes red-hot from destroying Vesuvius closed this archway to Pompeii's Forum. The stone blocks kept out the traffic*



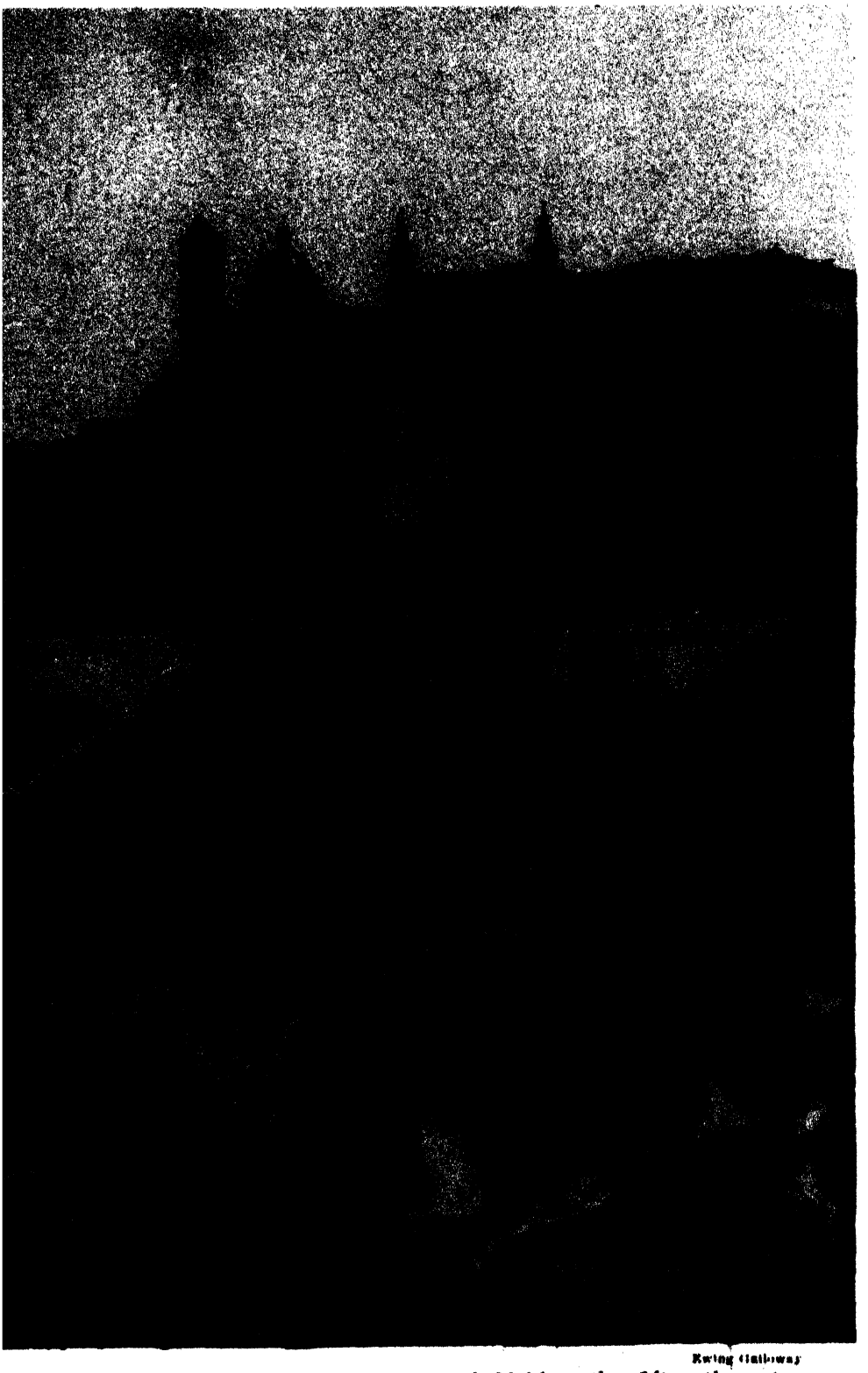
E. N. A

ITALY SOUTH. *The Marina Grande is the fishing harbour at the west end of the limestone ravine that guards Sorrento's land approach*



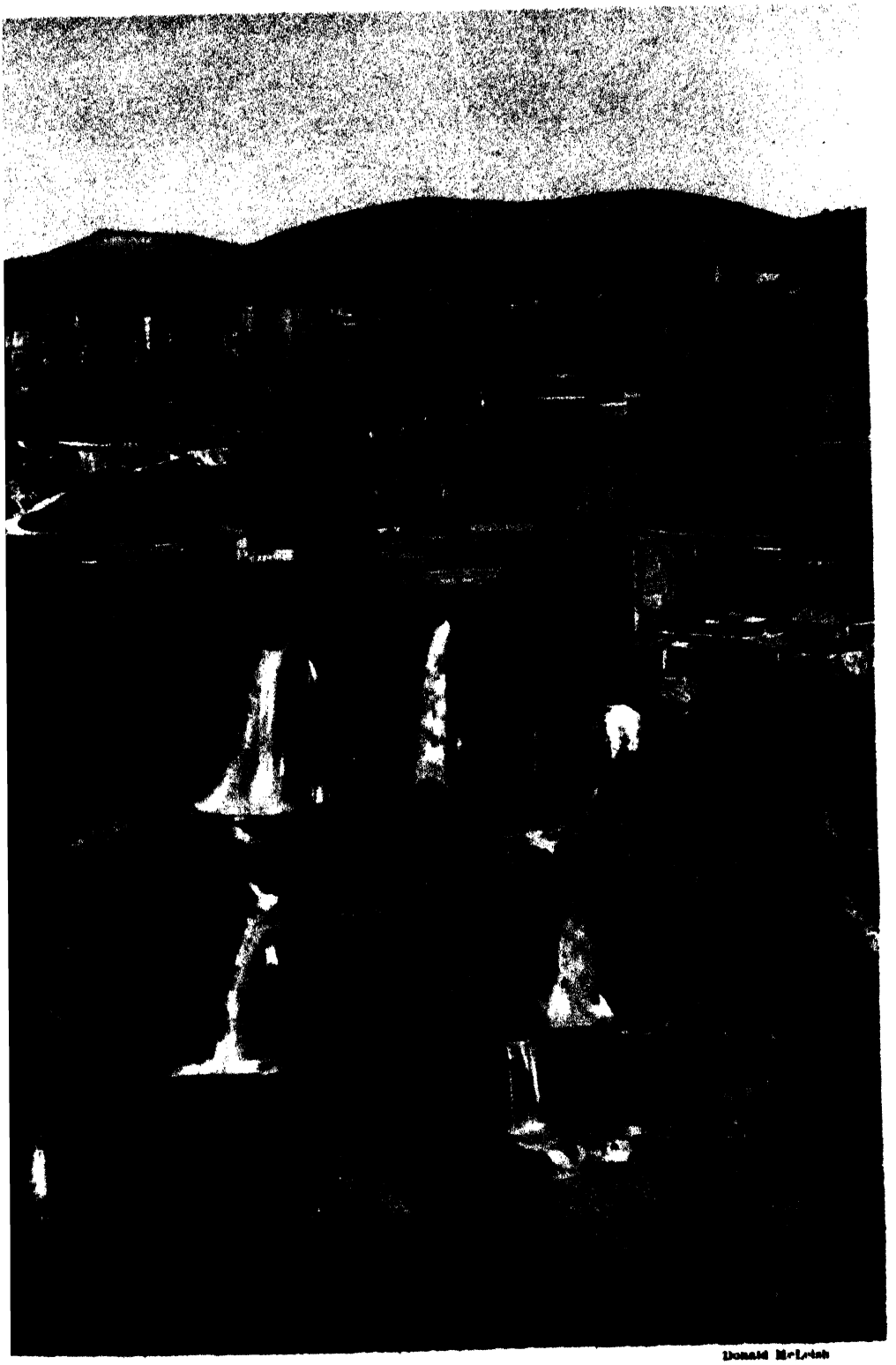
Ewing Galloway

ITALY SOUTH. *Sending a plume of steam into the blue Italian sky this cone, 250 feet high, is a temporary outlet in Vesuvius' crater*



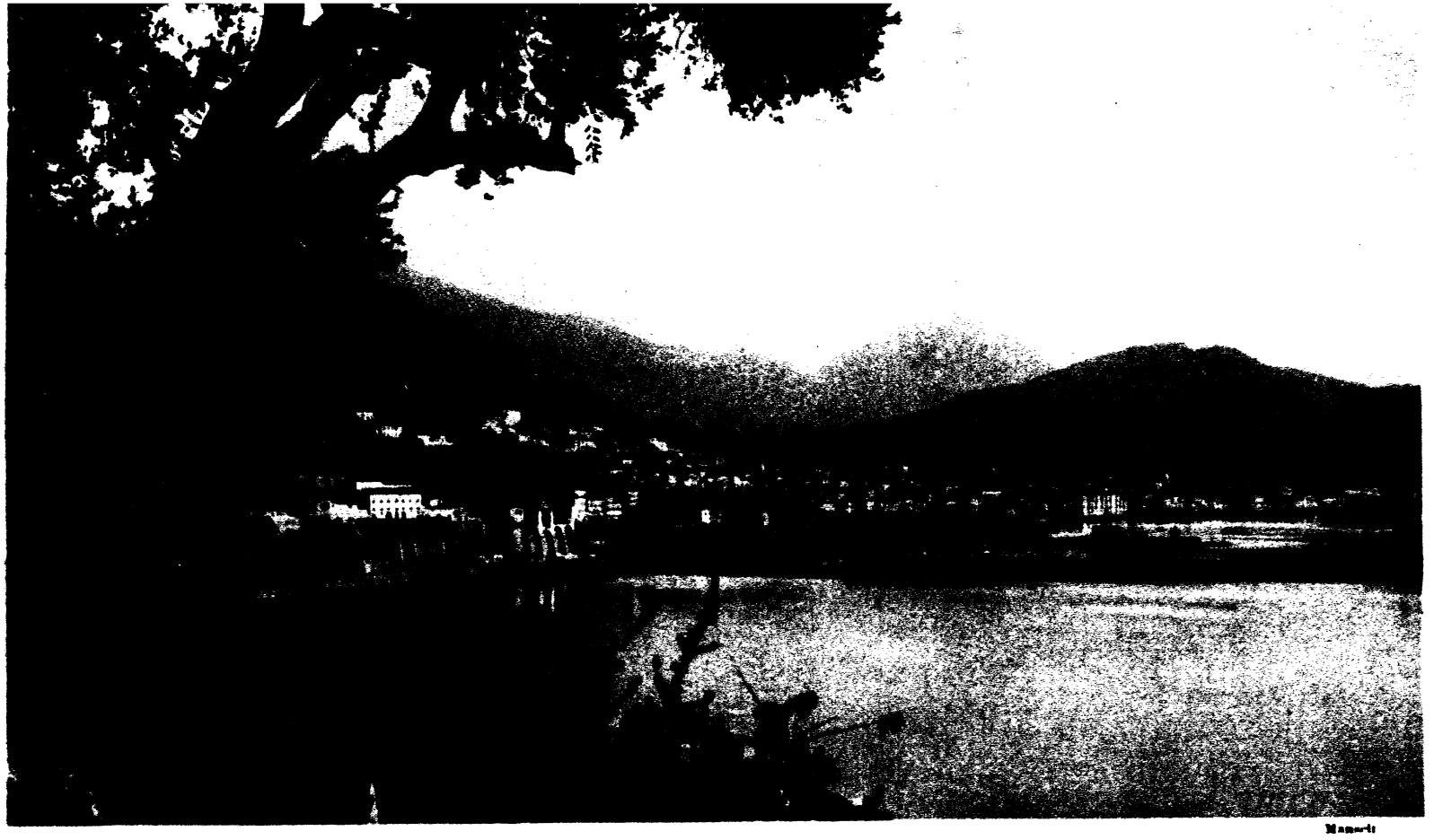
Ewing Galloway

ITALY SOUTH. *On the north side of Urbino the fifteenth-century Ducal Palace faces the gaunt Apennines with a long line of wall*

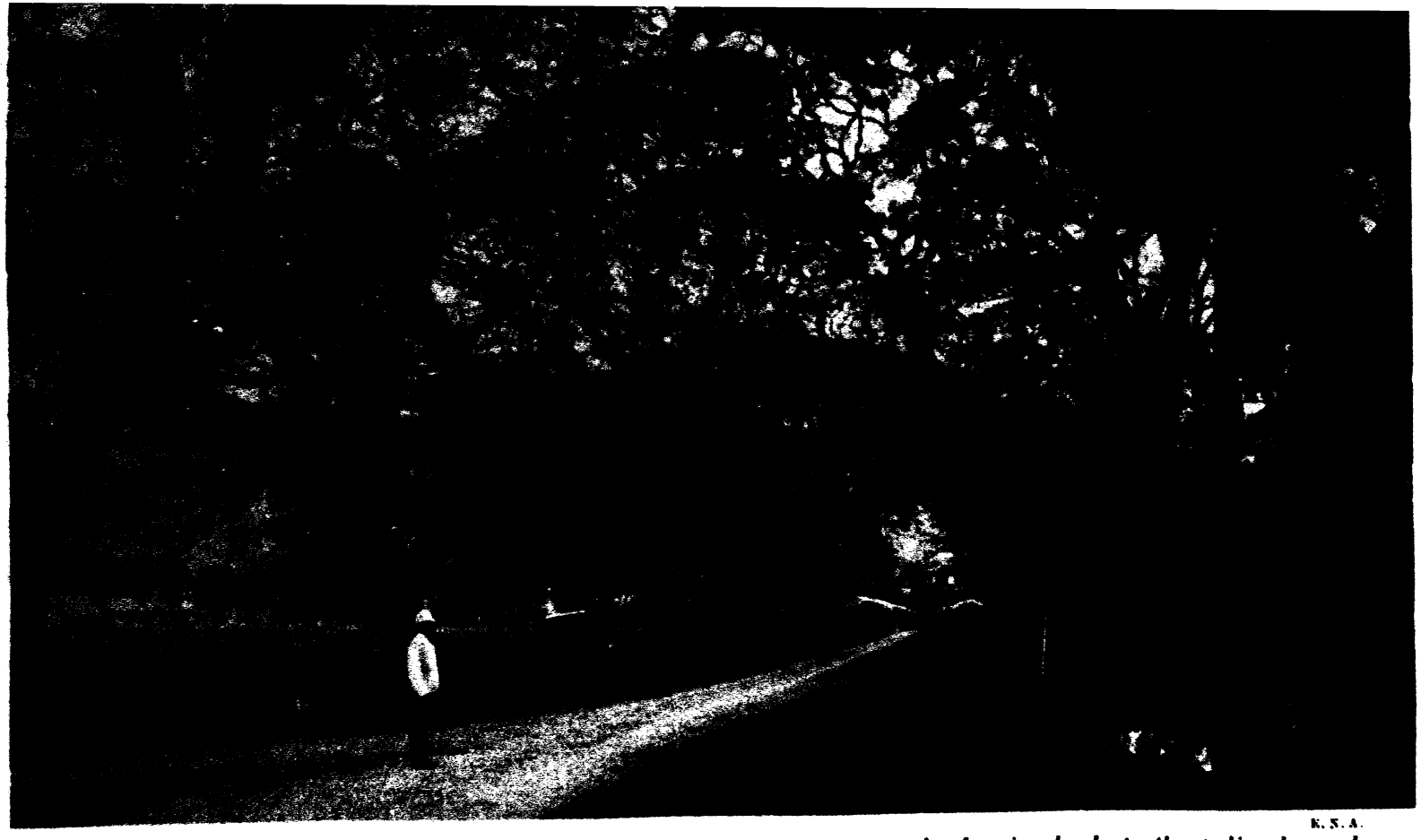


Donald McLeish

ITALY SOUTH. *Tivoli is built in the Sabine Hills down whose shaggy slopes the Anio threshes in cascades of crystal froth*



ITALY SOUTH. *Along the seashore at Salerno runs a fine esplanade, the Corso Garibaldi. Behind, the town leans up towards a majesty of hills, and in front are the blue levels of the Tyrrhenian*



K. S. A.

JAMAICA. *An avenue of guango trees, whose leaves close on the approach of rain, leads to the police barracks at Spanish Town in St. Catherine's Parish. The branches are festooned with "old man's beard"*

Jamaica (Govt.

JAMAICA. *On the main road from Lacovia to Black River there are the famous four green miles of the Bamboo Avenue*

2372

JAMAICA

Favoured Island of the Antilles

by Frank Cundall

Author of "Historic Jamaica," etc.

THE statement that Columbus, when desirous of describing the physical character of Jamaica, squeezed up a piece of paper and threw it on the table before his royal patrons is probably apocryphal, but it is of happy inspiration. It is the readiest way of reproducing the island's crumpled hills, tossed and torn by torrential rains and by successive submersions and risings in nature's process of manufacture. The result is an island of surpassing beauty, of hills forest-clad to their topmost peaks, of vales and plateaux, of rolling pastures and of streams flowing over rocky beds.

The island forms the centre of the Caribbean Sea, which was probably in prehistoric times an inland lake with the Greater and Lesser Antilles as its northern and eastern bounds. The four Greater Antilles, of which Jamaica is the third largest, consist of a disconnected chain of mountains, about two-thirds of the altitude of which are now beneath the sea. Measured from the deep sea plain from which they rise, they exceed any heights in Europe or North America.

Long Mountain Backbone

Jamaica is a longish oval in shape, 144 miles in length and about 44 in width, with a backbone of mountains running through the long axis, declining more or less rapidly to the sea all round. Here and there is a health-giving plateau, and here and there a fruitful interior valley, "karst" land as modern geologists call it, drained by sink-holes.

In its general geological formation the foundation of the island is composed of igneous and metamorphic rocks, some mineral bearing, overlying which are several formations, white and yellow limestone and carbonaceous shales.

Kingston harbour, the finest in the West Indies, though not capacious enough to accommodate H.M.S. Hood, has a total area of about sixteen square miles, of which about seven have a depth of from seven to ten fathoms. The rise and fall of the tides around the coast do not exceed sixteen inches.

Rain that Falls in "Seasons"

The climate is exceptionally equable, varying from 98° F. in August in the lowlands to 47° at an altitude of 7,500 feet. At an elevation of 500 feet the variation is from 85° to 70°. December, January and February are the coolest months, when the weather is as a rule ideal—bright sunshine tempered by balmy winds, with an occasional shower to lay the dust. From April the weather becomes warmer until the usual May "seasons" of continuous rain, which cool the air for a time, set in; then the heat increases until September, when the atmosphere is close, just before the advent of the October "seasons."

A series of years of plentiful rainfall is often followed by a series of droughts, when the "seasons" fail, the average rainfall for the whole island being about 76 inches. The north-east part of the island is the wettest, and the central coast sections on the south side and the north side are the driest. During the "seasons" rain sometimes falls to the extent of 20 inches in 24 hours in the high mountains and about 4 inches in the plains. Except during the "seasons," there is rarely a day when the sun is not seen, relieved by light clouds.

CRUMPLED HILLS AND VALLEYS OF JAMAICA

The prevailing trade winds which reach the southern coast from the south-east and the northern coast from the north-east, can be relied on during the day, except during the months of July, August and September. At night a cool wind comes from the hills.

The dry hilly regions in the south-west and in the centre of the northern half of the island afford a climate that is characterised by agreeable warmth, abundant sunshine and total absence of fog, eminently suitable for those of delicate health.

Hurricanes, when they come, usually appear from the months of June to September inclusive. In the winter months the wind occasionally blows cold from the north, and is locally known as "a norther," often synchronising with a blizzard in North America.

Residents in the West Indies become accustomed to slight shocks of earthquake, but it is only occasionally that these do severe damage.

When Columbus discovered Jamaica it was covered with virgin forest and uncleared bush, and in the higher and more inaccessible parts that condition remains to-day. Amongst its principal trees are the giant cotton-tree, one of the few deciduous trees in the island, which rears its head above its fellow trees, the lace-bark with its muslin-like fibre frequently used as a textile; the yacca, mahogany, cedar, satinwood and the mahoe (all beautiful cabinet woods); and the logwood, anatta and fustic (all three yielding dyes).

It is thought that the sugar-cane, to which the West India islands owe much of their prosperity, was introduced by the Spaniards. Of trees and plants now common in the island which we know were not existing when Columbus landed, may be mentioned the cinnamon, nutmeg, rice, pindar nut and cherimoya, the bougainvillea from Brazil and the jack-fruit and ginger for which Jamaica is world famous. The ever useful and beautiful bamboo came to Jamaica from the neighbouring island of Hispaniola. The orange, lemon and citron were brought by the Spaniards from their own home, and coffee, kola and akee came from tropical Africa. Various kinds of yams were brought from Africa and the East Indies; the cocoa from Polynesia; the shaddock and hibiscus from China.

The mango, now one of the common trees of the island, came in 1782 from India, and guinea-grass, which flourishes throughout the island and has been a great boon to cattle and horse breeders, came by accident from West Africa. The breadfruit was brought into the island in 1793 by "Breadfruit" Bligh, who possibly also brought the banana; and the plantain was in the island when Blome wrote in 1672.

Of animal life there were among the mammals only the cony, now found in the rocky recesses of the high mountains,

a mute dog-like animal which the Indians called alco, of which no trace exists to-day, and possibly the rat.

Forty-three of the birds of Jamaica are said to be peculiar to the island, but interesting as they are, none is particularly remarkable for sweetness of song or brilliance of colouring. The ring-tail pigeon, the bald-pate, white-wing, white-belly, pea-dove, quail, mountain-witch and mountain partridge are very good eating, the ring-tail being considered one of the island's chief luxuries.

One of the most instructive features in the natural history of Jamaica has been the introduction of the mongoose, imported in 1872 to keep down the rats which were very harmful in the cane-fields. The mongoose did his work well, but, unfortunately, he did not stop there. He then turned his attention to the snakes, lizards, small birds, turtle eggs, domestic poultry and their eggs, and ground provisions. By the destruction of small birds the mongoose is said to have caused an increase of ticks, a great pest in some parts of the island, and it has even been thought that he destroys the honey-bees and has some share in spreading foot and mouth disease amongst the cattle. But no animal introduced by the agency of man has become a pest in the same sense as the rabbit in Australia.

The sea around the coast holds a large supply of food-fishes, excellent in their way, but lacking for the most part the flavour of fishes in temperate waters. An experiment made in Jamaica in 1898 tended to prove that neither the sea-bottom nor the supply of fish is conducive to successful fishery operations on a large scale, fossil sponges and other marine growths tearing the nets to pieces. The calipever and the mountain mullet, the finest of

Jamaica Govt.

PORTABLE SISAL MACHINE TRANSFORMING LEAVES INTO ROPE FIBRE

Sisal is grown with considerable success in Jamaica, the plant thriving on any soils of the island which are derived from limestone, and is ready for the first harvest after about three years from the time of planting. Large areas have been given over to the cultivation of sisal in the May Pen district, parish of Clarendon, where sisal rope of the superior quality is manufactured

Jamaica Govt.

HEREFORD CATTLE ON A STOCK-FARM AT HODGES IN THE PARISH OF ST. ELIZABETH

Pen-keeping, as stock-farming is termed in Jamaica, is a widespread industry. The cattle are raised both for the butcher and the planter; for the former all the famous English breeds are bred, while for the latter it has been found necessary to cross the British cattle with Indian animals to enable them to withstand the tropical conditions. St. Elizabeth, besides being the largest corn-producing parish in the island, is noted for its cattle and horses, the latter being considered to be among the best bred in Jamaica and in great demand in the other West Indian islands.

the river fishes, rival many English fish in delicacy. The rivers also produce a kind of crayfish of excellent eating quality, and from their estuaries and lagoons come the oysters which commonly adhere to the branches of the mangrove, and so may be said to grow on trees.

From time, as one says in Jamaica, agricultural life has been divided into two classes—planting (of crops) and pen-keeping (of horses and cattle).

In the early days the settlers grew tobacco and indigo, but these soon gave place to sugar, which was the chief source of income during the eighteenth century, when Jamaica was the principal of the "sugar islands." Emancipation, in part through their own fault, ruined most of the sugar planters, who were absentee proprietors, but sugar still maintains its position as a leading crop. During the Great War it received a great impetus, but owing to the uncertainty of the tariff in England the industry is in an unstable state.

Growing Importance of Bananas

Early in the second decade of the last century the growing of bananas was taken up, and it has prospered to such an extent that it is now of the first rank. The crop, it is true, is liable to devastation by hurricanes, but the large profits made in most years are more than compensatory; and of late years insurance has been effected in some cases. The crop is also threatened with Panama disease, against which war has to be constantly waged.

Coffee is produced on higher land than any other crop in Jamaica, the finest growing at an altitude of from 3,500 to 4,000 feet; in the Blue Mountains, where the best is grown, it has suffered from lack of attention in the past, largely due to insufficient capital. With proper care there are large tracts capable of exploitation, as many estates testify.

Coconuts of great excellence are grown, especially on the northern coast. They are liable to destruction in time of hurricane, but the large insurance companies afford growers ample opportunity of recovering their losses.

The island is remarkably suitable for the breeding of cattle, and there are large areas where magnificent beasts are reared under economical conditions.

Introduction of Mysore Cattle

The original Spanish settlers introduced Spanish cattle, slow in growth, of inferior beef quality, but useful in the yoke. These formed the stock on to which the British breeds were subsequently grafted. From time to time bulls of the best Shorthorn, Hereford, Black Angus, Devon, Welsh, South Devon and Red Poll breeds have been imported. Of late years the introduction from India of Mysore cattle, with a coat of short hair and a dark skin affording a resistance to ticks and to tick fever, has revolutionised the working cattle of Jamaica. And lately an experiment has been made with bulls of the "Val di Chiana" breed from central Italy.

The chief difficulties of the pen-keeper are the periods of drought, and the attacks of ticks; but the first can be met by storage tanks and the second is being successfully combated by dipping tanks, the use of which is now compulsory in herds of over a certain number.

Hardy Breed of Horses

Sheep are kept in some parts, but never in large flocks. Pigs and goats, however, are very prevalent, especially in the homes of the peasantry.

The horses which are bred in Jamaica are famed throughout the West Indies as racers, as polo ponies and for their excellent working qualities. When well fed and well groomed they are probably as good as any in the world for hard work. The work they will do and the weights they will carry are simply marvellous.

Of the vegetation in Jamaica what is most noticeable is the astonishing variety of fruit trees. In one sense forestry is unknown, and fire is still used too carelessly in making clearings; but settlers nearly always plant fruit trees round

Jamaica Govt

KING'S HOUSE AT SPANISH TOWN, JAMAICA'S FORMER CAPITAL

Spanish Town, in the county of Middlesex, is about 12 miles by railway from Kingston. The town was the capital of Jamaica until 1872, when the seat of government was removed to Kingston, since when it has gradually lost its importance. The Old King's House, which was formerly the governor's residence, stands in the square and dates from 1762.

Jamaica Govt

KING STREET IN KINGSTON, CAPITAL AND SEAPORT OF JAMAICA

The town of Kingston is spread out on the south-east shore of Jamaica at the head of an excellent landlocked harbour. It is the terminus of several railways, and the well-built, strongly-fortified town, lighted by electricity and with an electric tramway system, carries on a large export and import trade, and since 1872 has been the centre of the country's political and commercial life

Jamaica Govt

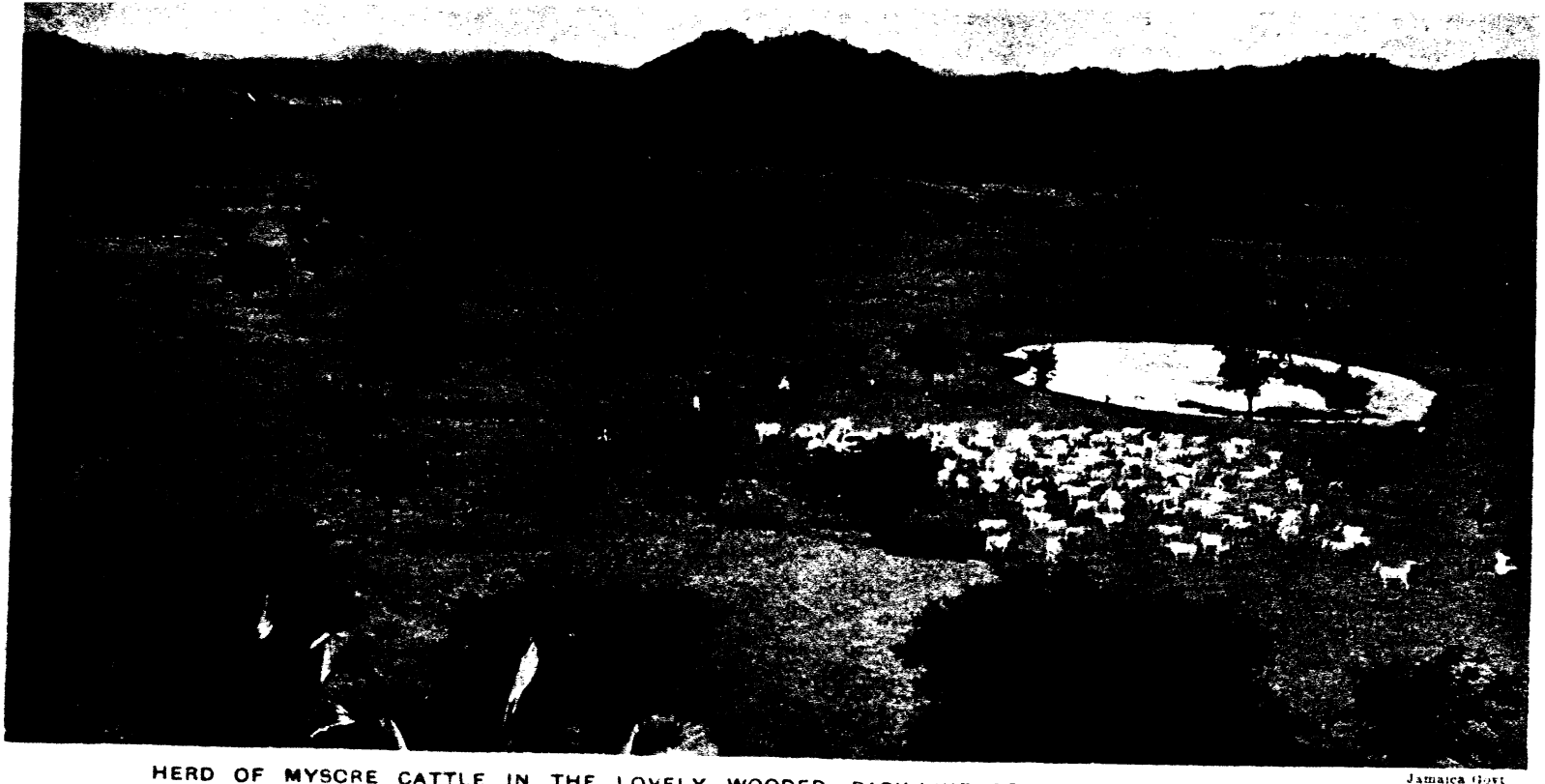
ON THE LONG POND SUGAR ESTATE IN THE PARISH OF TRELAWNY

For more than two centuries the sugar cane was the chief source of the wealth of Jamaica. Then its cultivation declined, its place being taken by bananas and orange plantations, and before the Great War sugar had come to be regarded as a minor product. The War however gave a great impetus to the industry, and in 1923 there were 55,818 acres under sugar cane.

Ewing Galloway

DESERTED SUGAR MILL ON THE BANKS OF THE RIO GRANDE

Deserted sugar mills, overgrown with trees and creepers, are found here and there in Jamaica. In the photograph bushes can be seen growing out of the top of the chimney. The Rio Grande, rising in the Blue Mountains, is one of the finest rivers in the island, and at its mouth there is a splendid railway bridge over which passes the line from Kingston to Port Antonio.



Jamaica Govt

HERD OF MYSORE CATTLE IN THE LOVELY WOODED, PARK-LIKE COUNTRY AROUND MONTPELIER

All through the island there are hills covered with rich pasture and suitable for cattle, since the exercise in climbing the slopes is beneficial to the health and growth of the animals. There are also plenty of shady glades giving shelter to the calves from the mid day sun, and on the more level lands there is abundant guinea grass, which is the finest natural feed for fattening cattle. The Indian have the advantage over British breeds in that they do equally well either in the lowlands or the mountain , and will thrive where other cattle would starve and die. The original cattle were introduced by the Spaniards

Ewing Galloway

FOAMING CASCADES OF SPARKLING WATER ON ROARING RIVER

Roaring River Falls, in the parish of St. Ann, are famed for their beauty. The falls are the largest in the island, and not only are the banks covered with almost tropical forest, but trees and mosses grow in the midst of the rushing waters. About five miles to the west of Roaring river is the site of Sevilla Nueva, the first capital of Jamaica

their homes, and such delicious products as mangoes, star-apples, papaws, and grenadillas abound. Vegetables, too, are grown in great profusion, not only tropical varieties such as yams, sweet potatoes, Indian corn, and so on, but plentiful crops of all the well-known European kinds.

The chief agricultural exports of Jamaica are bananas, sugar, rum, coconuts, coffee and tobacco. For home consumption the principal crops are tobacco and yam and other "bread kind," as such foods are locally called.

The only manufactures for export are sugar, rum, logwood extract and cigars. For local consumption the chief are cigars, cigarettes, matches and ice. Cassava, an indigenous plant which yields valuable starches, seems to await exploitation by some capitalist.

In the slavery days there were on every sugar estate the slave quarters where the slaves were housed; in later days barracks have been maintained for the indentured coolies from India, whose importation is now stopped. On the "farms" of the United Fruit Company suitable dwellings are provided for their employees, sanitation is attended to and medical service afforded.

There are four banks, one of English and three of Canadian origin, with head offices in Kingston and some of them with branches in country towns. They issue banknotes. There is a government savings bank with upwards of sixty branches. Accounts are kept in English money, but American coins and notes are legal tender. There is also a big system of government assisted cooperative banks, which aid land-purchase on a cooperative basis. An agricultural society gives prizes for small-holdings and has thereby greatly stimulated home enterprise.

Jamaica Govt.

SECTION OF THE MILK RIVER, A WATERWAY OF JAMAICA FAMED FOR ITS MINERAL SPRING

Owing to the great variety of its scenery, Jamaica has often been considered the most beautiful island of the West Indies. Its name is thought to have been derived from an Arawak word signifying "well-watered," and the island certainly contains many rivers, few of which, however, are navigable. The longest of the rivers are the Cobre, Minho and Black, which empty their waters on the south coast; another southern river is the Milk river in Clarendon, famous for its mineral spring of therapeutic value: this warm saline bath has a temperature of 92° F. and is efficacious in relieving many ailments

Jamaica Govt

MONTEGO BAY IN AN ALMOST PERFECT SETTING OF TROPICAL BEAUTY IN CORNWALL COUNTY

Montego Bay, the most important town in the parish of St. James, lies at the head of Montego Bay, in the county of Cornwall. The town has a population of about 7,000, a magnificent open roadstead, and a large market, while the Doctor's Cove and the White Sands are claimed to be the best bathing places in the island. Montego Bay is the terminus of the railway from Kingston, and a road crosses the island to Black Rive on the south coast. The surrounding country is covered with fields of sugar-cane, while there is a central sugar factory at Rose Hall

LOOKING FROM OCHO RIOS ALONG THE BEAUTIFUL COASTAL ROAD TOWARDS ROARING RIVER

Ewing Galloway

Ocho Rios, formerly called "Chereras" or the "Bay of Waterfalls," lies about seven miles east of St. Ann's Bay and is a town of increasing importance with a good harbour. The surrounding country is famous for its beauty. The drive along the coast past Dunn's River Cove and the Roaring River Falls to St. Ann's Bay is considered to be one of the finest in the island. The road from Ocho Rios to Moneague runs for a distance of several miles through the celebrated Fern Gully, which is a ravine filled with the most lovely ferns of every description.

There is a railway which runs diagonally through the island with branches on the north side. Main roads are maintained by the Public Works Department and parochial roads by the parochial boards of the fourteen parishes into which the island is divided. All the former and some of the latter are fit for light motor traffic, some of them passing over altitudes of 3,000 or 4,000 feet. In addition there are a number of bridle tracks in the highlands used by mules, donkeys and a few horses.

An electric car line traverses Kingston and extends into the neighbourhood in three directions to a distance of about six miles. Two rivers only are used for the carriage of produce, and that only in a small degree. Droghers (small vessels cutter or schooner-rigged) ply round the coast from port to port. The island is covered by the electric telegraph service in connexion with the Post Office, and there is a public telephone system in operation in Kingston. A fruit company has private telephone wires throughout the island.

Problems of Communication

There is now good communication by sea with England, America and Canada, but the lack of inter-communication between the islands themselves is a serious bar to the federation of the West Indies to which many of their well-wishers look forward. This lack has more than once seriously interfered with the holding of inter-colonial conferences which might have proved of great advantage to the West Indies as a whole. There is cable communication by means of the Direct Cable Company via Bermuda, and by the West Indies and Panama Company. There is wireless communication from the land to ships within about 300 miles distance, and the station is equipped with the latest receiving instruments.

The imports come chiefly from the United States (over 50 per cent.), the British Isles and Canada, the last named having of late years made an earnest endeavour to arrive at closer trade relationship.

Despite a feeling that the Mother Country has not always extended the support it might to the industries of the island, there is a genuine desire on the part of the inhabitants to deal with British subjects either in the old country or Canada; but the proximity of the United States and the enterprise of its business men are serious factors in the case. Flour, however, which was once imported from the United States now comes almost entirely from Canada.

Relics of Old, Bold Days

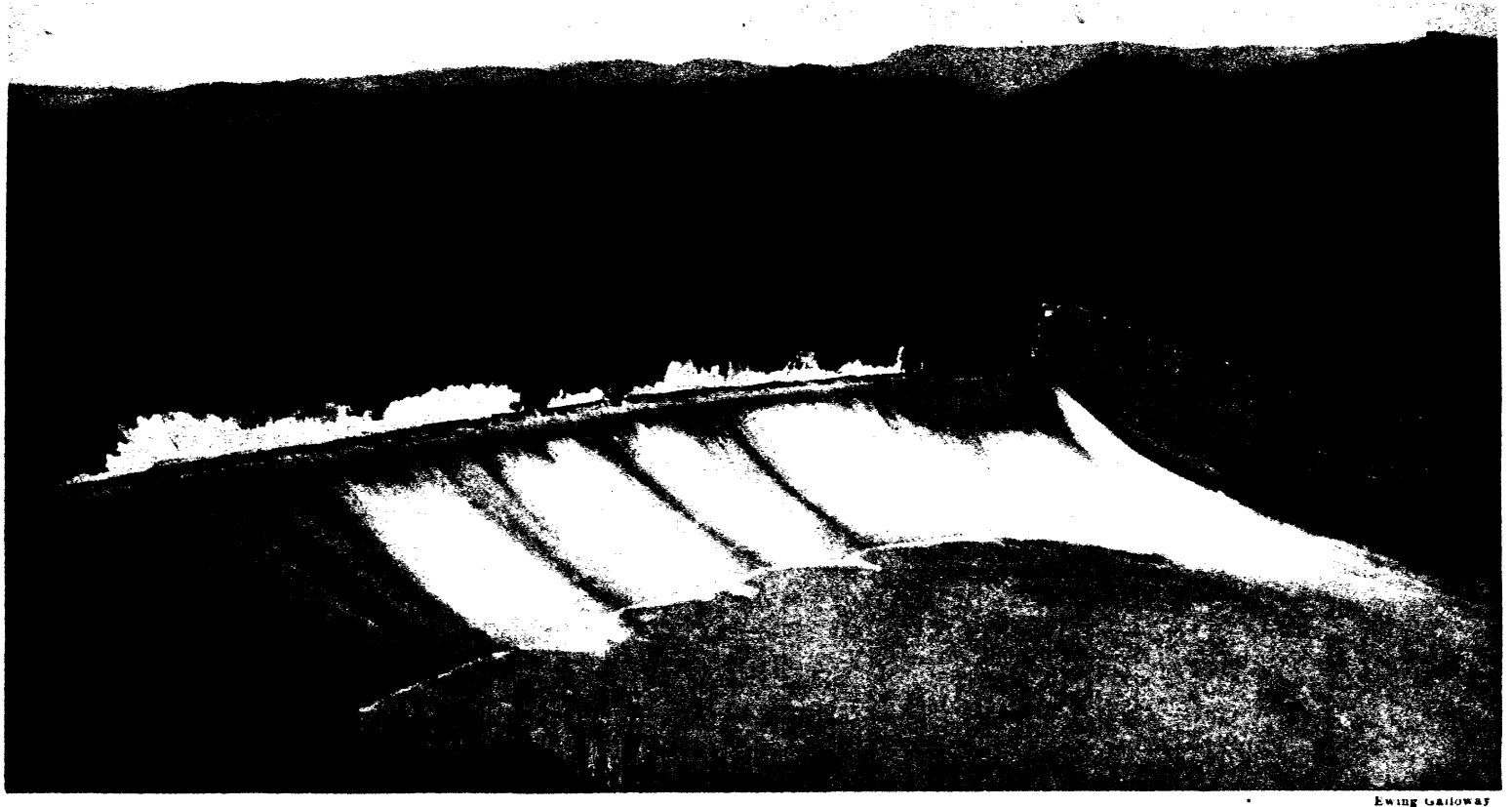
The exports go whence the imports come, principally to the United States, the British Isles and Canada; but as regards outward trade the producers of Jamaica have ever been, in great measure, at the mercy of hostile tariffs.

The casual traveller through Jamaica would hardly realize that it is as thickly populated as it is, many of the settlers' huts being off the main roads and out of sight, hidden by fruit trees which they themselves have planted. In the country is found an occasional old-time great-house with loopholed walls, telling of protection against buccaneers, and here and there are specimens of Georgian mahogany doorways which would not disgrace an English manor house.

Villages Always on the Move

Village communities are of a somewhat transitory nature, following the vicissitudes of cultivation and consequent employment; and churches and schools have occasionally been established near small settlements only to find the inhabitants subsequently moving on to other fields. Every village has its rum shop, a general shop, with its neatly packed ranges of shelves, and possibly a church.

In the smaller towns are added perhaps another church, more rum shops and general shops, a police-station and shops for the supply of motor accessories. Each parish has its chief town, save two exceptions on the sea coast,



Ewing Galloway

RUSHING WATER AND FOREST-CLAD HILLS AT THE DAM-HEAD ON THE RIO COBRE CANAL

About four miles from Spanish Town is the dam-head of the Rio Cobre Irrigation Canal, which has been constructed to irrigate the fruit and sugar plantations. The canal leads from the famous gorge of the Rio Cobre, known as Bog Walk, which calls to mind a Highland glen. The scenery on either bank is exceedingly beautiful, as fresh vistas of loveliness are revealed to the eye at every bend of the canal. Ferns, among which the maidenhair predominates, flowering creepers, coconut palms and bamboos line the banks, while here and there are clumps of rushes reminiscent of England

Ewing Galloway

IN PLACID TROPICAL WATERS OFF THE JAMAICAN COAST THE DOCK AT ROCKFORT IN KINGSTON HARBOUR

The island of Jamaica, a British possession in the West Indies was discovered by Columbus in May, 1494 It lies about 100 miles west of San Domingo and 90 miles south of Cuba Its extreme length is 144 miles, and its maximum breadth 49 miles, and it has a total area exclusive of several dependent islands, of 4,207 square miles The broken coast line has many inlets which form safe harbours, of which the most important is the harbour of Kingston, the capital, on the south coast A mile or two east of Kingston at Harbour Head is Rockfort, known even in Vernon and Rodney's days as a place where ships could water

with a court-house in which are also housed the parochial board, the tax collector and the government savings bank. The constabulary station is hard by. In the main streets are also a few substantial residences.

The English adopted the Spanish capital, St. Jago de la Vega, as their capital and called it Spanish Town. In plan it might have been designed for a maze. The main road which encircles the island goes through the other chief towns in a more or less straight line: through Spanish Town it meanders. Kingston, at the head of the principal harbour, passed Spanish Town in the eighteenth century as a commercial centre by reason of its greater accessibility, and in the middle of the nineteenth became the actual capital, all offices except that which held the records being transferred thither.

After the earthquake of 1692 Kingston was laid out by a competent engineer in a symmetrical manner, but its outlying portions have grown up anyhow.

In the principal suburb around Halfway Tree, in Lower St. Andrew, the old-time pen residences, with their few acres of land, formerly used for providing guinea grass as fodder for buggy horses, are rapidly being displaced by concrete bungalows of American type, with gardens attached full of gorgeous plants.

The great band of planters used to suffer by reason of conditions resulting from the unwillingness of many of their forefathers to accept emancipation in a proper spirit, and by reason of the absence of many proprietors from the island in the past. To-day, however, these social problems are in a fair way to being settled.

In the old days, before quick communication and ocean telegraphy, it was the distance from the Mother Country and a feeling of isolation rather than the actual heat that engendered a certain amount of indifference to the amenities of civilized life amongst the better-class inhabitants; for to-day, as formerly, many white men do a large amount of supervision entailing some physical exertion through the mid-day sun, and many athletic sports and games are carried on in spite of the heat, which is considerable.

Now that good communications have brought the island into closer touch with the outside world, no such reproach can apply. Jamaicans are fond of music and dancing, and an active social life is developing; education is extremely progressive for so small a country, and an excellent circulating library for a yearly subscription of five shillings will send books to residents all over the island.

JAMAICA: GEOGRAPHICAL SUMMARY

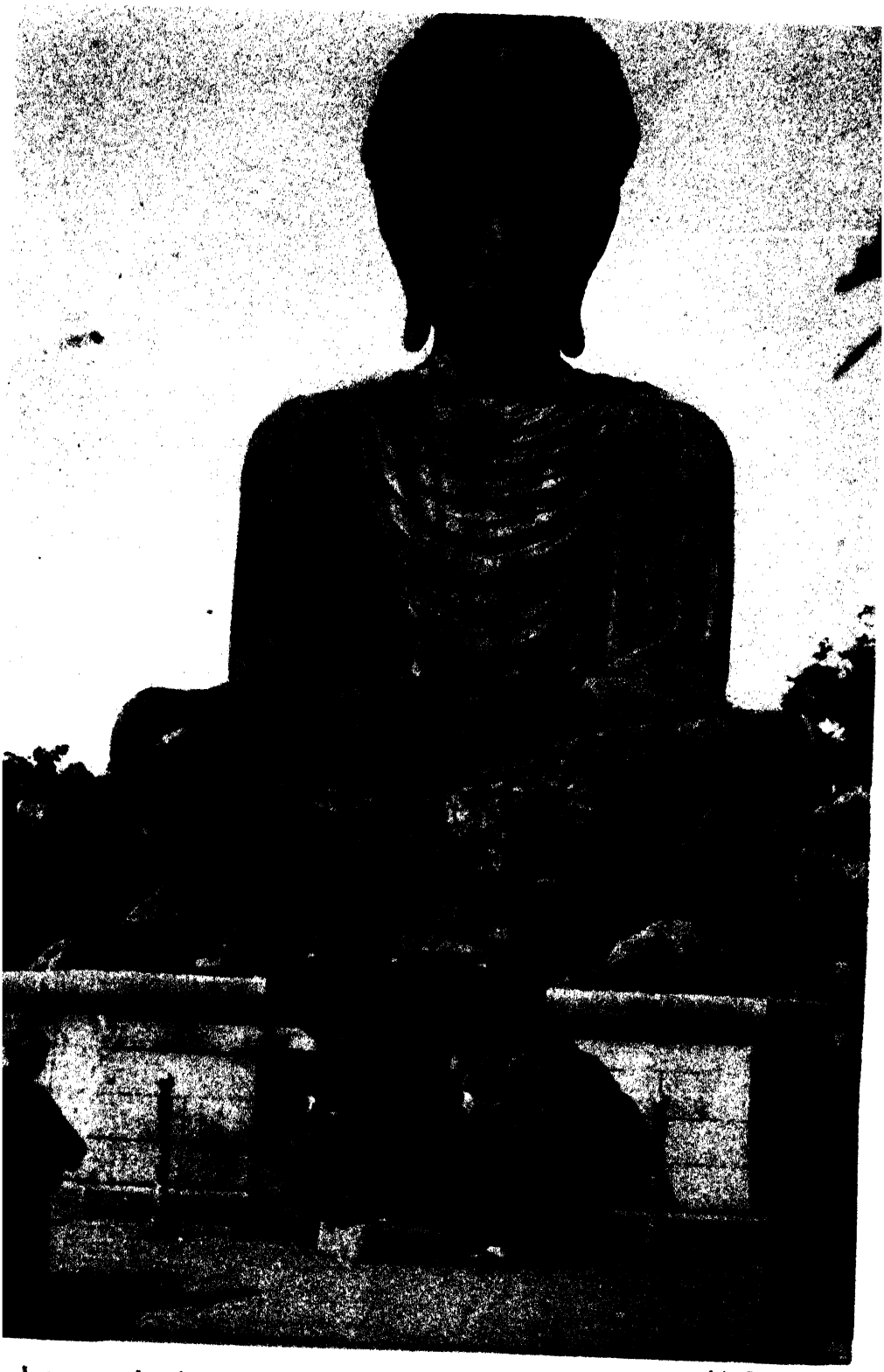
Natural Divisions. An upstanding steep-sided ridge, resting on the deep floor of the Caribbean Sea, a relic of the ancient Antillia. (See Central America.) A jumble of hills and dales without apparent order or symmetry. Part of an area where the earth's crust is unstable, as evidenced by the frequent earthquakes and the neighbouring volcanoes (Cf. Sicily).

Climate and Vegetation. Tropical temperatures with small variability on the lowlands, cooler but still equable on the uplands. Tropical rains, with two rainy "seasons" about the time of the equinoxes. Tropical forests with some jungle, although much of the original vegetal cover has been cleared. (Cf. Ceylon.)

Products. Cane-sugar, bananas and other fruits, ginger, tobacco. Mahogany, cedar, logwood. Coffee, coconuts, cocoa. Cattle, some Indian zebu cattle (cf. Brazil), horses.

Trade. Half the overseas trade is with the United States, as the nearest great state, most of the rest is with the British Isles and Canada. Canada is reviving an ancient trade with the island which can supply to Canada foodstuffs which Canada cannot produce.

Outlook. Jamaica is at the mercy of world price movements. During times of shortage Jamaica has been an important source of supply of cotton, cane-sugar and tropical fruits. The plantation industry flourishes when other sources of supply are restricted. The future rests with the capitalist exploiter who can organize the main plantations so that they may compete more effectively in the world's markets. Large scale operations seem essential. (Cf. Mauritius.)



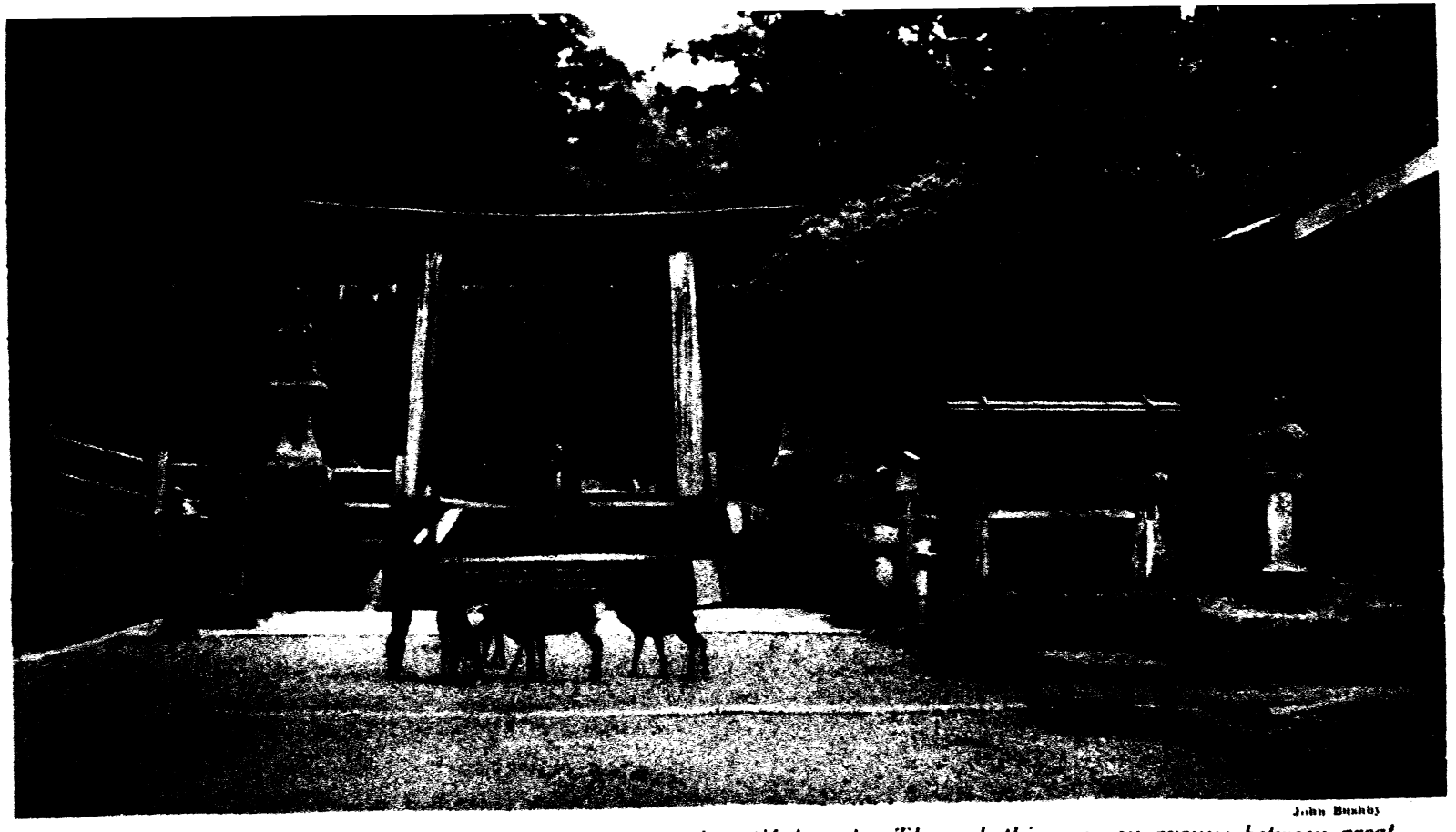
John Buckby

JAPAN. *In the precincts of Nofukuji temple near Kobe this great bronze Buddha sits cross-legged in perpetual contemplation*

2389

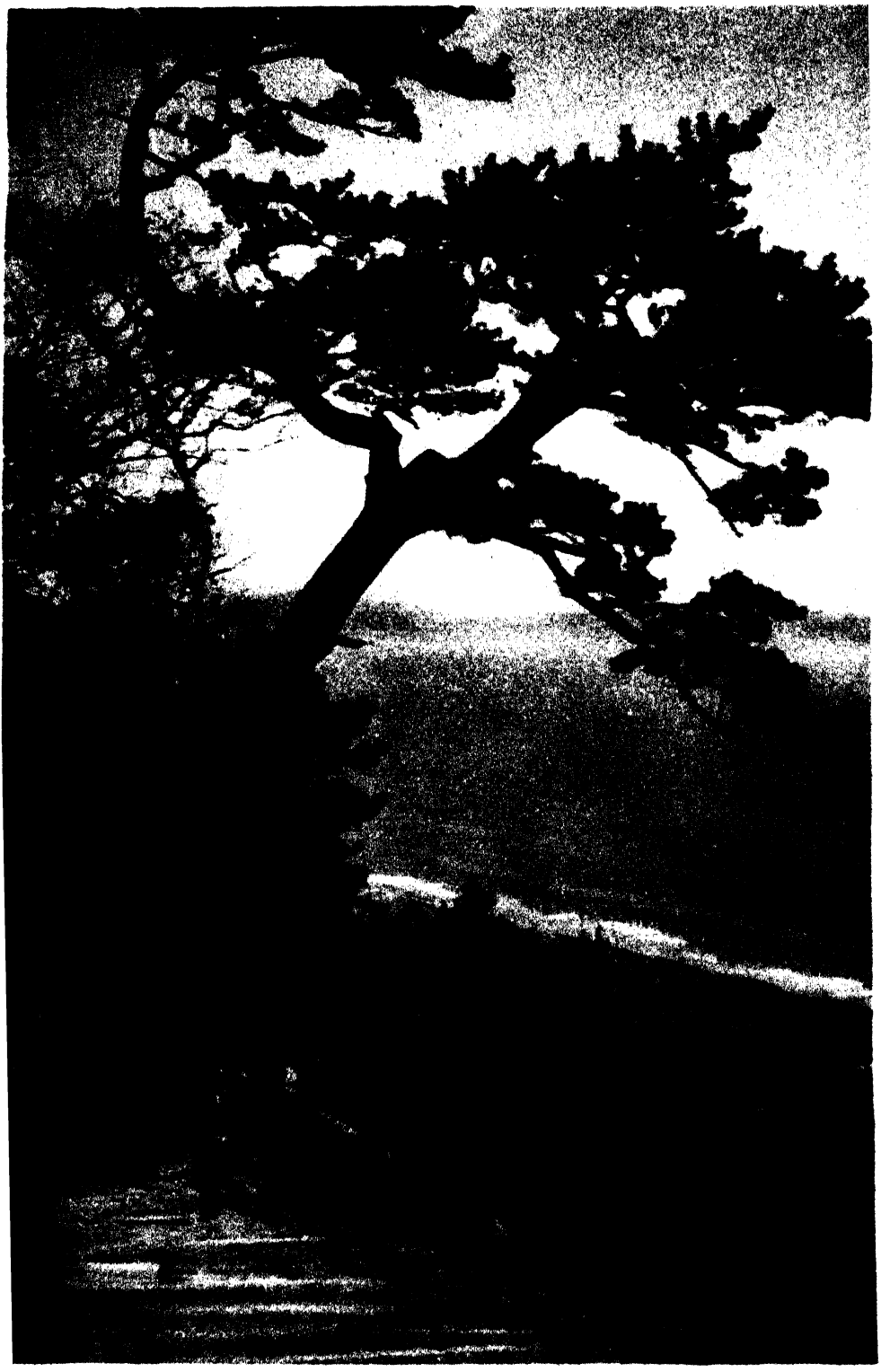
W. Wimbledon Hill

JAPAN. *In this cemetery near Kyoto the Japanese have achieved an effect very popular with them, a picture of cryptomerias with an ornamental doorway for frame. The tall stone slabs are memorials*



John Hinkley

JAPAN. *The temples of Nara, near Kyoto, stand in a beautiful park. Through this goes an avenue between great dark cryptomerias and pairs of stone lanterns where deer solicit food from the visitor*



John Buckley

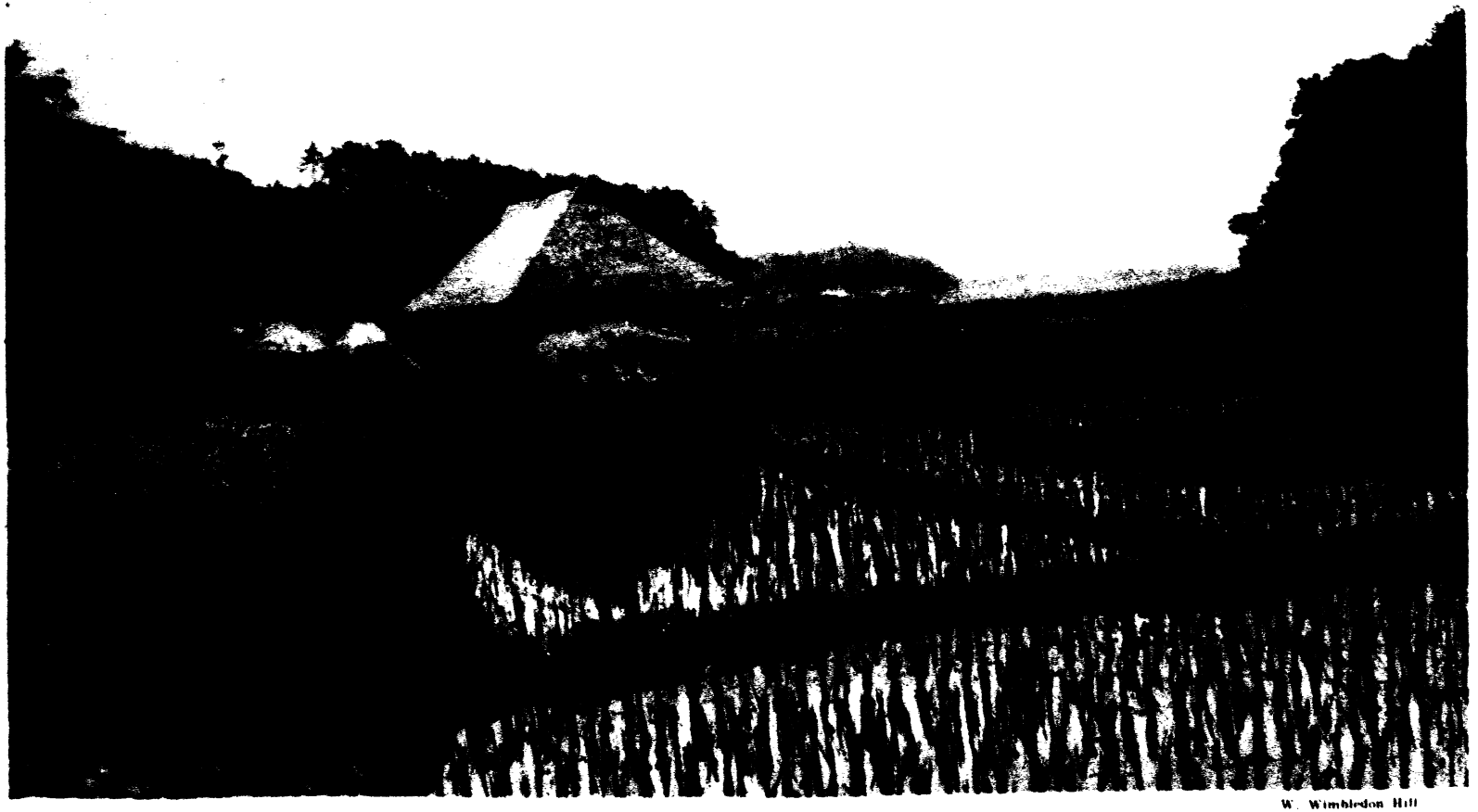
JAPAN. *After climbing 1,000 steps the pilgrim nears the temples at the summit of Kunozan, and an aged pine sighs in the sea wind*

W. Wimbledon Hill

JAPAN. *Kyoto folk climb to the Kiyomisu-dera temples to sup among the cherry blossom or be merry under the autumn moon*

Ernest Peterffy

JAPAN. *Near Nikko there is a lake in the mountains called Chuzenji. A stream flows through it and by the shore is a village, peaceful save when visited by about 10,000 pilgrims for a few summer days*



W. Wimbledon Hill

JAPAN. *South of the peninsula on which Yokohama stands there is an inlet called Mississippi Bay. Over the hinterland are wide rice fields with thatched farms strangely reminiscent of England*

E. N. A.

JAPAN. *Miyajima, the holy isle and bourne of pilgrims in Hiroshima Bay, has its courtyards flooded at high tide, and its temples are raised on piles. The dragon, looping its armoured throat, keeps the cistern filled*

Ridge that Rises from the Deepest Sea

by J. W. Robertson Scott

Author of "The Foundations of Japan: 6,000 Miles in the Rural Districts," etc.

THE quick movement of Japan out of the Middle Ages into the position of a Great Power is one of the most interesting things in history.

There is no country in the world as remote to-day from modern civilization as Japan was in the middle of the nineteenth century. The imagination of the peoples of the West has been captured by the tales of an ancient civilization different from anything of which they have had experience, by the alluring art and handicrafts of Japan, by the beauties of the country itself and by the gallant air of the Japanese race. When tales of the Samurai, when the glories of the Japanese art, when the engaging novelty of the daily life of Japan, when the story of the extraordinary turning away from old methods of government and social usage might have palled, there came the surprise to most Westerners - first of victories over China and Russia, then of the remarkable military and naval development which Japan had reached by the time of the war with Germany, and, finally, of her jump to the position of the third greatest naval power. And then Japan came into the limelight again with an earthquake and a fire which cost her an incredible sum.

Barrier of a Difficult Tongue

It is natural that Japan should have been both overpraised and underpraised. Although countless books have been written about Japan, the country is still 11,000 miles away, and Japanese thought and feeling elude us in the haze of a troublesome language which few foreigners have mastered.

But every day Japan comes nearer us. When the Siberian route is reasonably efficient she will be only about a fortnight distant. When the airman's luck holds she is not more than a hundred flying hours off.

Japan is already closer physically than she is mentally. The world knows the material expression of Japan—the army and navy of which we have spoken, the remarkable mercantile marine, the development of industry and trade in competition with other nations, the painstaking diplomacy, the triumphant bureaucracy—but the Japanese mind is little known.

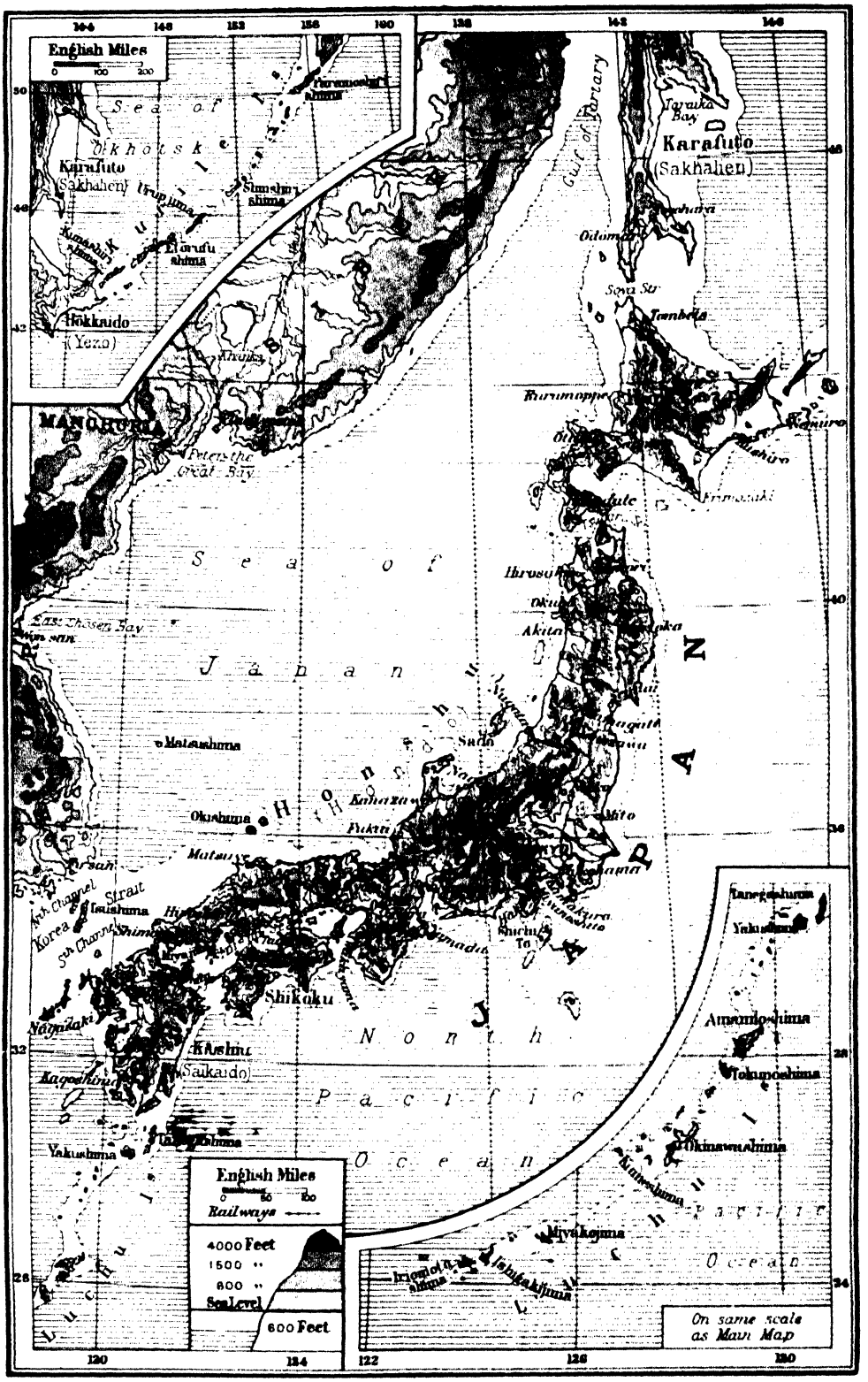
Four Earthquakes a Day

First, let us get some basis of knowledge about the country.

The Japanese people live on a ridge in the Pacific which slopes rapidly down into the greatest depth to be found in the sea. An average of four more or less perceptible earthquakes a day reminds them of their insecure hold on the world. Japan proper consists of a main island, three other large islands in sight of the main island, and four thousand or more islets. The main island, Honshu, with Shikoku behind it, lies off the coast of Korea. The next largest and northernmost island, Hokkaido (Yezo), is off the coast of Siberia. The other large island and the southernmost, Kiushiu, is off the coast of China 500 miles from the mouth of the Yang-tse; indeed, a popular belief is that the sands of Kiushiu come from China.

The area of all this territory, that is of Japan before the acquirement of Formosa, Korea, southern Sakhalien and part of Manchuria, is about 142,000 square miles. This is about as big as Great Britain would be if there was not one Wales, but four. The area is about one per cent. of the area of Asia.

Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited



JAPAN'S ARCHIPELAGO OF FAR-FLUNG ISLANDS

When population comparisons are made between Japan and other countries on the basis of the area in which it is possible for people to live, " Japan may be considered," writes a Japanese statistician, " to surpass all in density," for the reason that the habitable area of Japan is so small. The figures for habitable area are only 19 per cent. for Japan compared with 74 for Belgium, 73 for England and Wales, 65 for Germany and 70 for France. The fact that there are in Japan fifty more or less active volcanoes, about a thousand hot springs and two dozen mountains between 8,000 and 12,000 feet high—the highest British mountain, Ben Nevis, is 4,400 feet—makes one understand the tumbled character of the country.

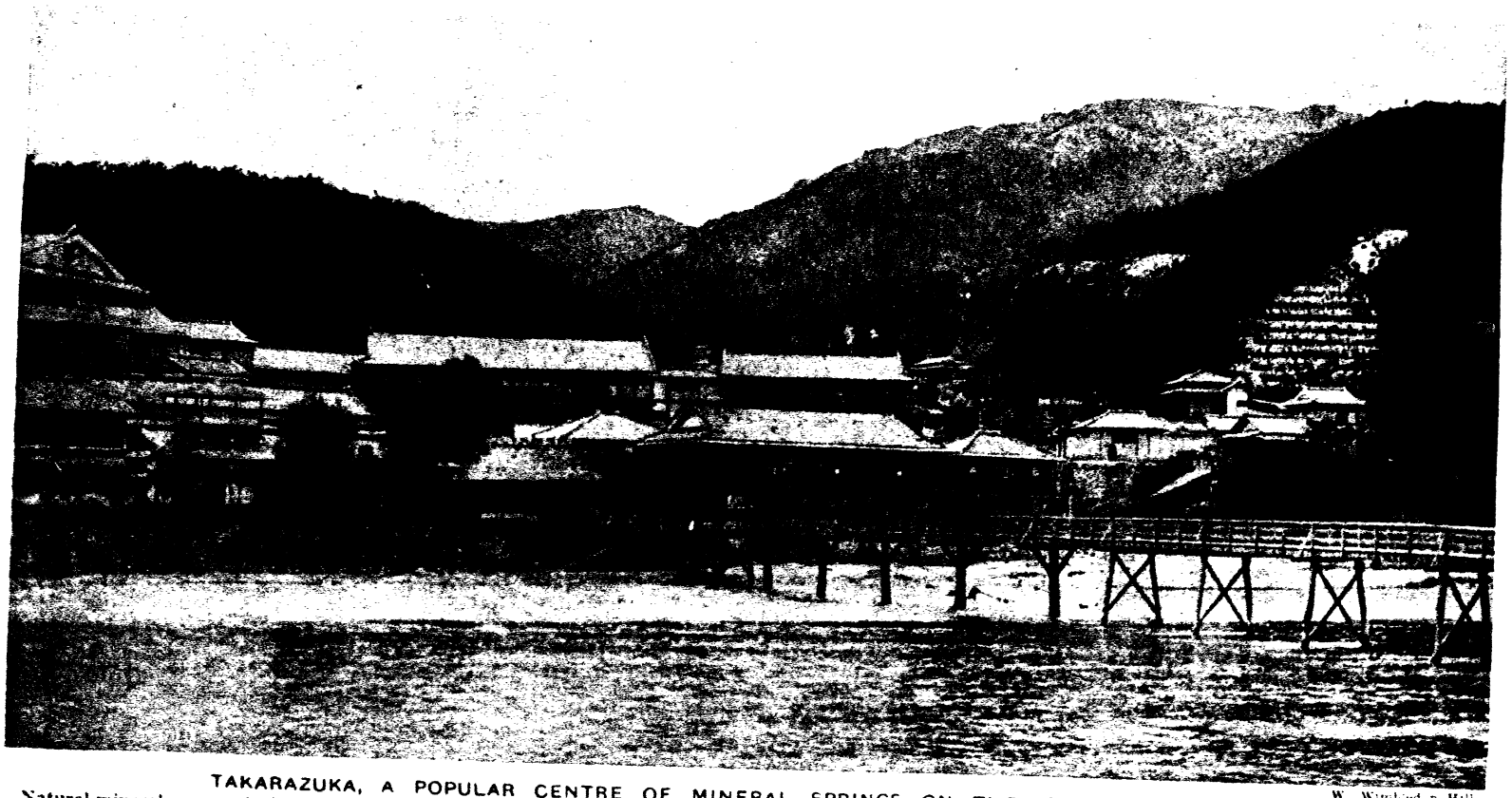
Japan, which lies within the latitudes of the Crimea and Cairo, might be described as consisting of mountains with land largely hilly or boggy—there are some plains—at the foot of them. Japan is, in one part, only 50 miles across, and is nowhere more than 200 miles. The summer temperature of Japan is higher than, and the winter temperature as low as, that of the continents of Europe and America within the same latitudes. The protection which the mountain ranges give the eastern part of Japan is obvious. Another influence on the climate is the warm current that flows up the east and west coasts. Some distance north of Tokyo, the east coast current meets the cold current from Kamchatka and is turned off towards America.

If Japan were in the western hemisphere it would be lying, roughly, between the Isle of Wight and the Cape Verde Islands. The four principal islands are so shaped and situated that though there is an eastern, a western and southern coast there is very little northern coast.

Field Museum, Chicago

WILD NATURE IN HOKKAIDO, THE AINU COUNTRY

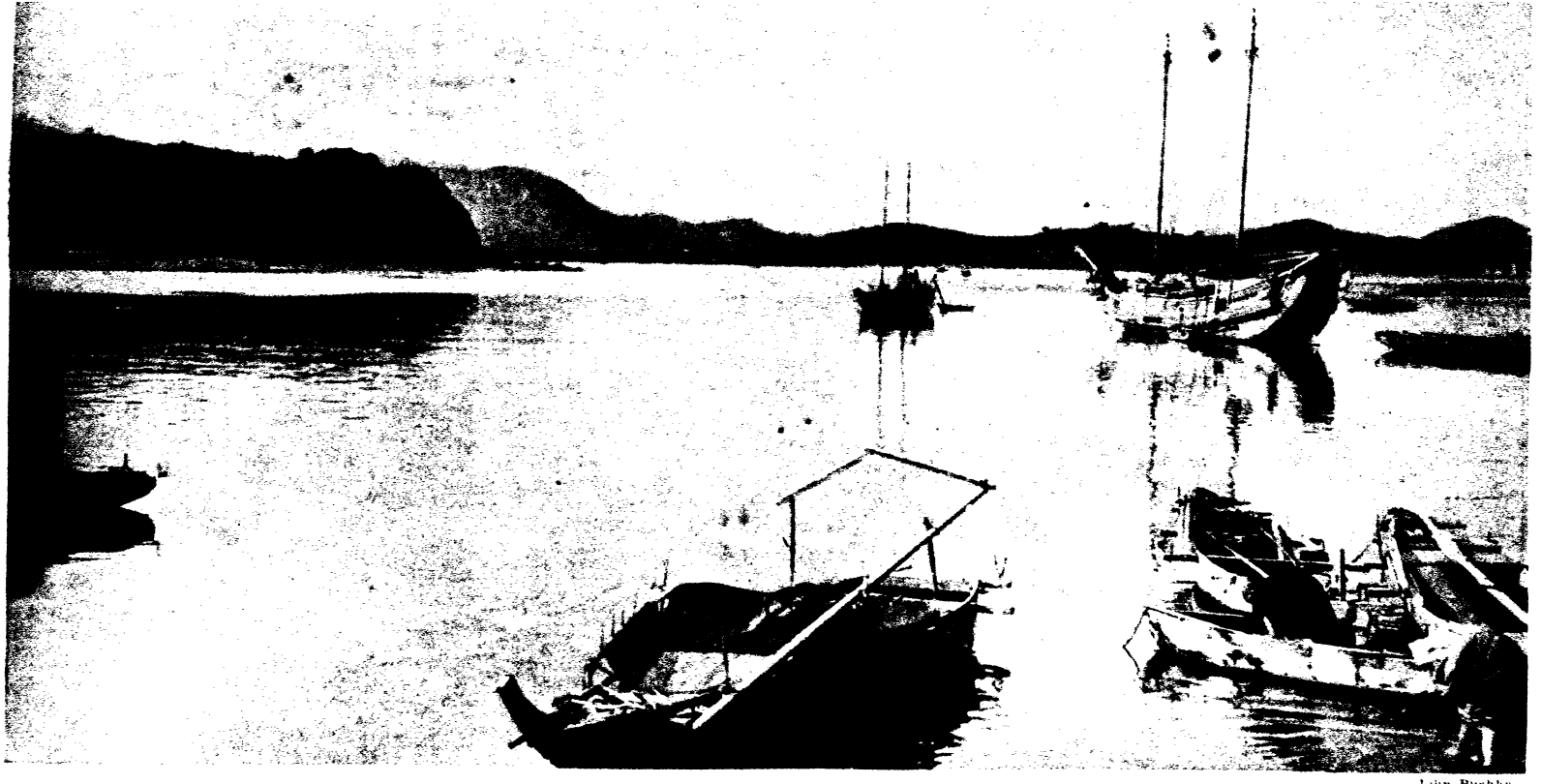
The characteristics of Hokkaido or Yezo, home of the hirsute Ainu race descended from the aboriginal people of Japan, differ widely from those of Honshu. The climate is more severe, virgin forest covers much of the rugged interior, and many divergences in flora and fauna testify to the fact that Yezo and the main island have been separated from each other through long geological ages



TAKARAZUKA, A POPULAR CENTRE OF MINERAL SPRINGS ON THE ISLAND OF HONSHU

W. Wimbledon Hill

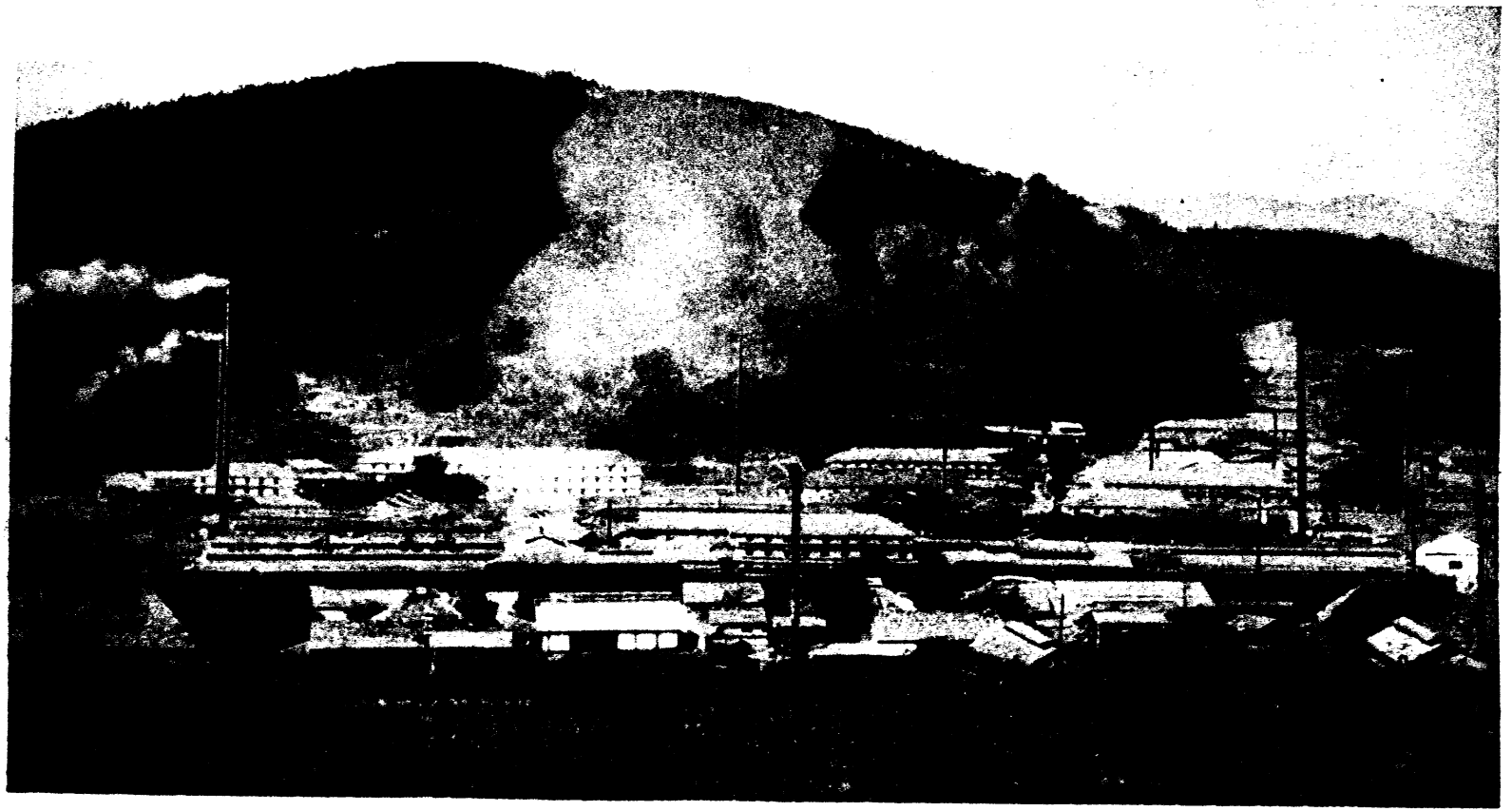
Natural mineral springs, including no fewer than 400 well-known hot springs, are found in abundance in the islands of Japan, and, like the frequent earthquakes, bear witness to the instability of the earth's crust. Many of the springs possess medicinal properties and have a high temperature, over 200° F. being reached in some instances. About 15 miles from Osaka lies Takarazuka, an attractive resort with two mineral springs, the waters of which are famous throughout the Far East—"Tansan," a drinking water, and "Niwo," a salt, ferruginous water. Here the village is seen, also the method of hillside cultivation in terraces



John Bushby

SMOOTH WATERS OFF TADOTSU, SHIKOKU ISLAND, A PORT OF CALL FOR STEAMERS ON THE INLAND SEA

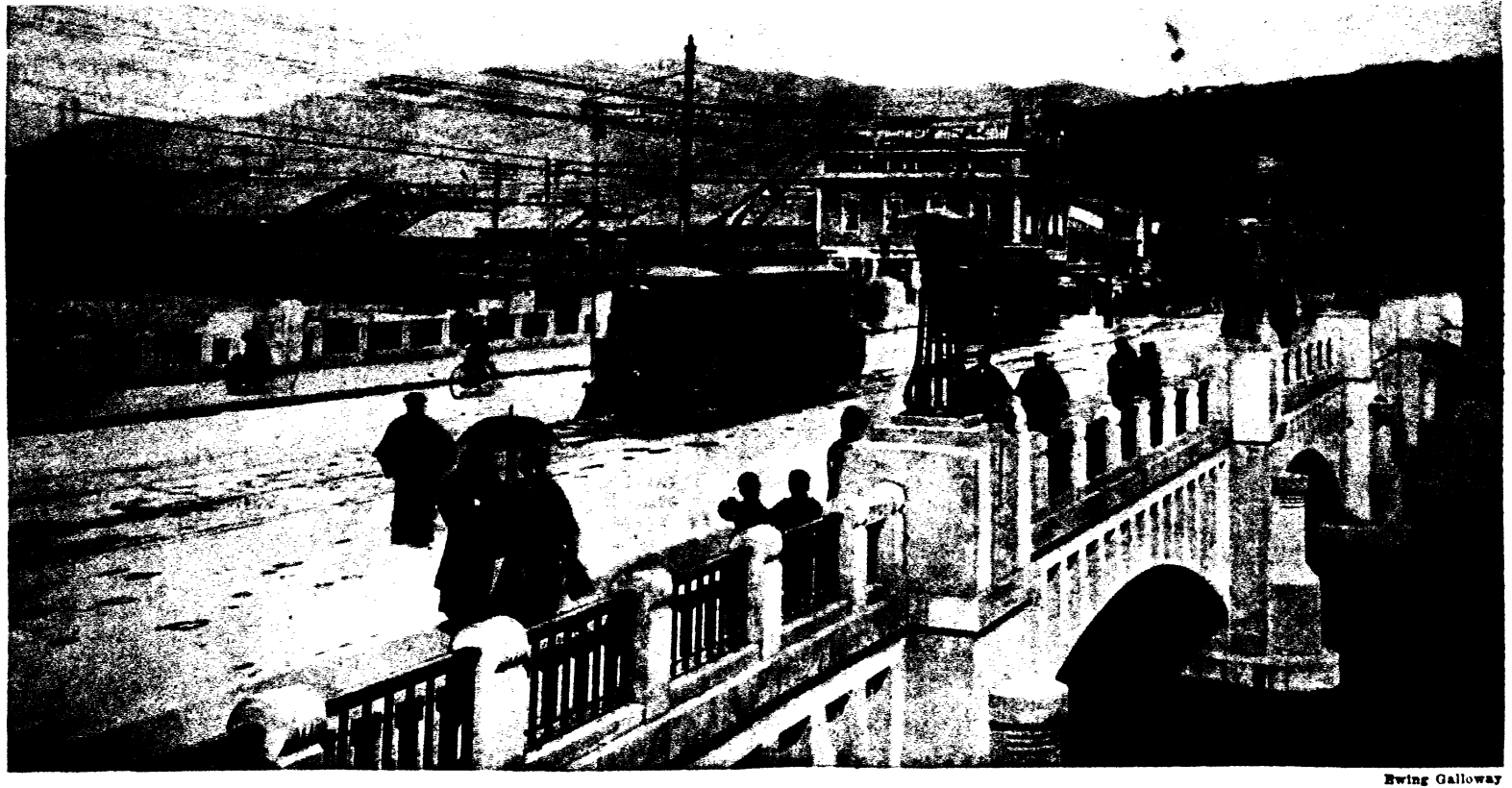
The stretch of water known as the Inland Sea is an almost completely landlocked basin lying between South Honshu and Shikoku, and extending from Osaka Bay to the Strait of Shimonoseki, with a length of some 240 miles and a varying width of three to nearly 40 miles. Its channels are studded with hundreds of fantastically shaped islands and the shores lined with quaint villages housing a half farming, half fishing population. The sea teems with trading junks, fishing-boats and other native craft, and throughout the entire length the tranquillity of the water and the superb scenery are a source of endless delight



S Tomii

AKAYA, IN THE PREFECTURE OF NAGANO, THE CENTRE OF AN IMPORTANT SILK-PRODUCING DISTRICT

Both in its raw and manufactured state, silk is a product in which Japan has a considerable advantage over all other countries, and its beautiful silk fabrics command an extensive sale in Europe. In many Japanese districts the rearing of silkworms and the making of silks constitute the sole industry, and often outside the humblest dwellings women and girls may be seen occupied in spinning silk off the cocoons. In the prefecture of Nagano the silk industry has developed astonishingly, the greater number of the filatories clustering round Akaya, where from 5,000 to 6,000 persons, chiefly women, are employed



Ewing Galloway

ELECTRIC TRAMS TRAVERSING THE SHIJO BRIDGE IN THE FINELY BUILT, WELL ORDERED CITY OF KYOTO

The city of Kyoto lies on Honshu, the main island, 27 miles by rail from Osaka. From the city's foundation in the eighth century until 1869 it was the capital of Japan, and still contains numerous noteworthy buildings, including the Imperial Palace and University, Nijo Castle, many famous pagodas and temples and several educational institutions. A well built city, in which the rectangular street plan prevails, Kyoto receives water for electrical and irrigation purposes by a canal from Lake Biwa, and possesses two systems of electric trams. The Shijo Bridge spans the Kamogawa, a river which intersects the city from north to south

The main island, Honshu, is about the size of Great Britain. The northern island, Hokkaido, is a little less than Scotland. Kiushiu is about half the size of Ireland. Shikoku has an area almost equal to that of Wales.

The general appearance of Japan has been thus described by Longford: "None of the mountains are covered with eternal snow, but they are everywhere, outside the few great plains, rising, some in gradual slopes, some in abrupt precipices from the shores of the sea, alternating with narrow, deep and precipitous valleys, studded with evergreen trees, whose foliage, with its varying tints through the change of seasons, gives infinite charm to the whole land."

The highest mountain is Fujiyama, 12,390 feet. The longest rivers are the Ishikari, the Tone and the Shinano; and the largest lake is called Biwa and is 180 miles in circumference. The famous Inland Sea, between the island of Shikoku and the mainland, is an island-studded area of 1,325 square miles of rare beauty. All the openings are so narrow that it can be easily defended.

There are two wet seasons, the first lasting from the middle of June to the beginning of July, while the second is from the beginning of September to the first days of October. Japan is one of the rainiest countries in the world, the average fall for all Japan being about 62 inches per year. There are roughly four sunny days to every three of rain or snow. The country is at once hotter, colder and more humid than Great Britain. It is commonly described as a paradise for children, but life in Japan is apt to affect the nerves of adults who are not careful to get enough exercise and change. The average temperatures recorded in Tokio are as follows: January, 34.9° F.; April, 53°; August, 79°; October, 60.8°; December, 39°. Typhoons occur usually between June and October. A typical and severe typhoon was that of 1917, when the maximum velocity was as great as 130 feet per second. One

John Bushby

HUTS OF HONSHU NATIVES ENGAGED IN THE FRESH-WATER FISHERY

Fish being one of the main staples of Japanese daily food, it is not surprising that the fisheries form an important national industry which ranks next to agriculture. Some 600 species of marine fish are known in Japanese waters, and many of the rivers and lakes contain abundant life, carp, trout, eel, lamprey, gudgeon, barbel and roach being among the commonest fresh-water species

W. Wimbledon Hill

WORKADAY LIFE IN A SMALL STREET OF KYOTO CITY

Celebrated as the centre of Japan's art industries, Kyoto has many and varied manufactures comprising cloisonné and bronze ware, silk stuffs—the silk weaving industry dates from the very earliest days of the city's existence—fans and numerous lacquer goods. Here farmers are seen with country produce passing the stores of merchants. A rickshaw, or man-drawn carriage, stands on the right

thousand people were killed, 1,000 injured and 275 missing. "In brief," says McGovern, writing of the climate, "Japan has just those features to stimulate a people to activity, while its failings cause them to look abroad."

The largest cities and their populations are: Tokyo, 2,193,000; Osaka, 1,253,000; Kobe, 608,500; Nagoya, 427,900; Yokohama, 422,900; Kyoto, 591,300; Nagasaki, 170,500; Hiroshima, 160,500; Hakodate, 144,700; Kure, 130,300; Kanazawa, 120,300; Sendai, 119,000; Kagoshima, 102,400; Sapporo, 102,500. Before the Great War there were sixty cities with a population of over 30,000.

Osaka is known for its canopy of smoke from hundreds of factory chimneys, for its active commercial life, for its castle, the oldest in Japan, for its bridges and its festivals. Nagoya has one of the largest detached palaces. Nagasaki, or, rather part of it, was for long the only point of contact with foreigners. Hiroshima was the base of operations in the wars against China and Russia. "Till you have seen Nikko," says the proverb, "do not say 'splendid.'" The scenery and the magnificent tombs of the Tokugawas are both delightful; the fact that two and a quarter million sheets of gold-leaf were used gives some notion of the splendour of the tombs. Kamakura has memories of the great Shogun families, the immense open-air Daibutsu, 50 feet high, and the many shrines.

Ewing Galloway

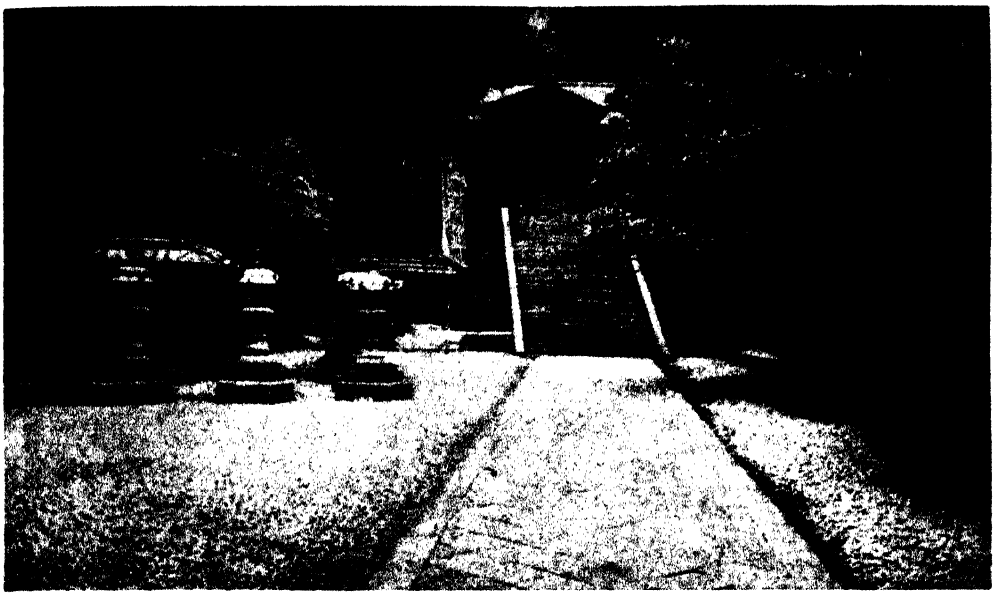
HOT SAND CURE FOR RHEUMATISM AT THE HEALTH RESORT OF BEPPU

The hot spring figures prominently among the gifts that nature has bestowed on Japan. A short distance from the busy town of Oita, on the island of Kiushu, is Beppu, a port of call for steamers, famous for its hot baths which attract large numbers of visitors; the entire ground of the semicircular beach flanking the bay being undermined by hot water and volcanic vapours

John Bushby

CANAL SCENE IN THE WEALTHY COMMERCIAL CITY OF OSAKA

Osaka, an important commercial and manufacturing city in Honshu, at the head of Osaka Bay, covers an area of eight square miles and has an estimated population of 1,253,000. It lies on the Yodogawa, and is also intersected by numerous canals. In its 7,000 odd factories textiles, iron and metal goods, leather goods, glassware, confectionery, patent medicines and ships are produced



W. Wombleton Hill

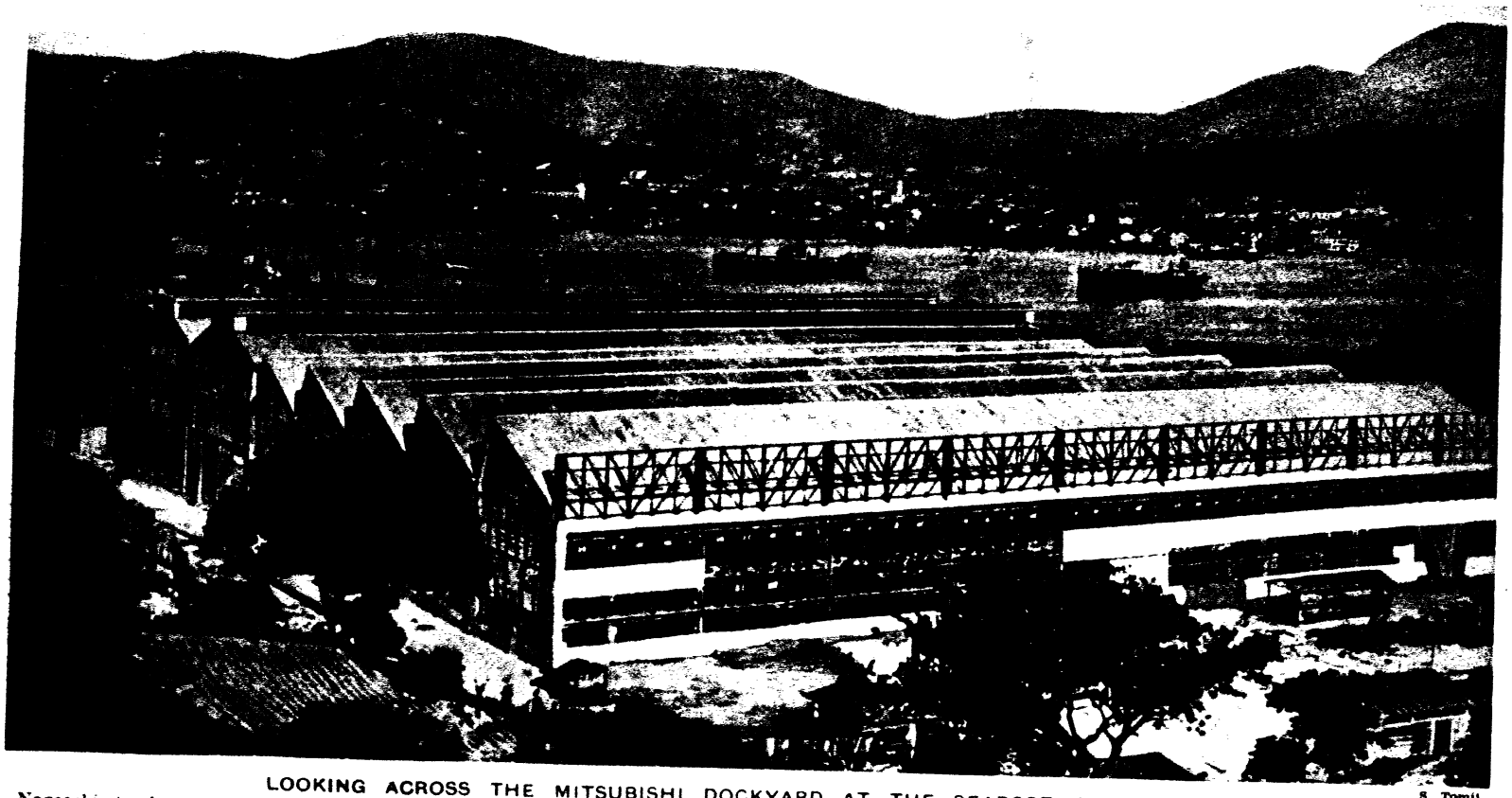
DIGNIFIED APPROACH TO A SECLUDED BUDDHIST SHRINE NEAR KYOTO

The Japanese profess two religions, Shintoism and Buddhism, which, however, are not antagonistic. The Shinto faith is deep rooted in the heart of the nation, the pantheon of Shinto gods and goddesses comprising hundreds of thousands, and much beautiful work is lavished in the building of both Shinto and Buddhist temples. On the left are seen the stone lanterns which are votive offerings

John Bushby

SACRED BRIDGE AT NIKKO, A RELIGIOUS CENTRE OF JAPAN

Many hundreds of Japanese visit Nikko annually to worship at the ancient altars, for the district, which is watered by the Daiyagawa, is renowned for its numerous temples and for the tombs of the Shogun emperors. It has likewise wonderfully attractive mountain scenery, with peaks ranging from 5,000 to 8,000 feet in height. The town is about 90 miles by rail north of Tokyo



S. Tomii

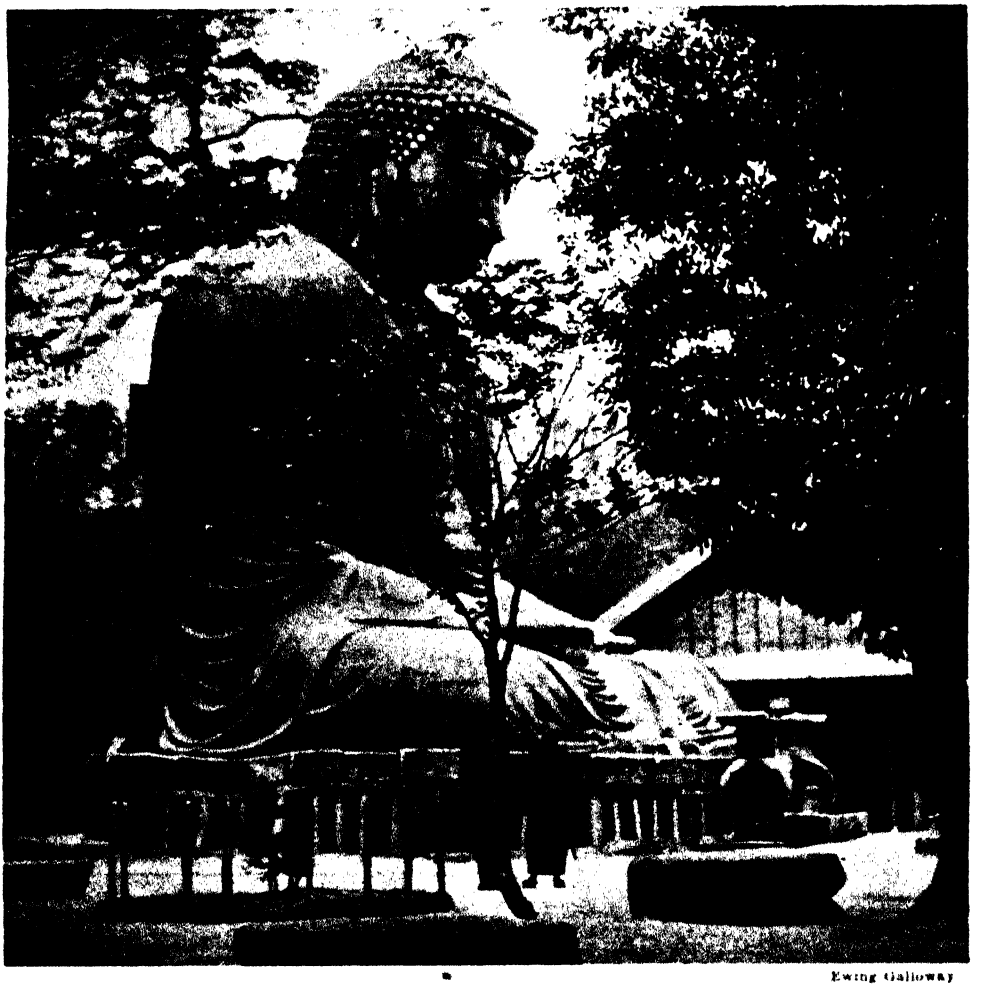
LOOKING ACROSS THE MITSUBISHI DOCKYARD AT THE SEAPORT OF NAGASAKI

Nagasaki stands on an excellent natural harbour on the west coast of the island of Kiushiu, three miles from the sea. From the sixteenth century until 1859, when Japan was opened to foreign trade, Nagasaki held the monopoly of European trade, and although many other towns have superseded it in importance it is still a great commercial centre. The slopes of the hills behind the town are studded with private residences; on the opposite side of the harbour are large engine works, also extensive docks which belong to the Mitsubishi Company, or the Company of the Three Diamonds, a great shipping concern

John Bushby

ON THE BANKS OF SHOJI, ONE OF THE SUPERB LAKES THAT ENCIRCLE FUJIYAMA

Every landscape in Japan is replete with natural beauty, and quite justly has this original country been called "the happy hunting-ground of the lover of the picturesque." A remarkable variety of scenery, from the gracefully beautiful to the majestically grand, is found in the vicinity of that peerless peak, Fujiyama, the highest, the most beautiful and the most famous mountain in Japan. One of the lovely lakes which half encircle the mountain's base on its north-west slope is Lake Shoji, lying 3,160 feet above sea-level and affording bathing in summer, skating in winter and a variety of walks amid unrivalled panoramic splendour



Ewing Galloway

COLOSSAL EMBODIMENT IN BRONZE OF THE FOUNDER OF BUDDHISM

Of the numerous shrines at Kamakura, a historic site some 12 miles south-west of Yokohama, one of the chief is the Daibutsu, or gigantic bronze image of Buddha. This "statue solid-set, and moulded in colossal calm" is 50 feet high. The great earthquake of 1923 did no harm to the image, but damaged the base, which is here seen braced with heavy supports

Miyanoshita in the mountains is famed for Hakone, beautiful views and historical associations. Then there is Kyoto, the seat of the imperial government for 1,000 years, with its palaces, temples, places of natural beauty, dancing and joyous excursions. At Nara one may see wonderful buildings and objects of art and the famous deer park.

Kobe had, before the great earthquake, outdistanced Yokohama in its volume of foreign trade, and Miyajima is one of the three famous sights of Japan. The temple "torii," standing in the sea and with cross-beams more than 70 feet long, is a delight. The sacred dances are supposed to be a thousand years old.

The time to visit Japan is in spring, the season of cherry and plum blossoms, or autumn with its splendour of foliage. The summer is spent in the hills where it is cool. Spring lasts from the middle of March to the middle of June; summer from the middle of June to the middle of September; autumn from mid-September to December, and winter from the middle of December to March.

Hakodate is in Hokkaido where the snow lies for three months and the aboriginal "hairy Ainu" survives. There is a naval station at Kure and Sendai

John Bushby

SECTION OF OKAYAMA'S CHARMING AND CELEBRATED PLEASAUNCE

The Korakuen Garden or Park at Okayama covers some 22 acres, and has none of the formal aspect of the usual Japanese public garden. Limpid lakes, slender bridges, a wild luxuriance of cherry and plum trees, blood red maples, age old pines and graceful wistarias all add to the charm of this spacious garden which is celebrated for its beauty throughout Japan

John Bushby

SHINTO SYMBOLISM ON THE SHORES OF LAKE HAKONE

Hakone, the watering-place on the island of Honshu, is much frequented for its thermal springs and its picturesque lake where bathing and boating form the chief attractions. The lake lies at an altitude of over 2,400 feet and is three miles in length by one mile broad. The Torii, or gateway, seen above with a stone lantern on either side, is a religious symbol connected with Shintoism

has memories of a great daimio. Matsushima's scenic beauties are within a few miles. With Kagoshima were associated two great Japanese, Saigo and Okubo. This is the place that was bombarded by the British in 1863. And lastly there is Sapporo, the capital of Hokkaido, an American-looking city with a university.

A Land of Abundant Rain

"The mild climate and abundant rainfall," says an official publication, "stimulate a luxurious forest growth" —467,000,000 acres—"which in turn provide ample fountain-heads for rivers. The rivers and streams run in all directions, affording opportunity for irrigation all over the country. The insular position of the country renders its humidity high and its rainfall abundant compared with continental countries. The rainy season prevails during June and July, making this season risky for the harvest of wheat and barley; on the other hand, it affords a beneficent irrigation supply to paddy-grown rice, the most important crop. The characteristic feature of the climate in the greater part of the islands is the frequency of storms in the months of August and September." A favourite time for tourists is the plum and cherry blossom season of spring. The Japanese climate is trying to foreigners in the wet season, when mould invades their possessions and the covers come off books. The heat drives most foreigners to hill resorts.

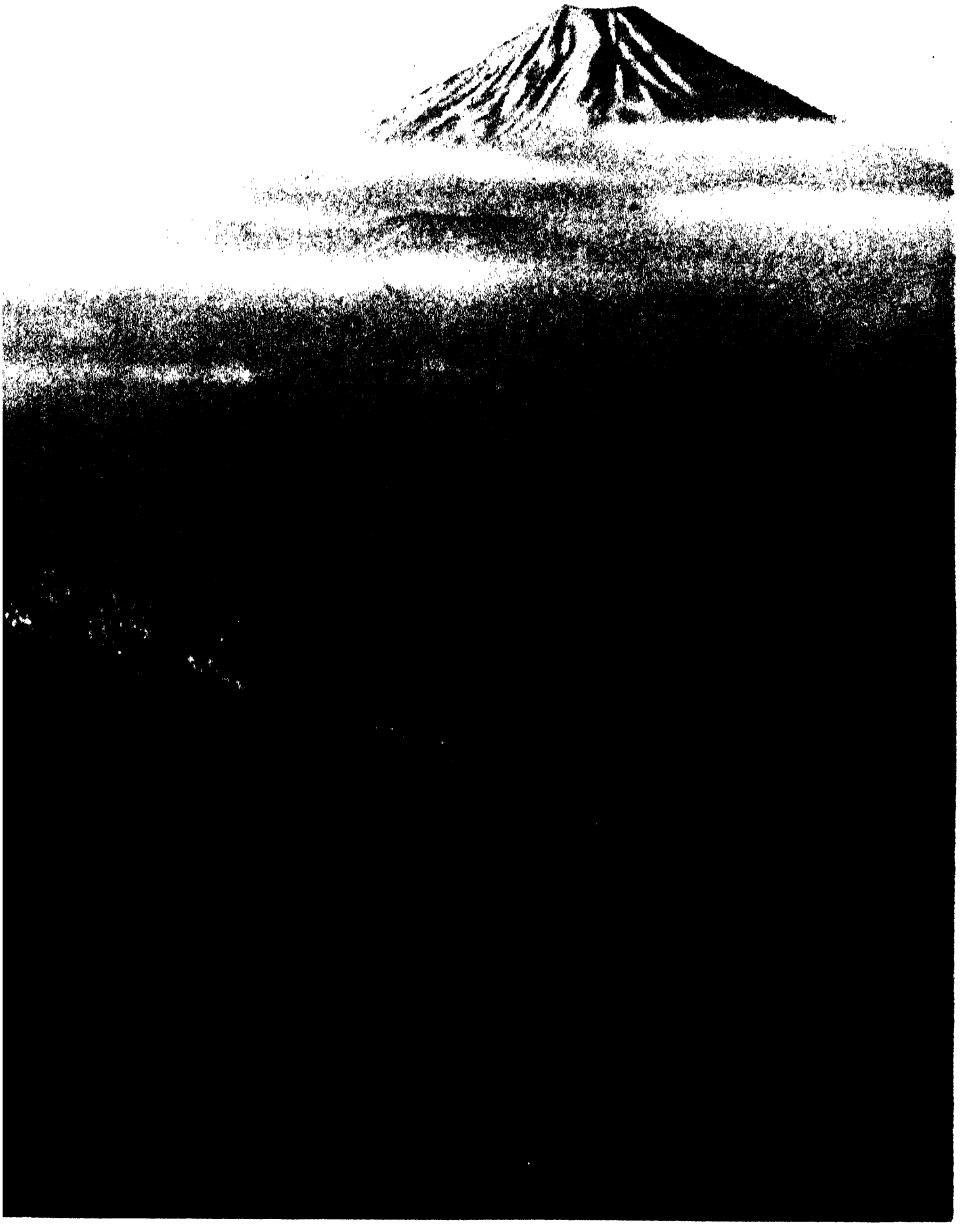
Three Acres to a Family

Japan is primarily an agricultural country. Something of the problem of food production with which she is confronted may be understood from the fact that while the area of Japan proper is less than a twentieth of the area of the United States, the Japanese population is more than half that of the United States. Some 5,500,000 families cultivate holdings of 15,000,000 acres or a little under three acres per family. Even in northern Hokkaido the average area per family does not rise beyond seven and a half acres. More than half the cultivated area is given to the most laboriously cultivated of field crops, rice. When by a peaceful revolution the daimios yielded up their lands to the emperor, the title deeds of farms were given to the men in possession. Inevitable private readjustments followed in a period of extraordinary social changes.

After rice, silk is the chief rural industry. Then comes tea. The fact that the United States is Japan's best customer for silk and tea is, with the elephant-and-whale-like inaccessibility of the two countries one to another, the chief argument for peace between Japanese and Americans. Japan produces 40 per cent. of the world's silk. The agriculture of Japan, into which animal power and modern implements have entered but little owing to the small patches in which rice is mostly cultivated, is exceptionally able. Immense quantities of artificial manure are used, but human waste and compost are the chief standby. There has been a creditable improvement in methods and a steady rise in the rate of production. Agricultural colleges abound.

Comforts for the Traveller

The way of the stranger is made easy in Japan. There are many up-to-date hotels, the railway arrangements are efficient and English goes far. At stations of the least importance luncheon boxes, tea and hot milk are brought on sale to the carriage windows. As the Japanese delight in holiday trips, the traveller is catered for in every part of the country, and is always safe. Mountain climbers have not only the beauteous Fuji and the volcanoes but the Japanese Alps. Apart from the delights of walking, rickshaw and motor riding there is Japanese art which may be studied in temples and shrines in every province as well as in the museums. Rice culture, if smelly, is interesting. So is silk, tea and orange cultivation. In the cities there is the old drama, one of the best things Japan has to offer her

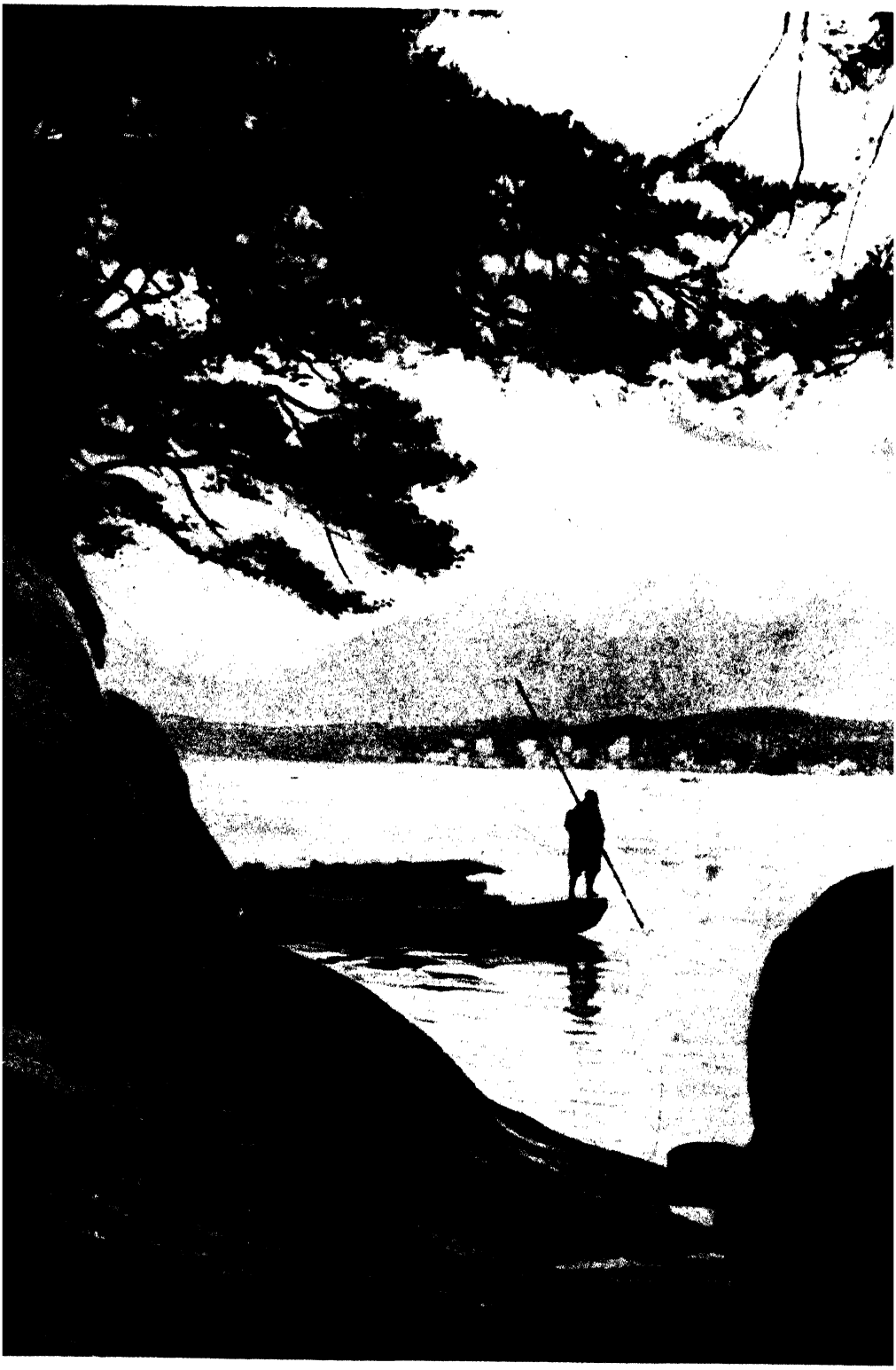


JAPAN. *Out of the thinning veils of mist the sunrise lights a broken cone stippled with snow—Fuji the incomparable*

JAPAN. *When the flood-tide comes lapping about the temple at Miyajima, the torii, sacred gateway of the Shinto faith, is left a carven silhouette against the sky and a quivering image on the water*

J. T. Wynyard Wright

JAPAN. *Kyoto has many strange temples whose fantasies keep the supernatural before the eyes of their votaries; but everywhere there are gardens with water and bright blossoms where the pilgrim may contemplate*

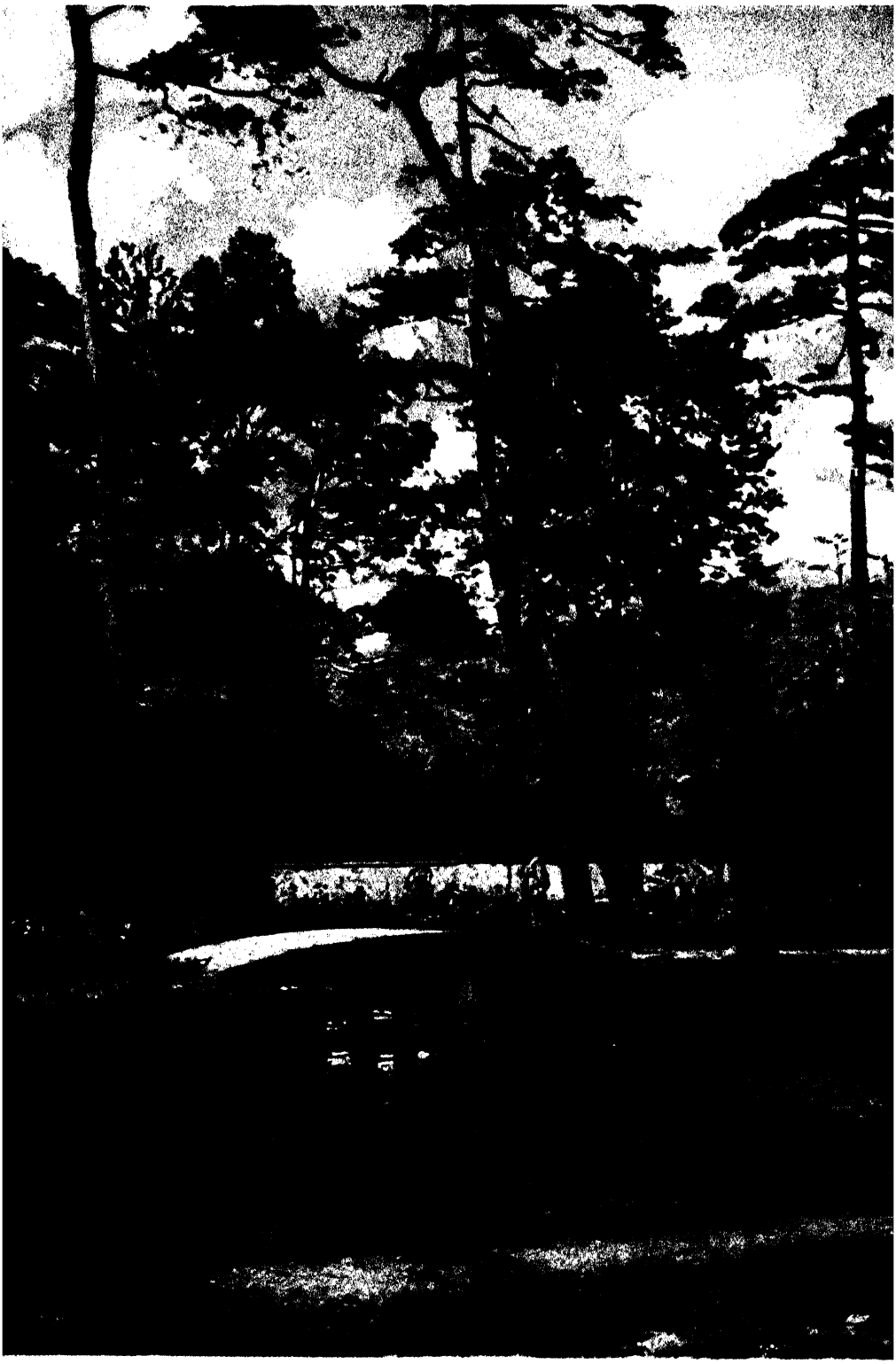


J. T. Wynyard Wright

JAPAN. *Peaceful waters, a view of mountains and the waiting fisherman symbolise beautiful Miyajima, so holy that none are allowed to die there*

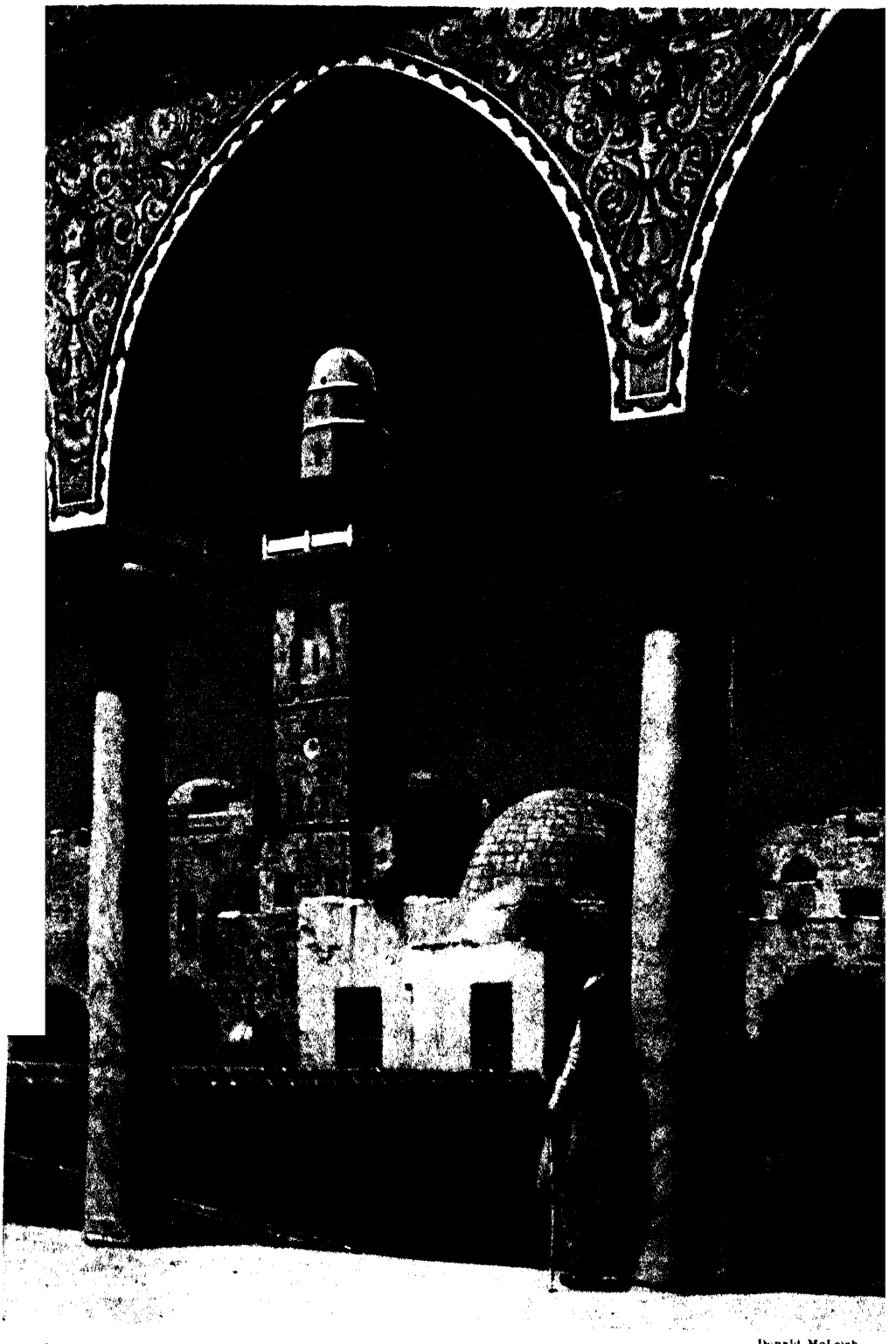
W. Wimbledon Hill

JAPAN. *Yasaka Pagoda, raising its curving eaves five storeys high among the galaxy of temples about Kyoto, was built in* 1618



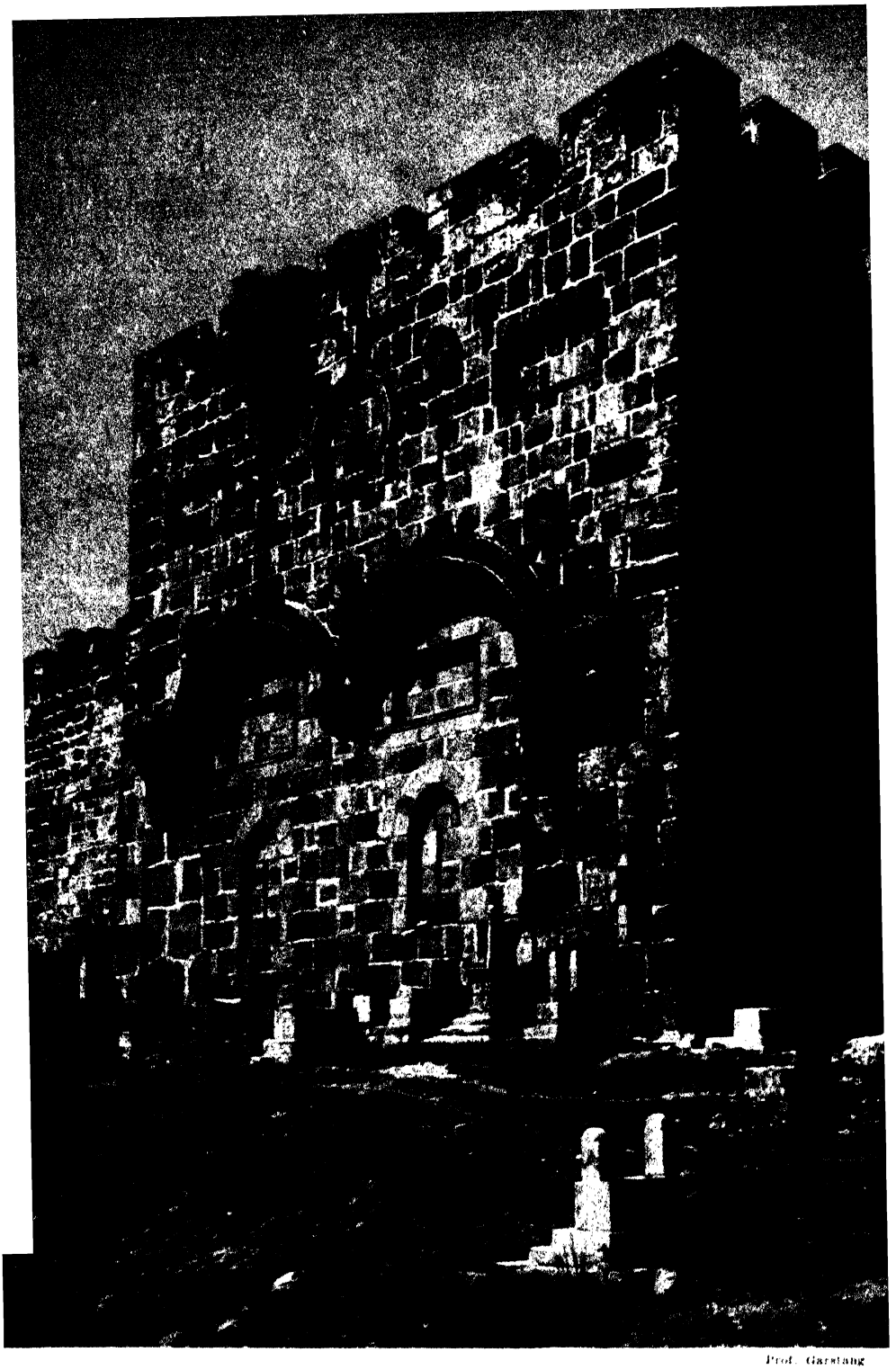
W. Wimbledon Hill

JAPAN. *There are no fairer gardens than those in Japan, nor any laid out with more art in leaving nature to attain her own unlaboured beauty*



Donald McLeish

JERUSALEM. *Where once the Temple stood there is a mosque, the Kubbet es-Sakhra. This arcade above one of its western stairways overlooks the city*



Prof. Garstang

JERUSALEM. *Bab ed-Dahiriya, the so-called Golden Gate in the Haram wall closed up by the Arabs, shows its blind archways to the sunrise*

visitors, and the "Nō" plays. The police, if a little paternal and at times officious, are civil. The general politeness and cleanliness of the people make a pleasant impression.

The advance of an industrialism that has learnt little from the bitter Western experience which the labours of Lord Shaftesbury and his successors have caused the present generation to forget, has produced slums in Tokyo, Osaka and other cities; and urban labour and rural labour have organized in unions. There is a wide demand for universal suffrage, which does not always take account of the widespread lack of interest in public questions and of the very low monetary limit of the present qualification for a vote. Japan is still ruled by its bureaucracy—a remarkably skilled bureaucracy—rather than by Parliament. But the political development of the country advances, and the most vocal sections of the community will not be content until Western forms of democratic government have been fully adopted.

Emancipation of Womenkind

Women, kept so much in the background in Japan, have played a more valuable part in her life than most foreigners imagine, and are still largely the keepers of the purse-strings and the counsellors. In the last few years liberty to play some part in life outside the house has been given or has been seized on by women to an extent which amazes Japanese grandfathers. In the main it is a movement in a helpful direction. In barring woman from modern education and from her just share in the direction of work for the public good Japan tied one of her hands behind her back. She is now gaining the use of both hands with marked advantage.

There are aspects of the relations of the sexes in which Japan has come in for criticism from many foreigners, who did not always remember the moral shortcomings of their own countries. There has seemed to be in Japan a certain callousness. Undoubtedly Japanese have shone more in family and clan relationships and in their devotion to the emperor than in their relations with the rest of the Japanese people. There has been need of cultivating a sense of duty to all men and women. When the Japanese had only begun to realize some of their obligations to men and women of their own race there could be no surprise on finding that in international relationships their behaviour sometimes seemed to suggest an inability to see any other than their own point of view. It was many years before any considerable number of Japanese was able to understand something of the reasons which made Americans and Australians unwilling to admit Japanese immigrants.

Problems of Yellow and White

It is hard, no doubt, for the people of a country which ranks as a Great Power to have their rights of foreign travel limited. The Japanese see Australia as a country which, but for the closing of Japan by the Tokugawas, might have been theirs. Asiatics may be different from Occidentals, they say, but they are not inferior. To the resolution to maintain a white America and a white Australia they naturally oppose the claim that Asia—especially their own corner, the China corner—should be preserved for the Asiatics, especially their own kind of Asiatics.

Bonds between Japan and China

Geographically, Japan lies in the relationship to Asia that Great Britain occupies towards the continent of Europe. To understand how the mind of Japan works one has to try to put oneself geographically in her place. There is a bond between Japan and China greater than the bond which unites Great Britain to any nation of the Continent. But, as the Great War showed, what happens to the states whose territory lies opposite one's own is not a matter of indifference. The coal and iron, the general trade and cooperation of China—in which over a quarter of a

million Japanese live—are necessary to Japan. Japan has amended many of her old oppressive ways with China. A measure of China's friendship and confidence may yet be gained. In any event, Japan must always know more about China than Europe or America can know. And the notion that any Western powers, circumstanced as they are at home and thousands of miles from Japan, can force Japan to yield a jot of what she believes to be her interests in China or can use military or naval force against Japan is visionary. Most Western powers now realize this.

Moreover the wisest heads in Japan are in no doubt whatever of the futility of an armed struggle with the West. But militarism does not quickly yield its influence with a nation whose place in the sun seems to have been gained by armaments. Nor can Japanese politicians and economists be expected easily to let go the fallacies under the stress of which Western powers have made their greatest international mistakes. Japan is wasting much of her substance on that which is not bread, she has notions which are as out of date as they are dangerous; but, in a troubled world, her fears and dreams are easy to account for. As Europe puts her own house in order, as the situation clears in India, as America gives profounder study to oversea questions and as a more neighbourly spirit develops in the world at large, Japan will become less and less of a bugbear. A constant criticism of Japan is that she is an imitator; but what country is not an imitator? As other countries' thoughts become more tranquil, Japan may feel the talk of her men-at-arms jar. She has not reached her present position without a considerable display of common sense and self-sacrifice.

The period in which Japan was crippled by the losses of the great earthquake was a providential period affording an opportunity for the white world sincerely to apply itself to the formulation of a just and, therefore, wise policy towards the Japanese and the yellow world in general.

JAPAN: GEOGRAPHICAL SUMMARY

Natural Divisions. An archipelago, the summits of a submerged ridge, making a typical festoon off the east coast of Asia. The eastern edge of the ancient Angaraland. High peaks and ridges with steep narrow valleys submerged at their lower ends, few alluvial flats or plains. A volcanic area, part of the "ring of fire" round the Pacific Ocean.

Climate. Situated entirely south of lat. 50° N., Japan resembles Newfoundland in latitude and location on the east coast of a temperate continental landmass, in the "Black Stream" which corresponds to the "Gulf Stream"; both are examples of the East Coast marginal temperate climate. With winter snows and severe frosts—e.g., in Hokkaido—with heavy rainfall and fog-girt coasts, with short pleasant summers and delightful springtimes, Japan, though nearer the Equator, has a more extreme climate than Great Britain, with colder winters and hotter summers.

Vegetation. By nature forested (cf. Newfoundland); the forest and the absence of lowland preclude the growth of natural grasses. Cultivation is by horticulture.

Products. Rice, generally of high quality for export, in exchange for a greater bulk of a poorer quality. Silk, tea. Objets d'art in porcelain, pottery, enamel and metal. Indigenous products these, all typifying the necessity for much labour to be expended on a commodity of small bulk. Textiles and metal goods as a consequence of the imitation of Western Europe, from a giant battleship to a tiny piece of rich silk.

Communications. Outlying districts are reached by coasting vessels or by road. Ferry services between the islands, especially across the Inland Sea. Increasingly widespread network of railways and roads. Tramp steamers and established cargo and passenger liners on the world's main trade routes.

Outlook. Japan has one of the densest populations in the world, only a fraction of the land being habitable and cultivable. Perforce Japan desires to expand into lands overseas. The people have an inheritance which makes it easy to concentrate much labour on small objects—even, for example, a garden with miniature trees, lakes and hills, a landscape in little. Japan has earned a commanding place, particularly in the Eastern world, and her future must rest in co-operation with the other Great Powers in the exchange of commodities, ideas and ideals.

JERUSALEM

Walls and Ways of the Holy City

by G. Horsfield

Author and Traveller in Eastern Lands

FEW travellers escape a feeling of disappointment on first entering Jerusalem. The first view, whether from road or rail, is not impressive. Modern Jerusalem does not, in fact, express, without search and knowledge, its monuments, its history or its antiquity. Lying at the end of a ridge of rock which, suddenly dipping to the south-east, ends in the Valley of Hinnom, it is divided by the Tyropoeon Valley which formerly separated the city from the Temple area. This valley to-day is hardly apparent, being filled in with the debris collected during the various destructions.

From Mount Scopus, which overlooks Jerusalem from the north-east, it may be perceived that the old city spreads northwards from Mount Ophel over the ridge which it has now covered, that it gives way in turn to the modern north-western suburb, which presents a vivid contrast of stone-built, tile-covered houses interspersed with hospices, convents and churches, and that it occupies a narrow area straggling down the slopes.

Where the Temple Stood

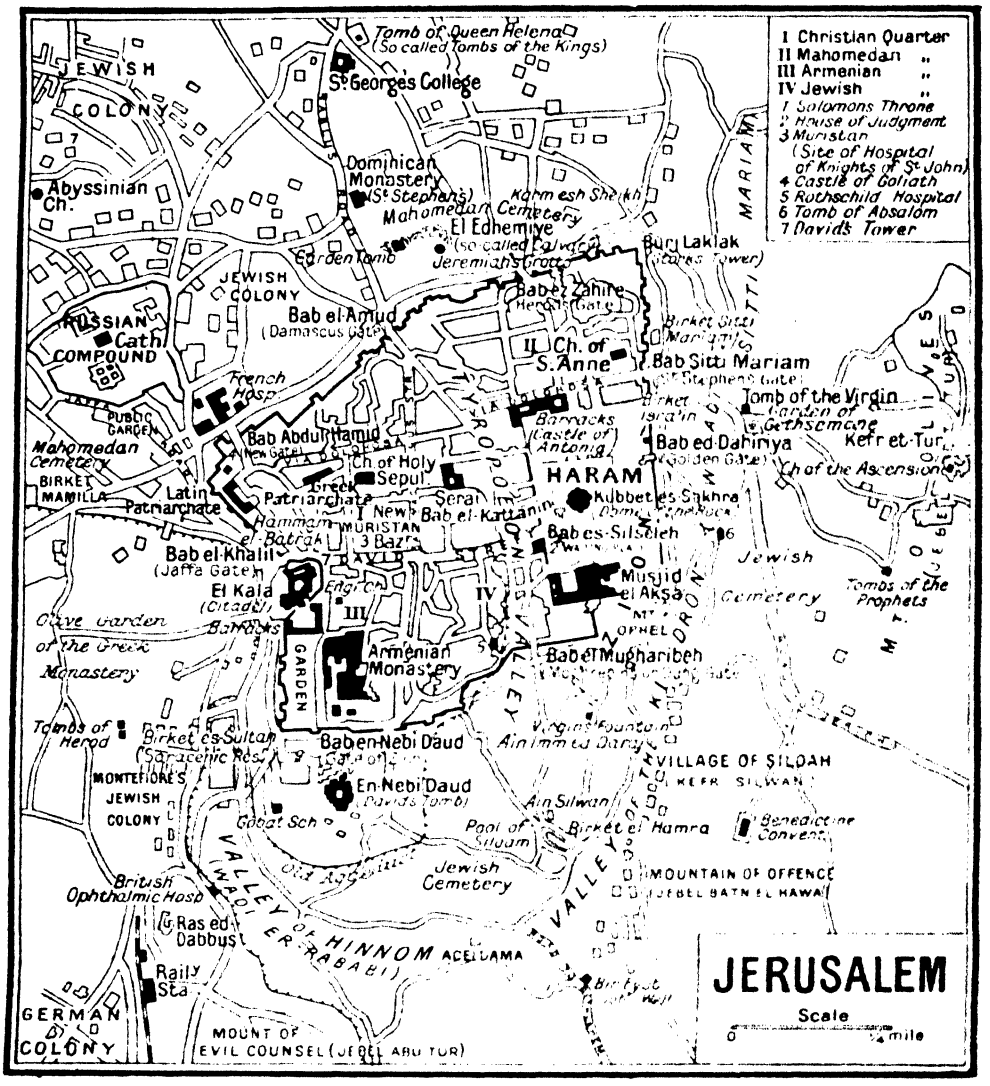
From the top of the Mount of Olives on the east a full view of the old city is obtained. Immediately in front lies the Haram (Temple area) with its enormous embattled walls, a long straight line of masonry, worn to a pleasing greyish ochre colour, almost without a break and shutting in this side of the city. Its towers and gates are demolished, and the Golden Gate is built up. At its feet, for the whole extent, is a Mahomedan cemetery dotted with headstones. Of trees there is none, only a few small bushes. In winter and spring the foreground is covered by the vivid green of grass, surprising to eyes grown accustomed to the bare bluish-grey and red of the dusty soil.

The feature of the Temple area is the so-called Mosque of Omar, really the Dome of the Rock; it stands, as its rightful name implies, sheltering the Sacred Rock within its octagon, crowned with a lead-covered dome which in its turn is surmounted by the crescent.

Time-worn Architecture

Filled to within a few feet of the summit of the walls, the Haram presents an area which appears flat. On moving about this idea is lost, for there are hummocks, holes and rough ground, with here and there a gnarled olive-tree; it has an uncared-for appearance, not of neglect, but of indifferent use. On the two sides which touch the city are cloisters, divided, altered, built up and pulled about, but still presenting an interesting appearance and giving deep shade.

In the angle where these meet was the Castle of Antonia; at this point the rock has been cut down, an enormous work visible to-day, bare and naked. The mosque tower, one of the most delightful in Jerusalem, a square shaft shooting up, with a wide open balcony and carved cornice changing to a diminished round and finishing in a dome, has a base of Roman masonry, sole remnant of the ancient fortress that overawed the Temple. The surrounding buildings are schools, houses and Mahomedan law courts, all very weary with the battle of years—patched, altered and generally ill-treated, but in which the ancient design is still visible. Scattered about are shrines, praying-places and well heads. To the west, not in the middle,



PLAN OF OLD JERUSALEM AND ITS NEWER SUBURBS

approached by flights of steps from the four points of the compass, is the paved platform on which reposes the Dome of the Rock. Flat tiled walls, above the marble sheathing, confront the visitor, while a door and enclosed porch face each flight of steps. Blue is the predominating colour; white, yellow and red are used sparingly, nor is the blue all of one shade; it ranges from cobalt to turquoise, presenting a different contrast at each step taken.

Inside is peace—the peace of Allah. The interior is rich and sombre, glittering with mosaics and all that wealth, art and culture can provide. Dark green monolithic columns support the dome, and coloured glass cunningly set in wide panels fills the windows. A screen of yellow-painted hammered iron-work, pointed with lilies, lies between the columns, like the rejas of the Spanish cathedrals, but having no straight lines save the supports. Underfoot are carpets rich and thick. Here is no collection of warring religions; no one passes, no fuss or flurry, but only peace. It is the loveliest thing in Jerusalem—nay, the one lovely thing in Jerusalem. Nothing remains of the Temple above

ground, nor is it known if there is anything below.

On departure from the Haram, there is a choice of various ways; one leading into the gate el-Kattanin brings in view a deserted "souk," with shops closed except for a few, where weaving is being done. It is all repaired and white-washed, dedicated to arts and crafts, and they are all but dead in Jerusalem. The gate es-Silseleh is the one of most architectural importance; this is masked, for the approach is but a narrow street. Foul smells assail the nose; people are very primitive in Jerusalem, and sanitation is still in its infancy.

Outside are more idlers, smoking and talking, lying on the stone benches flanking the gate, indifferent to smells and flies as only Orientals can be. The street is typical of Jerusalem; it leads up steps set wide apart into the souks. On advancing the throng thickens; shops of all kinds lie on either hand. Across the road at intervals are houses, built on arches so that they who live within may take part in the life and movement below. These are common to the whole city and seem like a sop given to cloistered woman—to relieve in this way the monotony of her home life.

The Tarik Bab es-Silseleh (David Street) is one of the most interesting in the city; all the houses are old and remain practically as built, save for time and some repairs; they seem very high, the

Canon Pardt

SCENE IN DAVID STREET WITHIN THE JAFFA GATE

Modern Jerusalem is divided into four distinct quarters, the Mahomedan and Jewish quarters on the east, the Christian and Armenian on the west. The Armenian and Jewish quarters are bounded on the north by David Street which leads from the Jaffa Gate to the Temple area and is lined by buildings as motley and incongruous as the human throng which daily treads it

Ewing Galloway

THE ROCK-HEWN TOMB AT THE FOOT OF THE "NEW CALVARY"

Various sacred places associated with the life of Christ have been localised by centuries of tradition. The claims of the traditional Golgotha as the scene of the Crucifixion and Burial are not, however, always supported, and near Jeremiah's Grotto, north of Jerusalem, is the site known as "Gordon's Calvary," with a tomb hewn in the rock which some believe to be the actual grave of Jesus

Major G. O. Turnbull

THROUGH ONE OF JERUSALEM'S NARROW, TORTUOUS WAYS

Countless streets, alleys and bazaars intersect the city of Jerusalem, the older parts of which have been raised upon the debris of previous cities. Here the cities of David, Herod and the Crusaders lie buried in successive strata. Formerly many of the narrow thoroughfares were malodorous with squalor and filth, but sanitary and hygenic conditions have improved under British mandate

WITHIN THE DAMASCUS GATE, A FINE EXAMPLE OF THE ARCHITECTURE OF THE SIXTEENTH CENTURY

The existing encircling wall of Jerusalem, the fourth wall according to many historians, dates from the reign of Solyman the Magnificent in the sixteenth century, and is some 40 feet in height and 2½ miles in length. There are no fewer than thirty-four towers and eight gates; of the latter the four principal, which face the cardinal points, are the Damascus, Zion, S. Stephen's and Jaffa Gates, on the north, south, east and west sides respectively, each possessing a distinct architectural style of its own. The Damascus Gate is perhaps the most interesting of all Jerusalem's picturesque gateways, with its two massive towers and battlements

street being very narrow. It is full of life and movement coming and going. In it is a khan, a square yard with a gallery, stables below and rooms above, where come the fellahin who have brought goods for sale. It is very unkempt, dirty and picturesque. The clangs from the tin-smithies, as the ex-paraffin tin is hammered and bent into the useful coffee pot or all manner of other things, fill the air with sound.

Mounting this street it becomes apparent how the view from the direction of the Mount of Olives is set, with houses rising over houses, a multitude of small round domes and box-like buildings all plain grey and flat, with a few small windows. Suddenly it becomes dark, and on either hand are the large tunnel-like souks which run from north to south in the midst of the city, marking the line of ancient streets. Here all is confusion and noise; they are so narrow that a way must be picked between the many and various obstructions—wares which have overcrept the thresholds of the tiny recess-shops or a donkey forced on from behind, loaded with tins of water.

Shopping in the Souks

As eyes grow used to the gloom, one realizes that it is a long, narrow, vaulted passage, pierced at intervals by square holes for light and lined on either side with recesses which serve as shops. Here are sold saddle-bags and horse trappings, all gay with variegated tassels and embroidered with cowrie shells, for which wild-looking Arabs bargain, some with turbans, others wearing the fringed handkerchief, bound on with a double coil of camel-hair rope. Overhead are horse trappings, strung high in the air across the vault. All is clamour and shouting. No women are about; it is a male population entirely. Few Europeans come here except the tourists. In a little backwater are the jewellers, working up gold into rings and necklaces.

To continue farther westwards is to climb once more into the open air and sunshine and under a blue sky. Finery, mostly male, with a few women's oddments, is displayed, so different from the wares of European cities where the demands of woman are the more prominent. It is crowded and steps are still to be mounted: still the same shops but not quite the same, for there are remnants of Crusading days. On many of the dividing walls, between the shops, hidden by the shutters, may be seen carved in Gothic letters S.S. or S.A.—the Canons of the Holy Sepulchre or the Benedictine nuns of S. Anne who in those days drew part of their income from the shops in this quarter of the city.

Relics of the Roman Colony

At the beginning of the street is an interesting café with pillars and a high-vaulted roof, which has a look of rare antiquity and picturesqueness and is crowded with patrons drinking coffee, playing at cards or dominoes, and smoking. In a side street is the half-buried arch of the gate to the Roman barracks of Aelia Capitolina—the colony founded on the site of Jerusalem in 135, after its destruction in A.D. 70. These wide arches, high and open, partly the fruit market and partly a café, are the only remaining part of the Hospital of the Knights of S. John of Jerusalem. The market is piled with fruit, heaped on the floor in confusion; here comes the housewife to buy, here you may see her chaffering.

Incongruous Modernity

Beyond David Street and bounded to the south by the wall lies the Jewish quarter. It is full of narrow, winding streets, of immense intricacy, old and tumbledown, with a variety and superfluity of smells peculiarly its own. Various new buildings have been erected since the Great War, including a synagogue, but they are all monstrously ugly, outraging all the canons of taste and ruining a view of the city. It is sad to think that this spoliation may be the ultimate fate of the venerable

JOSTLING CROWDS IN ONE OF THE WARRENS OF THE HOLY CITY

Most of the chief bazaars are to be found in and about the Muristan, but few are attractive from an architectural point of view. Some of the most important are under vaulted arcades, such as the passage-way seen above which is part of the vaulted-over portion of David Street or Bazaar Street. The stalls, though quaint and Oriental, are not likely to attract many European purchasers

JERUSALEM STREET OF SUPREME INTEREST TO CHRISTIAN VISITORS

Via Dolorosa extends from the Holy Sepulchre to the Castle of Antonia. Along this " street of pain " it is said that Christ carried the Cross to Golgotha ; the assumed stations of the Cross, fourteen in number, being indicated by tablets. The section seen above is near the sixth station, where the legend runs that the miracle of S. Veronica's handkerchief took place

E.N.A.

CENTRAL SHRINE OF CHRISTIAN WORSHIP IN THE HOLY LAND

The Church of the Holy Sepulchre, in the Christian quarter of Jerusalem, has been hallowed by the prayers of countless pilgrims since its erection by Constantine in 335. Restored after the fire of 1808, the edifice includes a vast congeries of churches, chapels and shrines containing various sacred relics. At the very door of the church dealers in "articles de piété" hold a daily market

city, which has so little to commend it but its traditions and the patient, unassuming modesty of its appearance. In other spots, too, destruction and rebuilding have taken place. David Street has not escaped, but it is to be hoped that the law may be tightened so as to permit no further outrage.

To the west of the Jewish quarter lies the Armenian monastery of S. James, really a miniature town, a medley of courts and passages of no merit architecturally. The church is interesting and well kept, with an excess of decorations; its architecture is so overlaid that it is not much in

evidence: there are some good blue tiles of the seventeenth century and many indifferent pictures. This part of the town lies on Mount Zion and on the site of Herod's Palace, of which nothing now remains except the foundations and a few upper courses of two towers in the citadel.

To find the Holy Sepulchre is difficult, as there is no external sign of its existence near at hand. The Greek bazaar, a hideous modern affair, comes up to its walls: all is new on one side—even to a new German Lutheran church which, shamelessly white, incorporates an ancient site and some fragments of architecture. Next door is the former German Archaeological School, now the residence of the assistant governor. A small hole appears in a wall, a minaret towers overhead. One passes through into a court several steps down, decorated with the shattered bases of columns, and there rises the façade of the Holy Sepulchre with its double doors and the lead-covered dome overhead: to the right and left is a maze of various monastic buildings.

Walking up and down this court are men in black and the high hats of the Greeks, or the brown-clad, rope-begirt, sandalled Franciscans. The bodies they represent (the Greeks and Latins) are the chief guardians of the Holy Place, though they alone do not enjoy its entire use, for it is shared with a variety of other rites. They smoke and converse quietly and their relations seem most amicable: a Turkish doorkeeper still sits on his carpets or lounges smoking in the door of the Basilica. It is dark inside. One is impressed by the objects which everywhere hang down—lamps and strings of ostrich eggs, glass balls and balls of china. Women and men coming in prostrate themselves to kiss the Stone of Unction which lies inside the door. To the left is more light, and suddenly one comes under the dome, that monument to the French, Russian and Turkish architects who built it after the Crimean War, of which it was perhaps the indirect cause.

All that is visible is modern, dating from the restoration of 1810. Yet it looks old—so old—worn and rubbed by

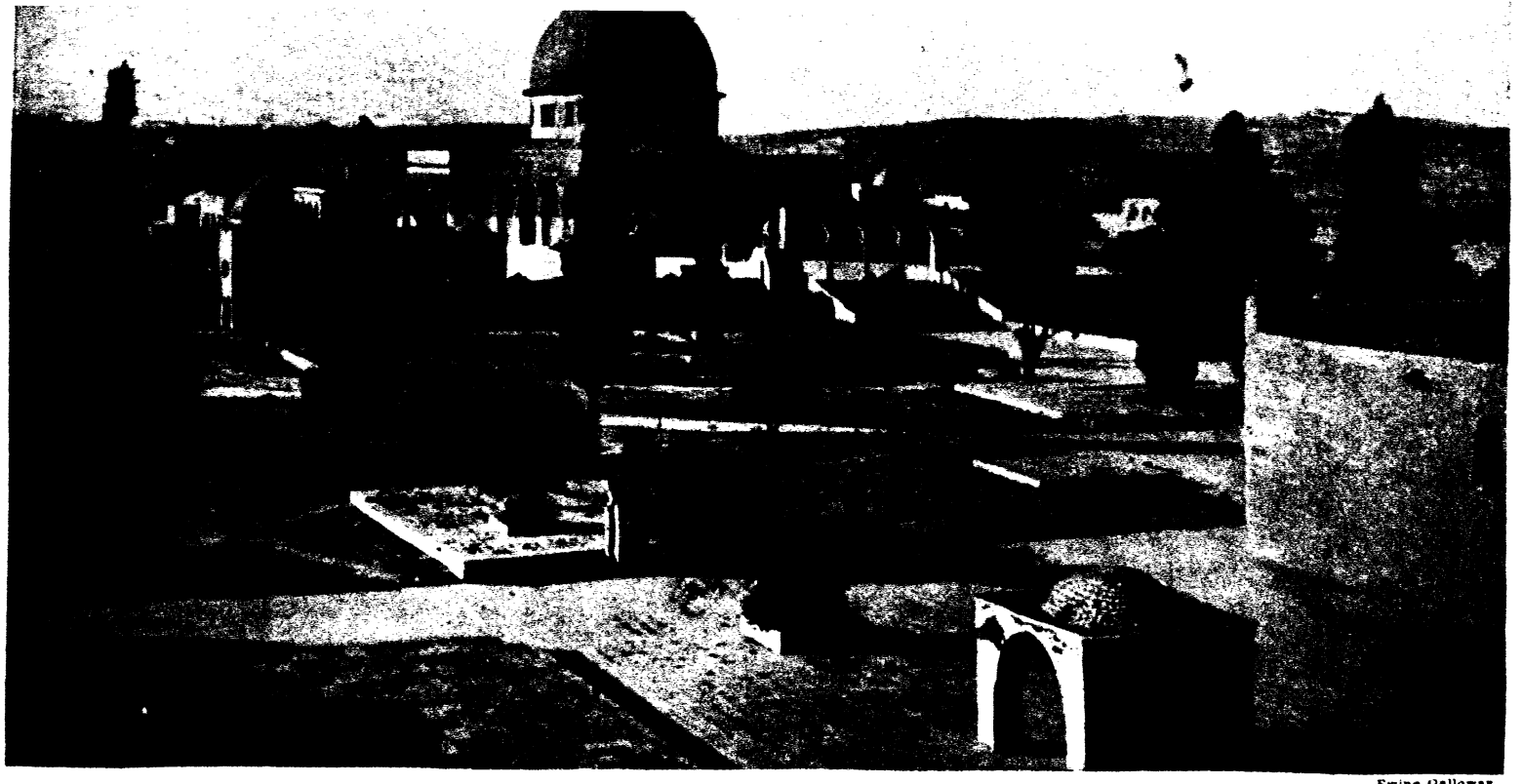
APPROACH TO THE JAFFA GATE FROM BETHLEHEM

Barely six miles south-west of Jerusalem lies Bethlehem, the modern Beit Lahm, birthplace of Christ and King David. Between this City of David and the Holy City, and entering the latter on the west by the Jaffa Gate, runs a good road on which carriages and motor buses ply daily, passing on the way many traditional sacred sites, including Rachel's Tomb and David's Well

AERIAL VIEW OF THE HOLY CITY IN ITS LOFTY SETTING AMONG A CLUSTER OF HEIGHTS

Aerofilms

A mountain city, situated in the heart of the "hill country," Jerusalem was well suited for a national capital, lying almost in the centre of Palestine at an altitude of 2,500 feet above sea-level, 33 miles from the Mediterranean Sea and 15 miles from the Dead Sea. Surrounded by stout walls and deep ravines, the city combines the squalor and the charm of the Orient, but modern buildings have arisen without the walls, especially in the west where a new quarter is steadily growing; and an incongruous note is struck by these patches of modern life on a groundwork of antiquity



Ewing Galloway

GROUP OF MOSLEM FANES DOMINATED BY THE MAJESTIC DOME OF THE ROCK IN THE TEMPLE AREA AT JERUSALEM

In the Haram el-Sherif, or Temple area, which occupies the reputed site of the Great Temple of Solomon on Mount Moriah, east of the modern city of Jerusalem, the principal building is the Dome of the Rock, Kubbet es-Sakhra, commonly but erroneously known as the Mosque of Omar. It is a magnificent octagonal structure, surmounted by a handsome dome, standing on a raised platform 10 feet high, and approached by eight flights of steps. Both Jews and Mahomedans believe that it forms the centre of the world, and the sacred boulder which it encloses is thought to be the traditional altar of burnt offerings on Mount Moriah

E. N. A.

LOOKING WESTWARDS OVER JERUSALEM, THE ROYAL CITY OF KING DAVID, FROM THE MOUNT OF OLIVES

To Jew, Christian and Mahomedan Jerusalem is the Holy City, and for about 3,000 years it has been the chief city of Palestine. It is built on the eastern slope of the Judean watershed and occupies a plateau with two spurs pointing in a southerly direction, bounded by the valleys of Kidron and Hinnom; its actual site being also marked by several elevations and depressions. From the Mount of Olives which overlooks Jerusalem from the east, the ancient city as well as many sites associated with scenes from Bible stories are seen spread out in an historic panorama. This view is from the tower of the Russian buildings

Ewing Galloway

MASSIVE MASONRY OF JERUSALEM'S WAR-SCARRED CITADEL

On the south-eastern side of the Jaffa Gate, the west entrance to Jerusalem, rises the citadel, which in its present form dates principally from the beginning of the fourteenth century. The oldest part of it is the north-eastern tower, built by the Crusaders but popularly known as the Tower of David, with a substructure which probably belonged to Phasael, Herod's palace tower

the hands of thousands of pilgrims. High, narrow arches carried on square unornamented piers rise nearly to the spring of the dome; they are arranged in a circle with pier and opening of almost equal size. In the centre of the knee-polished pavement of local reddish yellow stone stands the edifice which covers the Tomb of Christ: it has no distinction and seems urgently in need of repair. It is in two parts inside; in the Tomb chamber, so small as to contain but four people, is a raised marble slab filling one side; behind it a silver icon and burning candles; it is very hot, and smells of smoke and incense.

The Latin Chapel is small and dark; the Greek Choir large and dignified, but marred by the enormous quantities of things covering the walls and hanging from above. All shrieks for repair and cleansing, and the sweeping away of all these accumulated gifts, some of which proclaim their donors by the coat-of-arms upon them. The great Russian eagles sit on the door of the iconostasis and on festivals others are placed over the Tomb of Christ. Here on Sundays the Greeks sing Mass to dirgelike tunes which to European ears are monotonous. The painting of the dome has peeled off and now hangs down in flakes, adding to the general appearance of poverty.

Round the back of the choir is a dark ambulatory and stairs to the Chapel of S. Helena, a place of neglect and gloom. Farther on are the stairs mounting to Calvary—which is divided into two chapels, the actual altar of the Crucifixion belonging to the Greeks, and the altar of the Nailing to the Cross to the Latins. Nothing not relatively modern is visible, but by thrusting a hand down a hole under the altar one may feel the rock, rough and cold.

Round the Holy Sepulchre clusters the Christian quarter, a mass of narrow winding streets, with steps singly and in

ATTRACTIONS AT A VEGETABLE AND FRUIT MARKET OFF DAVID STREET

Jerusalem is a city of stone, the upper cretaceous limestones upon which it rests offering an inexhaustible supply of building material. Full of charm and colour, some of the stone walls in the bazaar quarter, often crumbling and grass-grown, have weathered the buffeting of many centuries and are made the more attractive by the surrounding lavish display of coloured wares. Of local fruits, olives, figs and grapes are grown plentifully near Jerusalem, but the scarcity of water is responsible for the limited supply of cereals and garden produce, which are dependent mainly on cistern-stored water; as of old, wheat comes principally from the lower plains

flights. In it are the Greek and Latin Patriarchates, and many churches and convents. Most of these are modern, and in many ways they detract from the appearance of the city, by their style and their height, greater than that which is current in the older buildings. It is a quiet, sleepy quarter—a few children, a man or a woman returning home, a tourist, and occasionally some artist sketching seem to make up its inhabitants. Of their occupants these houses betray little or nothing.

The Via Dolorosa is lined with monasteries and schools for its entire length; they are new and enshrine some station of Christ's passage to Calvary. Spanning the road is a Roman triumphal arch, from which Pontius Pilate is said to have showed Christ to the people, crowned with thorns. Near the Bab Sitti Mariam, otherwise the Gate of S. Stephen, is the Church of S. Anne, an interesting building of the Crusading period; for centuries after the city fell into the hands of the Arabs it was used as a Koran school. After the Crimean War it was given to the French, who have restored it as a school for Catholic Melkites.

Quiet Mahomedan Quarter

To the west of the Via Dolorosa lies the Mahomedan quarter, on the Hill Bezetha, bounded on the north by the wall and a ditch, which have preserved their character and suffered no alterations. This quarter is much like the Christian quarter. There are the same narrow, stepped streets, with arches and tunnels bearing houses, the windows of which give a view up and down the street. Their appearance is perhaps more inscrutable. It is very quiet. A few pedlars, children playing sadly in the gutter or running up and down the steps, laden donkeys or camels pass through. Windows are set high in the walls, and heavily barred and shuttered. Even with the bright sky and the sunshine it always has a gloomy appearance. Some of the houses have tiny walled gardens with cypresses showing their crowns over the top.

The Jaffa Gate both within and without is the business and shopping centre of the city; here passes the road from Beersheba to the north, here debouches the road from Jaffa, so producing a continuous flow of traffic. Except for the walls and the citadel, the former largely masked by modern buildings, it is quite uninteresting. The crowd is thoroughly cosmopolitan, speaking the languages of the West and East indifferently. The diversity of persons, of differing attire and complexions, who jostle each other on the narrow pavements is in some mysterious way occupied, and somehow ekes out a living; for there are no manufactures, except on the smallest scale to supply furniture, clothes and shoes to the inhabitants.

Expansion Without Order

The Russian Compound, with its cathedral and hostels serving as barracks, hospitals, law courts and prison, is set in the midst of the new city; it is the largest national establishment of this kind.

The Jaffa road and the Nablus road bound the new city on north and south, for Jerusalem now stretches about a mile and a half to the west, and has grown without a plan of development: the result is the wildest confusion of straggling roads. Attempts are now being made to correct this; but so far there is no apparent result, except a wide avenue, off the Jaffa road, which perversely runs into a convent school and incontinently ends there.

Wine Cheaper than Water

The modern city is characterised by its red-tiled roofs, as opposed to the domes and flat roofs of the city proper. From the distance it is almost picturesque, but complete disillusion takes place when it is examined in detail. The houses are all of one type, heavily square, with windows barred and shuttered and wide balconies. Attempts have been made at gardens. There are a few trees. To the south are the better houses; to the north the poorer. Some

of these are in a state of deplorable squalor and filth; poor barrack-like buildings pressed close together and teeming with life. The new city is almost entirely Jewish. Building is progressing in all directions, and more ground is constantly being pegged out and sold in building lots.

The only water supply is the municipal trickle inherited from the army, and now supplemented from the Pools of Solomon, near Bethlehem. From this source water is doled out twice daily to the poorer populace from standpipes. Most houses have, however, cisterns in which to store rainwater, so that practically all the inhabitants are dependent on the rainfall. As the summer progresses the cisterns give out. Hours before the times appointed for the official doles, queues are formed at the standpipes, with much clatter of empty paraffin tins, and endless quarrels and cursings for position. Wine is almost cheaper than water at this time of year.

Near the railway station to the south, at a lower level, is the German colony. This is a miniature garden city, with houses standing in gardens which are in part cultivated, so far as water admits, and narrow tree-lined roads very dusty in summer, but a refreshing spot.

Near by, off the Bethlehem road, the Jewish colony of Talpioth is being developed in the garden city manner, though the gardens are not yet visible. On the Ain Karim road to the south-west is another of the same type built and occupied mainly by school teachers. In the intervening area the land is being developed, so that in a few years the whole of the westerly approaches to Jerusalem will be through suburbs.

Anciently, to judge by the potsherds and scattered tesserae, these heights were occupied by villas and gardens; even fragments of roofing tiles are sometimes found. It may be urged then that these new constructions revive the appearance of the city 2,000 years ago.

H. Perrin

BREAD SELLERS WITH UNLEAVENED LOAVES AS IN BIBLE TIMES

The sacred topography of Jerusalem has an overwhelming interest for visitors and even the street scenes in the Holy City hold indescribable attraction, for the present population, estimated at 62,578, represents many races and religions. A lively concourse of travellers, merchants and pilgrims is continuously passing through the narrow thoroughfares

KASHMIR & OTHER HIMALAYAN LANDS

An Eden near the Roof of the World

by Edmund Candler

Author of "On the Edge of the World," etc.

THE fifteen hundred miles of mountain chains that form the Himalayas would, if transplanted to Europe, stretch from the Black Sea to the Bay of Biscay, and cover considerably more than twice the span of land between the Baltic and the Adriatic. The greatest of mountain ranges is so massive that it deflects the surveyor's plummet. It attracts all liquids to itself, scientists tell us, as the moon attracts the ocean. It exercises the same magnetism on the human spirit. In the clear mornings and evenings of the cold weather one can see "the hills," as the Anglo-Indian calls them, 80 miles away, a low purple web with white threads strung across the horizon like gossamer in hoar frost.

A bird's-eye view of the Himalayas is as impossible in the literary as in the physical sense. Scenically the Bernese Oberland, the Welsh hills, the Apennines and the mountains of Iceland do not offer greater contrasts; racially the Mongolian, Aryan and Semitic hillmen of the Himalayas are as distinct from one another and ignorant of the language and customs of their neighbours as the peasants you would meet in a journey from Stamboul to Biarritz.

The Giants of the Himalayas

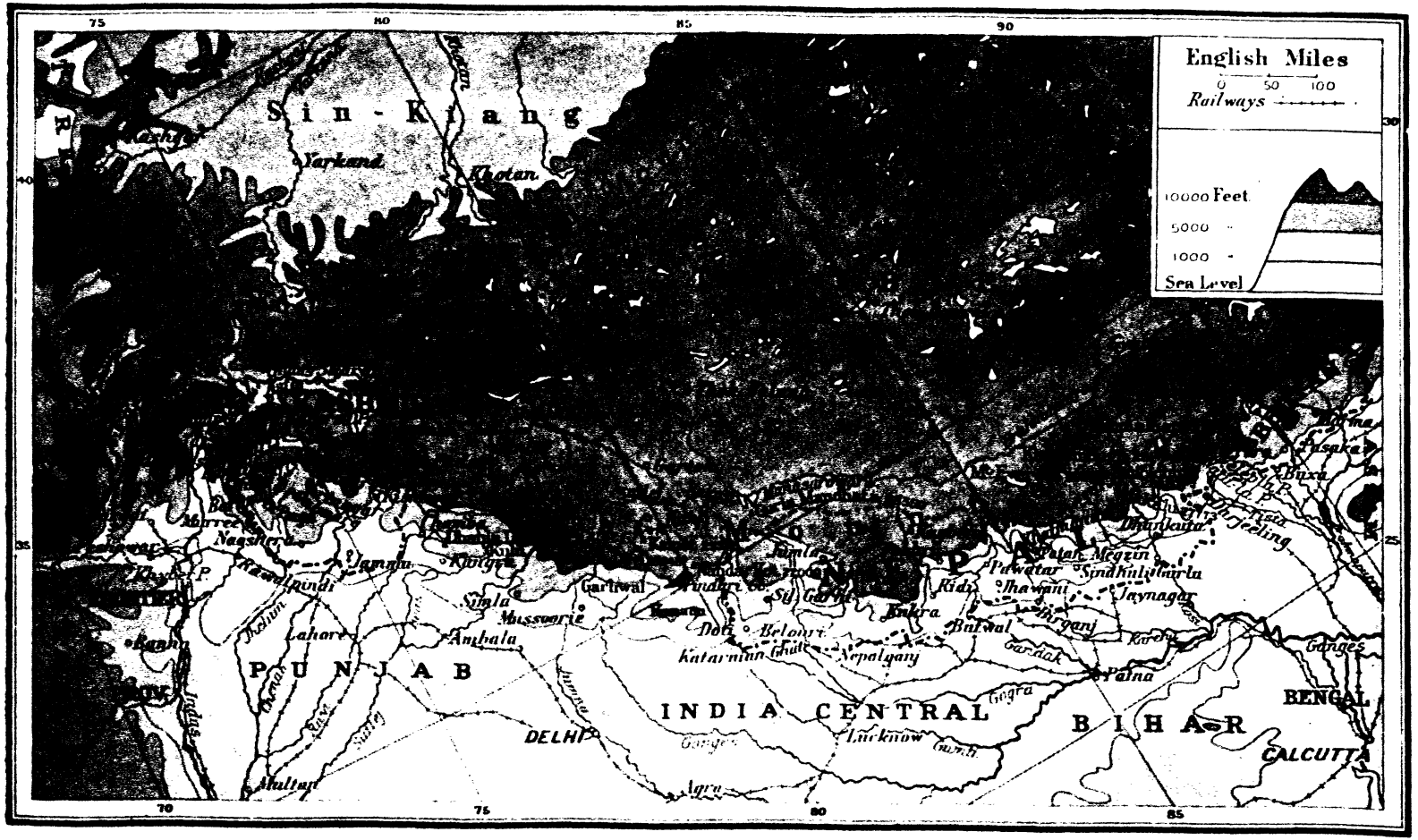
Besides this, the different zones of vegetation, from the humid valleys at the eastern end of the range to the sterile and almost verdureless tracts of the north-west, comprise a flora as varied as you would find in a passage from Andalusia to Derbyshire.

It is in Nepal, Sikkim and Bhutan, the region most affected by the monsoon, that the vegetation is most luxuriant. And here are grouped the giants of the Himalayas, earth's highest summits. The greatest peaks lie at the extreme ends of the chain, in Nepal and its boundaries to the east and in Kashmir territory to the west. Nepal alone within its boundaries or on its borders contains a hundred peaks of over 21,000 feet, and twenty-three that exceed 25,000 feet, including Everest (29,140 feet) and Kinchinjunga (28,146 feet), the highest and third highest summits in the world.

Kinchinjunga through the Mists

Much of this country is unexplored. Nepal is closed to Europeans save for the main straight road into Khatmandu, and this is only open to the resident and his guests, while the native state of Bhutan at the extreme end of the chain is little more accessible. But between these two enclaves lies Sikkim, an open door to the traveller. It is a country of fabulous beauty.

Among hill stations Darjeeling is incontestably the finest view-point in the Himalayas. In sheer sublimity Kinchinjunga is unparalleled. One looks across an immense forested abyss to where its dazzling rifts and spires fill the horizon. Darjeeling lies on the first bulwark of the Himalayas which receives and condenses the moisture-laden currents of the monsoon. For months at a time it is enveloped in mist and cloud, and many are the travellers who have visited it and returned disappointed without a glimpse of the snows. The first lifting of the curtain is an unforgettable memory. It is better to arrive in mist and watch the panorama slowly unfold. These intermittent glimpses revealed through floating cloud, suggestive of a hidden



FIFTEEN-HUNDRED-MILE BARRIER OF THE HIMALAYAS FROM CHITRAL TO SIKKIM

R. J. McNeill Love

COUNTRY-FOLK IN A STREET OF ONCE FAMOUS ISLAMABAD

Islamabad stands on a ridge overlooking the north bank of the Jhelum 28 miles south east of Srinagar. It was formerly the capital of the state and until the fifteenth century was known as Anant Nag, after its holy reservoir. The town has about 9,000 inhabitants and contains an old summer palace and a fine mosque and shrine. The ruins of Martand are about five miles away

majesty and remoteness, impress one more than the complete revelation.

Two of the chain, Siniolchu and Chumulhari, dwarfed by their neighbours at this distance, have been saluted by a succession of travellers as the most perfect examples of mountain architecture. The exquisite grace and symmetry of Chumulari whose image sleeps in the turquoise-blue waters of the Bamtso will be remembered by all who have taken the road from Darjeeling into Tibet. Everest and Makalu (27,773 feet) in Nepal, with their array of attendant peaks, are hidden by a spur to the west of Darjeeling, but in an hour or two's ride one may reach a point from which they are clearly visible at a hundred miles distance.

One gathers little more than a hint of the variety and prodigality in detail of Himalayan scenery from this hill-top. One must descend to the valley and climb the ridge through which the road winds up to the Jelep-la, the highway into Tibet. Nowhere in the same compass will one find the characteristics of the different zones of vegetation, from tropical to temperate, from temperate to alpine, so lavishly exhibited. The Tista valley immediately below Darjeeling is only 700 feet above sea-level. Here we are in the tropics. In the trough of the valley the air is as enervating as in the plains. The vegetation seems to grow visibly in the steamy moisture. Stately tree ferns raise their heads above a tangle of

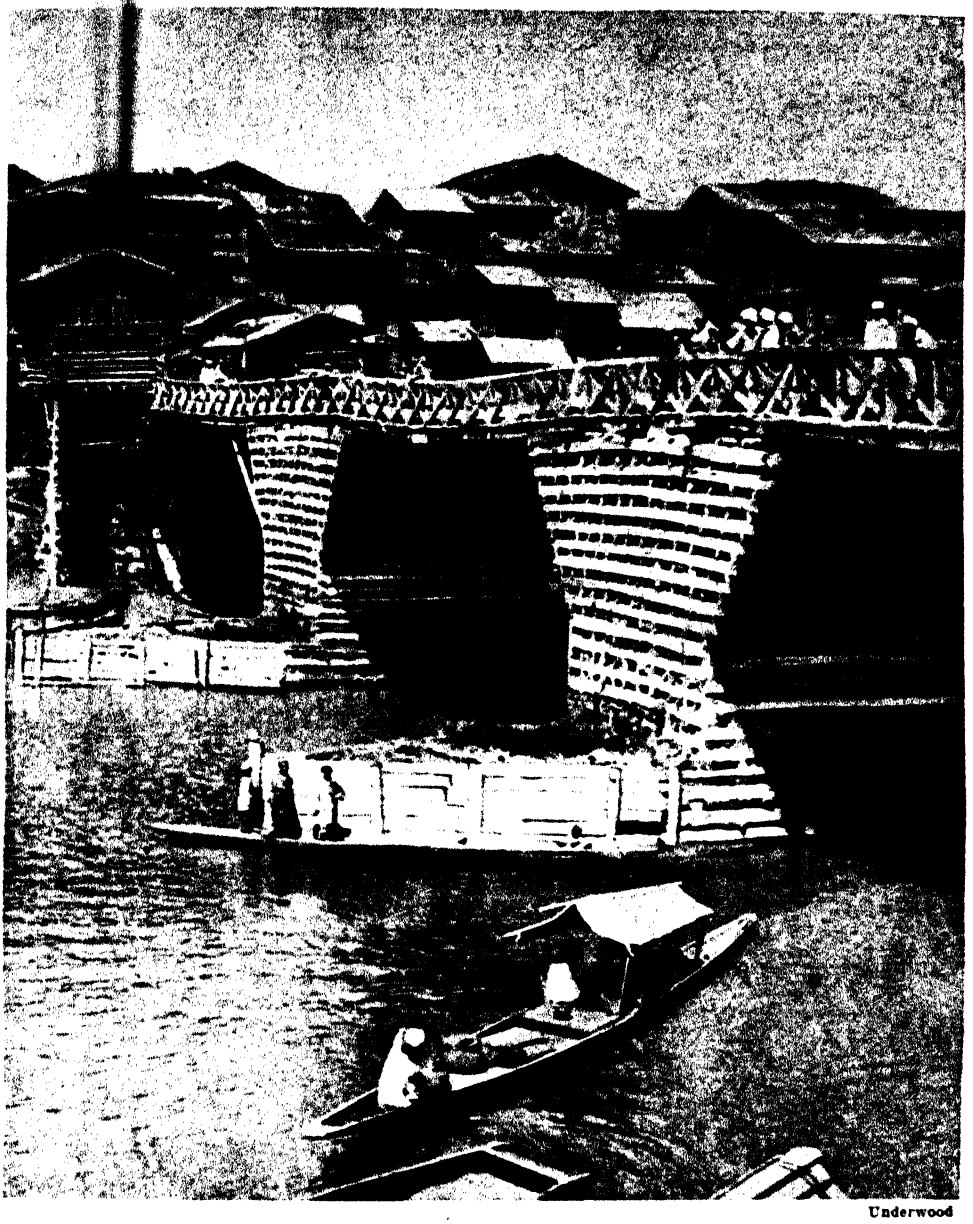
E. N. A.

CITADEL OF THE MOUNTAIN STRONGHOLD OF DUG-GYE IN BHUTAN

Bhutan, situated on the southern declivity of the eastern Himalayas, is a land of forest-clad mountains and deep intervening valleys. Fortresses have been erected in several of the passes into Tibet to check raids by the Tibetans. These strongholds have galleries with wooden roofs running round the walls and a central citadel, occupied by the governor

rank undergrowth, vines and bindweed, convolvulus and the exquisite smilax and scarlet clerodendrons. Gorgeous butterflies flash across the path, weaving an iridescent pattern in the shade. The ceaseless din of the cicadas is deafening. The birds, too, of this forest are strident and unmusical; they shriek and whistle, but rarely sing.

It is a hot-house atmosphere, a belt of tropical luxuriance. But as one ascends the winding path into the mountains the air becomes sensibly fresher and the vegetation changes. One passes under terraced rice-fields and through waving maize, whose spring verdure is the greenest in the world, through orange groves and peaceful

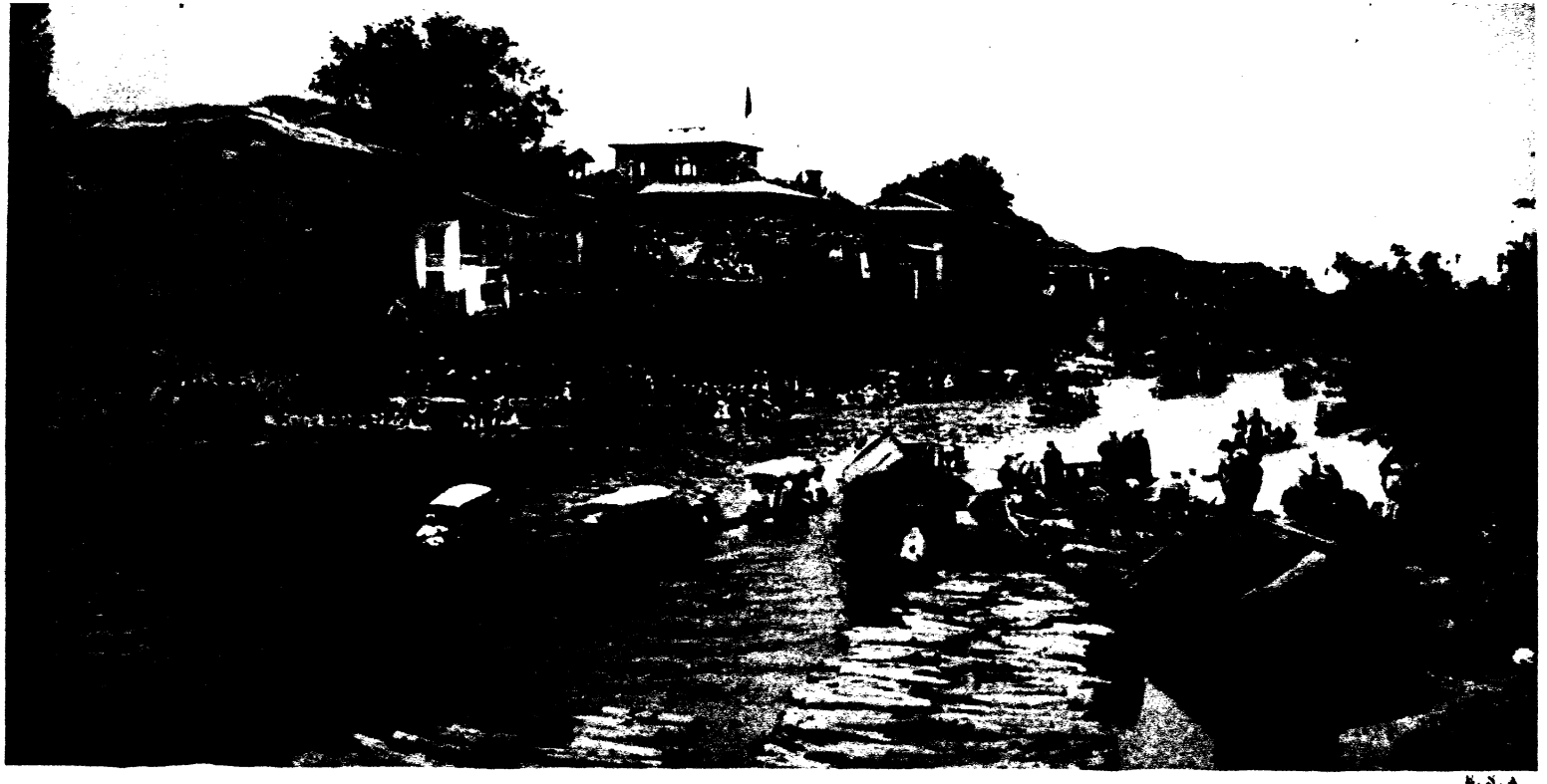


Underwood

WOODEN BRIDGE AND HOUSES WITH GRASSY ROOFS IN SRINAGAR

Srinagar, the capital of Kashmir, stands on both banks of the Jhelum, 5,000 feet above sea-level and 175 miles from Lahore. The unstable-looking timber dwellings surround the palace and stretch along the river banks for nearly two miles. The chief industries are those of the wood-carvers, gold, silver and copper smiths, papier-mâché makers and dealers in precious stones

villages, where the scarlet hibiscus glows in the hedges among the great white trumpets of the datura. At 4,000 feet one regains the fringe of semi-European vegetation. The road becomes a ladder of stone beside a mountain torrent. The waterfalls of the eastern Himalayas are embowered in greenery. The wreckage of the stream is hidden. No ruin and debris here, or ugly gashes in the burnt thirsty earth, but a fairyland of flowers and ferns and moss, each rock a garden of begonias, columbines and balsam, peeping from their moss beds. And the trees are draped with orchids hanging in sprays, mauve, white, lemon and yellow. The evergreen oak and chestnut—not the



E. N. A.

CROWDS LINING THE JHELUM TO WATCH THE RETURN OF THE MAHARAJA TO SRINAGAR

Jammu is the winter capital of the maharaja of Kashmir and the day of his return to Srinagar for the hot weather is kept as a festival. Srinagar is the hottest part of the valley of Kashmir, the temperature sometimes rising to 95 degrees in the shade during the months of July and August, hence there is a general exodus to Gulmarg, which has become a fashionable hill station, at about the beginning of June. The great annual invasion of visitors has led to a serious diminution of game and to the creation of game preservation laws.

English varieties—grow to a tremendous height and girth in these forests. Their straight stems, sometimes rising to a hundred feet without a branch, are niched and ringed with moss and ferns and creepers and parasitic plants.

At 8,000 feet to 9,000 feet the magnolias and rhododendrons predominate. The rhododendron dwindles in growth as one ascends. Here it is a spreading tree, as substantial as a small oak; at 11,000 feet it is a shrub; at the summit of the ridge it becomes a dwarf plant that would be overshadowed by a sprig of whortleberry. But, whether tree, shrub or dwarf, the rhododendron in April or May is the glory of the Himalayas. The forests of Sikkim then are an earthly paradise. The dwarf rhododendrons, as one approaches the tree limit, form a continuous bed, white and crimson and cream, scarlet, rose and purple, every imaginable hue between a dark reddish brown and a light sulphury yellow. These delicate flowers are more like the hothouse azaleas than the rhododendron of the English shrubbery and resemble them in wealth of blossom.

Months of Ceaseless Rain

Three months later, after perhaps a fall of 100 inches of rain, these oak and rhododendron forests present an appearance of unspeakable gloom and desolation. Gaunt tree trunks stretch their arms through the mist in despair. Enormous ropes of rotting vegetation hang from their branches, draped with sombre mosses and lichen and large yellow fleshy orchids. The paradise has become an apt foreground for an illustration of Dante. For months on end the blanket of cloud hangs over them like a pall, and there is no sound in the forest save the pattering of the rain.

Above 12,000 feet the tree line ends abruptly; only the stunted rhododendron growth leads a forlorn hope towards the snows. Nature's boundaries in the Himalayas are as definite as man's. On the southward-facing slopes of the Bhutan hills the bamboo limit is so clean that the hill folk have accepted it immemorially as their natural frontier. In Kashmir the serried ranks of the mast pines (Picea and Abies) halt at their appointed stations with the suddenness of a wall. The silver birches alone break bounds. You may find the bravest flung forward in the teeth of the glacier, breasting the precipice with the dead white lopped trunks of the fallen all round them.

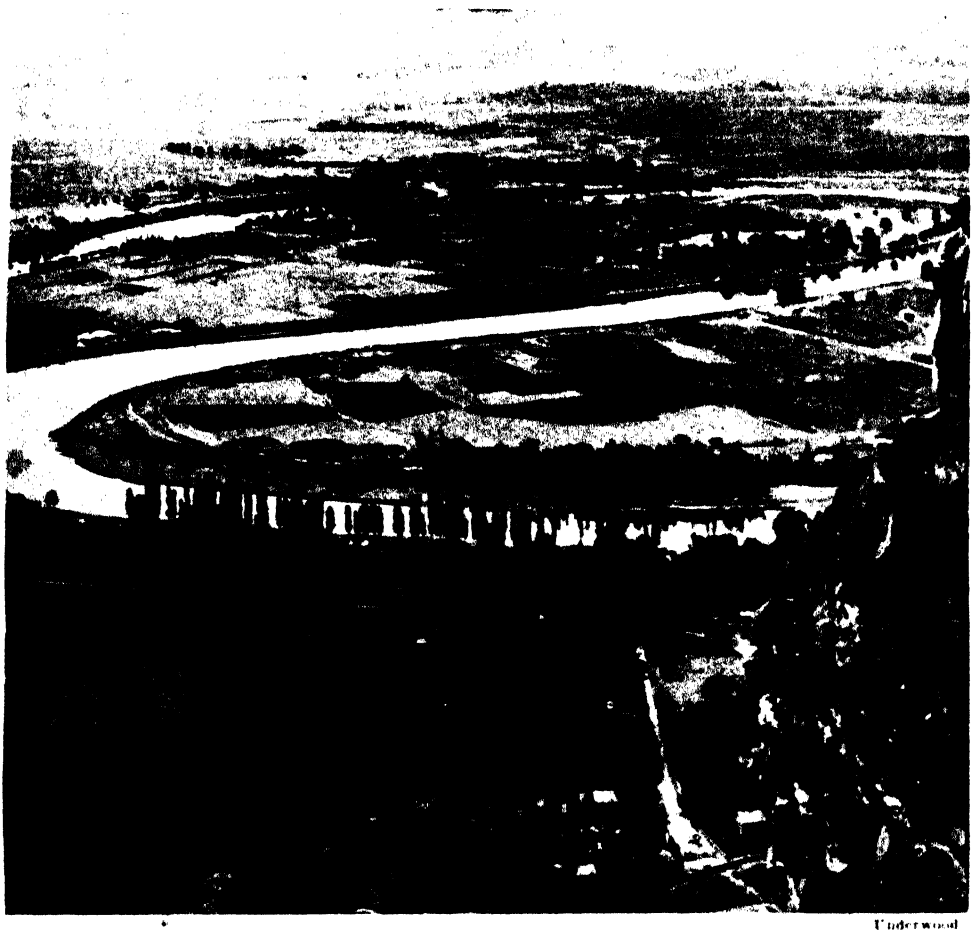
Flowers 19,000 Feet Up

In the pastures beyond the tree limit the turf is pied with bright flowers; anemones, white and mauve and purple and yellow, are spread as thick as daisies, while the primulas and gentians make a bright border against the edge of the retreating snow. Alpine flowers grow at an immense altitude in the Himalayas. A species of gentian is found as high as 19,000 feet, while at 18,000 feet the dwarf blue poppy is conspicuous with a variety of the blue delphinium and a number of species of edelweiss and saxifrage.

There is very little animal life in the Eastern Himalayas, and the absence of game in the forests is generally attributed to the leeches which infest the forests in countless millions during the rains. Bear are not uncommon; and the serow, a species of Himalayan antelope with long ass' ears, goat's horns, and feet which look too slender to support his unwieldy carcase, is occasionally shot.

Shy Mountain Sheep

In the lower forests the gooral (chamois), musk deer and barking deer are found; and under the snow-line the burhel, a species of wild sheep, a shy beast and difficult of approach. On the Tibetan side, where the Buddhist religion forbids the taking of life, these mountain sheep are almost tame. In the Rongbuk valley the Mount Everest Expedition used to watch the herds come down to the hermits' cells and pass from door to door to be fed not a hundred yards from their camp. A new and unexpected paradise



Underwood

RIVER JHELUM FROM THE THRONE OF SOLOMON ABOVE SRINAGAR

All the fruits of temperate climes grow well in the valley, the mulberry, grape, pomegranate, apple and pear being indigenous, while the apricot and peach have been introduced. The plane tree is the glory of the valley and the cultivation of saffron is an old industry. The Takht-i-Suleiman or Throne of Solomon is a temple-crowned hill 900 feet high to the east of Srinagar

was discovered by the Everest Reconnaissance Party in 1921. In the Kama valley at the foot of Everest and Makalu and overlooked by three of the five highest summits in the world they discovered the Himalayan Garden of Eden; and in Makalu a peak pre-eminent for its rugged and spectacular grandeur. Its smiling pastures carpeted with gentians, saxifrage and primulas rise to the very verge of ice-bound and snow-covered tracts where mighty glaciers descend among the forests that clothe the lower slopes. It was a surprise and a delight to find fir trees, birch and juniper, and a very luxuriant vegetation, growing on either side of the ice and the moraine beside it.

Bhutan, at the eastern end of the chain, is as difficult of access to the unofficial traveller, and every bit as medieval, as Tibet, though not so inaccessible as it used to be. In scenery and vegetation the country may be compared to Sikkim and the Himalayan borders of Tibet. Sikkim, lying as it does at the threshold of the Giants, is more sublime; and Tibet has scenes of wilder and more desolate grandeur. The most distinctive feature in the scenery of Bhutan, the thing one most remembers, is partly artificial. In its crag-perched monasteries and forts one discovers a blend of geological and monkish architecture which would be romantic even in Tibet. These

E. N. A.

DISTANT VIEW OF THE FORT PERCHED HIGH ON HARI PARBAT

Hari Parbat is an isolated hill 250 feet high on the northern outskirts of Srinagar. It is surrounded by a wall and on the summit is a fort built by Akbar at the end of the sixteenth century. With its lovely lakes, floating gardens and canals, nearly all of which are bordered by magnificent trees, Srinagar is a beautiful city—when viewed from a distance

Bhutanese lamas know how to supplement God's handiwork.

But we must follow the chain to the north and west, leaving Nepal behind us with its 500 miles of virgin peaks and great rivers unexplored. The northward trend of the Himalayas is, as a rule, imperfectly realized. Who, for instance, without the verification of the map would accept the statement that Simla lies in a latitude of a hundred miles farther north than Lhasa? The capital of Tibet, as a matter of fact, is south of Ambala in the plains of the Punjab. Everest is well to the south of Kumaon and Garhwal, the first British territory to the west of Nepal.

The giants of the Himalayas, as we have pointed out, lie at the extremities of the range; but in Garhwal, the centre of the chain, is grouped a cluster of magnificent snowy peaks breaking the uniform mountain level to the north-west and south-east. Nanda Devi (25,645 feet) and Kamet (25,355 feet) lie within British Garhwal; Gurla Mandhata (25,350 feet), just over the Tibet border. This district, which contains the principal sources of the Ganges and Jumna, has Alpine beauties of its own; but its valleys are shut in. One does not gain the same sense of immensity as in Sikkim or Kashmir, where one seems to be gazing into space itself. It is

difficult to realize the tremendous height of the peaks above one. But Garhwal is most often visited for the view of the Pindari glacier, which lies near the foot of Nanda Kôt (22,000 feet). It is the only glacier easily accessible from the plains of India. A good road leads up to it through the Pindari valley with rest houses at every stage, so that one may make the journey without camping out.

Where Snow Overhangs the Plain

The best view-point of the hills from the plains is at Kangra at the foot of the Dhaula Dhar. It is the one point in the long line of the Himalayas where the snows overhang the plains without any intercepting ridges. Beneath this range there is a wide sweep of almost tropical vegetation. From the gentle rise at Kangra one looks down through the creamy white blossom of the bauhinia on to the green belt sparkling with streams, and then up the gaunt buttresses beyond, over the dark ilex and rhododendron forest to a line of peaks as bold as one could wish. The highest point of this great wall is 17,000 feet; the mean elevation some 15,000 feet; there is no view of the snows from the plains to equal this all along the line from the Khyber to Bhutan.

The view of the Himalayas from the plains of India has inspired many rhapsodies; we have sublimity in another dimension in the view of the plains from the hills. Here one's sense of the illimitable is greater, as there is no screen to interrupt one's vision beyond what is imposed by the limitations of the eye.

Wild Gorge of Raldang

At Chini the Sutlej becomes the flank of Raldang and holy Kailas—not the Kailas by the Manasarowar lake in Tibet where the Hindus say Siva dwells. The village is a little rock-girt Arcady, pent in with coloured crags, scored and charactered like an old script. The path to it is cut out of the precipice, and one looks down the jagged ribs of rock on the stream 2,000 feet below, so far beneath that the wind sweeping through the gorge drowns the roar of the torrent. On the opposite cliff the splintered buttresses that tower above the river are the shoulders of Raldang. No valley intervenes; one looks up through the forest to the glaciers hanging over it.

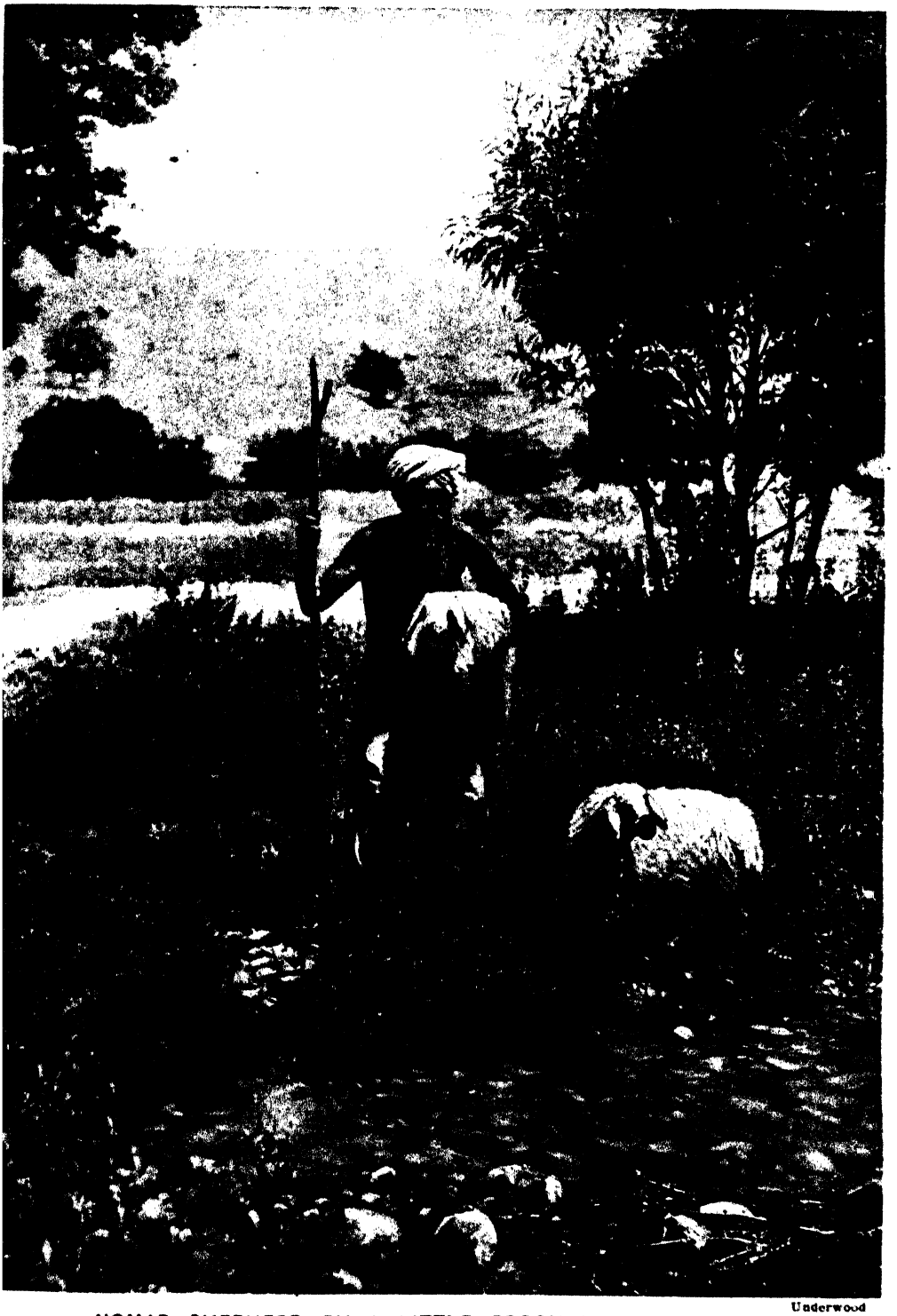
The hill folk in this valley, and all over the Himalayas, are animists though they call themselves Hindus. They believe that every tree has its little deva, or spirit, and whenever they fell one, they place a stone on the lopped trunk to keep the genius within. Their temples of stone and cedar wood, roofed like pagodas with overhanging fretted eaves, stand in groves of deodars, which being sacred are protected, and thus attain an immemorial age and a girth corresponding. But long before one reaches the frontier, before the deodar gives place to the blue pine in the dry country that reeks of southernwood, one encounters symbols of the cult of the dwellers on the roof of the world—here a praying wheel, there a mani-wall or a chorten or a pagoda-roofed arch frescoed with Buddhistic script.

Pilgrim and Mountaineer

One meets Tibetans driving their flocks of goats laden with skin-bags of rock salt and borax, sometimes with a kid or two behind, and helped along by the drover with his crook while his other hand piously revolves the wheel.

At Chini I met a shock-headed bairagi drifting round Kailasa, mumbling inarticulate prayers. The circumambulation of the peak is one of the lesser pilgrimages, but the true Sadhu leaves nothing to chance. He seeks merit wherever tradition or piety declare it is immanent, and this is naturally where the earth goddess reveals herself in some sovereign shape, generally in the innermost recesses of the hills. So it happens that the unbelieving mountain-lover and the Hindu pilgrim often follow the same path.

I have been on many pilgrimages to Hindu temples in the plains and in the mountains, but I know no natural shrine



Underwood

NOMAD SHEPHERD BY A LITTLE BROOK IN FAIR KASHMIR

There are wandering bands of shepherds in the Indus area of Kashmir, which comprises the provinces of Ladakh, Baltistan, Gilgit and Hunza. The chief occupation, however, is weaving; and though the famous Kashmir shawl has now been displaced to some extent by the Kashmir carpet, silk-weaving is still the most prosperous industry at the present time

so awe-compelling as the cave of Amarnath on the borders of Kashmir and Ladakh. It is Siva's reputed dwelling-place, a mansion fit for divinity. The roof is a 17,000-foot peak, under which the god and his spouse, Parvati, dwell, congealed in two green stalactites in the atrium of the cave. The pilgrims who are drawn to Amarnath in thousands from the burning plains of India—the cave is twenty-three marches from the railway at Rawalpindi—worship these pyramids of ice as a manifestation of the First Cause, the genesis of Energy, of which the image and emblem, the stone lingam of Siva, stands at the door of every temple dedicated to the god.

Haunts of the Sportsman

A number of small semi-independent states intervene between Simla and Kashmir. Chamba, the most important of these, is preeminently the haunt of the sportsman. On the snowy slopes the ibex, red bear and tahr are found. The tahr, a species of wild goat, inhabits inaccessible crags. Like the serow he has a large body, but a disappointingly small head. The markhor, on the other hand, another wonderful climber, has a remarkably fine head. His habitat is farther west in Kashmir and the adjoining territory. The red bear is becoming scarce in Chamba, Kashmir and Kulu, which he used to haunt.

Bird Life of the Forests

The black bear, however, is ubiquitous all over the Himalayas; he changes his ground with the season, and in summer is generally found near the ripening maize. The gooral, or Himalayan chamois, frequents the crags and forests of the lower ridges. But the ordinary traveller who is not bent on "shikar" (hunting) might traverse the Himalayas from end to end without meeting any of these beasts.

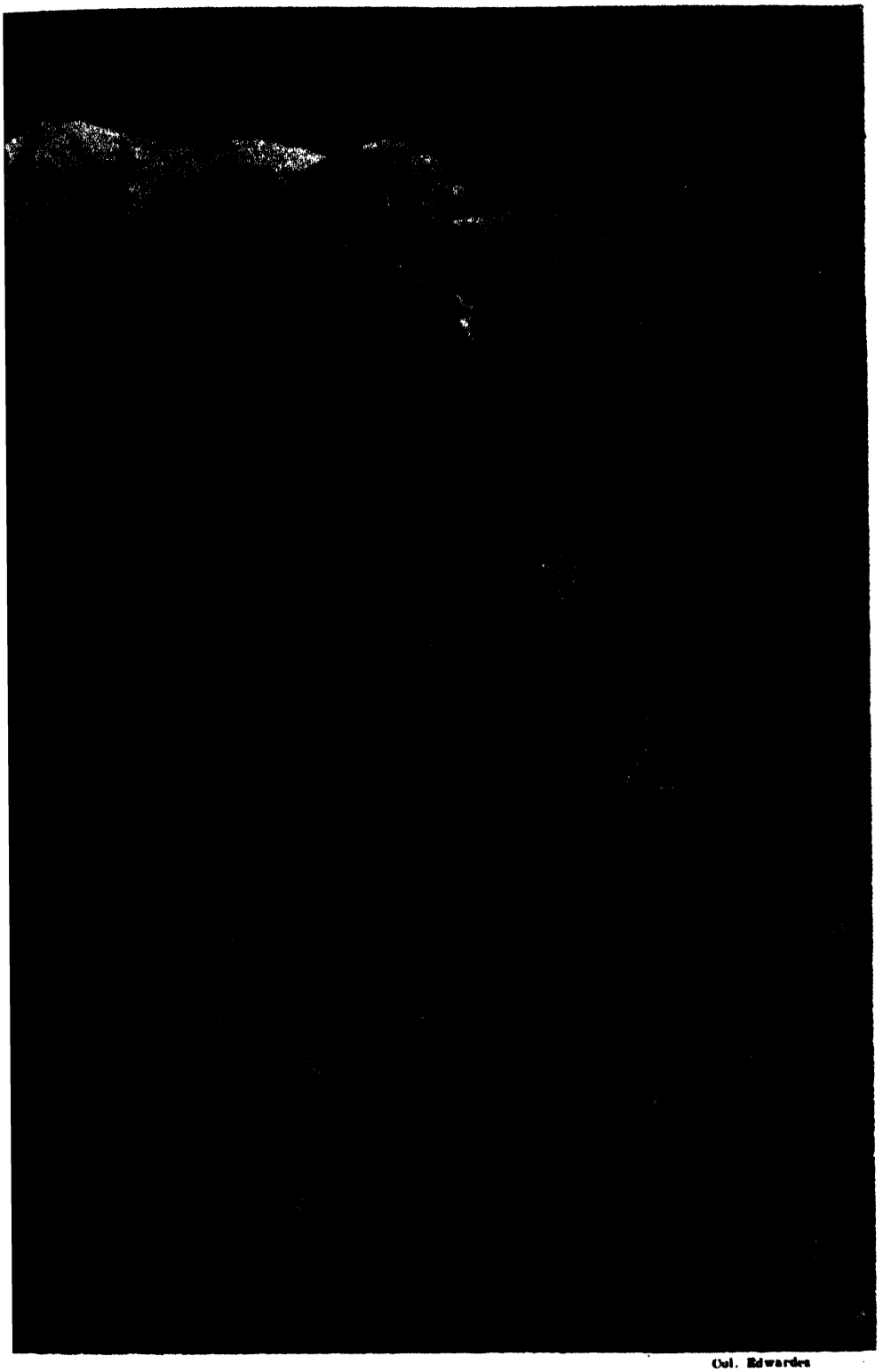
Bird life is more plentiful. The forests are a happy hunting-ground for the naturalist, though a little disappointing from the point of view of the sportsman. The Himalayan pheasants, for instance, seldom rise, and when they do, it is difficult to get a shot at them in the thick jungle. On the middle ridges the monal is plentiful. The cock bird, as all sportsmen know, is with the exception of the argus-eye the most beautiful pheasant in the world. On the Sikkim-Tibet border, where the snow melts in the pine forests and leaves soft patches and moist earth, you will find the blood pheasant. The hen is insignificant, but, on a closer acquaintance, the cock shows a delicate colour scheme of mauve, pink and green, which is different from the plumage of any other bird I have seen. Another pheasant of the Sikkim borders is the tracopan, a smaller bird than the monal and very beautifully marked.

The snow partridge is found among the large loose boulders on the crests of the inner ranges. These birds are gregarious. In appearance they are a cross between the British grouse and the red-legged partridge, having red feet and legs uncovered with feathers and a red bill and a chocolate breast.

Kashmir and its Borders

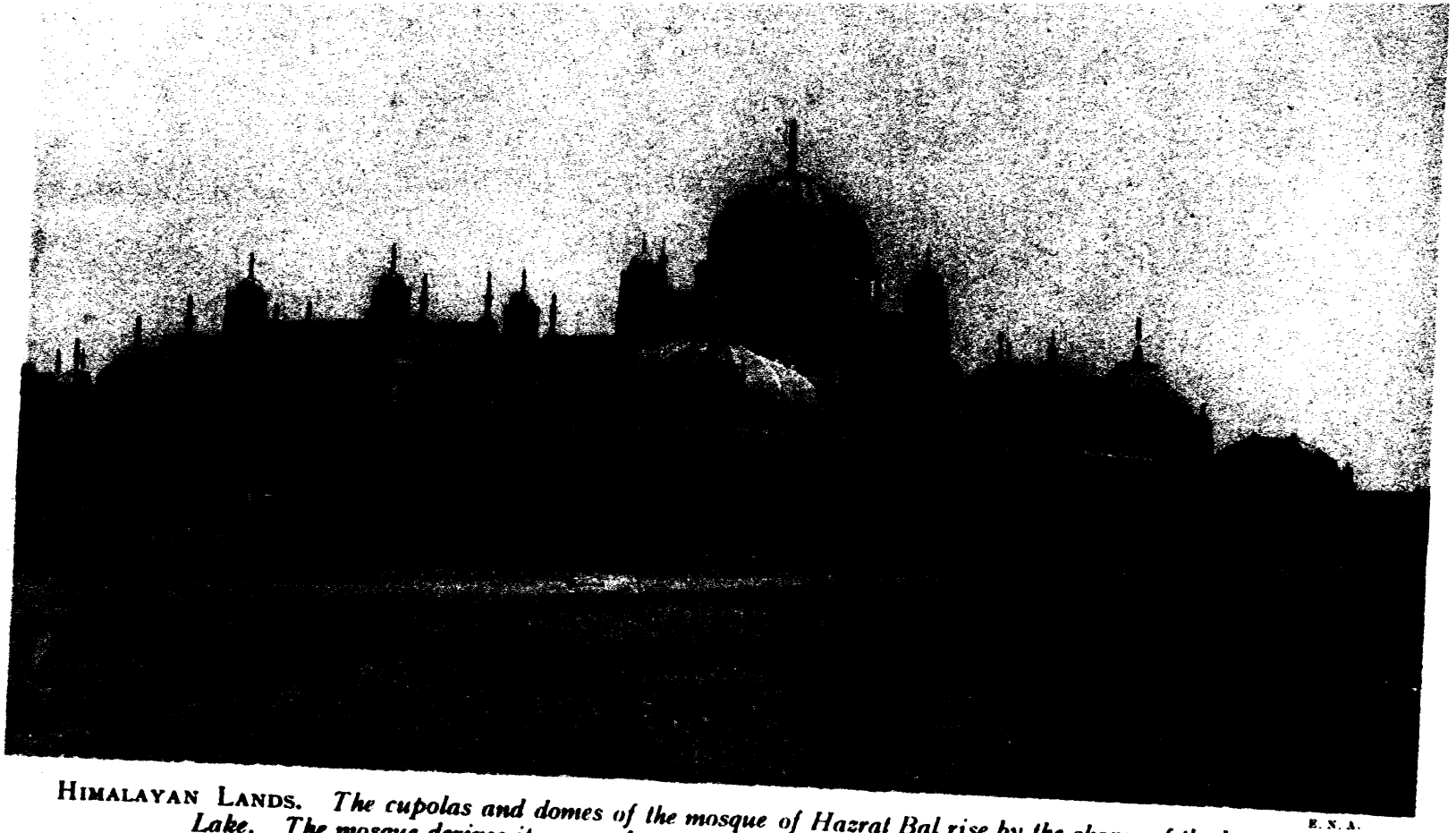
The chikore, a red-legged partridge very like the European variety but larger, is found on the bare hillsides of the Western Himalayas. He is a strong flier, providentially gregarious, and affords the best shooting in the hills.

The territory of the maharaja of Kashmir includes the western extremity of the Himalayas as established by geographers for the sake of definition only. The Indus is the boundary, and Nanga Parbat, that magnetic peak, which is visible sometimes from the valley of Kashmir, is the western bastion. Beyond the Indus, to the north and north-west, lies the wild country including Chitral, Yasin, Punyal, the Gilgit valley, Hunza and Nagar, which is collectively, though not very scientifically, known as Dardistan. Here we enter the Hindu Kush range, which extends in a south-easterly direction into Afghanistan.

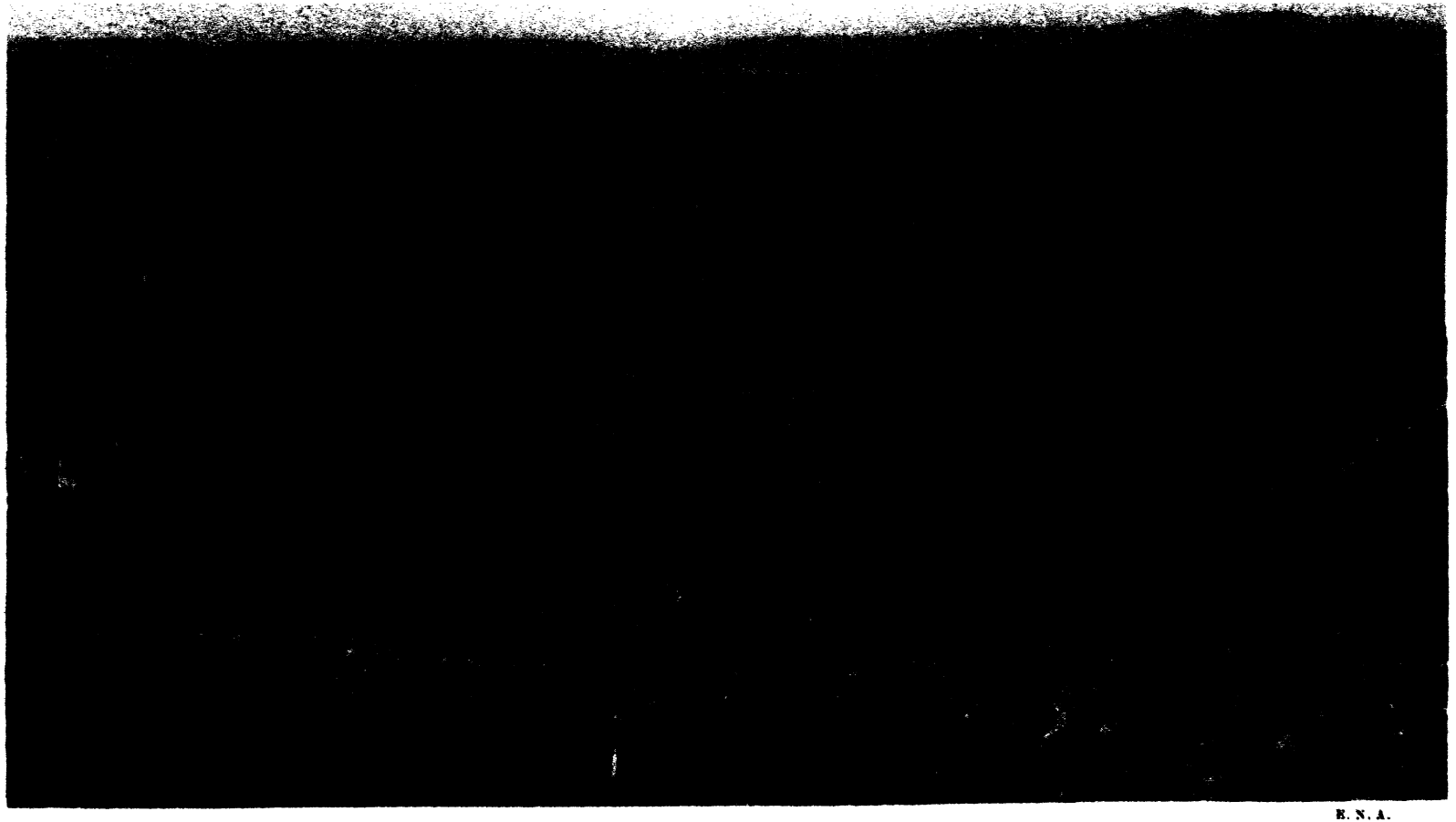


Col. Edwardes

HIMALAYAN LANDS. *Machicolated galleries for downward fire, barbed wire and Gurkha garrison keep the block-house against Chitralis*

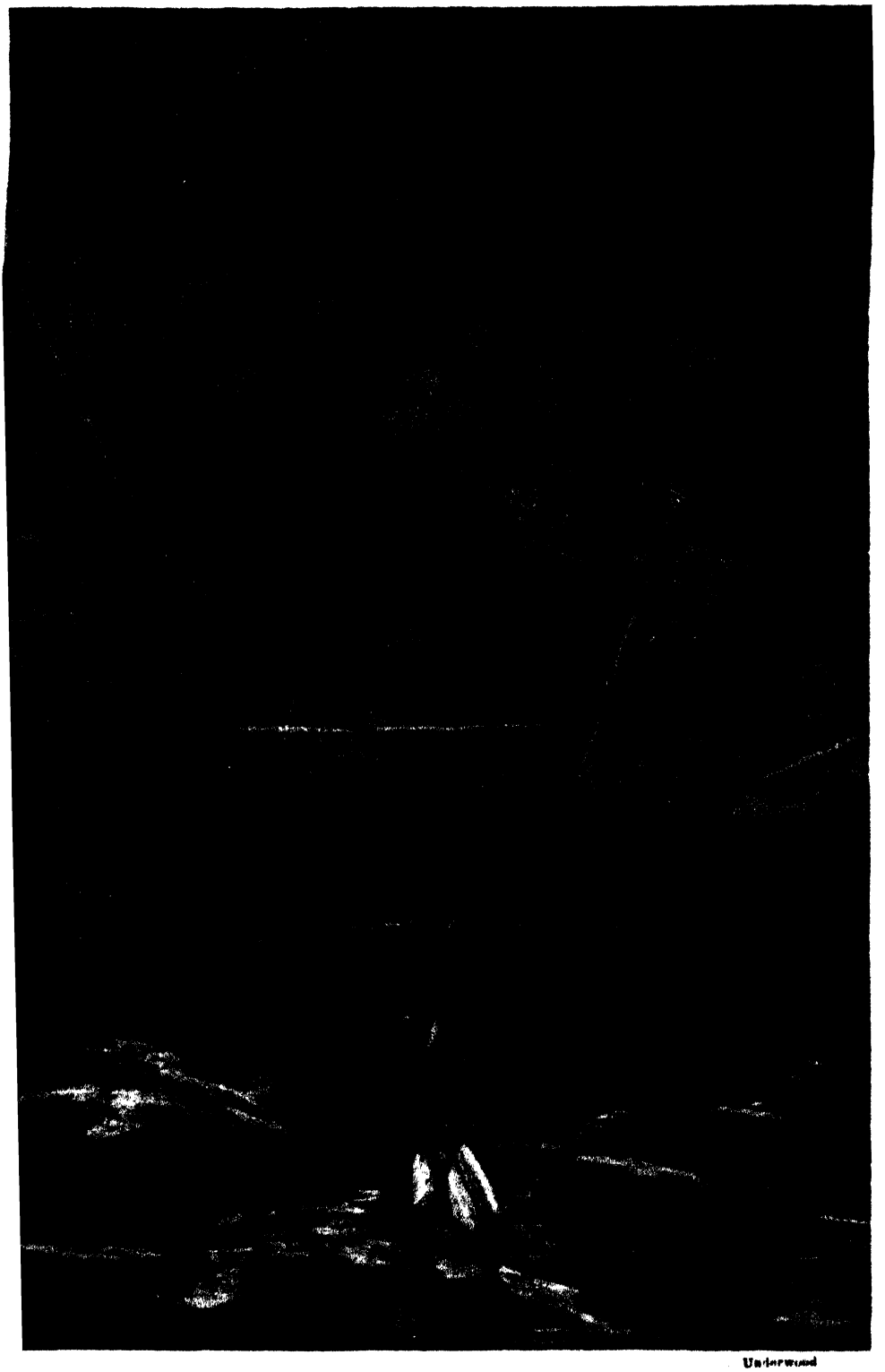


HIMALAYAN LANDS. *The cupolas and domes of the mosque of Hazrat Bal rise by the shores of the beautiful Dal Lake. The mosque derives its name from a hair of Mahomet believed to be preserved there* E. N. A.



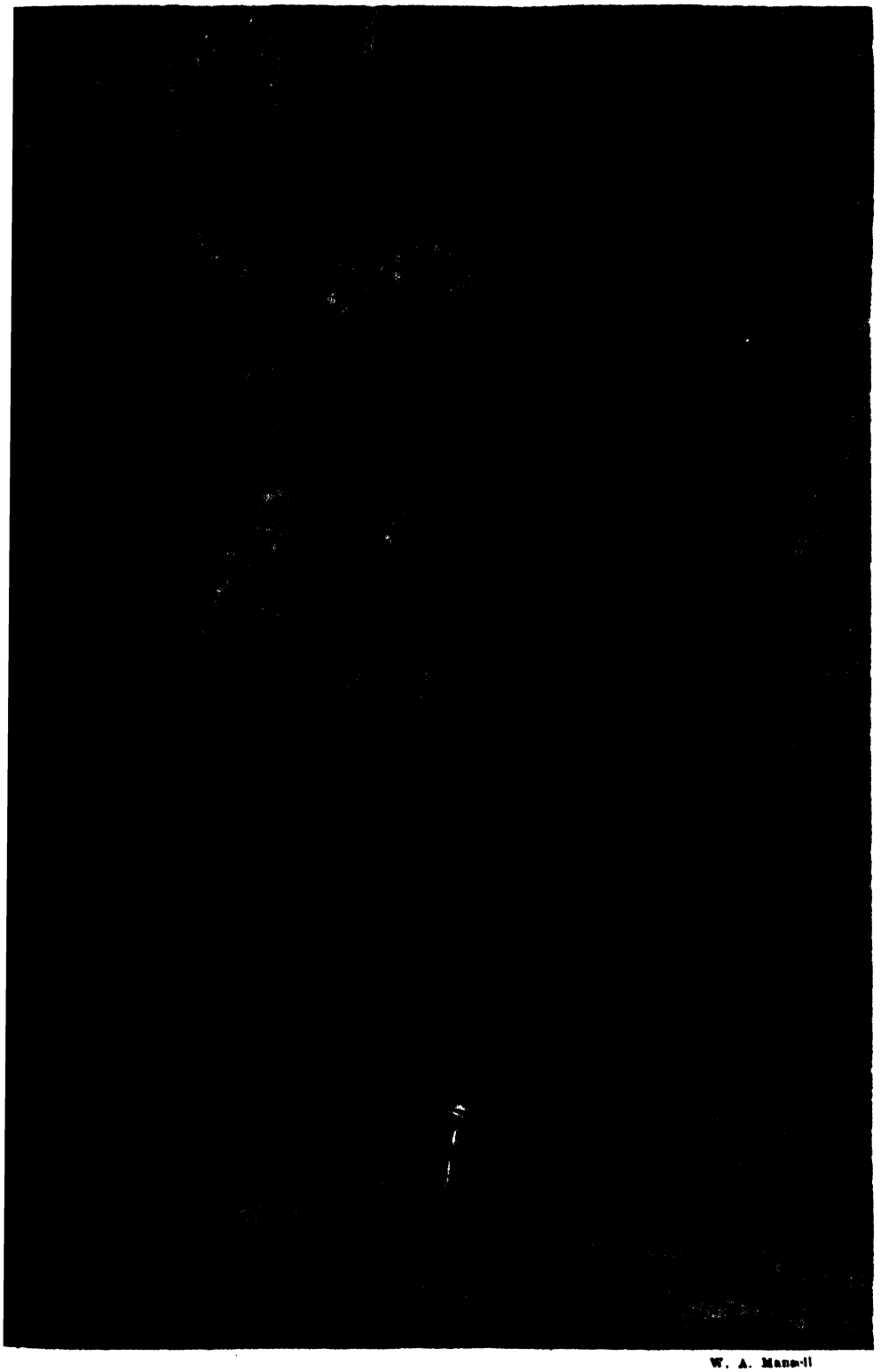
E. N. A.

HIMALAYAN LANDS. *About five miles from Islamabad are the ruins of Marland, which include the largest temple in Kashmir and the finest examples of the ancient Kashmiri style of architecture.*



Underwood

HIMALAYAN LANDS. *This man-made spider's web of a rope bridge sways giddily above the seething flood of the river Jhelum at Uri*

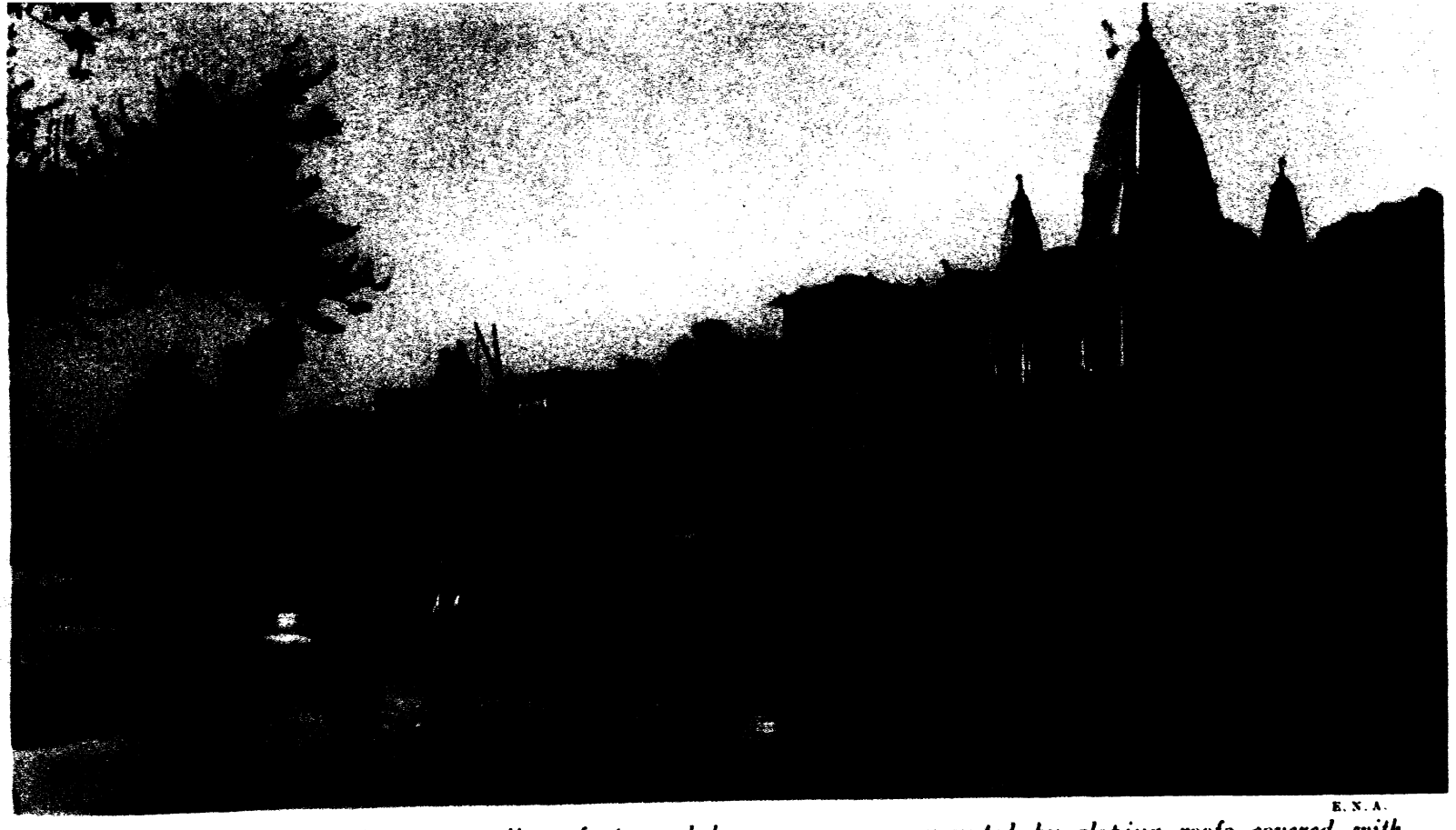


W. A. Mansell

HIMALAYAN LANDS. *On the road to Gangtok through Sikkim's dank woods the creeper riots triumphant over the trees it has smothered*

E. N. A.

HIMALAYAN LANDS. *A wooden bridge on quaint tree-grown piles spans the Jhelum at Srinagar, the former hot-weather capital of the Moguls situated in the centre of the "Happy Valley"*



E. N. A.

HIMALAYAN LANDS. *This uneven line of storeyed houses, some surmounted by sloping roofs covered with earth, straggles along the bank of the Jhelum which winds through the ancient city of Srinagar*

B. N. A.

HIMALAYAN LANDS. *Above the clouds that wreathe the mountains of Darjeeling rises the awful wall of Kinchinjunga whose name means the "five treasure-houses of the great snows." The highest peak is* 28,146 *feet*

The physical features of Kashmir, "the terrestrial paradise of the Indies," as the old Moguls used to call it, are easy to fix in the mind. One thinks of it in three parallel strips lying north-east and south-west. First, the range of the Pir Panjal, the barrier that separates "the happy valley" from India; then the valley itself, the plain of Kashmir—Akbar's and Jehangir's paradise, admittedly the nearest approach to Eden on earth; and lastly the chain of sheltering hills which rise in tiers of transcendent grandeur from the mountain wall to the north. "An emerald set in pearls" was the Mogul simile. For the valley is always green and for nine months in the year the inner circle of hills that rings it in is snow-capped. Farther north lie the eternal snows. Nanga Parbat (26,620 feet) is visible from points in the valley, and K^2 (28,278 feet), or Mount Godwin-Austen, from within a day's journey.

Paradise of Pir Panjal

The Pir Panjal, the southern wall through the passes of which Kashmir is entered from the plains of India, is the most delightful playground in the Himalayas. Elsewhere one's feet and soul cry out for a flat place under the snow, but the knife edges of the hills fall away sheer into the valleys. In the Pir Panjal there are open spaces, where one can gallop over downs of close bitten turf and through forest glades. One looks down into the golden valley through a vista of meadows dotted with clumps of birch and maple and pine, and each of these park-like uplands is a garden through which you cannot tread without crushing flowers underfoot.

But it is not the flowers alone that make the paradise. Nearly every mountain range in a temperate climate with sufficient rainfall is more or less a garden. It is the setting of the garden that gives the Pir Panjal its rare distinction. To say that it commands a wide view of the plain is to convey little. From most Indian hill stations, or their neighbourhood, one gets such a view. But the plain one looks down on from Gulmarg is a mountain plain, another garden, or pastoral enclosure under the rock garden, very different from the verdureless expanse of the Punjab, parched and burnt to the shades of dull copper and gun metal. The green and golden valley at the foot of the Pir Panjal is over 80 miles long and from 20 to 25 miles broad, and lies at an elevation of some 5,000 feet to 5,500 feet above the sea. It is blessed with all the fruits of the earth, and every corner of it is beautiful.

Lovely View Half Veiled

From the Pir Panjal one does not look out on infinity as from the southern-facing slopes of the Himalayas, where the view is illimitable, a sublime monotony of colour varied only by cloud shadows and metallic tints. It is to its salient limitations that the Vale of Kashmir owes most of its loveliness. Twenty-five miles of plain is enough to satisfy the eye. If a mist is interposed, obscuring the lakes and mountain buttresses, one can still carry away an impression of unforgettable beauty and mystery. Having seen the half picture one might still subscribe to the praises of Bernier and the Moguls and Tom Moore. A demi-Eden at least. But the whole picture, when the veil is lifted, leaves no doubt.

When the Mist Curtain is Gone

The scene is complete and transfigured, as the mists fall away from the northern wall. One understands then why the valley with its encircling hills is renowned as the most wonderful piece of landscape gardening that Providence has designed in the earthly scheme.

The visitor to Kashmir seldom sees the Pir Panjal in spring. Up to the end of the second or third week of April Gulmarg is uninhabited; all through the winter the huts lie deep in snow. It is only in May and June when the valley grows hot and the mosquito

Major H. S. Cardew

GOHNA LAKE IN GARHWAL FORMED BY A TREMENDOUS LANDSLIP

Garhwal, a district in the Kumaon division, has an area of about 4,200 square miles and consists almost entirely of steep and rugged mountain ranges extending in every direction and separated by deep gorges and ravines. The cultivated area is small and principally confined to the banks of the rivers. The distant triple summit is that of Mt. Trisul, which is over 23,000 feet high

becomes a burden that folk flock up to the summer capital. The place is nothing more than a huge caravanserai, a collection of tents and wooden huts, the maharaja's palace, the residency, and one sprawling hotel. You might leave Kashmir without setting foot in the Pir Panjal and still think of it as the terrestrial paradise. The road from the railway at Rawalpindi to Srinagar drops into the Jhelum valley below Murree and follows the bank of the river cut into the edge of the cliff, until one comes to Baramula under the cedar forest and enters the vale of Kashmir.

In the last few miles before Baramula the torrent becomes a wide unbroken stream; the valley broadens out into rich corn and pasture-land; walnut and willow and elms enfold snug villages. At Baramula the Jhelum becomes navigable for the first time.

This is the threshold of the Kashmir of paradisiacal tradition, and the visitor, if he is wise, will forsake the road and continue his journey to Srinagar, the City of the Sun, in a houseboat. He will be poled and towed to the Wular lake. He will visit Manasbal, the most beautiful lake in the world, if we except the Dal. On the fourth day he will enter Srinagar. Like all dirty, picturesque, dilapidated, old Eastern cities built on a river bank it is best seen from a boat. The smells are chastened in midstream, and the filth of ages never

Major H. S. Cardew

FAMOUS TEMPLE OF VISHNU IN THE VILLAGE OF BADRINATH

Badrinath in the Garhwal district is a village situated on the Vishnuganga and inhabited by the Brahmans and attendants of the temple. This building, about 50 feet high and conical in shape, is surmounted by a cupola with a gilt ball and spire, and contains the shrine of Badrinath. Every twelfth year, at the celebration of the feast of Kumbhmela, about 50,000 pilgrims visit the temple

offends the eye. The houses are brown, of wood and brick, two or three storeyed, with carved latticed windows and fretted balconies, and roofs covered with moss and grass and flowers. In the mosques and some of the houses the projecting roofs are carved and ornamented, generally in the shape of hanging bellflowers. Women and children crowd the balconies and river steps. Their dresses, a kind of jibbah with loose upturned sleeves, magenta, green, terra-cotta or purple, glow in strong relief against the quiet tones of the old wood and brick.

Srinagar lies between two hills—to the west the sprawling yellow fort of Hari Parbat, to the east the Takht-i-Suleiman, Solomon's throne, rising 1,000 feet above the plain. The Dal lake laps the bases of both hills; both are reflected in its clear waters. In colour and outline, shadow and light, the image is as beautiful as the substance. It is a spring-fed lake of crystalline clearness. The surface, five miles in length and two and a half in breadth, is broken by belts of gigantic reeds, bulrushes, floating gardens and islands. The vegetation, which has encroached on the lake, adds to its variety and beauty. One can spend mornings watching the birds—the terns, the grebes, the jacanas, the herons, the fish-eagles, the kingfisher dropping like a plummet from its crumpled lotus

E. N. A.

WHITE MOUNTAIN PEAKS ABOVE THE CLOUDS MIRRORED IN THE FLOODED VALE OF KASHMIR

The valley of Kashmir is an oval plain some 80 miles in length and 20 to 25 miles in breadth at an average height of 6,000 feet and encircled by the outer ranges of the Himalaya systems. Some idea of the vast height of this mountain wall may be gained by covering the top part of the photograph with a piece of paper and considering the view of the mountain behind the trees as an ordinary landscape. Then raise the paper slowly. The crest of this range is nearly four miles above the plain, which is watered by the Jhelum and its tributaries and is sometimes flooded during heavy rains

leaf, the dark red dragon-flies, the lazy fish burrowing into their green underworld. Or one can watch the craft in the channels on the Srinagar side coming back from the gardens with their market produce, boat-loads of enormous pumpkins, water weed for cow fodder, rushes and reed and osier for matting and fuel and thatch. There are gardens of coxcombs in the dry patches between the dykes, a rich warm glow of colour, and fields of bright marigolds which the orthodox Hindu plucks daily to strew on the altars of Siva. At every turn in these winding creeks one catches some new glimpse of the hills, the brown and mauve crags over the Nishat Bagh, the thimble-like shrine on the Takht-i-Suleiman, or to the south Tatakuti in the Pir Panjal rimmed with fresh snow.

Beside the Shalimar

The Nishat, Shalimar and Nasim Baghs on the shores of the lake, the legacy of the Moguls, are the most beautiful gardens in Asia. The Nasim, or garden of breezes, more a park than a garden, is memorable for its spacious groves of chenars planted by Akbar in the sixteenth century. The Shalimar in the north-east corner of the lake was the pleasaunce of Jehangir and Nur Mahal celebrated by Thomas Moore in Lalla Rookh. All these gardens are built on the same plan. A spring-fed conduit runs down the centre, dropping from terrace to terrace by a series of cascades into reservoirs in which fountains are playing. The wall of the basin of marble or old limestone is niched for lights which glisten on nights of festival behind the falling water. The central conduit is bordered by paths with flower beds on either side, intersected by other paths at right angles between the lawns, which are symmetrically planted with magnificent chenars.

Architecturally, in symmetry and formalism, the Shalimar has best preserved the old Mogul atmosphere and tradition, but the Nishat Bagh is incomparably the finer of the two. This is due to its natural setting, its spacious lawns and terraces falling away from the bold and coloured crags behind to the green shores of the lake, so that the last pavilion, embowered in roses and jasmine, overlooks a bed of lotuses. The Pir Panjal, 20 miles beyond the opposite shore, forms the southern screen.

Lofty Pass into Ladakh

The mountain scenery of Kashmir, wild and pastoral, is inexhaustible in its variety. This great diversity of landscape in a small compass is not repeated elsewhere in the Himalayas. From Bandipura on the Wular lake one may climb the zigzag path to Tragbal, which leads over the Burzil and Kamri passes to Gilgit and the Pamirs. Ten days out of Srinagar one may camp under the Tarshing glacier in the Rupal nullah at the foot of Nanga Parbat.

Or one may leave one's houseboat at Ganderbal, and after seven easy marches one has crossed the Zoji-la (11,300 feet), the lowest depression in the northern wall, and is well on the road to Leh in Ladakh. But the scenery of the mountain country beyond the watershed is of another order of grandeur, wild and inhospitable. Kashmir scenery appeals more to the pastoral bias in the traveller. The country, whether he enters it from the south or north, is an idyllic contrast to the barrenness, whether of parched plain or rocky wilderness, he has left behind.

Trees in Coloured Procession

It is a green world, and bubbling water-courses chatter among the poplar and chenar trees and run underneath the road, feeding the rice-fields and turning little mills like rabbit hutches laid across the stream. These rivulets mean a double border of flowers by the edge of the road, a line of homely English wayside plants. The edge of the field, especially where a wooded hill falls abruptly into the valley, is often

overgrown with a forest of balsam, which varies in colour with sun and shade and soil, so that one sees it descending the ravines like a marshalled procession, group behind group, in uniforms of pink or white or yellow.

The paths rise gently from the river through a rich country dotted with shady villages. Fat marsh plants border the dykes of the green lanes that lead off on either side to the hamlets through avenues of willows. The villages are embowered in groves of walnut, elm and chenar, apple orchards and clumps of hawthorn.

Lake Garden of Lotus

The walnuts are the largest I have ever seen; the grass under them is starred with balsam and larkspur. The irises, the small purple kind, grow in thick clusters, so close together that they look like a sown crop. They flood the humble graveyards outside the village and make flower beds of the flat grass-grown roofs of the houses.

Such is the valley in spring. Summer has other charms. The window of one's houseboat opens on to a garden. The Dal lake then is ablaze with the tall pink lotuses, acres and acres of them, through which a channel is preserved with difficulty for navigation. One hears a great deal of the heat, but the thermometer seldom rises above 80° or 85° F., and the air is freshened with constant showers. Still, in July or August most of the visitors will have gone to the upland plateaux, either to Gulmarg or to the camping grounds in the valleys of the northern tributaries of the Jhelum.

Dread Work of the Glaciers

There is good trout fishing in the side streams preserved by the state. And sportsmen who have time to go farther afield can generally count on a head or two of markhor or ibex or red bear. The season of the black bear and of the Kashmiri stag is the autumn.

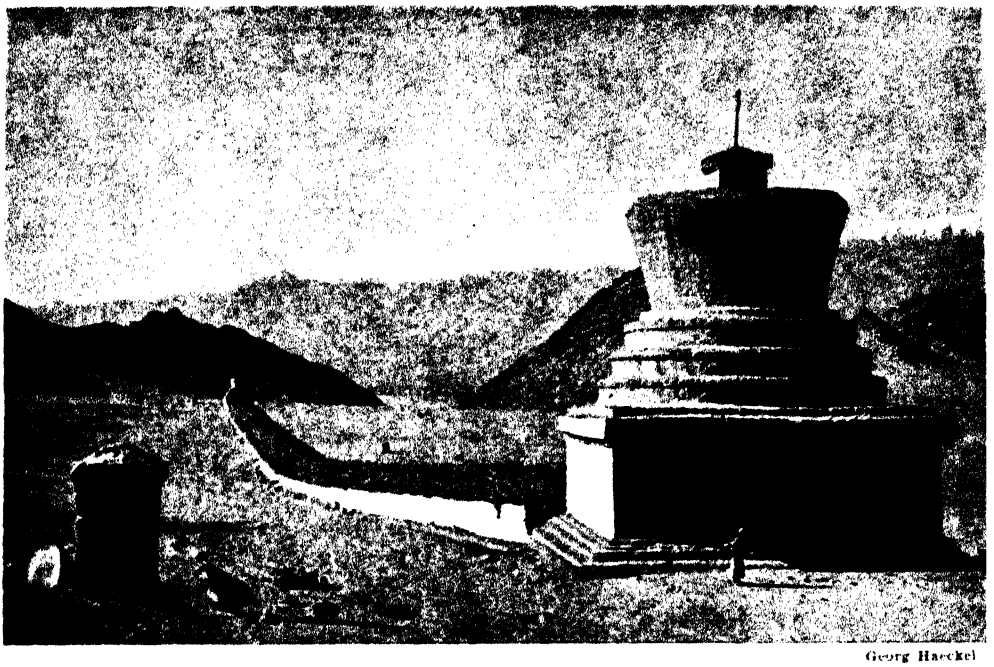
The country to the north of Kashmir is the best field in which to explore the ice world of the Himalayas. Beside the glaciers of the western Himalayas and the Karakoram those of the Kinchinjunga group at the eastern end of the chain are inconsiderable, while the glaciers of the Alps offer no standard of comparison. The movements of these ice-fields are governed by no ordinary laws. They gather impetus from the tremendous height and precipitousness of the cliffs from which they are discharged. The Yenugutsa glacier in the Hispar district is known to have advanced at least two miles, swallowing up water mills and converting a cultivated valley into a waste.

The Hassanabad glacier in Hunza is believed to have advanced six miles in two and a half months, threatening villages in its course. When I visited the Diamarai glacier on Nanga Parbat in 1913 a sudden ice flood seemed to have swept over the surface of the old glacier, which had descended and carried away miles of pasture-land on the south bank of the Indus. We looked down on tumbled chaos.

A Picture of Destruction

From the pass above the Diamarai nullah the millions of spires and cones reminded us of a graveyard. Down the centre of the valley the lateral moraine stretched clear-cut like an enormous railway embankment. When we descended we found that this great wall, which rises at its highest 250 feet above the glacier bed, was being dislodged by the impact of new forces.

Huge blocks of ice, shiny turrets and pinnacles, were lifted up 40 or 50 feet above it and hung on its edge, supporting boulders which were continually slipping away, so that the hollow below our tents was being pelted by a stone shoot all night. This monster was alive, shaping the hills anew. It crushed, devoured, disgorged; it carried ruin on its back; it had heaved and stretched its snout across the valley, and was bursting in the cliffs on either side.



Georg Haeckel

MILE LONG MANI-WALL ON THE WIND-SWEPT PLATEAU NEAR LEH

These walls are constructed of stone and covered with stone flags, on which is cut the sacred Buddhist formula, "Om mani padme hum," meaning, "O, the jewel in the lotus." They are built in order to acquire merit in a future life. Leh, situated four miles from the Indus, is the capital of Ladakh and a caravan centre between India, Kashgar, Yarkand and Lhasa

John Bushby

TREE-CLAD FLANKS OF STUPENDOUS MOUNTAINS NEAR SONAMARG

Sonamarg, situated in the Sind valley 8,500 feet above sea-level, was once the principal sanatorium in Kashmir. The heights above look down into the lovely valley of the Sind river and among the peaks are many small glaciers. Around Sonamarg are numerous beautiful pastures in the form of low tablelands at the foot of many of the spurs running down to the valley

E. N. A.

BUDDHIST TEMPLES AND CROWDED HOUSES IN THE STRAGGLING CITY OF KHATMANDU

Khatmandu, the capital of Nepal, lies on the bank of the Vishnumati at its confluence with the Baghmati, and is believed to have been founded in A.D. 723, taking its name from an ancient wooden building in the centre of the city, "khat" meaning "wood." The streets are extremely narrow and often dirty, while the houses, which are built of brick, have two or three storeys and many are ornamented with richly carved wooden balconies. The city has a population of about 80,000 and outside it are the British residency and the palaces of the maharaja and the nobles. In the centre is the huge caravanserai

The narrowest point, where we crossed, was three or four furlongs wide. Our men had been cutting steps before dawn and we had made a portable birch-wood bridge for the crevasses. They were not wide and held no surface snow. The only danger lay in the boulders which hung on the cliffs of ice above our heads, but we crossed before the sun had power to loosen the debris. We ascended and descended many cold staircases, and seldom could we see beyond the wall in front and the wall behind. The glacier here was black with debris, and the jagged turrets of dirty ice shone like smooth damp coal. The ghostly company took on strange shapes in the mist, curled and polished, hooded and cowled; their black and dripping garments offered a suggestion for an allegorical picture of lost souls.

But nothing could have been lovelier than the glen beside the moraine where we camped in a forest of scrub willow, birch and mountain-ash. Spires of the rose-bay willow herb waved gently in the breeze. The vivid crimson of the stalk and leaf of the wild rhubarb was brighter even than the berries of the eglantine of which there were still a few lingering pink blossoms. The floor of our tent was a carpet of swertia, gentian and golden rod. The ravage of the glacier was hidden by a group of whispering birches. And at sunset the clouds which had been sweeping over Nanga Parbat all day lifted and revealed the great north-west wall, 14,000 feet of ice and snow and precipice bathed in rose and opal.

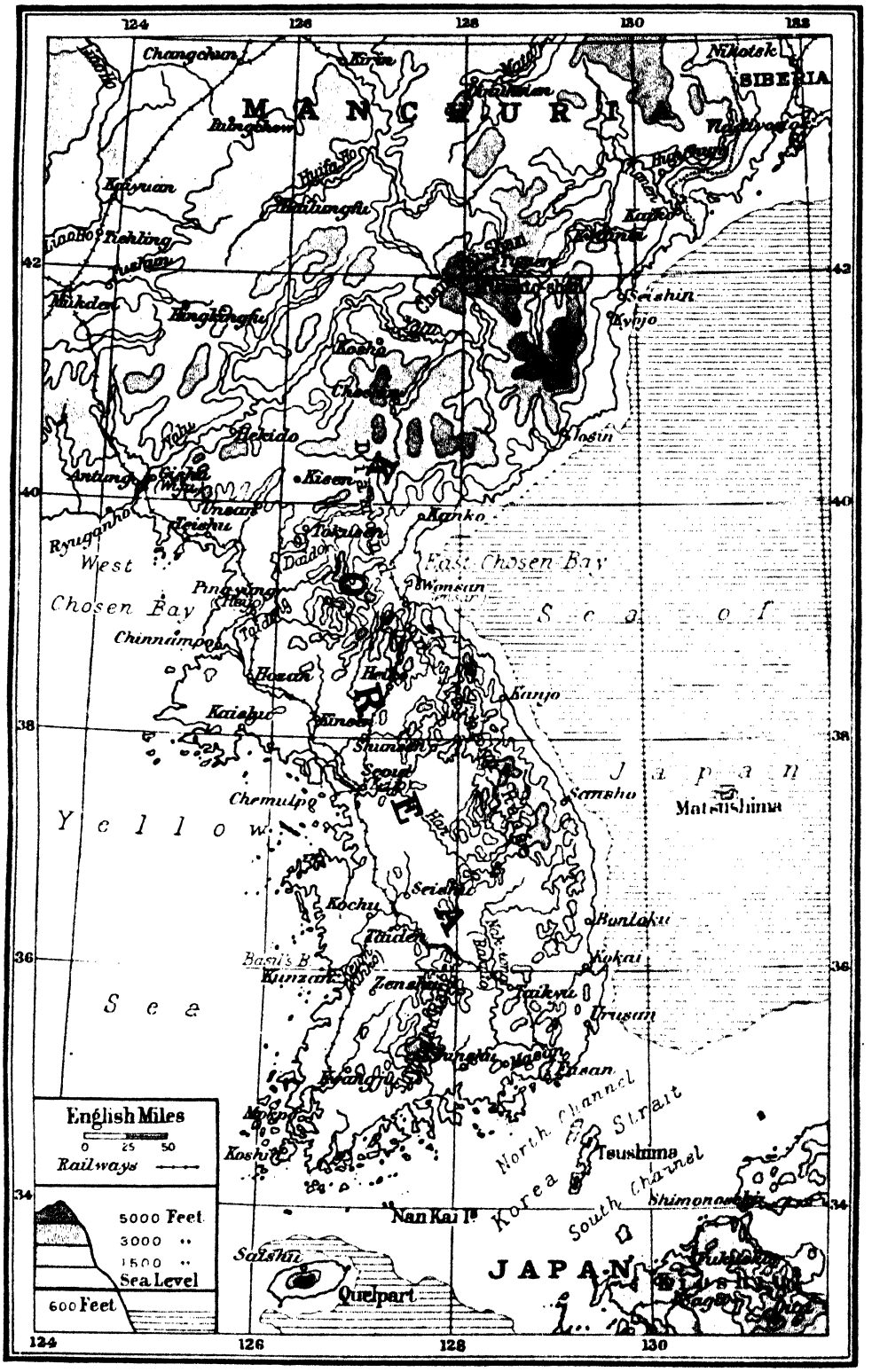
Of all one's memories of Himalayan travel it is these sylvan camps on the margin of the ice world, islands of Arcady, that recur most hauntingly. One forgets the rain, the blizzards and the snow; one only remembers the evenings of transcendent peace and beauty when the faintest shadows of colour linger caressingly on the weather-stained rock and light up caves and galleries which have been indistinguishable all day, when the soft violet haze merging into emerald suffuses the abrupt cloud rim that lies stretched at the foot of the snows, and the glaciers take on a mysterious sheen as though of one birth with the stars.

HIMALAYAN LANDS: GEOGRAPHICAL SUMMARY

Origin. In the early days of the world a great sea—the Middle Ocean, or Tethys—separated at its eastern end two ancient continents, Angaraland to the north-east and Gondwanaland to the south. Of the former China and north-east Asia is a relic; of the latter the Deccan of India is the main Asiatic remnant. In Tertiary times slow yet stupendous changes altered the face of the earth; steady pressures from the north built up against the resistance of the Deccan crust-block a series of folded mountains—the Himalayas, the giant mountain-ridge of the world, the eastern section of the great east-west mountain fold which joins North Africa and Spain to Burma. (Cf. Mediterranean Sea.)

Natural Division. Stretched in a curve, bowed out to the south-west, reaching to five and a half miles above sea-level as a maximum and three miles on the average, a jumble of peaks and ridges with intervening high level valleys drops relatively sharply to the plains, almost at sea-level, about 100 miles away; this is on the southern, the Indian side. On the northern side the plateau of Tibet is, in general, two miles above sea-level. On a gigantic scale, then, the Himalayas are an exaggeration of the Western Ghats and form a mighty scarp overlooking the plains, yet merely a serrated edge to an elevated plateau. The gigantic uplift has pushed upwards for at least a mile the granitic core-rocks of the earth's crust, and has raised almost into the levels of the upper air rocks laid down under the sea. Fossils have been discovered about four miles above sea-level.

Climate and Vegetation. Along the Indian face the climate is controlled by the monsoon winds which blow from May to September from the Bay of Bengal along the scarp and deposit decreasing quantities of rain from east to west. From the jungle swamps, the terai of the foothills, to the snow caps on the heights, the zones of vegetation succeed each other with increasing height as they normally do between Equator and Arctic with increasing latitude.



KOREA DIVIDING THE YELLOW SEA FROM THE SEA OF JAPAN

KOREA

Peninsular Link 'twixt China and Japan

by J. O. P. Bland

Author of "China, Japan and Korea," etc.

THE peninsula of Korea, or Chosen, stretches southwards from Manchuria, some 600 miles in length by 135 miles in breadth, with a coast-line of 1,940 miles. It lies between 34° 12′ and 43° 2′ of northern latitude and 124° 18′ and 130° 32′ of longitude east of Greenwich. The northern, or Manchurian, frontier is marked by the Tumen and Yalu rivers; on the east, by the sea of Japan; on the south, by the China Sea and the Strait of Korea, and on the west by the Yellow Sea. It is separated from Japan by a distance of 122 miles, and from the nearest point of the China coast by about the same distance. For some ten miles its northern frontier along the Tumen river faces Russian (Siberian) territory.

The area of the peninsula, including that of the islands of its south and west coasts, amounts to 85,229 square miles, of which the mainland covers 82,926 square miles—that is to say, its area is roughly equal to that of the mainland of Japan, and two-thirds of that of Great Britain. Census returns (1920) put the native population roughly at 16,916,000, not including 347,850 Japanese and 25,061 foreigners (principally Chinese). This gives a density of 204 inhabitants per square mile, as compared with 379 in Japan and 374 in Great Britain.

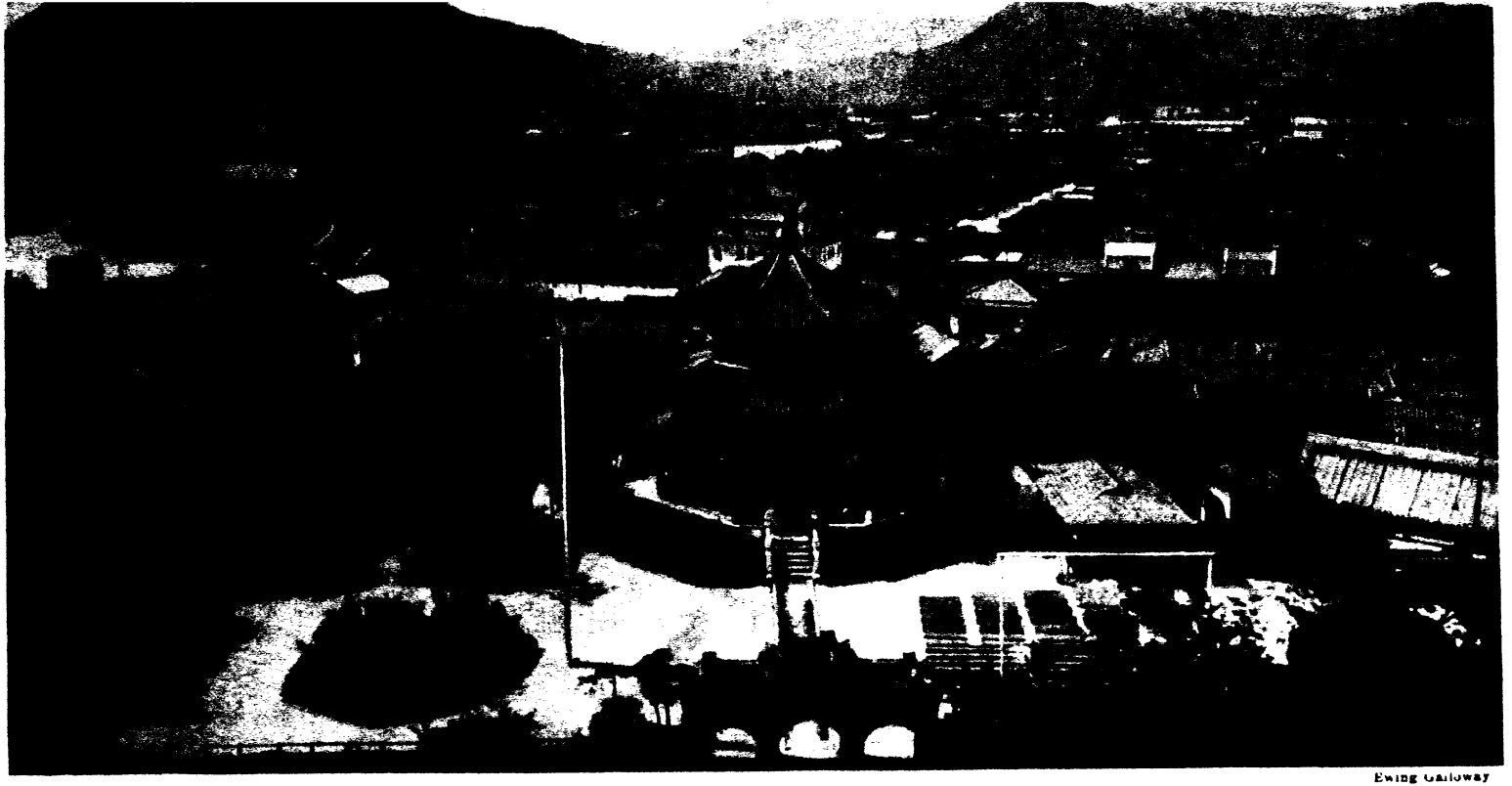
Mountains Famed in Song

The country is mountainous, especially in the north; the principal range runs irregularly along the eastern coast, throughout the entire length of the peninsula. Its highest peak is Mount Paikto-shan (8,000 feet), an extinct volcano, whereof the crater contains a lake greatly celebrated for its beauty in Korean and Japanese literature. Famous also for their lovely scenery are the Diamond or Taihaku mountains. Here, far from the noisy highways of the world, yet easily accessible, the traveller may enjoy nature at her serenest and best, and the sportsman find ideal hunting-grounds.

Railway Supersedes River

All the eastern coast of the peninsula is rocky and agriculturally unproductive, a land of mountains, narrow valleys and swift running streams, but on its western and southern sides there are broad and fertile plains watered by a number of rivers. Of these the Yalu, whose source lies in the heights of the Chang-pai-shan mountains, affords an important means of transportation for the region adjacent to the Manchurian border. Through the silt deposits of its estuary it makes its way by three channels into the Yellow Sea. Not far from its mouth lies the prosperous town of Gishu, formerly a small fishing village, where a great railway bridge now spans the river and a stream of travel passes into Korea from the western world.

The Tumen, rising on the eastern slope of the Long White Mountains, flows north-easterly and enters the Japan sea about 80 miles south of Vladivostok. The Taidong river, which flows into the Yellow Sea, is navigable by launches and flat-bottomed steamers from its mouth as far as the town of Ping-yang; in olden days it afforded a favourite route of invasion for the Chinese pirates of the Shantung coast. Other important rivers are the Keum, which flows into Basil's Bay, the Nak-tong, navigable from its mouth, near Fusan on the Korean Strait, for



Ewing Galloway

ANCIENT WALLED CITY OF SEOUL AND ITS BACKGROUND OF DENUDED GRANITE CRAGS

Seoul or Keijo, the capital of the former Korean Empire, is situated in the province of Keiki-do on the river Han about 35 miles from Chemulpo. The city is surrounded by walls from 19 feet to 20 feet high, which are pierced by eight gates, the largest being the Nan-Daimon or Great South Gate. On the right of the saddleback in the centre of the photograph is Mount Hokugakuzan at the foot of which is the Keifuku or Old Royal Palace, erected in 1850. Behind the residential quarters there is a banqueting hall 90 feet by 114 feet and supported by 48 stone pillars

over 100 miles; and the Han, which before the building of the railway provided the chief highway of travel and transport between Seoul, the capital, and the sea coast near Chemulpo, a distance of 50 miles. All these rivers serve not only for junk traffic but as reservoirs for the irrigation of agricultural lands: along and around their banks lie the most populous and prosperous districts of Korea.

The coast-line is irregular, and its aspect on the eastern side of the peninsula very different from that on the south and west. The eastern coast is generally precipitous and only slightly indented, providing only three serviceable harbours, of which Wonsan (formerly Gensan) is the best. The tidal rise and fall on this coast is about two feet, whereas on the sloping western shores it varies between 20 and 32 feet.

Tides that Rise 30 Feet

The southern and western coasts are deeply indented, fringed with thousands of islands, large and small, and provide a number of excellent harbours. Of these the most important are Fusan and Masampo at the southern extremity of the peninsula, and Kunzan, Mokpo, Chemulpo and Chinnampo on the west. At the two last-named ports the Japanese government has built docks to overcome the shipping difficulties caused by the 30-foot tidal rise and fall.

The most notable of the islands in the archipelago off the southern and western coasts are Quelpart, lying about 60 miles to the south-west of the mainland, the Nan Kai group in the Korean Strait, and Kang-wa off the mouth of the Han river. In spite of the buoyed channels and coast lights provided by the Japanese government since 1910, navigation in these waters remains difficult and dangerous because of their tidal currents and uncharted rocks.

A traveller journeying through Korea in former times—the writer made the journey with pack ponies in 1887—might easily have been led by the general aspect of the land and its inhabitants to conclude that it was a poor country, of very limited resources. Looking beneath the surface of things, however, it was not difficult, even then, to form a different opinion, to perceive that the comparative smallness of the population and its general apathetic inertia were not due to poverty of the soil, but rather to those political and economic conditions which deprived the individual of any incentive to work for more than the bare means of life.

Land of Equable Climate

As a matter of fact, now fully demonstrated by the preliminary researches and experiments of the government's model farms, the soil is sufficiently fertile, under proper conditions of agriculture, to afford the people a higher standard of living and leave a wide margin for export. It consists chiefly of light sandy loam, like that of Manchuria and North China, disintegrated lava and rich alluvium, varying in depth from three to ten feet.

The climate of Korea is one of the finest and healthiest in the world. It is a climate of regular seasons, giving a reliable rainfall during the summer when the soil needs it, and plenty of sunshine, with a brisk and bracing air during the remainder of the year. The winters in the higher latitudes are cold, but not more rigorous than those of Scotland, while in the south they resemble those of the Riviera.

Typhoon and Earthquake Unknown

The "Land of the Morning Calm" is never visited by the typhoons and hurricanes which make havoc in China and Japan; it knows not the ever-haunting fear of earthquakes, and is usually free from severe floods and droughts. The mean temperature of Seoul in summer is about 75° F. and that of the winter about 33°. The average annual rainfall is 36 inches, of which about 22 inches occur during the rainy season. The latter begins on the south coast in April, lasting till July; on the west and north-east

coasts it is usually confined to the months of July and August. The excellence of the climate and the kindly courtesy of the people make Korea an ideal country for travellers to visit, especially in spring and autumn.

Reckless Destruction of Timber

One of the most notable features of the landscape throughout Korea, and particularly in the more thickly populated districts, is the bleak and barren—because treeless—aspect of the mountains, which cover 71 per cent. of the area of the peninsula. "Give life to the mountains first," advised a Japanese official, "and you will give life to the nation." Had it not been for the destructive hand of thriftless generations these bleak slopes might be covered to-day, as they were in olden times, with a goodly growth of pine, oak, maple, ash, juniper, chestnut and birch, and rich with the vegetation of the temperate zone. In many parts of the country there are remnants of old forests which tell their own tale, not to mention the great undestroyed timber areas on the banks of the Yalu river and on the island of Quelpart.

Planting of Model Forests

It will take many years to restore the stony surface of the mountain sides to a tree-bearing state, but the authorities have taken the work energetically in hand and, as the result of their labours, green is beginning to replace grey as the dominant note of the Korean landscape, particularly in the vicinity of the larger cities. The good work was begun in 1906 by the creation of "model forests" covering a total area of 81,654 acres on the mountains near Seoul, Ping-yang and Taiku. These were planted with 18,000,000 saplings of pine, acacia, oak, larch, chestnut and cryptomeria imported from Japan. So keen was the immediate interest and cooperation of the people in afforestation that seven years later 310 seedling nurseries had been established in various parts of the country. It is safe to predict that by means of scientific forestry many of the evils will be remedied which unforested mountains inevitably inflict upon irrigation systems, river conservancy and harbour works.

No complete or authoritative classification has yet been made of the flora of Korea. The traveller notes, as in Japan, a profusion of azaleas and rhododendrons and many varieties of flowering shrubs; also, as in Japan, he notes the scarcity of song birds. Other birds, however, notably wild-fowl, abound in great numbers.

Extinction of the Korean Tiger

For sportsmen, the mountains and forests of the northern provinces offer a happy hunting-ground equal to any in the East. The Korean tiger, especially when clad in his superb winter coat, is a noble quarry and probably the finest specimen of the feline race on earth. Since the acquisition of modern rifles by the native hunters, and as the result of a keen demand for his skin at high prices, this magnificent beast is becoming rapidly rarer in the inhabited districts; as many as 500 skins have been exported in one year from Wonsan (Gensan).

Leopards are plentiful, also bears, boar, several species of deer, beavers, tiger cats, otters, sable and marten, and a number of other valuable fur-bearing animals. The wild-fowl include swans, bustards, geese, teal, mallard, mandarin ducks, snipe and woodcock. The imperial crane frequents the rice-fields, together with pink ibis, herons, storks, egrets and other waders. The peregrine falcon (used by the natives for hawking) is frequently seen, also black eagles, buzzards and kites.

Notwithstanding the rapid developments which have taken place during the last fifteen years in mining, fishery and industrial enterprises, more than three-fourths of the population of Korea live by agriculture. Compared with the highly intensive type of farming which man's struggle with nature has evolved in densely populated China and Japan, the husbandry of the Korean tillers of

Ewing Galloway

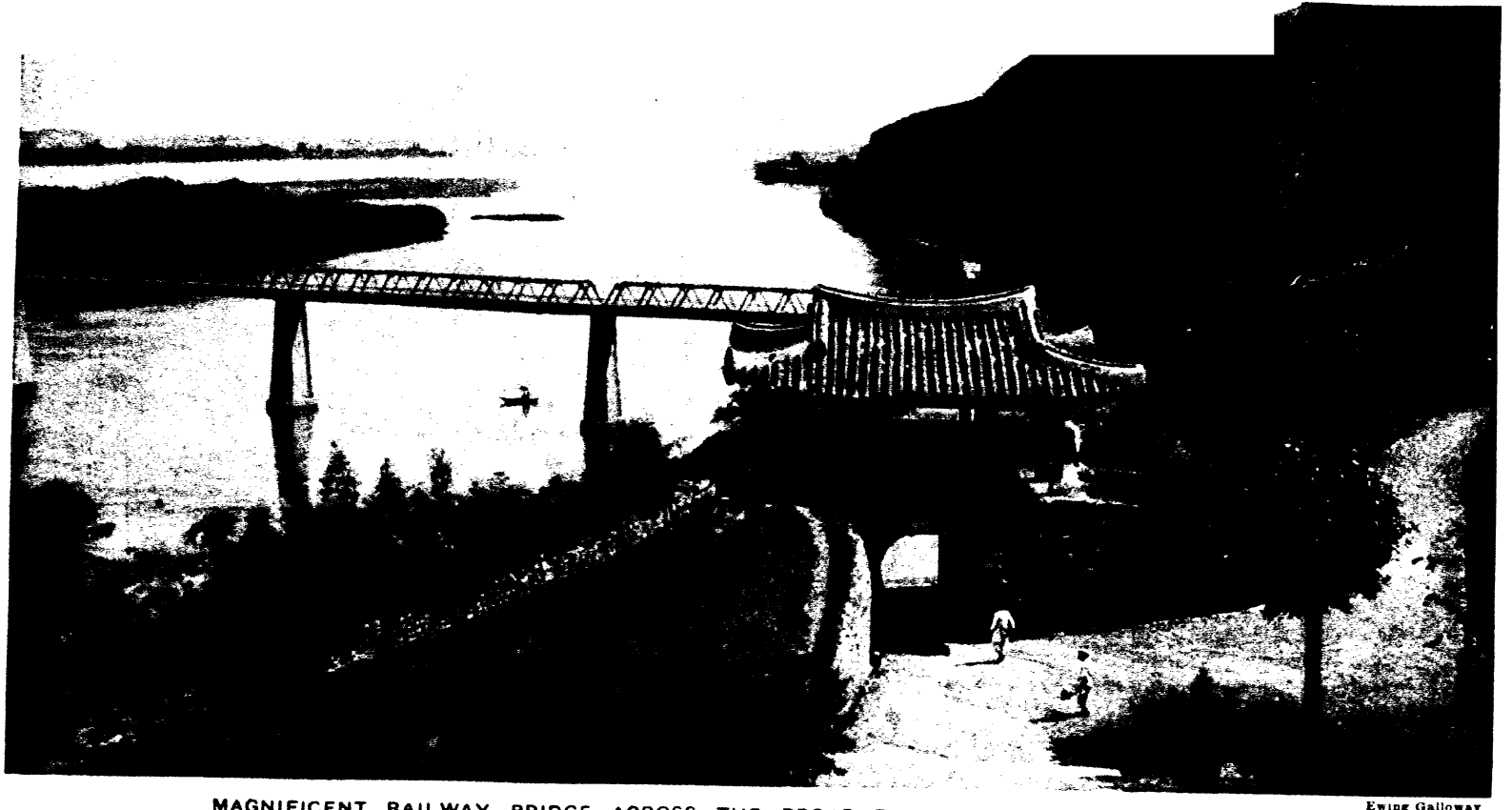
MAGNIFICENT MUSEUM IN THE KEIFUKU PALACE, SEOUL

This splendid building was erected by the government of Korea after the end of the Great War and houses a fine Korean archaeological collection. Seoul is being transformed into a modern city by the construction of up-to-date buildings along the main thoroughfares and the widespread use of electricity, gas and telephones. The back streets still remain the same noisome alleys as formerly

Ewing Galloway

NARROW ALLEY WITH ONE-STOREYED HOUSES IN PING-YANG

At the back of the main thoroughfares the towns of Korea are very much the same as they were centuries ago. The narrow unpaved alleys with an open drain running down one side, the low wooden houses, some with thatched and others with the traditional curved roofs, the eaves ornamented by dreadful dragons, still defy Japanese schemes of modern town-planning



Ewing Galloway

MAGNIFICENT RAILWAY BRIDGE ACROSS THE BROAD TAIDONG RIVER AT PING-YANG

This bridge carries the railway from Seoul, which has two branches at Ping-yang, one leading to Chunnampo and the other to the coal-mine at Jedo. The river at the point shown is nearly three-quarters of a mile in width, but the middle portion of the bridge traverses the island of Yokakuto which lies almost in the centre of the channel. The river is not only beautiful, but is used as the main highway between Ping-yang and the towns and villages along its navigable portion, though only vessels of medium draught can ascend to the city

the soil is inferior in its methods, implements and execution.

It must, however, be borne in mind that for centuries the Korean farmer has suffered from a lack of transportation facilities which on the one hand compelled him to be self-supplying as regards the necessities of existence, and on the other left him indisposed to labour for anything beyond the provision of those necessities. Thus the farmers of the north grew the cotton required for their clothing on land which, given means of transportation, might have been used to far greater advantage in the cultivation of beans or wheat. Also, it was seldom or never part of a farmer's ambition to make money, because of the insecurity of visible wealth. Even with his archaic implements and slipshod ways, however, the land produced good harvests of rice and beans, the people's staple foods, besides millet, wheat, barley, tobacco, cotton, ginseng and other crops enough as a rule to satisfy his own simple wants and the rapacity of the tax collector.

A Departure in Agriculture

After the establishment of the Japanese Protectorate (1905) improvements began to be made in the methods and products of the country's main industry, proving clearly that much of the farmers' listless conservatism was not the result of original sin but merely of instinctive adaptation to an unhealthy environment. Farmers all the world over, like sailors, are inclined to oppose new ideas, but the Korean is showing himself reasonably adaptable. He is fully capable of appreciating, for instance, the merits of scientifically selected Japanese rice seeds, whose yield is 30 per cent. higher than that of the native species, or the superiority of American Upland cotton as compared with the native plant.

Some idea of the steady development of agriculture which has taken place since 1910 may be gathered from the fact that whereas in that year the area under cultivation was 6,000,000 acres, it had increased in 1920 to 10,500,000, of which 3,782,069 acres were under rice. By the cultivation of waste land and an improved system of irrigation the surplus of rice available for export to Japan increased nearly fourfold during this decade, and the government expects to double the present output within the next ten years by bringing more land into cultivation and by introducing scientific irrigation into districts where the farmers have hitherto relied solely upon rainwater.

Exploitation of Fruit Farming

Similarly, following upon the introduction of scientific tobacco cultivation and preparation by the model farms since 1905, the output increased from 10,500,000 pounds in 1910 to 32,000,000 in 1918. Finally, the progress made in sericulture, owing to improved methods and highly favourable climatic conditions, would appear to indicate that before long Korea will become one of the chief silk-producing countries.

In former times Korea grew practically no fruits worth mentioning except walnuts, chestnuts and persimmons, but the experiments carried out on a steadily increasing scale by the government's model farm at Tuksum have shown that the climate is admirably suited to the production of pears, apples and grapes of excellent quality—so much so, that these fruits already figure in the list of Korea's exports. Between the years 1910 and 1920 a considerable number of Japanese have taken up land for fruit-farming in Korea, an industry in which they excel. In 1920 the fruit crop raised was nearly seven times more than that of 1913.

Where the Best Ginseng Grows

From time immemorial Korea has been known and envied among Eastern peoples as the producer of the highest quality of ginseng, a medicinal plant (Panax ginseng) to which the Chinese, and to a less degree the Japanese, have always attributed mysterious curative

Ewing Galloway

OLD TILED ROOFS AND IRON BUILDINGS IN THE MIDST OF THE CITY OF PING-YANG

Ping-yang or Heijo, the oldest city and for centuries the capital of Korea, stands on the Taidong about 35 miles from its embouchure into Korea Bay. The city is connected by railway with Seoul and Chinnampo, its outport. There are many coal-mines in the neighbourhood and to the west lies the largest and most fertile plain in Korea; these factors, together with the opening of a gold-mine at Unzan, have all added to the commercial importance of the town. The population is about 86,000, but the modern development of the city has not progressed so rapidly as at Seoul

and tonic qualities. In the days when Korea was still a vassal of China a portion of her annual tribute was paid in ginseng roots, and those which bore a forked-radish resemblance to the human body (being therefore possessed, like the mandrake, of special virtue) were set aside for the use of the emperor and his court.

China is still Korea's best customer for this venerated vegetable, its price on the Shanghai market being seven times higher than that paid for the American variety. In 1902 the plants all over the peninsula were attacked by an unknown disease which threatened to put an end to the trade. In 1905, however, the ginseng monopoly was transferred from the Imperial Household to the finance department of the government and energetic measures were taken to check and cure the disease. Since 1910 the production of high-quality ginseng has rapidly increased, to the great relief of China's valetudinarians. The production of salt by natural evaporation is another lucrative government monopoly which has shown rapid expansion.

Mining Discouraged by Dragons

No geologist has done in Korea work like that which Baron von Richthofen did in China, so that our geological knowledge of the peninsula is scanty. We know, however, that all the higher mountain ranges consist of strongly folded crystalline schists and that they contain no small wealth of mineral deposits. The Korean people, like the Chinese, have never shown any desire to explore or exploit their mineral wealth, partly because of their fear of disturbing the sleeping dragons and subterranean demons of the hills, and also no doubt because they realized that any wealth thus obtained would speedily be taken from them by locust-like officials. "Placer" washing for gold and surface scratching for coal were the limit of their activities.

In 1906 foreigners were by law entitled to own mines in Korea, a privilege which continued until 1916, and a number of gold-mining concessions were granted to American, British and French companies. Of these, the only one which has produced gold to any considerable extent is the American "Unzan" mine in North Pyung-an province. After the annexation, a number of Japanese companies were organized, chiefly for the production of coal and iron, and this enterprise has steadily expanded. Gold and pig-iron represented more than half of the total; other minerals produced were silver, zinc, copper, lead, tungsten and graphite. Korean labour, though less efficient than Chinese, is sober and intelligent.

Neglected Deep-sea Fisheries

The seas which wash the shores of Korea are very rich in fish of all kinds, some 200 species being known. Until recent times, however, the activities of Korean fishermen were generally confined to inland waters and the near seaboard, and their methods and appliances were primitive. The country's deep-sea fisheries were therefore the hunting-grounds of Chinese poachers on the west coast and Japanese on the south. Since Korea became part of the Japanese Empire, measures have been taken to encourage the development of the fishing industry in many ways and much progress has been made. The species of fish which figure principally in statistics are sardines, herring, pollack, bream, mackerel and cod.

Dogs an Article of Diet

Pastoral farming has never been highly developed in Korea; the Korean is by choice a flesh eater, but under the old regime his consumption of meat was of necessity limited to the rare occasions of marriage feasts or funeral ceremonies, whereat beef, pork and dog figured on the menu. The grass of the hills is not suitable for sheep, of which animal only a few hundred exist at the experimental farms. The native bull, a massive, handsome beast, is a prominent feature of village life. Until

E. N. A.

SOLITARY SHRINE AMID THE MOUNTAINS NEAR KEIZANCHIN

Keizanchin is a small town in the province of North Kankyo on the Yalu river, which here forms the frontier between Korea and Manchuria. North Kankyo, though it is one of the largest provinces, is also the most thinly populated. There are valuable forests of pine, oak and chestnut trees along the course of the Yalu, the timber being floated down the river

recent years it was bred chiefly for ploughing and transport work; since 1910, however, the number of cattle bred has greatly increased and a considerable quantity is exported to China and Japan. The Korean pack pony is a disappointing creature at best, the native pig an unsavoury animal, and even the hen is but a casual layer of insignificant eggs.

As already observed, Korea has always been, and is still, an agricultural country; for centuries the arts and crafts of the people have been limited to the production of the necessities of life, and very humble life at that. In 1911 the only manufactured articles on the list of Korean exports were ginseng and paper; since then, under the impulse of Japan's economic activities, and with the aid of Japanese capital, a beginning has been made of factory enterprise and the organization of industrial works. The Bank of Chosen's report on the "Economic History of Chosen" lays great stress on these "salutary changes": and on the fact that between 1911 and 1919 the number of factories in Korea increased from 252 to 1000.

Some of us may doubt whether the man who makes seven factories grow where one grew before is necessarily a benefactor of the human race, and may wish it were possible for the Korean people to be left to till their ancestral fields instead of being brought into the crowded slums of manufacturing towns; but for good or evil their destinies are becoming more and more closely linked with those of the machine-made civilization of the West.

To-day, all over the country, commercial towns are springing up and growing fast, the bulk of the business being of Japanese origin and controlled by Japanese. In 1920, 135 companies had been established for industrial business, 157 for general commerce, 44 for banking, 81 for transportation and 49 for agriculture and forestry. Of all these only about 60 are owned and controlled by Koreans. In the list of manufacturing companies the most

important are those engaged in cotton growing, dyeing and weaving, rice-cleaning, smelting, brewing and tanning, and in the production of tobacco, gas and electricity.

The first railway in Korea, between Chemulpo and the capital, was originally granted by the King of Korea to an American in 1898. It was purchased by a Japanese syndicate in 1899 and the line was completed in 1900. The Seoul-Fusan line was opened to traffic in January, 1905. Subsequently the trunk-line which traverses Korea lengthwise was completed by the construction of the Seoul-Wiju section, built by the Japanese army and opened in March, 1906. Altogether 1,380 miles of railway and 4,060 miles of road now enable legions of travellers and traders to journey in comfort, where formerly pack-pony and bull transport "wound slowly o'er the lea."

The phenomenal effect of these changes is clearly reflected in Korea's recent trade returns, which show an increase of about a hundredfold since 1887. Their significance will be the more readily appreciated if the reader bears in mind that in 1887 Korea was still China's vassal; that Japan fought China in 1894, and Russia in 1904, for mastery of the peninsula; and that the country was annexed by Japan in 1910.

It would be difficult to find a more striking example of the effect of improved communications upon the trade of a primitive people. Of Korea's overseas trade to-day roughly three-quarters are with Japan and one-quarter with foreign countries. Her chief exports are naturally agricultural products and her principal imports cotton and piece goods.

Seen through European eyes, the dominant feature in the Korean's existence, whether in towns or villages, is dirt. Of the rudiments of sanitation he is completely and blissfully ignorant. Around his dwelling garbage and offal are strewn broadcast and its interior swarms with vermin. Where streets exist they are bordered by open ditches, public receptacles for every kind of refuse, so that in summer a Korean town stinks to high heaven. Native architecture for dwellings is practically

O. R. Archer

SITE OF AN ANCIENT STRONGHOLD OUTSIDE SEOUL

About half a mile from Mount Hakuun-dai, one of the peaks of Hokugakuzan, are the ruins of the Hokugakuzan fortress. The date of erection is unknown, but it was repaired in 1382 and in 1711 extensions were made and a circumambient wall constructed. Within the fortress were a granary, temple and a royal palace, but now only the foundation stones remain

all of one type, a one-storey building constructed with a rough frame-work of poles, interlaced with millet stalks or brush and plastered with mud.

Throughout the country they are thatched with rice straw, and in the towns with heavy earthenware tiles; their windows admit a faint light through oiled paper. Heating is done with flues which run under the stone or mud floor from an oven outside the building. The universal demand for privacy is secured by protective walls or bamboo screens.

Seoul, the capital, is the largest city in Korea, with a population of about 271,000 inhabitants, of whom 60,000 are Japanese and 2,100 foreigners. Lying in a beautiful valley, sheltered by mountain peaks, it is surrounded by an ancient wall, now falling into decay, with eight massive gates built somewhat in the style of those at Peking. Under the old regime Seoul slumbered peacefully enough as the headquarters of a lotus-eating bureaucracy gathered around the goodly pleasaunce of the palace. But the last twenty years have brought a great wind of change, stirring the dead bones of the past, and with the railway have come many outward and visible signs of a political and commercial awakening, such as drains, waterworks, tramways and electric light.

The chief commercial towns on or near the seaboard, Fusan, Chemulpo, Wonsan, Gishu and Chinnampo, all reflect in their present-day characteristics the impressive marks of Japan's administrative and commercial activities, and the inhabitants include a considerable proportion of Japanese settlers. But the life of the Korean people still flows on in its old channels in many small burghs and market towns of the interior and in countless villages, far from the busy highways of progress.

As to the Korean people, observers are generally agreed as to their indifference to cleanliness in their homes, and a general disinclination to physical effort, born of moral inertia; but many have testified to the belief that, given a square deal and good government, they have in them the materials of an industrious and self-respecting people. Physically, they are taller and more muscular than the Japanese; intellectually, they have proved themselves as adaptable as any Oriental race.

Whether, as they increase in knowledge and self-respect, they will definitely accept their assimilation as Japanese subjects remains to be seen; for the Korean resembles the Irish in many ways and frequently in that attitude of mind which, despite moral inertia, is instinctively "again the government."

KOREA: GEOGRAPHICAL SUMMARY

Natural Division. Part of the fractured tableland of north-east Asia, the ancient Angaraland. A steep dip from the peninsular backbone to the Sea of Japan, less steep slopes to the shallower Yellow Sea. The peninsula lies almost north and south and has almost the latitudes of peninsular Greece.

Climate and Vegetation. Although in Mediterranean latitudes, Korea has not a Mediterranean type of climate, but an east coast marginal type, with extremes of temperature from freezing point to 75° F. and with summer rains, limited in certain areas to the two hottest months. (Cf. New Jersey, U.S.A.) Like Japan, the natural vegetal cover is forest, much of which has been destroyed; this is now being restored with young trees from Japan. The trees are mainly pine, oak, chestnut, birch, all temperate in character.

Products. Chiefly cultivated: rice, cotton, tobacco, ginseng, beans and barley. Domestic animals of slight importance. Under Japanese tuition the area under crops is increasing, temperate fruit-culture and sericulture are being developed. Gold, iron, silver, zinc. Fish: sardines, herring, cod. Factories are being established for cotton, rice and tobacco.

Communications. Since 1910 the railway system—a trunk line with branches—and the eastern and southern ports have opened up the country, with a consequent growth in trade, mainly with Japan.

Outlook. Korea was an isolated area for political reasons; the Koreans dwelt in an "island of misery," they were afraid to progress. It remains to be seen whether they can develop a wise use of their great natural resources under a less restricted regime in contact and in competition with the rest of the world.

LIMA

Venerable & Romantic Capital of Peru

by L. E. Elliott

Corresponding Member of the Geographical Society of Lima

THE city of Lima has two faces. The one looks towards the blue Pacific down the valley of the Rimac River, a seven-mile stretch sloping to the port of Callao, 500 feet below, and to the residential suburbs of Miraflores, Chorrillos, Magdalena, La Punta and Barranco, with their gay villas hung with flowers smiling in the sun that the overcast skies of Lima often lack.

The other face of the Peruvian capital is turned to dark, bare, brooding mountains whose spurs rise from her very streets. Far beyond and behind there rise glistening snow peaks of austere loveliness; but between those white summits and the city stand rank after rank of long ridges, fantastic, crenellated, devoid of all verdure, the bare bones of a continent, a forbidding barrier of brooding solitudes. This sombre face is accentuated in the months of winter, July to October, while the bright face is most sunny between the months of November and June.

Lima's Scotch Mist

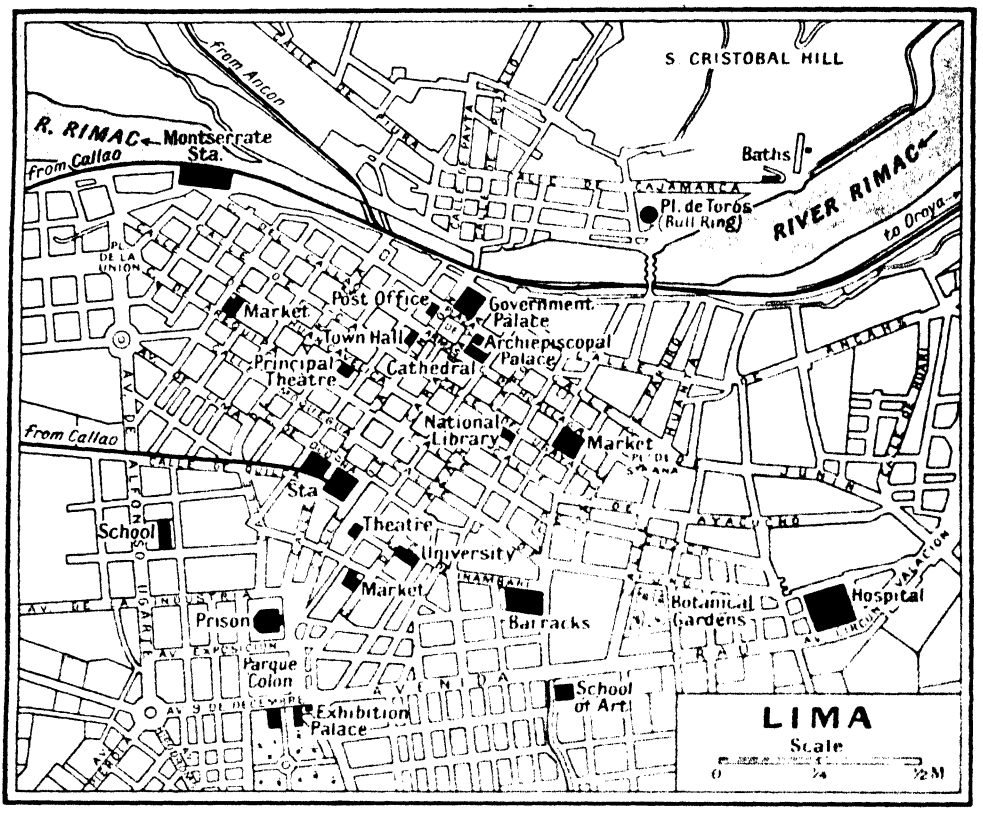
Rain never falls in Lima. The Andes check rain-bearing clouds, and thus the Atlantic slope receives a double share, nursing the dense tropical forests and sweltering jungle that western South America never sees. But instead of rain Lima's winter months bring the garua, a kind of Scotch mist that hangs in the air, and, not heavy enough to excuse an umbrella, is able to moisten your woollen clothes, to cover pavements with a thin, greasy paste, to darken the slippery cobbles of the older streets. It is hard to believe that the Equator is but 12 degrees to the north. The garua pervades the whole atmosphere; skies are grey, houses chilly, and ladies wear their furs indoors. The Spartan tradition of Spain rejects fires or radiators, although you may find houses where the old colonial silver brazier, glowing with charcoal, is still used to warm the tiny feet of the Peruvian ladies.

Pizarro's Wise Choice

All the mud-walled gardens of Lima's outskirts cover themselves during this season with a new veil of green. Wild flowers, particularly quantities of small rosy lilies and orange nasturtiums, spring in every corner, and the orchards of olives, figs, citrus fruits and peaches take on new growth; the rainless fields beside the Rimac are full of corn and sugar for Lima's markets. The city, running two miles by two and a half, houses something like 150,000 people, and the daily food market is a sight worth seeing.

For nearly four hundred years every newcomer to the capital has asked why the Spaniards built their new town in the conquered land of the Incas in this misty cup in the Rimac valley, when, a few miles away, lie many sunnier sites. But Pizarro's choice seems to be justified by the city's permanence; there has occurred no inconvenience or lack of health sufficiently serious to cause removal—epidemic diseases are unknown—and he who begins by grumbling at the climate generally ends as its defender. And in any case he must admit that the temperature never falls below 60° F., and only very rarely rises above 80°.

The almost inevitable approach to Lima is from its port. Sailing past endless walls of dun-russet cliffs, the



STREETS OF THE ANCIENT CAPITAL OF SPANISH SOUTH AMERICA

open roadstead of Callao, guarded by the bold rock of San Lorenzo island, displays the gentle incline of the vale, checkered by malachite-green fields, with the pale towers and flat roofs of Lima against the stark background of the Andes. Callao is permanently dishevelled, a poor doorway to such a country as Peru. But in less than half an hour you can reach Lima by train, by electric tramcar, or by motor along the old colonial "camino real." All along the valley of the Rimac, a river perpetually fed by the melting of Andean snows, are the remains of many a prehistoric mound, whose levelled summit was probably used as fort and dwelling of chieftains, while the interior sheltered the bodies of illustrious dead.

Half way between Lima and Callao you may see a modern residence, balconied, set in hanging gardens, built upon the 300-foot square top of such an ancient erection; the sides, almost vertical, are 25 feet high; sugar-fields surround it, and it was once used as a dwelling by Meiggs, builder of the Oroya railroad, Lima's 128-mile link with the famous mountain mines of Cerro de Pasco.

The modest outskirts of Lima, casual, careless, indicate little of the stately character that graces much of the old city. For Lima has dignity. It was founded by Francisco Pizarro in January of 1535, two years after the killing of Atahualpa broke, for ever, the spirit of the subjects of the Inca and handed an incredible empire over to the ex-swineherd. The great capital of the Inca empire was Cuzco, still a noble city; but Cuzco was too far inland, too much of an Inca stronghold. Pizarro preferred a new site near the sea. He named this new Spanish capital the "Ciudad de los Reyes," the City of the Kings, i.e., the Three Kings, the Magi, because the ceremony took place on the

day of Epiphany. But gradually, as in so many Latin-American regions, the old native name survived the Spanish overlay, and long before Independence this was again the place of Rimac, the god of the river. "Lima" is but a popular corruption of the name of the oracle-deity, "he who has spoken."

The City of the Kings has had many a great, many a troubled day. Its early days were excited by the quarrels between the Pizarro and anti-Pizarro factions, not ended by the murder of Francisco Pizarro himself in 1541. Here in Lima, at one side of the great Plaza de Armas, you may see the very spot where his enemies set upon and stabbed the Conquistador, and there in a glass casket in the great cathedral is a pitiful skeleton alleged to be his.

The first viceroy was sent out from Spain in 1544; in the same year the Audiencia de los Reyes was erected, the authoritative judicial and administrative council whose control extended over all South America from Panamá

E. N. A.

STREET FRUIT-SELLER WITH HIS WARES IN LIMA

Fruit is brought into the city from the surrounding districts by the poorer people on donkeys with wooden panniers slung across their backs. The fruits include figs, grapes, oranges and pineapples. The soil in the neighbourhood of Lima is cultivatable only under irrigation, but the farms and ranches in the fertile Rimac valley do little more than supply a portion of the local requirements

PLAZA DE TOROS AND THE TOWERS AND DOMES OF LIMA'S MANY ECCLESIASTICAL BUILDINGS

On the left of the photograph is the bull-ring which dates from 1768 and is one of the largest in the world, having accommodation for 8,000 spectators. To the right of the bull-ring may be seen the river Rimac, which is fed by the melting snows of the Andes and is a shrunken stream in winter and a rushing torrent in summer. The twin towers to the right centre are those of the cathedral and from the many domes and spires breaking the line of the horizon it can be well believed that Lima has nearly eighty buildings devoted to religious observances, though the population is only about 150,000

E. N. A.

SPLENDID VISTA DOWN THE PASEO DE COLON, THE PRINCIPAL RESIDENTIAL STREET OF LIMA

The long Paseo de Colón, with its broad roadways ornamented by palms, trees and statuary, is the fashionable drive and promenade of Lima and ranks as one of the finest in South America. In the older streets are houses of solid architecture, with beautifully carved oak doors and balconies, splendid examples of mansions of the old colonial days and more attractive than the showy cement and stucco of the modern buildings. The city was formerly walled, but spacious boulevards such as the Grau and Bolognesi avenues have taken the place of the ramparts

Underwood

WESTERN FACADE AND MAIN DOORWAY OF LIMA'S CATHEDRAL

Dominating the Plaza de Armas, or Plaza Mayor, in the centre of the city is the massive cathedral with its twin towers. The cathedral was founded by Pizarro in 1535, but was destroyed by an earthquake in 1746 and reconstructed in 1758. It has double aisles and ten magnificent chapels, in one of which are the supposed remains of Pizarro, the conqueror of Peru

to Cape Horn, with Portuguese Brazil alone excepted. Lima became rapidly a rich and aristocratic city. To the splendour of the viceregal court, with its noble officials, the army that included king's guards, halberdiers and cavalry, was added the prestige of the Audiencia; the see, created in 1541, became an archbishopric as early as 1545; all the great orders built churches and cloisters; the University of San Marcos was founded in 1551; and the pomp and power of the Inquisition was established in 1570. Dazzling stories of the riches of Peru drew settlers not only from Spain but from all other parts of the Spanish-American colonies. There was a genuine base for these tales,

E. N. A.

LINE OF STALLS AND BOOTHS IN A SHADY PLAZA AT LIMA

Among the poorer people the shopping is largely done at markets in the streets and plazas. Goods of every description are displayed on the stalls, and in order that the effect of some of the articles may be seen at greater advantage they are hung on lines stretched between the trees. The streets in the older portions of the city are paved with cobblestones

for Pizarro had actually collected and melted down over five hundred thousand pounds weight of gold of the Inca treasure, besides immense quantities of silver; and now Lima became the market for the precious metals from the mines of Upper Peru, with the silver hill of Potosí representing the dream of wealth at last come true.

Little wonder that the eighty churches of Lima were sumptuously adorned in colonial days, that enormous houses were built by wealthy families, that silver dishes and platters and ewers were commonly used in every house, and that the finest porcelain and silks came from China to the City of the Kings. When, after Independence, Potosí fell

B. N. A.

CALLE DEL MERCADO, THE MAIN BUSINESS STREET OF LIMA

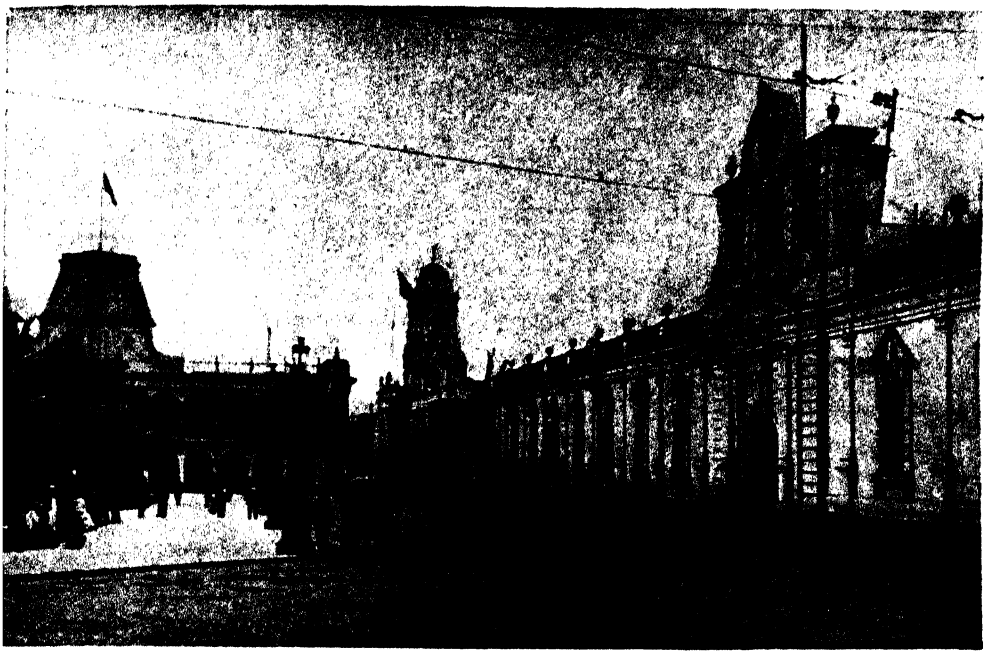
This street passes the chief of Lima's four markets or mercados, which is considered to be one of the finest in South America, not so much for the quality and quantity of the goods sold there as for its size and general arrangement. Many of the city streets are served by electric trams, which also go out to the suburbs of Miraflores, Barranco and Chorillos

to the share of the newly-established republic of Bolivia, a tremendous new source of riches was found in the guano islands off the Peruvian coast; sugar, and the very fine cotton of Peru, have yielded later fortunes. So, while much of Peru is undoubtedly backward, there has always been wealth in Lima.

Of the gold and silver plate, the tapestry, the fine pictures and books, the silken embroideries and church equipment, the carved furniture, you may still see specimens in private houses of Limeños as well as in definite collections, such as that formed by the late Dr. Javier Prado y Ugarteche in Lima. But much portable treasure vanished southwards during the Chilean occupation of the Peruvian capital from 1881-3, during the War of the Pacific, when Chile defeated Peru.

Walk the older streets of Lima and you will find many reminders of stately colonial days. Here is the house of the Tribunal of the Inquisition, now the chamber of the Peruvian senate; there, the Convent of the Recogidas, to-day a school of art. This glorious façade with its carvings and ironwork balconies was the mansion of the Marquis of Torre Tagle—it is now an academy of music and beautifully cared for. Most of these buildings are in their original condition, although the cathedral, lofty and handsome, was rebuilt after the earthquake which shook Lima in 1746, when five thousand persons perished.

If ghosts walk the old plazas, they are not the dark and mournful spectres of beautiful, bedraggled Cuzco; but here are the armour-clad shades of Pizarro and the Almagros; of that great viceroy Toledo, and his brilliant captain, Pedro de Sarmiento; they may be followed by the dusky shadows of those thirty-five youths of the Inca caste who were brought to Lima by Toledo and who died there. By the Inquisition may walk John Oxenham, friend and sea-comrade of Francis Drake, caught in



Ewing Galloway

POST OFFICE AND THE GOVERNOR'S PALACE IN THE PLAZA MAYOR

On the right of the photograph is the governor's palace, which was formerly the residence of the viceroy, and beyond it is the church of S. Domingo; while to the left is the post office past which runs the Calle de la Unión, or Calle Unión. The city exemplifies the Spanish-colonial type of capital, with its fine plazas, streets crossing one another at right angles, and many churches

Ewing Galloway

EQUESTRIAN STATUE OF BOLIVAR IN THE PLAZA CALLED AFTER HIM

Simon Bolivar, called the Liberator, was the dictator of Peru in 1824-25, and resigned when the Spanish power had been broken. The Plaza Bolivar was formerly the Plaza de la Inquisición, where the heretics were burnt by the Inquisition at the autos da fé. The university of San Marcos, which dates from 1551 and is the oldest in South America, faces upon this plaza

Panamá on an adventure and burnt in Lima by the Inquisition in the auto da fé of 1580; here, close to the viceregal palace, one might see the noble-hearted Prince of Esquilache, grandson of a saint; and in some conventual corner the veiled figure of a saint herself, the famous Santa Rosa de Lima, the only canonised woman of the Americas. These two straight-backed officers may be the Spanish captains, Jorge Juan and Antonio Ulloa, authors of the illuminating Noticias Secretas; that blue-eyed dignitary, Ambrosio O'Higgins, the barefoot errand-boy of Ireland who ended his wonderful and efficient career as Spanish viceroy in Lima.

Lima's Colonial Charms

The charm of Lima, to the visitor of to-day, is more apparent when the eye is accustomed to the dim colours of the older streets. By contrast, there are numbers of bright, pale-painted new houses all along the Paseo de Colón, with its Zoological and Botanical Gardens and a cheerful restaurant at the near end, and the tragic statue of Bolognesi at the other. You must see the great Plaza de Armas, with its sides measuring each 510 feet; two are occupied by the cathedral and the official buildings; on the other two sides are colonnades. The friendly Club Unión is housed above a group of these porticoes. To my mind, the prettiest of the smaller gardens is the Plazuela de Santa Ana, but there are delightful inner patios in the University of San Marcos.

Exploring a Peruvian Menu

The principal street of Lima is the Calle Unión, neither wide nor beautiful, but furnished with good shops and many foreign business houses—for Limeños, even to-day, are disinclined to commerce. Here you can buy huacas, charmed objects from the ancient graves and fine bits of old textile and gold-stuff; and in the afternoon you can drink the tea to which Lima is now addicted (forsaking the once beloved maté) at the Palais Concert. There is no good hotel in Lima as yet; but a huge hostelry is being built. Anything more dismal than an " inside " room, with no hot water and the electric light out of order, upon a day when the garua prevails, I have yet to encounter in Latin America. But the food is generally good: in the restaurant you should choose the Peruvian dishes—the puchero soup; the fish of the coast, pejerrey, bonitos or corbinas; eat an empanada, a glorified Cornish pasty; and remember in studying the menu that an " alligator pear " is in Peru a palta, and that maize cobs, delicious when tender, are in Lima choclos. The sweets, dulces, are excellent, and there are some very passable Peruvian wines.

Lima is the commercial centre of Peru as well as its capital, which is not always the case with South American capitals. Besides this it possesses several manufactures. Its potteries, for instance, produce fascinating models of animals and the like, strangely reminiscent of the prehistoric ware of the country, and there are establishments for the manufacture of paper, soap and textiles, tobacco, sugar and cocoa, as well as the copper and silver articles that one might expect.

Winter Exodus to Miraflores

Lima has, during recent years, spread not only to the Paseo de Colón, but in winter months removes to the warmer climate of pretty Miraflores, five miles away, to Magdalena, to La Punta, Barranco and Chorrillos: and even, 30 miles journey, to Chosica, situated 4,000 feet high in a nook of the mountains.

These resorts are for the well-to-do. The undercurrent may be seen all the year round, at the public market, for example, or at the Sunday stalls of the Avenida Grau; here are the Negro and Chinese, introduced four centuries ago, and the apathetic, gentle, dark-skinned, black-haired folk to whom the Inca was once a divine king before the first stones of Lima were laid, and who knew the passing of empires even older than that of the Inca.

LISBON

Portugal's Capital on the Tagus

by Edgar Prestage

Professor of Portuguese Literature and History at London University

MOST foreign travellers approach Lisbon by sea, but all should do so. He who comes by rail from Spain enters by the back door, and though this opens into the heart of the city, it is the exit from a tunnel a mile long. Moreover, the outskirts on that side offer no special interest, save for a glimpse of the great aqueduct carried on lofty arches over the Alcantara Valley and dating from the reign of John V., the king who also built the palace-monastery of Matra, a Portuguese Escurial, and imitated Louis XIV. in art and pleasures.

The Tagus in its lower reaches is one of the great rivers of Europe, and if Constantinople has an equally beautiful approach, no capital can boast so imposing a position as that of Lisbon; the fabled hills of Rome are mere mounds compared to hers, which would put a severe strain on the pedestrian in a hurry (usually a foreigner), were it not for the cars of the Electric Tram Company, a British undertaking.

Fine Sea Approach to Lisbon

He who journeys from England to Portugal by sea has a passage of less than three days and need not fear the Bay of Biscay, for he goes outside it. Rounding Cabo da Roca, the westernmost point of the Continent, the vessel an hour later passes Cascaes, a fashionable bathing-place with a citadel where King Carlos, friend of the English King Edward, used to spend the autumn. I can see now his towering figure walking down the quay with the Marquis de Soveral to board the yacht "Amelia," carrying a large briar pipe, for he was a terrific smoker, and greeting acquaintances with a cordiality equal to that of his English cousin.

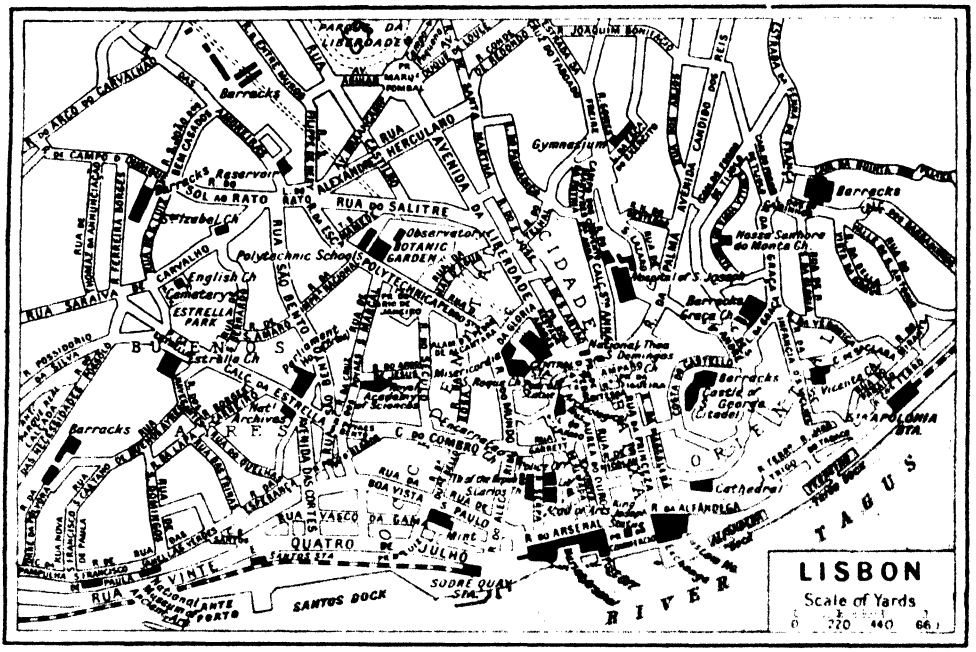
Mont' Estoril, known as a pleasant winter resort cheaper than the Riviera, is but half a mile farther on, and opposite to it ships describe a crooked course to get over the bar and pass between the Castle of St. Julian on the north and the Tower of Bugio on a sandbank, usually covered with water, to the south.

The Golden Sanded Tagus

It was at this spot that in March, 1650, Blake's fleet, when attempting to force its way into the river to attack the squadron of Princes Rupert and Maurice, which had taken refuge there, was brought to a standstill. According to an English contemporary account, the wind failed at the critical juncture, but the Portuguese classic, D. Francisco Manuel, also an eye-witness, declares that the fire of the forts checked the Cromwellian admiral. The Anglo-Portuguese war did not last long, and it was one of the rare occasions when the alliance between the two countries, the oldest in history, for it dates from 1386, suffered an interruption.

At the entrance the "golden sanded" Tagus is a mile wide; on either bank are low hills, covered with verdure in winter and flowers in spring, but burnt and brown in summer. On the north, bathing-places succeed one another, their gaily painted houses bordering the water and climbing the slopes; behind them the ground undulates until it reaches the lofty Cintra range, serrated against the sky and crowned by the Castle of the Pena, from whose grounds King Manuel I., "the Fortunate," is said to have watched the caravels of Vasco da Gama return from the discovery of the sea route to India in 1499. The results of this achievement have been summed up in the oft-quoted

Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited



LISBON'S STREETS CLIMBING THE HILLS ABOVE THE RIVER

words " the face of Europe was turned from east to west, and Lisbon supplanted Venice as the world's mart."

The southern bank has few buildings of note, the most conspicuous being the Lazaretto, of ill-fame when yellow fever raged in Brazil and home-comers from what was Portugal's greatest colony had to spend three idle weeks there before landing. It was formerly a fortress, the Old Tower, and crossed its fire with that of the Tower of Belem, a gem of Manoeline or floreated Gothic architecture. Within a stone's throw of this latter guardian of the port lies the Jeronymos, built in the same style as a thank-offering for da Gama's success. In the church rest Vasco da Gama and Camoens, " greatest poet of the Spains," and in the Chapter House Herculano, Portugal's leading modern historian; while in the cloisters, with their windows of lace-like tracery, hundreds of boys disport themselves noisily, for the monastery is now an orphan asylum.

Fittingly enough the figure of Prince Henry the Navigator, founder of modern discovery, surmounts the main door of the church, while a statue of Affonso de Albuquerque, conqueror of Goa, Ormuz and Malacca and one of the greatest names in Asiatic history, stands on a tall column by the waterside in front. Hard by is the Museu dos Coches, where royal carriages, dating from the seventeenth century to the end of the nineteenth, some with panels painted by famous artists of France and Italy, are preserved and form a unique collection. Many of them are very cumbrous, and used to need four horses to drag them up the breakneck streets; even then they went at a slow pace and with frequent halts, as I remember when President Loubet visited Lisbon.

Three or four miles farther up from Belem the true gateway of the city, the Praça do Commercio, opens out, a quadrilateral flanked on three sides by imposing colonnaded government buildings. For centuries it was known as Terreiro do Paço, because before the great earthquake of 1755 the royal palace stood there, but the English call it Black Horse Square from the equestrian statue of King Joseph which occupies the centre. Apart from his skill as a turner, this monarch was a

poor creature, overshadowed by the Marquis of Pombal, one of those eighteenth-century ministers whose despotic rule undermined the monarchical system they served and almost deified; but it would be unjust to deny him the credit for achieving material progress.

Opposite this square the Tagus widens out into a bay capable of containing a large part of the British fleet, and across it, in the distance, rise the Arrabida mountains and the rock of Palmella, crowned by a grim castle, once the seat of the Order of Santiago.

Black Horse Square is the proper and traditional entrance to and exit from Lisbon; there Catherine of Braganza embarked for Portsmouth to wed Charles II., and the procession can still be viewed in Dirk Stoop's engravings; there King Carlos landed one February afternoon in 1908 to die with his son at the hands of his own people. Some of the river steamers start from the square and at all hours it is traversed by a motley crowd: employees of the various ministries; smart officers; thick-set, whiskered farmers and peasants from the Alemtejo with wide-brimmed black felt hats, boleros, coloured sashes and tight-fitting trousers; barefooted fisher girls of graceful carriage carrying baskets on their heads; peasant women with bright silk handkerchiefs over their hair and gaudy, thick, ample skirts. These latter lend a colour to the city which would otherwise be lacking, because the mass of the inhabitants of both sexes dresses in black.

From the square, rectangular streets run north along the flat ground between hills of the Pombaline city, so called from the minister who directed its rebuilding after 1755. The principal are Gold and Silver Streets, for the various trades each had their own artery. Silver Street debouches after half a mile into a smaller square, the Rocio—Rolling Motion Square, from the waves marked out in the tesselated pavement.

Leslie E. Howard

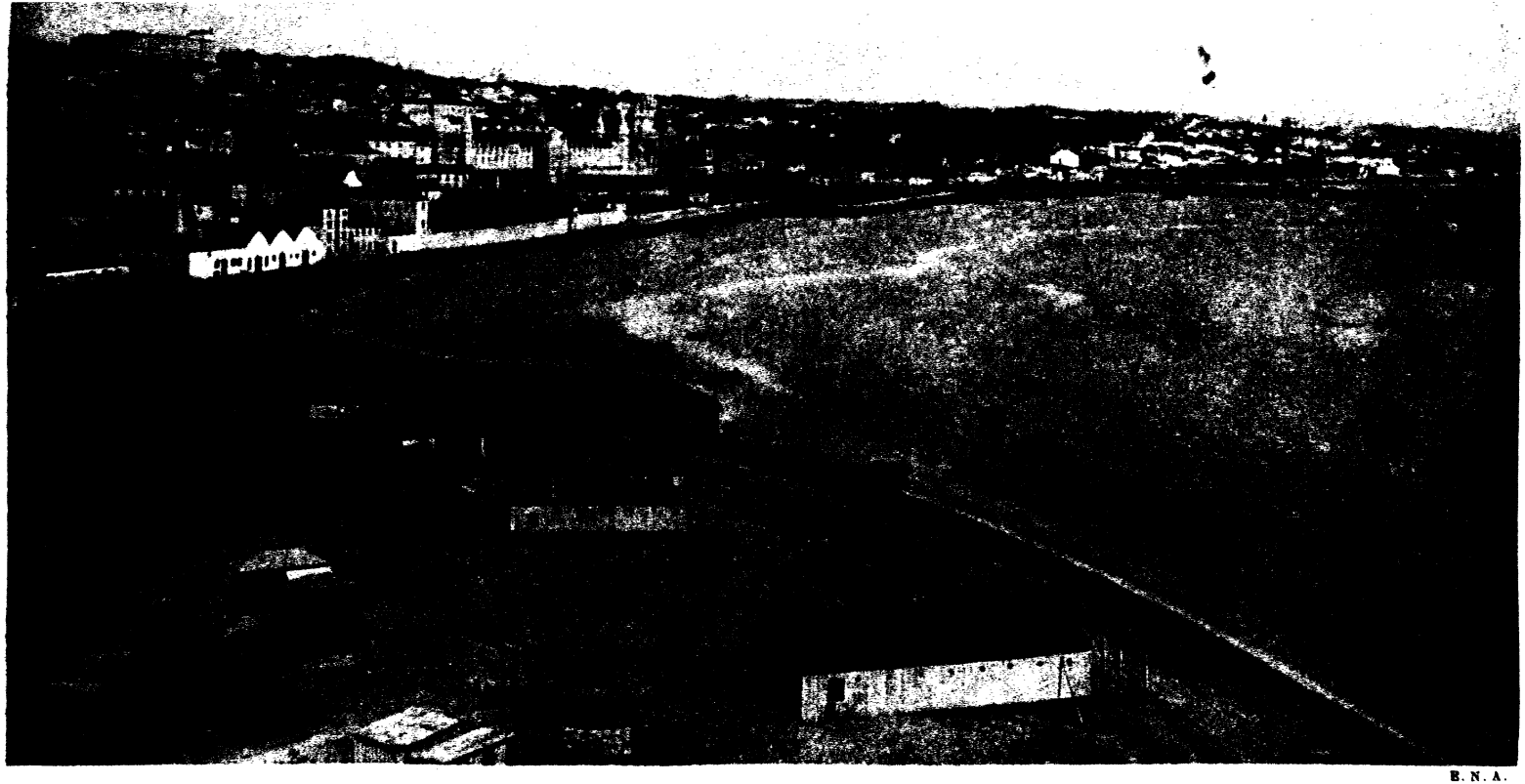
COBBLED LARGO DE SANTO ESTEVAO IN THE EAST END OF LISBON

St. Stephen's Square is in the squalid portion of Lisboa Oriental round about the docks. The ill-paved and often dirty streets, but feebly lighted at night by occasional gas lamps set in iron brackets at the street corners, together with the unsavoury-looking houses ornamented by festoons of dingy linen, are in complete consonance with the unkempt dwellers in this dubious quarter

E. N. A.

FISHING VESSELS IN THE HARBOUR BACKED BY THE CITY ASCENDING THE HILLS ABOVE THE TAGUS

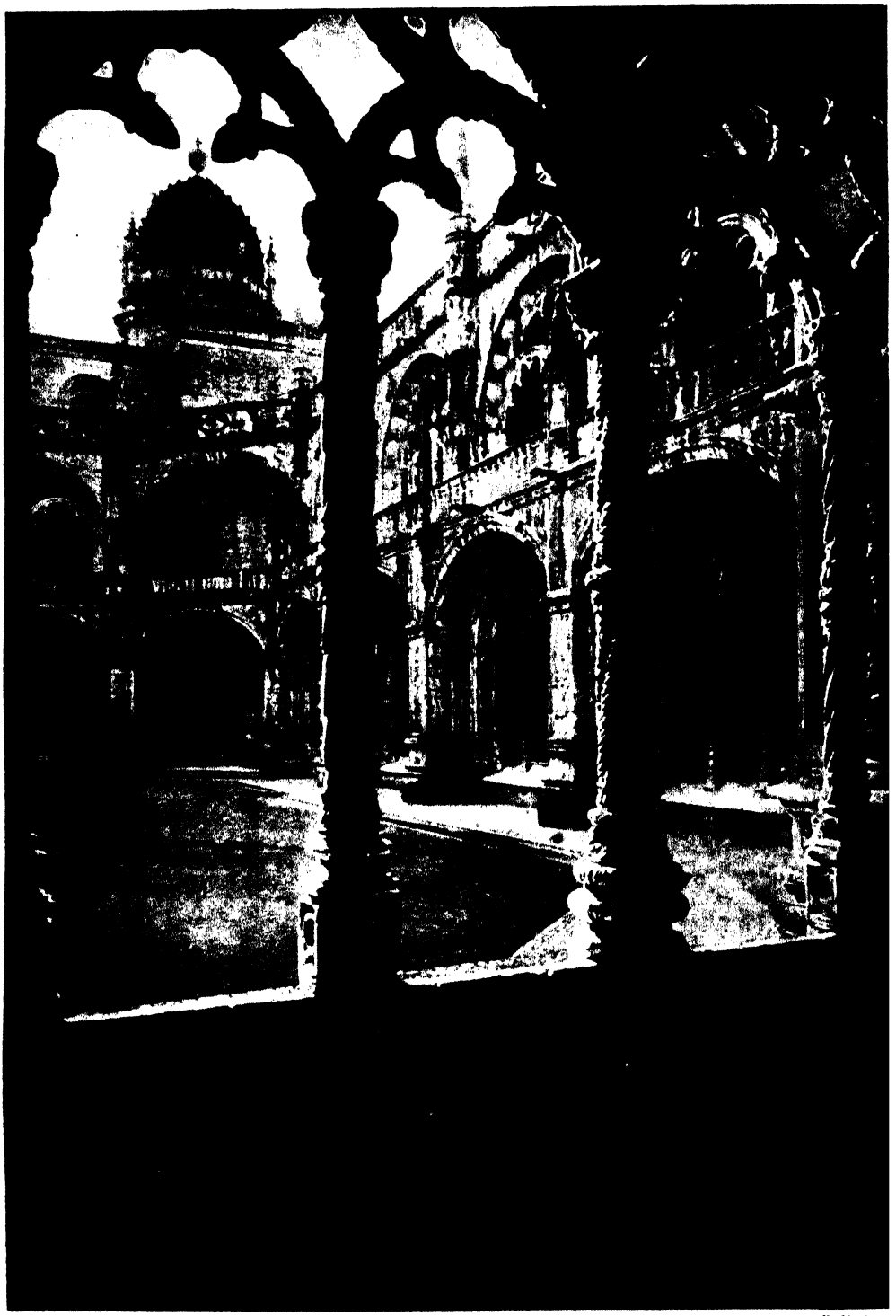
Lisbon is an important fishing centre with a large fleet of smacks and trawlers. The harbour is one of the finest in the world and lined with several miles of quays, fully equipped with hydraulic cranes, docks, warehouses, slips and railways. On the south bank are the government and privately owned docks, and a wireless station has been erected. The city replaced Coimbra as the capital of Portugal in 1260 and enormous wealth accrued from the discoveries in America and India, making it the richest city in Europe. Among the industries are ship-building, sugar refining, the manufactures of textiles, and gold and silver work



B. N. A.

SUBURBS OF AJUDA AND BELEM STRETCHING ALONG THE TAGUS TOWARDS DISTANT LISBON

To the left in the photograph is the palace of Ajuda on the heights above Belem; the palace was begun in 1816 and left unfinished. Below the hill by the bank of the Tagus are the convent and church of the Jeronymos, in the west wing of which is the Ethnological Museum. Lisbon stands on the estuary of the Tagus about nine miles from its mouth. The city and its suburbs are built on a series of low hills, which rise from the banks and front the estuary for a distance of six miles, terminating in parks, gardens and vineyards. This view is from the summit of the Tower of Belem



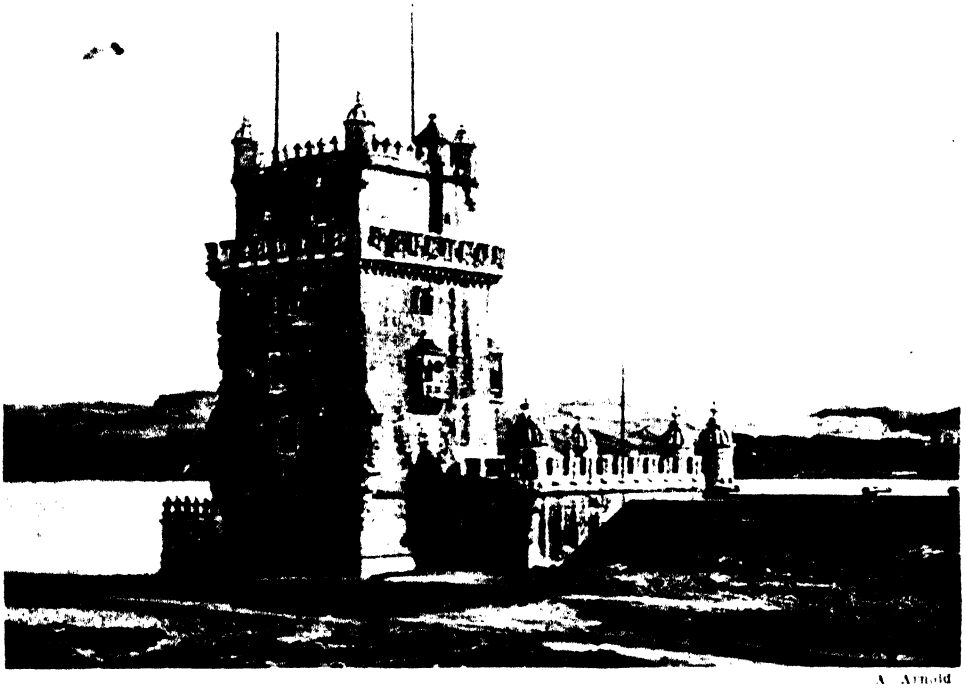
E. N. A

BEAUTIFUL CLOISTERS IN THE CONVENT OF THE JERONYMOS

Belem is a suburb of Lisbon and contains the convent of the Jeronymos, founded in 1499 to commemorate the voyage of Vasco da Gama. The edifice is of fine white limestone in the floreated Gothic or Manoeline style and the graceful columns, exquisite tracery and beautiful groining of the cloisters, the masterpiece of João de Castilho, make them the main glory of the convent

This is the actual centre of Lisbon life, and from the discussions and plots in the cafés which border it arise the affrays and sometimes the revolutionary movements which have been the fruit of the seed sown by the French Revolution of 1789. Ever since Portugal received in 1820 the gift of democratic government through parliamentary institutions alien to her traditions and unsuited to her character, she has been the prey to an unrest that did not exist in former centuries. Governments have risen and fallen with little to their credit save elaborate programmes of reform, and thousands of ministers have held portfolios.

In an earlier age armed force was little needed; religion proved a cheap policeman, for in case of a big popular disturbance the clergy issued forth with the Blessed Sacrament and calmed it. Now the convents have become barracks; yet the maintenance of order is more difficult, and the nation is crippled by the expenditure it entails. These matters, however, do not affect the tourist; he need not be frightened by the fear of a two-day revolution, while the fall in the exchange is to him a blessing; it means that he can stay at a small cost in a healthy and fairly temperate climate and enjoy scenery as varied and beautiful as any in Europe.

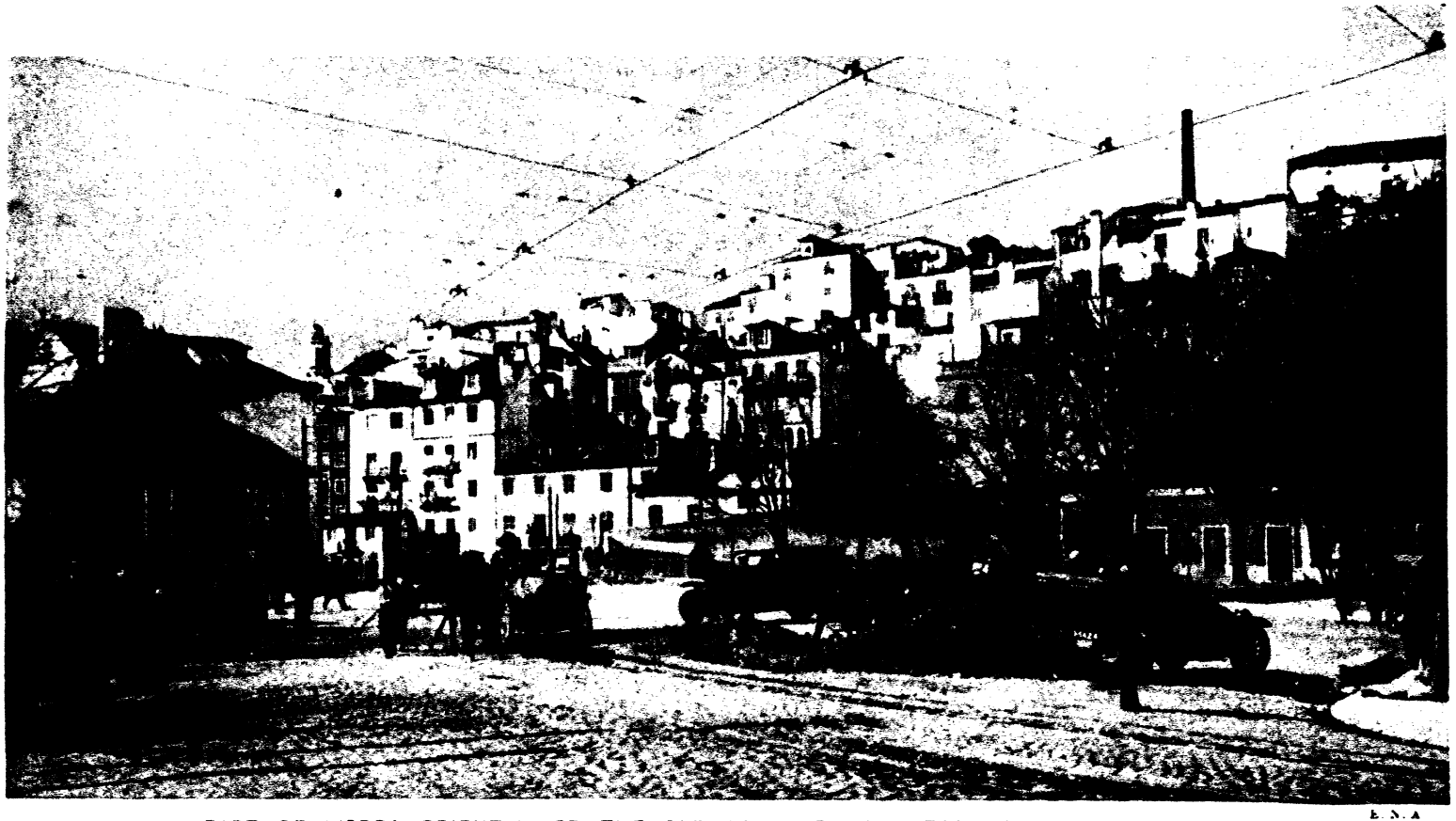


A. Arnold

TOWER OF BELEM GUARDING THE ESTUARY OF THE TAGUS

Completed in 1520, the Tower of Belem stands on the Tagus three-quarters of a mile south-west of the Praça de Vasco da Gama. On three sides of the base of the tower is a kind of terrace enclosed by an hexagonal parapet with battlements and the shields of the Knights of Christ; at the corners of the battlements are six turrets copied from originals in India

On the north side of the Rocio rises the National Theatre. Over against one side of this handsome building is the Central Station and Avenida Palace Hotel; on another the Church of São Domingos and the palace of the Count of Almada, where in 1640 the "fidalgos" met to plan the delivery of their country from Spanish domination. Beside it a narrow winding street mounts to the Hospital of S. Joseph, formerly the College of Santo Antão, a famous Jesuit secondary school, where some hundreds of boys received a free education.



E. N. A.

PART OF LISBOA ORIENTAL, OR THE OLD TOWN, BY THE FOOT OF THE CASTLE HILL

Lisboa Oriental is an alternative name for **Alfama**, the old portion of the city, which is in the east and represents the old Roman and Moorish quarters of Lisbon. The great earthquake of 1755 did comparatively little damage in this district and many of the steep, narrow streets and tortuous alleys have about them something of their medieval aspect. The Castello de São Jorge, on a rocky hill, is the most prominent feature of the Alfama. It was the old Moorish citadel and indicates the site of the Roman city. The castle is now used as a barracks and military prison

E. N. A.

LOOKING FROM THE BOTANICAL GARDENS TO THE CASTLE OF S. GEORGE AND THE BARRACKS

On the height called the Almafala, to the left of the Castello de São Jorge or Castle of S. George is the church of Nossa Senhora da Graça, an unpretending structure built in 1556 and restored after the earthquake. The old convent of Graça, by the side of the church, is now used as a barracks. The twin towers of the church of São Vicente de Fora can be seen between the two hills. The present Late Renaissance edifice replaced a convent on that site in 1582. The façade and interior are richly decorated with marble and the nave is roofed with barrel-vaulting

To the north of the railway station begins the broad Avenida da Liberdade, a mile long, lined by handsome stone houses and gay with palms, Judas trees, grottos, streams and beds of salvias; it connects with many newer avenues, whose breadth however, forbidding shade, is hardly suitable to a city where the sun shines for ten months out of twelve. The Edward VII. Park (now Parque da Liberdade) commemorated the visit of that king, who was received with "mad enthusiasm," to use a Portuguese phrase; although the national character is sad, as poetry and folk music prove.

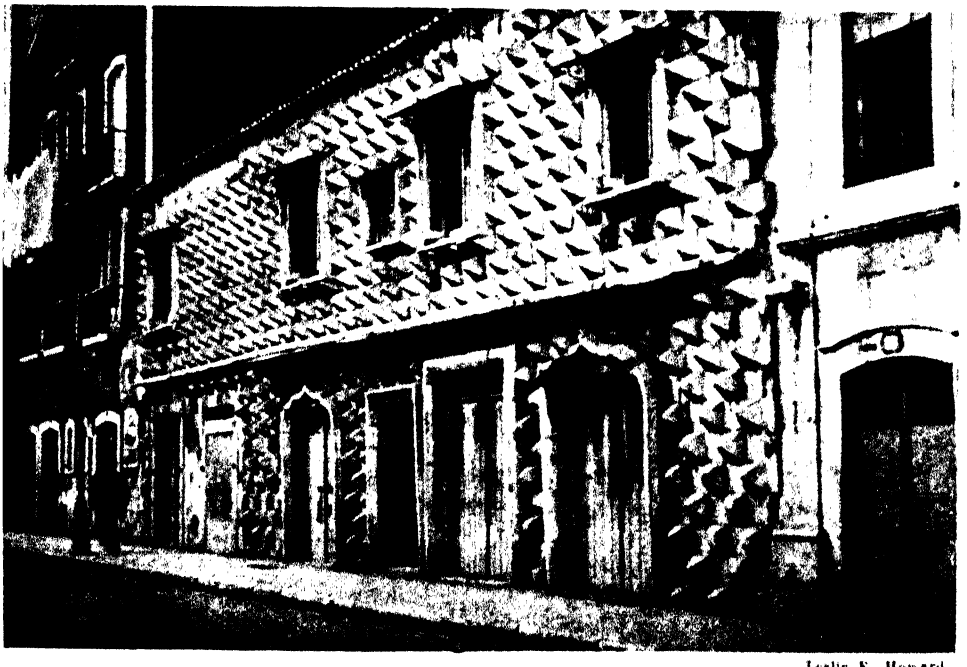
The lines of an opera,

"Les Portugais sont toujours gais,"

are the reverse of the truth, save on a "festa" day when their spirits rise like the rockets they love to let off to advertise a bull-fight, only to fall as quickly. Certainly the people have small cause for gaiety since they are very poor; but then poverty is easier to bear in a climate comparable to that of California, where little food is needed to support life, and in fact smiling faces are commoner in the Lisbon streets than in those of London.

As I have mentioned the national sport, whose Lisbon home is the bull-ring at the Campo Pequeno, I must explain that it differs entirely from the Spanish variety; the bulls have their horns protected, and neither they nor the horses are killed, but sometimes it happens that one of the "pegas," who surround and seize the bull after he has been wearied, pays for his daring. Bull-fighting as practised in Portugal develops the qualities of physical courage, resource and quick decision, and in Lisbon at least it offers a fine spectacle. Football has also become popular; it is even played in summer, and the Portuguese have shown that they can beat good English teams.

If we return through the Rocio to Silver Street and take the Graça tram, it carries us up past the Norman towers of the cathedral, whose first bishop after the capture of the city from the Moors in 1147 was Gilbert of Hastings, to the



Leslie E. Howard

CASA DOS BICOS, SHOWING THE POINTED STONES OF ITS FACADE

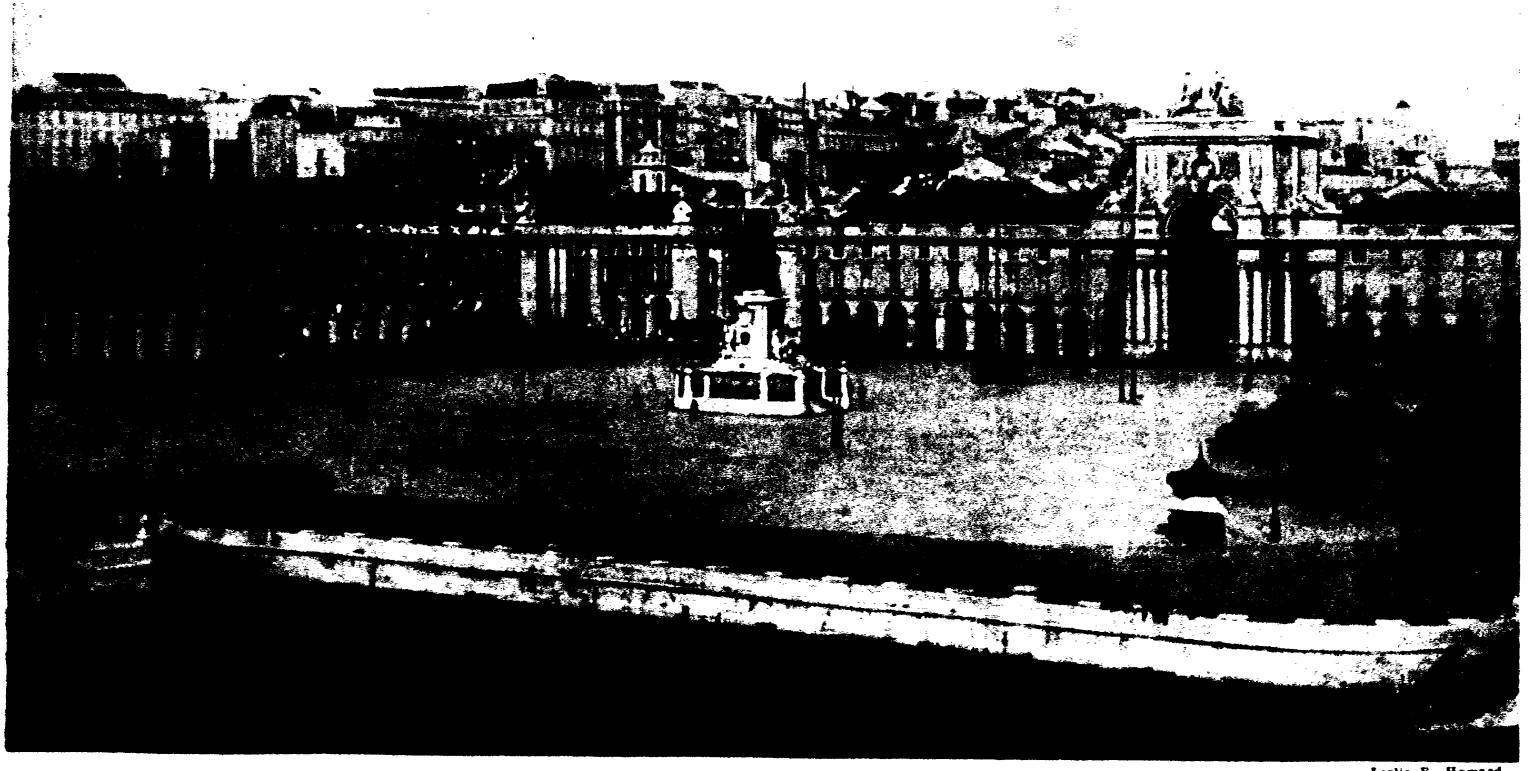
This peculiar house, built some four centuries ago by Braz, the son of the celebrated navigator and explorer, Affonso de Albuquerque, is known as the Casa dos Bicos, or "House of the Points." Its early history is not known, but it once formed part of a nobleman's residence and survived the earthquake of 1755. It is actually a warehouse, the upper part serving as a family abode

A. Arnold

WEST FRONT OF THE SE PATRIARCHAL, LISBON'S CATHEDRAL

Founded in 1150, the cathedral was rebuilt in 1755 after the earthquake. Practically the only relics of the original Gothic church are the lower portion of the façade and the choir. The walls are lined with blue and white tiles, dating from the commencement of the eighteenth century, and an underground passage leads to the Castle of S. George on the castle-hill

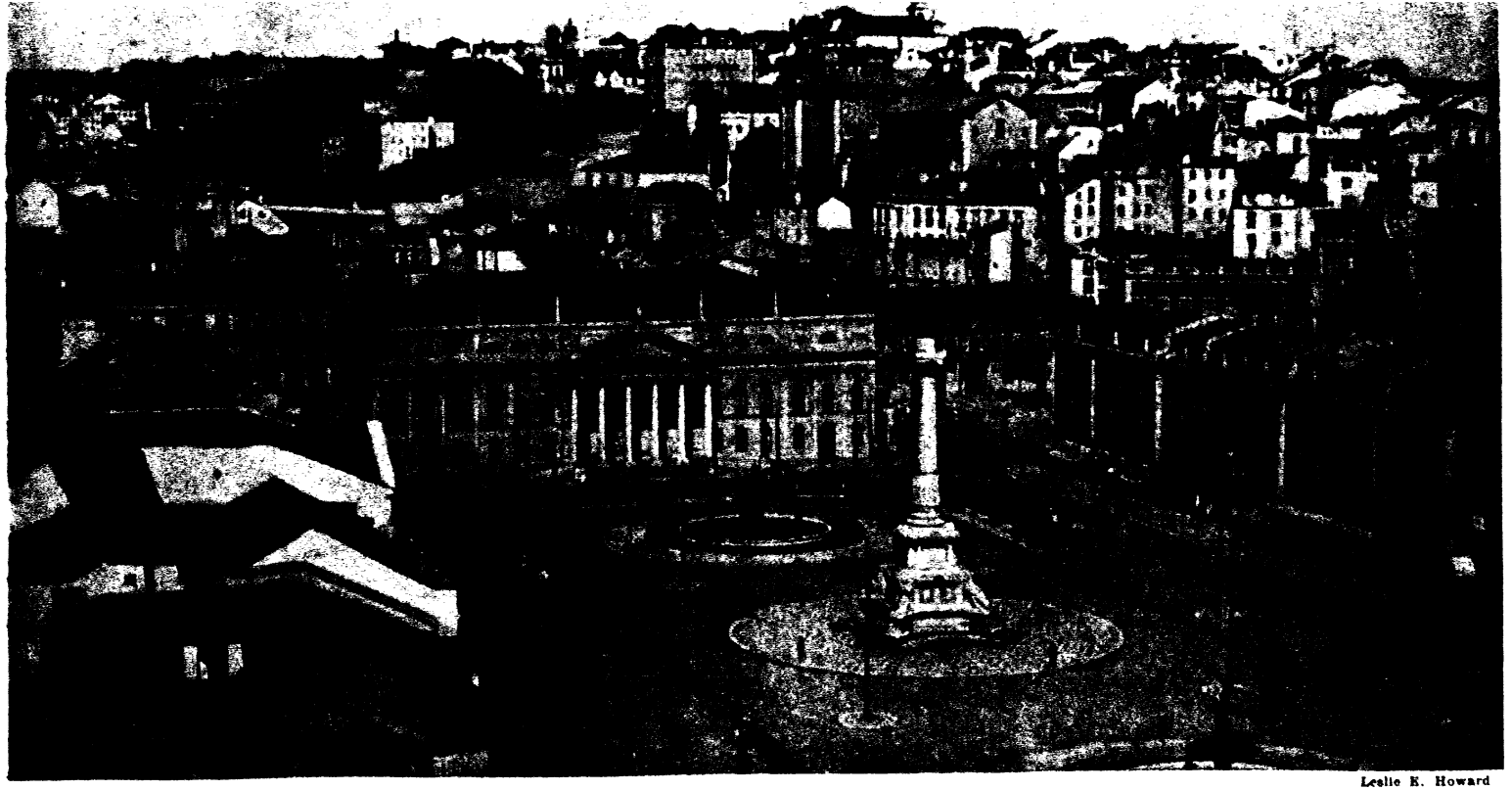
massive monastery of S. Vincent outside the walls, which contains the tombs of the Braganzas. King Carlos and his son at one time could be seen through the glass let into their coffin lids, and D. Pedro, Emperor of Brazil, a small shrunken figure with a white beard, used also to be visible, but his body was at last translated to his native land with every mark of honour. From the esplanade in front of the Graça church a magnificent view of Lisbon and the surrounding country is obtainable; no one should miss it. The city is famed for its prospects rather than for its buildings, and another vantage point is the rampart of the castle on a hill near the Graça, a royal residence in the Middle Ages, whose ancient walls are now disfigured by ugly barracks. At the foot



Leslie E. Howard

LOOKING ACROSS THE TAGUS AT LISBON'S PRINCIPAL SQUARE, PRAÇA DO COMMERCIO, AND THE GOVERNMENT BUILDINGS

The calamitous earthquake of 1755 did serious damage to Portugal's capital, laying half the city in ruins and causing the death of some 40,000 persons. Most of the public buildings were rebuilt by Santos de Carvalho, and the government establishments surrounding the Praça do Commercio on three sides—the fourth and south side is bounded by the river Tagus—all date from the latter end of the eighteenth century. This spacious square is popularly known among the English as Black Horse Square, the title having reference to the equestrian statue of King Joseph I., which was erected to the king by his people in 1775



Leslie E. Howard

SQUARE OF DOM PEDRO IV., SHOWING THE THEATRE OF DONA MARIA II. IN THE CENTRAL BACKGROUND

The chief cities of Portugal stand on the coast; and Lisbon, the capital, on the promontory at the Tagus mouth, with its white houses rising in amphitheatre fashion on a series of low green hills, presents a singularly impressive aspect from the sea. The newer portion of the town, well-planned in handsome regular form, contains several public parks, promenades and squares. Above is seen the Praça, or Square, of King Peter IV., known as the Rolling Motion Square on account of the curious undulating design of its mosaic pavement, of which the only remaining portion is seen round the base of the statue of King Peter

G. O'Brien

STRANGE CART DRAWN BY RAMS IN THE STREETS OF LISBON

On church festivals and holidays, when the country folk come into the city, the streets in the town are full of interest. The bright shawls, aprons and scarves of the women together with the broad brimmed hats and coloured sashes of the men add to the gaiety of the scene. Lisbon has been called the most beautiful city of Europe after Naples and Constantinople

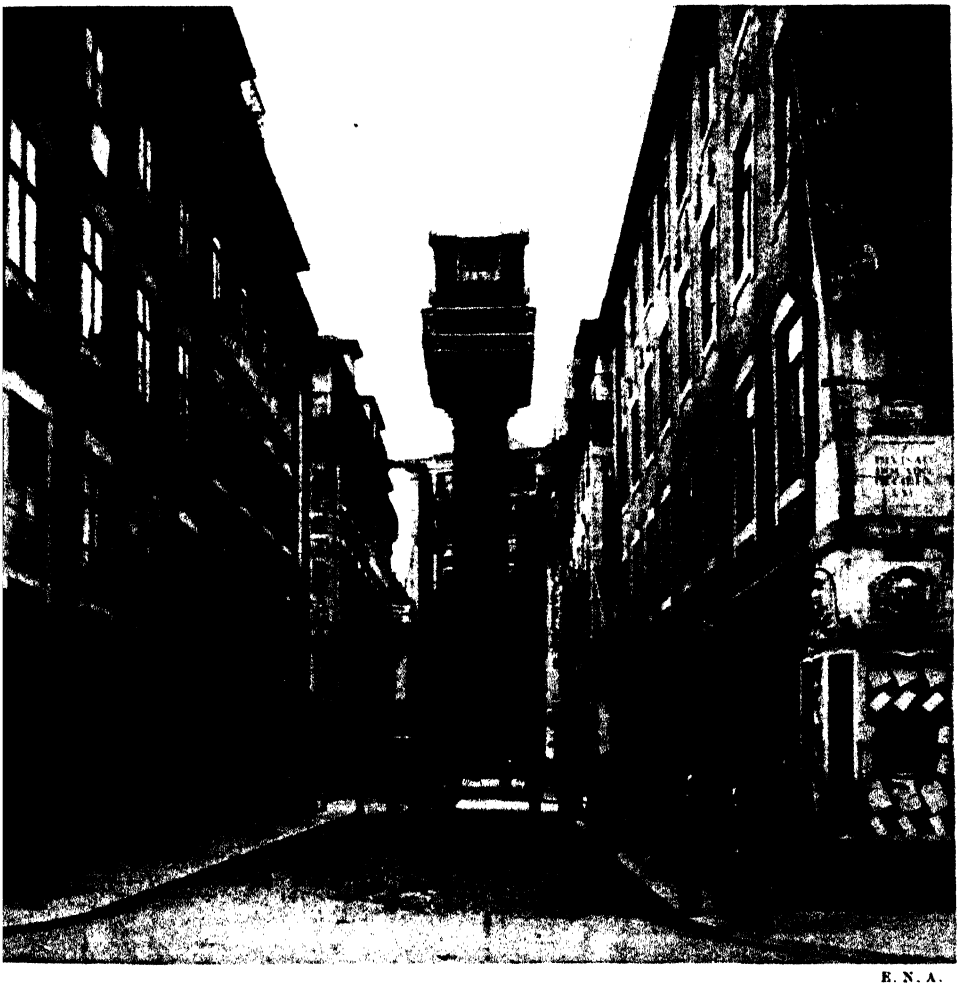
re the tortuous streets, the narrow ourts and alleys of the Moorish city, listricts known as Mouraria and Alfama, maze of buildings without adequate lrainage or air, yet picturesque and interesting to explore. Consumption is ife in Lisbon, but epidemics are rare; he sun disinfects and the people seem roof against their surroundings by the se of centuries; moreover, by its conguration Lisbon is a windy city, and he breezes from the river and the tlantic give little rest to microbes.

Descending to the lower city we alk up another hill, since here the tramay does not help us, to the Rua arrett, short and narrow, but the most shionable of Lisbon arteries, its Bond treet. Here are the best shops, and here the afternoon men of leisure stand r hours gossiping and observing the dies, who are noted for their fine yes and teeth and abundant hair, hile others turn the chemists' shops to clubs and discourse with the ssistants as they make up prescriptions one containing strychnine, but no mishap ever occurred; there chemists are able to do two things at once.

The habit of afternoon tea, introduced from abroad, has led to the opening of smart tea shops, but an old-fashioned Portuguese, though he may drink many cups of coffee over eternal political discussions in the cafés, will eat nothing between lunch and dinner; wisely, too, because the climate does not aid digestion; again, no one who values his health takes water or milk that have not first been boiled. In addition to several teashops the Rua Garrett, named after the founder of Romanticism who had Irish blood, has three churches; all are well kept and filled, for the practice of religion is reviving among this people, once most Catholic, which carried the Cross over the world and still bears it on the flag, together with the pieces of silver for which Christ was sold. These churches are the Martyrs, originally built for their dead by the French and men of Cologne who took part in the

ell fighting the Infidel; the Encarnação, vith a beautiful statue of the Blessed Virgin by Machado de Castro; and the oreto for the Italian colony.

If we would see a Gothic church, we nust mount farther on the right to the uined Carmo, now the Archaeological luseum; it was built by the Holy onstable Nuno Alvares Pereira, founder f the House of Braganza, who has ately been beatified. Off the Rua arrett to the left, the splendid Library, well-managed institution with its own ress, occupies the old convent of S. rancisco, which once housed 600 friars. he religious orders, who hold so large a place in the history of the country, have been expelled and the teaching of religion is not allowed even in a private school, though the vast majority of Portuguese are nominally Catholics. The ratio of illiterates, 75 per cent., is said to have been increased of late, because attendance in primary schools, though nominally compulsory, has fallen off. This fact is not so deplorable as it would seem, for the uninstructed country folk are found by experience to be as a rule morally better than the partially educated people of the towns; certainly nothing could exceed the devotion of good Portuguese servants,



E. N. A.

LIFT FROM THE RUA DA SANTA JUSTA TO THE LARGO DO CARMO

Electric and hydraulic lifts have been installed at eight points in Lisbon, where the streets are too steep for trams. A covered passage leads from the platform at the top of this lift-shaft, over roofs and courts, to the Largo do Carmo close by the ruins of the Gothic church of Carmo, erected in 1389-1423 and containing the Archaeological Museum

who often can neither read nor write. A noble bronze statue of Camoens stands in a square at the top of the Rua Garrett ; higher up, another street leads to the ex-Jesuit Church of S. Roque, where S. Francis Xavier preached before sailing for the East, and to the Misericordia, maintained by a weekly lottery. Retracing our steps to the square and passing Camoens on the left, we descend into a valley to S. Bento, another old monastery, now the home of the chambers and of the rich national archives, and mount again to the domed basilica of the Estrella, the first church built in honour of the Sacred Heart.

Grave of an English Novelist

Facing it is one of the beautiful municipal gardens, and behind it the English Protestant church of S. George and the cemetery with its aged cypresses where lies the novelist Fielding ; he went to Lisbon for his health, as was the custom in the eighteenth century, especially in consumption cases, and there died. S. George has been the patron saint of Portugal since the beginning of the fifteenth century when John I. married Philippa of Lancaster, daughter of John of Gaunt ; he once held a commission in the army and in effigy rode in religious processions.

The National Museum of Ancient Art at Janellas Verdes deserves mention, not for itself but for its contents. Probably all are aware that Portugal produced marvels of ecclesiastical gold and silver work, many of which are here ; connoisseurs value the eighteenth century furniture of the John V. style, but few know that in the fifteenth century a school of painting existed influenced by Van Eyck, yet distinctive and national.

Social Service of the Theatres

I have said nothing of the theatres, and yet in the eighteenth century Lisbon had the best opera in Europe, maintained by the wealth that came from Brazil ; and S. Carlos keeps something of its old traditions, for the Portuguese are lovers and keen critics of music. The opera house and the theatres perform a social service unnecessary in northern countries ; save at the seaside, young men and girls of the upper and middle classes have few opportunities for social intercourse, since dances and dinners are rarely given and a man may not call on a lady unless he be a blood relation, but at the play the intervals are long, perhaps purposely so, and men can talk with their lady acquaintances.

One of the most interesting features of the city is the street venders and their cries. First come the fish-wives, who, as they walk, advertise their goods in a voice to wake the dead, and when summoned from the windows to display them, haggle over the price until a bargain is struck. This is sometimes a long business, but time is of no importance in this sunny land. Then there are the scissor-grinders with their musical call, the sellers of pineapples, which are suspended from a pole carried over the shoulders, and above all the venders of lottery tickets, which never lose their attraction for the poor people.

Easy Time for the Housewife

Not so long ago the cows were paraded and were milked before the doors of their customers, which prevented the fraud of watering, while turkeys are still driven down the streets by a man with a long bamboo having a bit of rag fixed to the end, and the purchase is killed by the cook and prepared for the table. The same process is used in the case of chickens, though these arrive cooped up in baskets covered with netting and are borne on the shoulders of the seller.

Lisbon housewives are seldom overworked, for either provisions are bought at the door or they are fetched from the market at the Praça da Figueira by the cook and paid for in cash, so that no bills are run up. This enables the ladies to devote more time to personal adornment, on which both sexes spend much money, time and trouble.

Spencer Arnold

LONDON. *From the terrace of the National Gallery one sees Trafalgar Square, Nelson's Column, Whitehall and Big Ben tower*

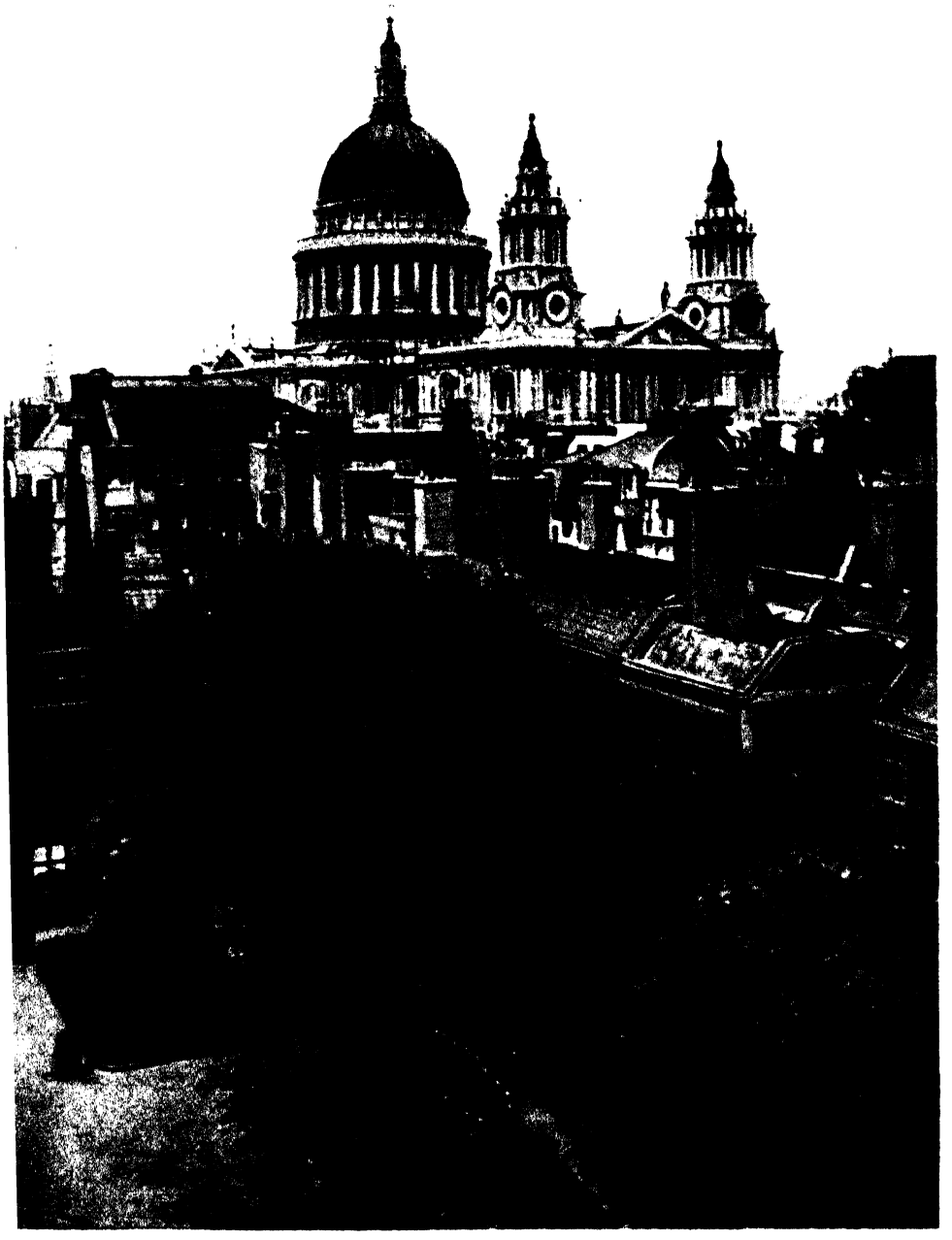
LONDON. *Trafalgar Square, on the site of old Charing village, was laid out in 1829-41. The church is St. Martin's-in-the-Fields.*

Temple Bar. Near where the Strand joins Fleet Street, St. Clement Danes, built in 1681, stands in the roadway by the Law Courts

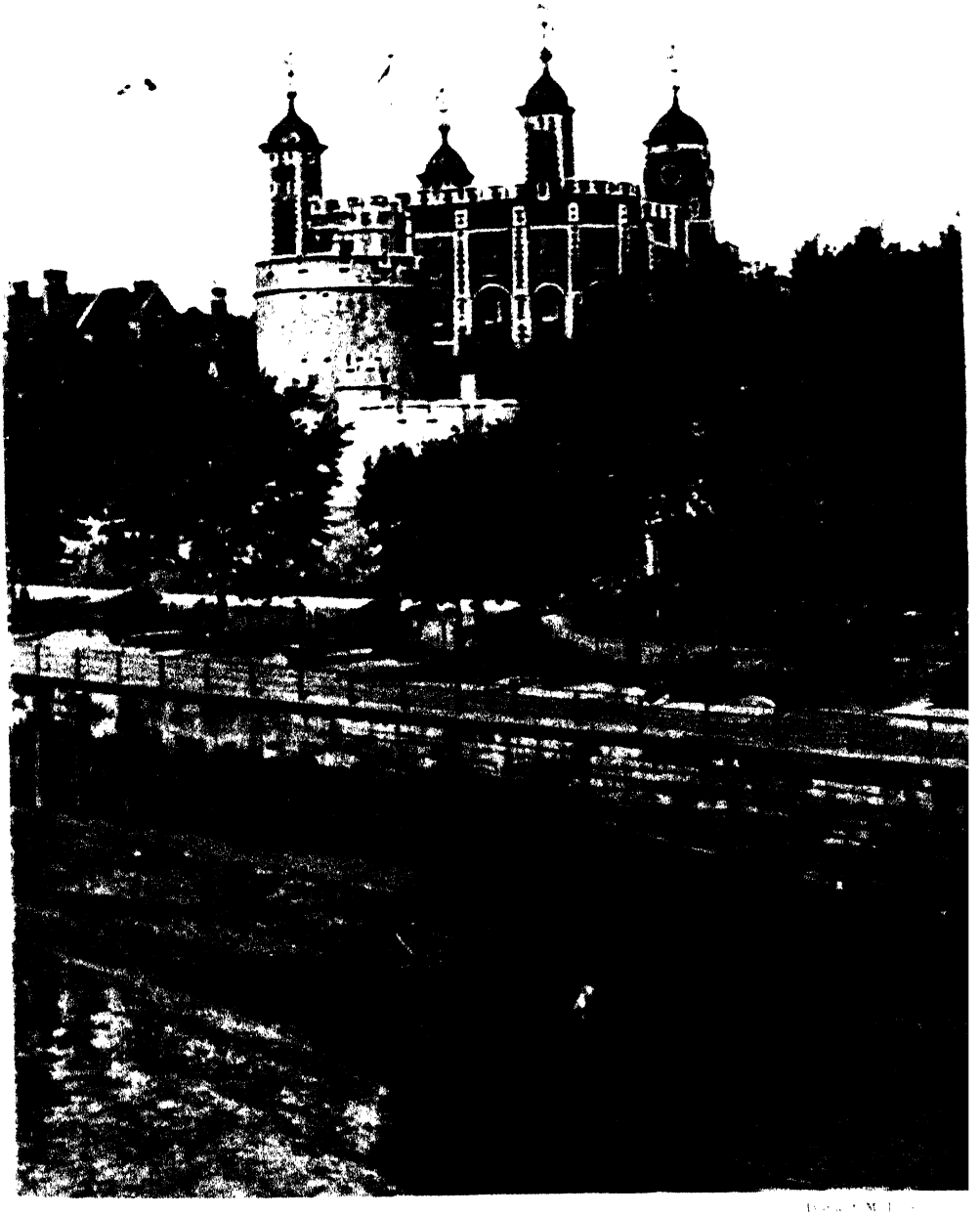
LONDON. *The eagle on the Air Force Memorial spreads its gold wings above the Embankment near the Houses of Parliament*

Donald M. Frost

LONDON. *Westminster's grey abbey has its west front facing Victoria Street. The towers, designed by Wren, were finished in 1740*



LONDON. *From the house-tops in Old Bailey there is a view of Amen Court which houses the Canons Residentiary of St. Paul's*



LONDON. Named after its square four-turreted keep, the Tower has been in turn fortress, prison and palace, and is now a barracks

2516

LONDON

The Greatest City in the World

by The Very Reverend W. R. Inge, D.D.

Dean of S. Paul's Cathedral

THE centre of the British Empire has a vastness suggestive of a World Power, a show of opulence which impresses the visitor, and a profusion of historical memories in almost unbroken sequence from the age of Roman occupation. London is not the most attractive of great cities; its welcome to the stranger is a little cold; but no town in the world surpasses it in interest.

The site of London has obvious advantages for the capital of England, but it was not the capital of Britain in Roman or pre-Roman times. Silchester was the key to the old roads leading to the Thames fords, and Verulam, or St. Albans, was the capital of the leading Celtic kingdom. London was the little port of such trade as Verulam wished to send by sea. The boats were probably moored in the creek of the Walbrook, afterwards called Dowgate. The road to St. Albans passed by Crouch End. Edgware Road is part of the famous Roman highway, Watling Street. There was a "Horse-Ferry" across the river, which was later put under the charge of the Archbishop of Canterbury; Lambeth Palace was at the beginning of the road to Dover. But the Romans made a "London Bridge," and another road along Oxford Street. Under them the town grew and was full of traders.

What the Romans Have Left

The Roman remains in London are scanty, and have to be looked for. There is a small Roman bath in Strand Lane (the great public bath was probably in Creed Lane), fragments of the city wall, and numerous sculptures, mosaics, wall paintings and tombs, which have been unearthed from time to time.

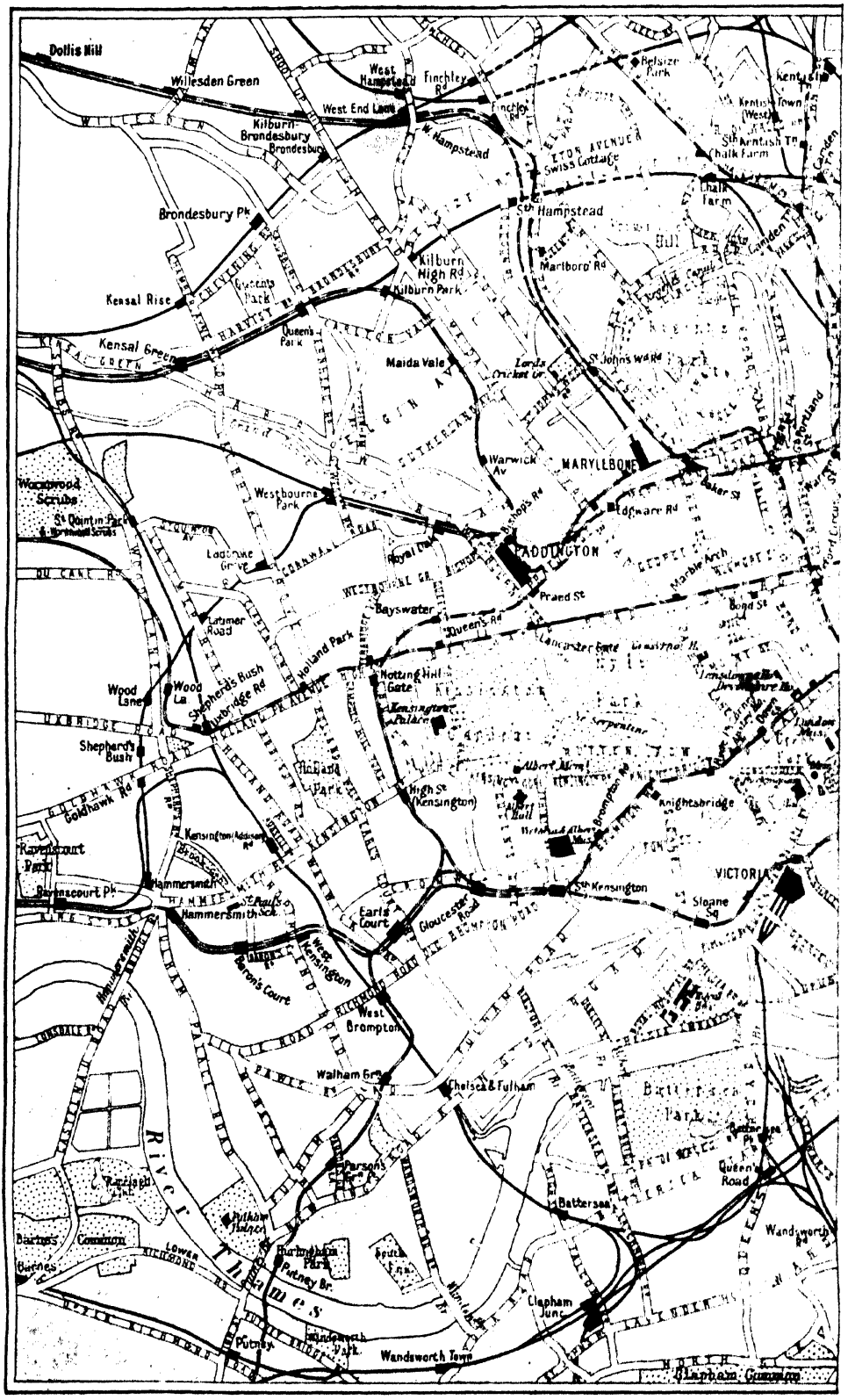
There is practically nothing left of Saxon London. It was burnt down in 1135, and there was probably not much to burn. But there are rich remains of the Norman period, beginning with "the Tower" of William the Conqueror, which no familiarity can prevent from being one of the most interesting spots to be found in Europe.

Relics of Norman Times

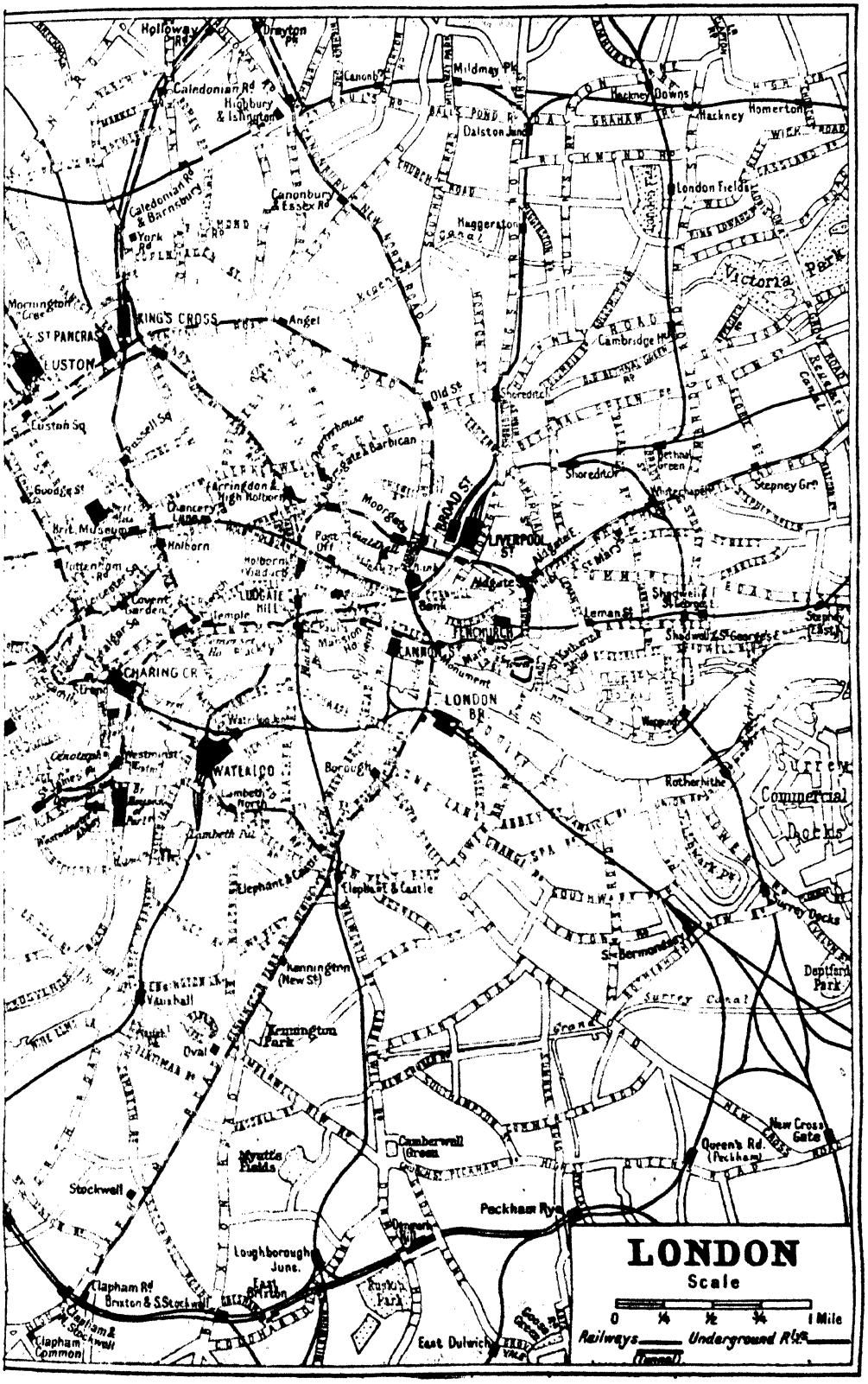
The latter part of the thirteenth century saw the erection of Westminster Abbey in substantially its present condition. Our national Valhalla is worthy of its fame; there is no other place where the continuity of English history is so strongly felt. But a drastic purge of the monuments which block and disfigure the interior is even more needed here than at S. Paul's. There are scores of monuments to nonentities, and shapeless blocks of marble which illustrate the bad taste of the survivors rather than the merits of the deceased.

Other remnants of Norman London are the round part of the Temple Church, the crypt of Bow Church, the remaining half of S. Bartholomew the Great, one of the noblest churches in the country, which met with barbarous treatment in the sixteenth century, and part of S. Ethelburga's, Bishopsgate. S. Katherine's-by-the-Tower was sacrificed a hundred years ago, with its cloisters and courts, to make a new dock. Only fragments of the Norman church remain in Southwark Cathedral.

The first stone London Bridge was built in the twelfth century. It had a chapel in the middle, but the two rows of houses which made it so picturesque and inconvenient came later. The beautiful Nonsuch House, upon the bridge,



MAIN ROADS AND RAILWAYS OF THE BRITISH EMPIRE'S HEART—



—THE UNORDERED TANGLE OF LONDON'S VITAL COMMUNICATIONS

was for a time the residence of the Lord Mayor. The old bridge was sixty yards lower down the river than the present structure, begun in 1825.

London in the century before the Reformation had become one of the most beautiful cities in the world. Not even Oxford, or Florence, cities which are visited by pilgrims from all civilized countries, gives a richer picture to the eye than did the old City of London before the fire, and still more before the destruction of the monasteries in the reign of Henry VIII. The narrow streets of "East Central" London, now sacred to the worship of Plutus, the god of wealth, were then flanked with the splendid colleges of religious communities. S. Martin's-le-Grand, a house of secular canons, was founded, near S. Paul's, by a grant of the Conqueror. The Austin canons came in the reign of Henry I. They owned S. Mary Overy on the Surrey side, where their church became Southwark Cathedral, S. Bartholomew in Smithfield, outside the city walls, and Trinity, Aldgate. The prior was ex-officio alderman of Portsoken. The Austin canons established almost the first hospitals in London.

Then came the Knights Templars, a proud, wealthy and gallant corporation, suppressed from mixed motives in 1314. The Black Friars (Dominicans), the Grey Friars (Franciscans) and the White Friars (Carmelites) established themselves in the thirteenth century. Their names survive, as the street called Minories commemorates the minoresses or nuns of S. Clare, whose house was founded in 1293 by Edmund Earl of Lancaster.

CITY OF LONDON AS IT WAS BEFORE THE GREAT FIRE

CHURCHES. 1, Allhallows Barking; 2, S. Olave; 3, S. Katherine Coleman; 4, Trinity Christ Church; 5, S. Katherine Christ Church; 6, S. Andrew Undershaft; 7, S. Mary, S. Ethelburga; 9, S. Helen; 10, Allhallows Staining; 11, S. Gabriel or Fen Church; 12, S. Margaret Pattens; 13, S. Dunstan in the East; 14, S. Mary at Hill; 15, S. Botolph; 16, S. Magnus; 17, S. George; 18, S. Margaret; 19, S. Leonard Milk Church; 20, S. Benet Grass Church; 21, S. Dyonis; 22, Allhallows; 23, S. Edmond; 24, S. Michael Archangel; 25, S. Peter Cornhill; 26, S. Martin Oteswich; 27, S. Anthony (French Church); 28, S. Peter le poor; 29, Austin Friars (Dutch Church); 30, S. Bartholomew; 31, S. Benet Fink; 32, S. Nicholas Acon; 33, S. Clement in Eastcheap; 34, S. Michael; 35, S. Martin Orgar; 36, S. Laurence Poultney; 37, S. Mary Abchurch; 38 S. Mary Woolnoth; 39, S. Christopher; 40, S. Margaret Lothbury; 41, S. Mildred; 42, S. Mary Woolchurch; 43, S. Stephen Walbrook; 44, S. Swithin; 45, S. Mary Bothaw, 46, Allhallows the more; 47, Allhallows the less; 48, S. Michael Paternoster; 49, S. Martin Vintry; 50, S. John upon Walbrook; 51, S. Thomas Apostle; 52, S. Sythe; 53, S. Pancrate; 54, S. Mary Colechurch; 55, S. Martin Pomary; 56, S. Olave Upwell; 57, S. Stephen; 58, S. Alphege; 59, S. Mary Aldermanbury; 60, S. Michael Bassishaw; 61, S. Mary Magdalen; 62, S. Laurence Jewry; 63, S. Mary Magdalen; 64, Allhallows Honey Lane; 65, S. Mary Bow; 66, S. Mary Aldermany; 67, S. James Garlickhithe; 68, Holy Trinity; 69, S. Michael Queenhithe; 70, S. Mildred; 71, Allhallows Bread Street; 72, S. John Evangelist; 73, S. Matthew; 74, S. Peter W. Cheap; 75, S. Michael; 76, S. John Zachary; 77, S. Olave Silver Street; 78, S. Mary Staining; 79, S. Alban; 80, S. Anne; 81, Foster (S. Vedast); 82, S. Leonard; 83, S. Augustine; 84, S. Nicholas Olave; 85, S. Nicholas Cole Abbey; 86, S. Mary Mounthaunt; 87, S. Mary Somerset; 88, S. Peter; 89, S. Mary Magdalen; 90, Christchurch; 91, S. Gregory; 92, S. Anne; 93, S. Andrew; 94, S. Bene't Hithe; 95, Temple; 96, S. Dunstan; 97, S. Bride; 98, S. Andrew; 99, S. Sepulchre; 100, S. Bart. the less; 101, S. Bart. the great; 102, S. Botolph; 103, S. Giles; 104, S. Botolph; 105, S. Botolph; 106, Trinity Minories; 107, S. Olave; 108, S. Mary Overy.

HALLS: 1, Bakers'; 2, Clothworkers'; 3, Ironmongers'; 4, Bricklayers'; 5, Fletchers'; 6, Parish Clerks'; 7, Drapers'; 8, Fishmongers'; 9, Dyers'; 10, Carpenters'; 11, Armourers'; 12, Girdlers'; 13, Guild; 14, Weavers'; 15, Masons'; 16, Bakewell; 17, Bay; 18, Founders'; 19, Grocers'; 20, Mercers'; 21, Cutlers'; 22, Skinners'; 23, Innholders'; 24, Parish Clerks'; 25, Painter Stainers'; 26, Saddlers'; 27, Goldsmiths'; 28, Haberdashers'; 29, Blacksmiths'.

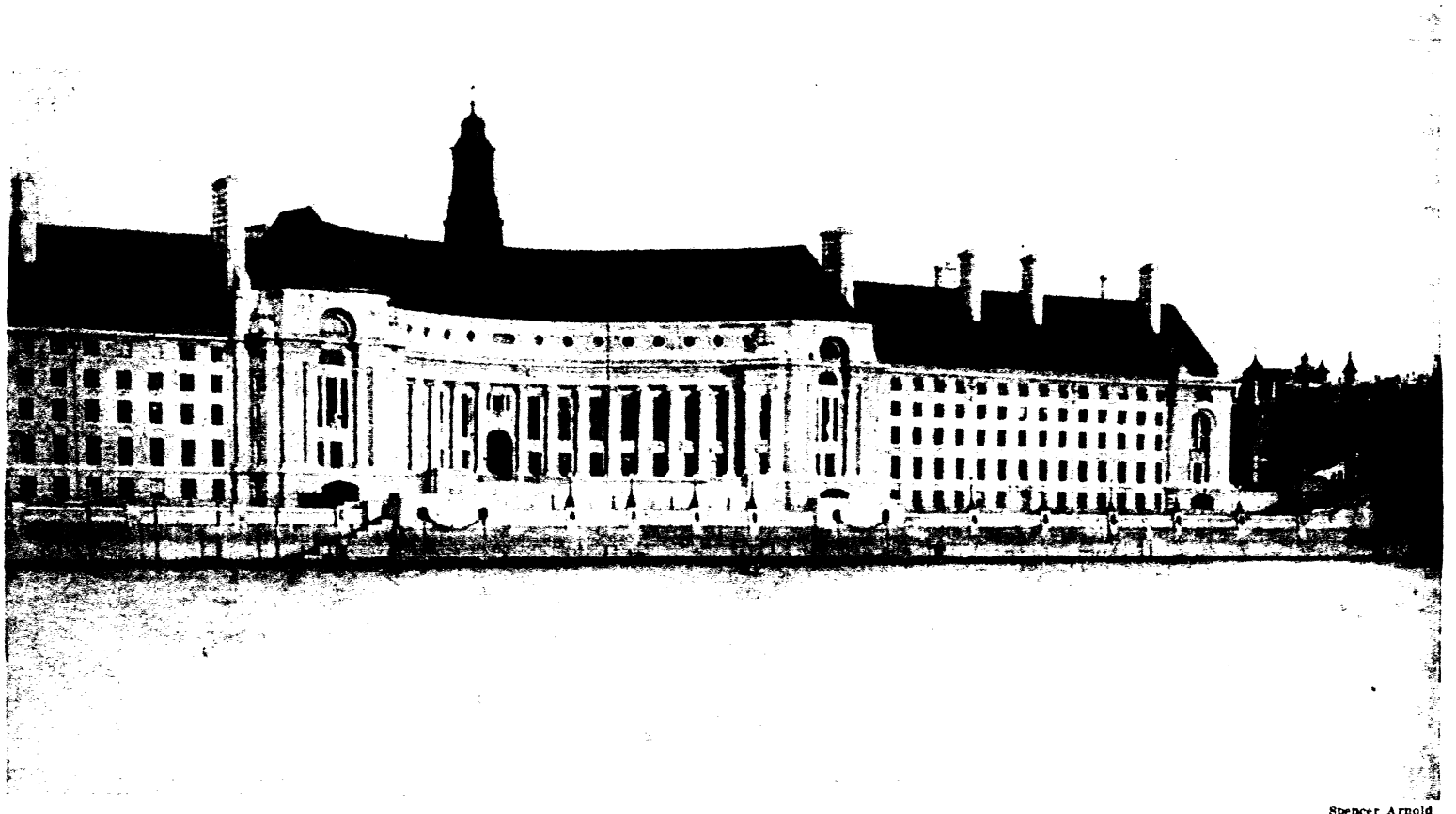
LOOKING INTO THE PULSATING HEART OF FINANCIAL LONDON

In the centre is the Royal Exchange facing the triangular space enclosed by itself, the Bank of England and the Mansion House. To the right of the Exchange is Cornhill leading into Leadenhall Street; to the left is Threadneedle Street terminating in Bishopsgate. The dome between Threadneedle Street and Throgmorton Street is that of the Stock Exchange

The Church was everywhere in those days. Besides the religious houses in every street, with their convent gardens, priests, canons, pardoners and retainers, there were 120 parish churches, each with its churchyard. Before passing the city gates the visitor feasted his eyes on a forest of spires and towers, crowned by the mighty steeple of Old S. Paul's, rising from the top of Ludgate Hill to a height of 500 feet.

S. Paul's was a huge monastic house, with bishop, dean, four archdeacons, treasurer, precentor, chancellor, thirty greater canons, twelve lesser canons, about fifty chantry priests and thirty vicars. These dignitaries, their subordinates and their guests accounted (in 1286) for 67,814 gallons of beer, brewed for them on the premises. Even the greatest admirers of Sir Christopher Wren's masterpiece must regret the destruction of this splendid cathedral. It was dilapidated before the Great Fire and had lost its steeple in the reign of Elizabeth. Indeed, the fire was a good thing for Wren's reputation, for his projected restoration of Old S. Paul's would have been terrible. Wren never understood Gothic architecture. Nevertheless the cathedral did not stand alone in unchallenged preeminence, as it does to-day. The great church of the Grey Friars, a little north of Newgate Street, enriched by Dick Whittington and several Plantagenet queens, was a formidable rival of S. Paul's. In it were buried the queens of Edward I. and Edward II., and the daughters of Edward II., Edward III. and Henry III. The Blue Coat School, till it moved into the country, worthily occupied the site, as the Charterhouse perpetuates the memory of a great and ancient Carthusian establishment.

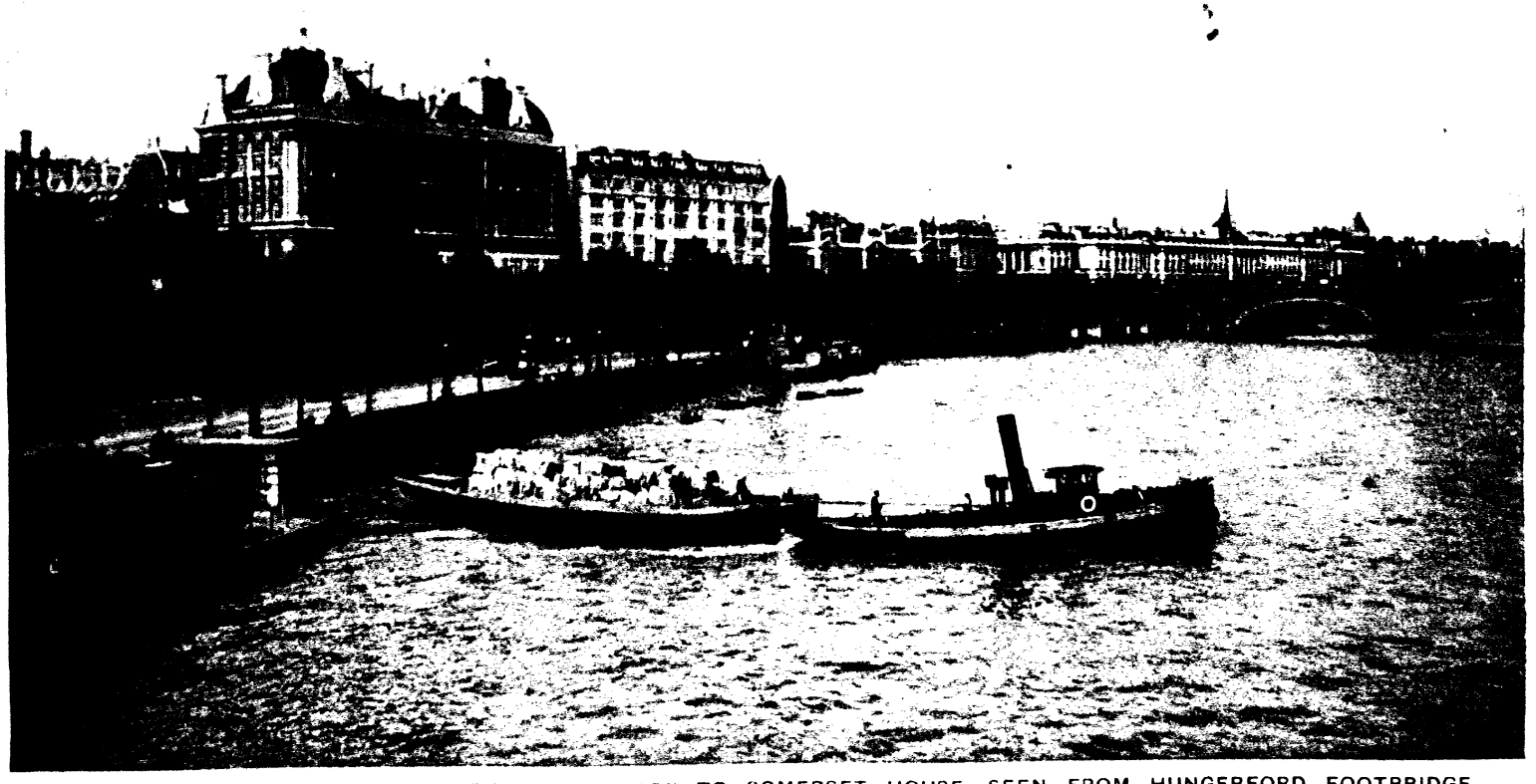
It is worth while to wander about the City in search of remnants of Plantagenet London. Quaint little squares mark



Spencer Arnold

HUGE RENAISSANCE EDIFICE OF THE LONDON COUNTY HALL ON THE BANK OF THE THAMES

At the east end of Westminster Bridge, on the left, and with its main entrance in Belvedere Road, rises the London County Hall, the new headquarters of the London County Council. The building was designed by Ralph Knott with a river façade 760 feet in length; it was opened in 1922, but the north wing was not then finished. The cost of the structure was over £3,000,000 and that of the furniture over £25,000. The sliding partitions in the finely panelled Grand Committee Room come up through the floor, converting the room into three. The octagonal Council Chamber provides accommodation for 200 members



VICTORIA EMBANKMENT, FROM ADELPHI TERRACE TO SOMERSET HOUSE, SEEN FROM HUNGERFORD FOOTBRIDGE

Until 1864 the area now occupied by the Victoria Embankment was a mud bank. At high tide the water reached the end of those streets which run south from the Strand and at the end of one, Buckingham Street, there still stands the York Watergate as evidence. There is now nearly a mile and a half of roadway between Westminster and Blackfriars along which is a double tramway track forming an important connecting loop with the systems south of the river. Along the riverside the hotels Cecil and Savoy can be seen, the monolith called Cleopatra's Needle, Waterloo Bridge and Somerset House

Topical

MONUMENT OF AN EMPIRE'S SORROW AMID AN EMPIRE'S ADMINISTRATURE

In the centre of Parliament Street, opposite the Colonial Office, stands the Cenotaph, inscribed with fine simplicity "The Glorious Dead." Designed by Sir Edward Lutyens, it commemorates those who fell in the Great War, stands on three broad flags and is surmounted by an altar. Parliament Street is a continuation of Whitehall; both contain the chief government offices

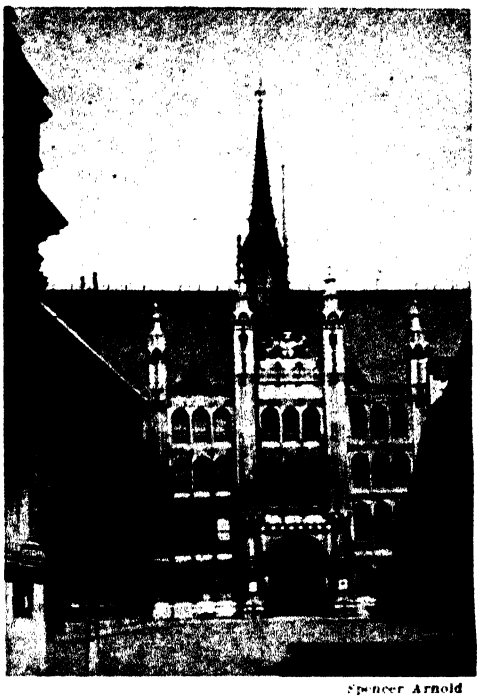
the courts of former religious houses, and all over central London the names of streets perpetuate the memory of old palaces of the feudal nobility and wealthy citizens. We do not realize the opulence and splendour of London at the end of the Middle Ages. A Venetian traveller towards the end of the fourteenth century counted fifty-two goldsmiths' shops in the Strand, "so full of silver vessels that all the shops of Rome, Milan, Florence and Venice together could not show the like." The Lord Mayor, he finds, is held in as great estimation as the Doge of Venice. The Lord Mayor's banquet is already an institution. "There must have been a thousand persons at table," and the profusion of victuals is infinite. The Englishman has always been a good trencherman.

The Great War has given the coup de grâce to the stately mansions of London, of which very few now remain in private hands. To get an idea of what the nobleman's house used to be like we should visit Lambeth Palace, or, on a rather smaller scale, the Heralds' College in Queen Victoria Street. This beautiful building, the front side of which has been pulled down, was once the town house of the Earls of Derby. The resemblance to a small college at Oxford or Cambridge must strike everyone. The present house was rebuilt on the same site as the old, after the Great Fire. Baynard's Castle, a grand palace on the river bank, ended its history in 1666. The usual plan of these great houses was a quadrangle, which was used, among other purposes, for drilling the retainers of the nobleman, who kept hundreds of them in his pay. These bands formed the nucleus of the armies which destroyed each other in the Wars of the Roses.

Crosby Place, erected by Sir John Crosby, Lord Mayor in the fifteenth century, was not burnt in the Great Fire It illustrates the magnificence to which a simple tradesman, a grocer, could rise in the late Middle Ages. The famous hall, with its fan-vaulted ceiling, recalls the contemporary chapel of King's College, Cambridge. Richard III. occupied this mansion, and it was there that he received the news of the murder

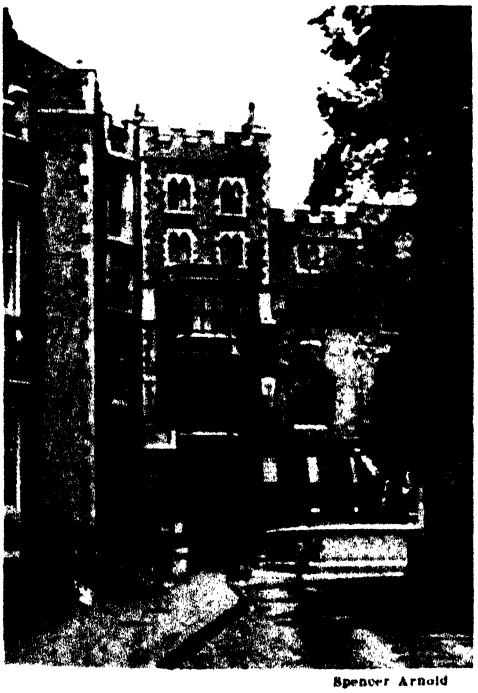
Humphrey Joel

In the Public Record Office, between Fetter Lane and Chancery Lane, England's state papers and archives, some dating back as far as 1100, are preserved in fireproof rooms



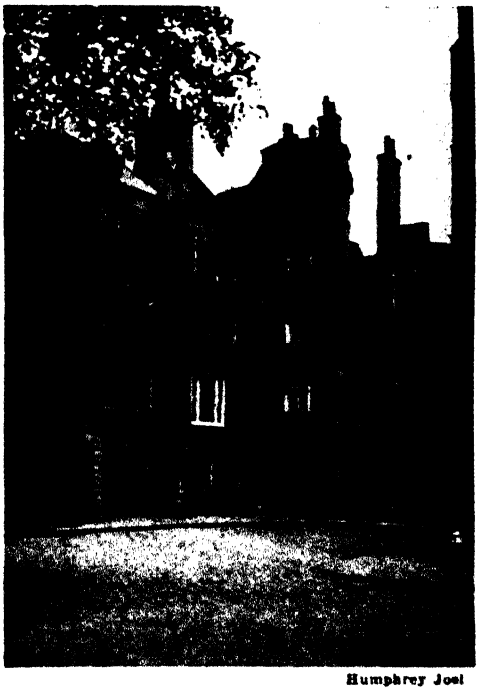
Spencer Arnold

This fifteenth century gatehouse, restored in 1789, gives access to the Guildhall, home of the City Corporation whose civic banquets held there have been famous for centuries



Spencer Arnold

Dean's Yard was once a portion of the Abbey gardens and known as The Elms. Through it ran a stream to turn the Abbey mill; now schoolboys play football here



Humphrey Joel

Of London's four great Inns of Court, Lincoln's Inn, the third, lying east of Lincoln's Inn Fields with main entrance in Chancery Lane, is associated with many eminent men

QUIET CORNERS HIDDEN IN THE TUMULTUOUS HEART OF LONDON

TIMBERED HOUSES DATING FROM ELIZABETHAN DAYS IN HIGH HOLBORN

Opposite Gray's Inn Road is Staple Inn, with a fine gabled and timbered façade, restored in 1886. High Holborn escaped the ravages of the Great Fire and still contains a few old buildings. The statue in the middle of the road commemorates those of the Royal Fusiliers, the City of London Regiment, who died in the Great War. In the distance is Holborn Circus

OXFORD CIRCUS, THE GREAT SHOPPING CENTRE, AND UPPER REGENT STREET

Oxford Circus is formed by the junction of Oxford and Regent streets. One of the fine shops around the Circus is the Louvre, a branch of the famous Parisian house. On the left in Upper Regent Street is the Polytechnic, which has about 15,000 members and students. The tower and needle-like spire of All Soul's Church rise where Upper Regent Street is continued by Langham Place

Donald McLeish

PICCADILLY CIRCUS, HEART OF THE WEST END, AND ITS TRAFFIC ARTERIES

Piccadilly Circus is at the junction of Shaftesbury Avenue, Regent Street, Piccadilly, Haymarket and Coventry Street, with Eros seen above in the central background. It is always crowded throughout the day and at night glares with coloured sky-signs. In the centre is the famous fountain, while the steps about the broad base are gay with the froth of colour above the baskets of the flower-sellers

CLUBS AND RESIDENCES OF PICCADILLY FACING THE GREEN PARK

Piccadilly has a history that goes back to the early seventeenth century when several of the large mansions which front the Green Park were built. This famous street runs for about a mile from Piccadilly Circus to Hyde Park Corner and contains, in its eastern half, fine shops, the Berkeley, Ritz and Piccadilly hotels and several restaurants, and is famous for its many clubs facing the park

Humphrey Joel

KNIGHTSBRIDGE, THE NORTHERN BOUNDARY OF BELGRAVIA

Knightsbridge, as a continuation of Piccadilly, runs from Hyde Park Corner to Prince's Gate, where it is renamed Kensington Road. On the north side it is bounded for the greater part of its length by Hyde Park and on the south by tall houses, hotels and shops. The lofty building in the photograph is that of the Hyde Park Hotel which is almost opposite Sloane Street

QUEEN VICTORIA MEMORIAL IN FRONT OF BUCKINGHAM PALACE

Since the accession of Queen Victoria, Buckingham Palace has been the London residence of the sovereign. Behind the palace is a garden 40 acres in area, containing a lake and a pavilion; on the north side is Constitution Hill passing under a triumphal arch to Hyde Park Corner; on the south is Buckingham Palace Road, which passes the Queen Victoria Memorial and joins the Mall

BERKELEY SQUARE THAT HAS HOUSED MANY FAMOUS MEN

One of the most dignified and most aristocratic of London squares, Berkeley Square was laid out in the early eighteenth century on a portion of the gardens of Berkeley House. Nowhere in "town," perhaps, are there more beautiful plane trees to be found than those in the central garden, around which stand many of the fine old houses so very rich in memories of eminent men

TALL HOUSES OF GROSVENOR STREET TRAVERSING QUIET MAYFAIR

Grosvenor Street runs from Grosvenor Gate in Park Lane through Grosvenor Square to New Bond Street. This, the most fashionable part of London, is called, though unofficially, Mayfair, since it was the site of a fair held in May during the seventeenth century. This festivity was eventually suppressed owing to its rowdiness. The fair ground was Brook Field by the Tybourne stream

Spence Arnold

IN PARK LANE WHICH CONTAINS SOME OF THE RICHEST PEOPLE AND POOREST ARCHITECTURE IN THE WEST END

For the most of a mile Park Lane marches with the eastern palings of Hyde Park and the inhabitants have one of the finest views in London from their upper windows. The houses, which provide some of the largest rent rolls in the whole city, are of all sizes from Dorchester House, near Stanhope Gate, to tall, narrow-fronted buildings huddled together with every sort of ornamentation for the sake of difference. Park Lane is a traffic artery from Marble Arch to Hyde Park Corner, joining Oxford Street and Edgware Road to Piccadilly and Knightsbridge. It is also the western border of that district called Mayfair

LOOKING TOWARDS THE SERPENTINE BRIDGE FROM THE WEST BANK OF THE LONG WATER IN KENSINGTON GARDENS

Kensington Gardens are a favourite resort and pleasure ground of Londoners and are situated between Hyde Park and Kensington Palace. In former times they were part of the private grounds of Kensington Palace and were enlarged and considerably beautified by Queen Caroline, who had the Serpentine and the Round Pond made and avenues of trees, including the Broad Walk, planted. Since then many landscape gardeners have added improvements and the gardens now cover 275 acres. The portion of the lake within Kensington Gardens is called the Long Water, in Hyde Park beyond the bridge it is known as the Serpentine

of his two nephews in the Tower. It is not easy to imagine noblemen's houses in Botolph Lane, Fenchurch Street, Lombard Street and Throgmorton Street, but there were many of them. Aldersgate Street was a row of palaces. On the site of the Vintners' Hall was a splendid house, where Sir Henry Picard, Lord Mayor, entertained five kings in 1357. They played dice, and the King of Cyprus lost both his money and his temper.

The Passing of the Town Mansion

The bishops have been glad enough to part with their sumptuous town residences. The names of Ely, Winchester and Durham Houses still indicate where those prelates occupied palaces outside their dioceses. The bishops of London lived on the north side of S. Paul's Churchyard, conveniently near their cathedral. Now even London House, in S. James' Square, has been given up, and only the "country" house, Fulham Palace, remains to the bishop.

One of the finest private mansions in London was Northumberland House, which was destroyed in the last century, and we must go to Syon House to see the lion of the Percys, with tail extended, over the ducal residence. Nor can we picture Somerset House as the Protector Somerset designed it, though its immense size can be realized as the eye travels along the very beautiful façade of the present building. Piccadilly still contains a few great houses, some of them turned into clubs; the most imposing is Devonshire House, which has gone the usual way of these "white elephants."

Islands of Calm in the City

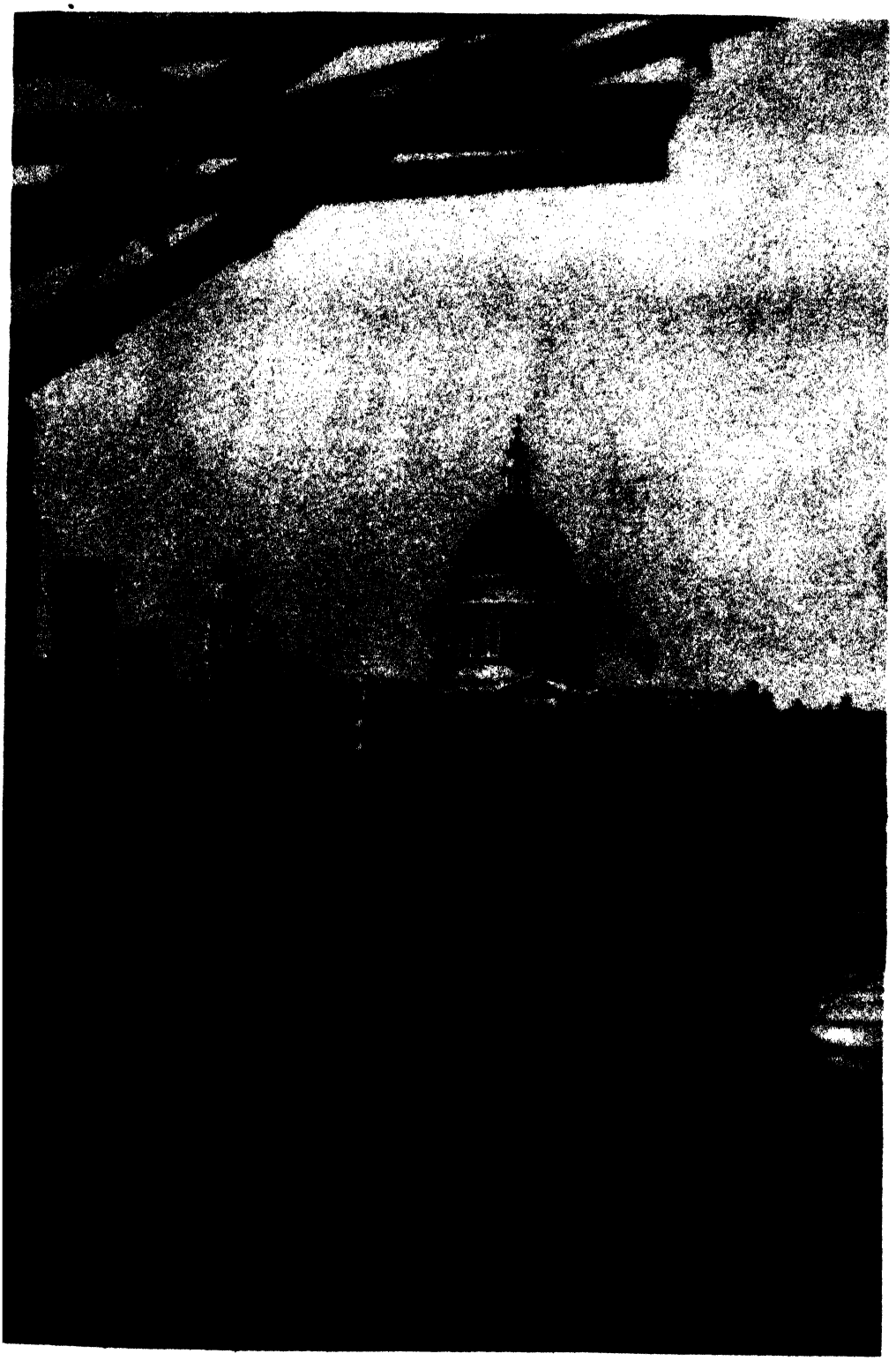
Surrounding Hyde Park and S. James' Park there is a group of handsome modern residences, such as Grosvenor House, Lancaster House, now the London Museum, Lansdowne House, with Bridgewater House opposite, Apsley House and Dorchester House. Changes in the way of living, only partly due to rising prices and the difficulty of getting servants, have made this kind of magnificence an anachronism. From the spectacular point of view, but perhaps from no other, the change is to be regretted. But the steady drain of precious works of art to America is rather deplorable.

There are, besides churches and large houses, two classes of building very characteristic of London, which a visitor from overseas ought not to overlook. The great "Inns" of the lawyers, looking curiously like large and dingy colleges of a university, preserve a conventual peace and quiet in the midst of the hubbub of London. This sudden change of atmosphere is even more marked when we enter the cloisters of Westminster Abbey, a veritable bit of the Middle Ages, quite untouched and unspoilt. The other characteristic feature, peculiar to the City proper, is the halls of the wealthy City Companies.

Halls of the Livery Companies

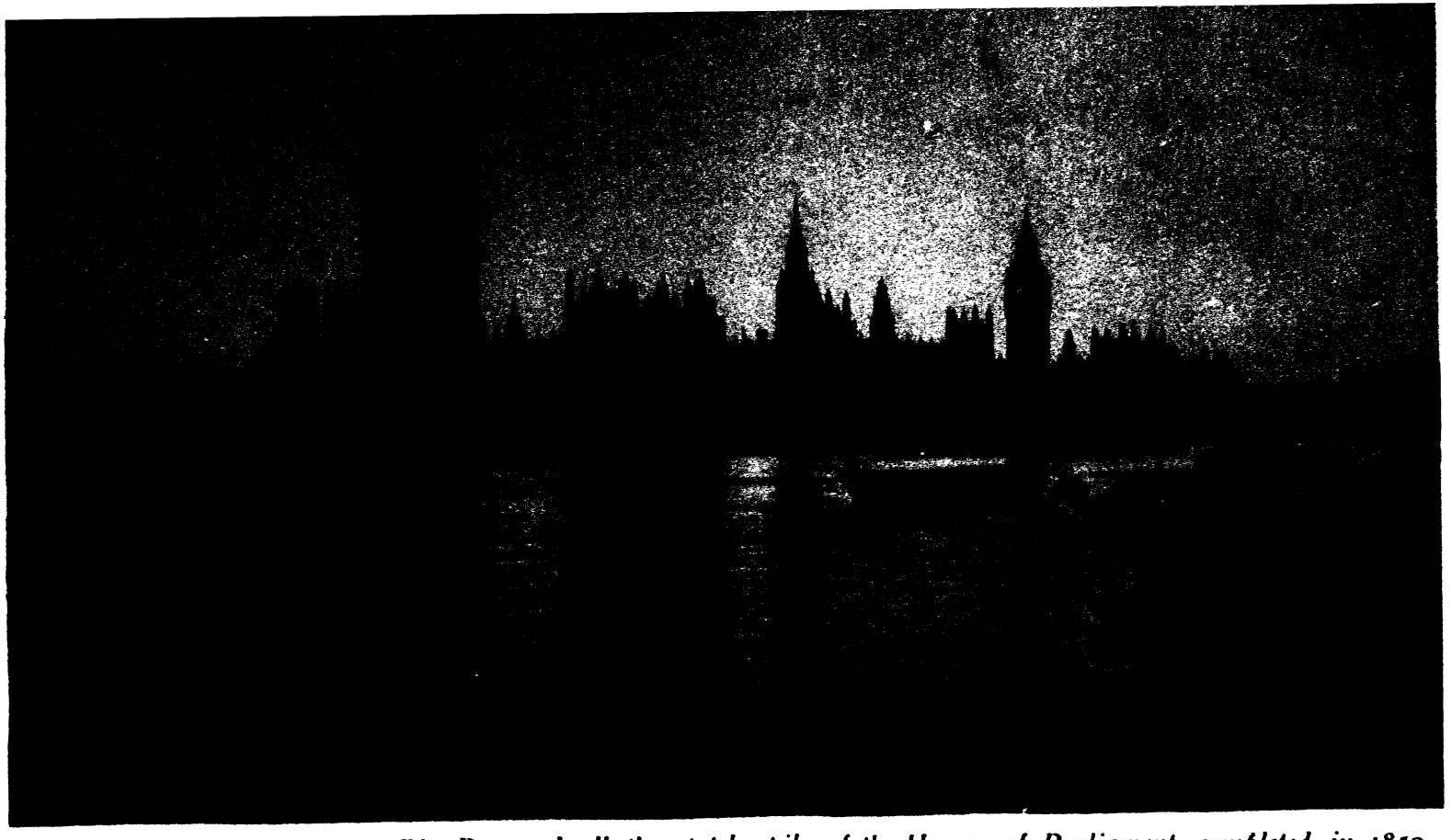
These old halls, some of which must no doubt have been extremely beautiful, were lost to posterity in the ruinous conflagration which devastated old London in 1666; but the present homes of the Livery Companies, though less romantic, are often very splendid, and well worth a visit. The dining-hall, decorated with past worthies of the institution, is a very English feature, common to the Oxford and Cambridge colleges, the Inns of Court and the Livery Companies. The Companies still keep up the reputation once enjoyed by the priestly colleges of ancient Rome, of being models in the art of luxurious hospitality. They are also models in their generosity to public education.

John Colet, the famous dean of S. Paul's, showed his wisdom by putting his school, which he placed at the doors of the cathedral, under the care of the Mercers' Company instead of under that of the dean and canons, who might have turned it into a school for choristers. In its present site, at Hammersmith,

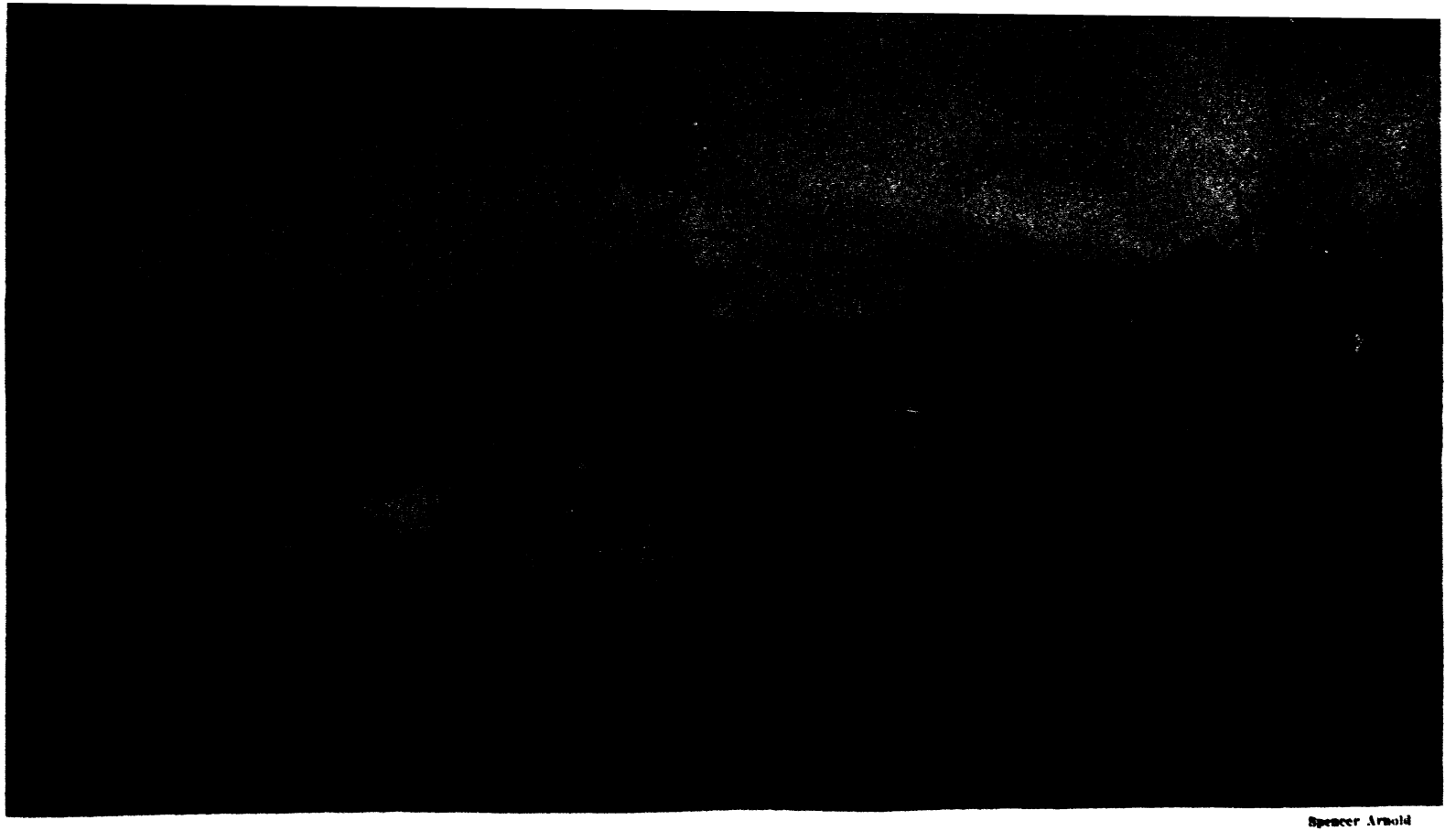


E. O. Hoppé

LONDON. *Bankside, between Blackfriars and Southwark Bridge, faces the old City wharves and the towers and dome of S. Paul's*



LONDON. *Victoria Tower, Big Ben and all the stately pile of the Houses of Parliament, completed in* 1850, *dominate the Thames from the north bank. On the left can be seen the west end of Westminster Abbey*



Spencer Arnold

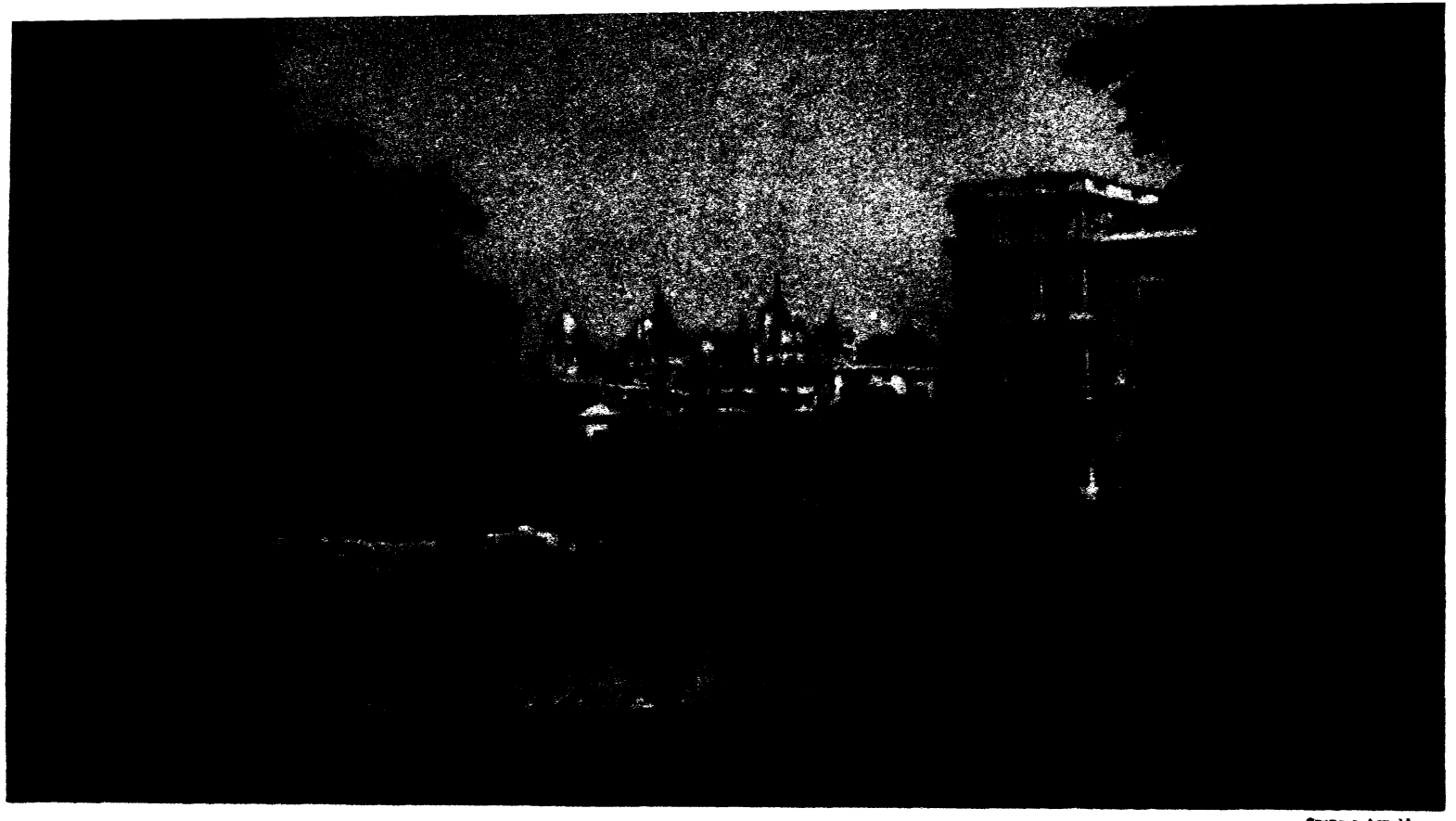
LONDON. *At the limit of navigation for large vessels, the Pool has 14 feet of water in the channel. There is a whimpering of sirens and a wheeze of derricks, and tugs doing wonders with fat barges on the top of the flood*

E. O. Hoppé

LONDON. *Spring haze dims Kensington Palace and S. Mary Abbott's across the Round Pond. Far away is a rumble of traffic*

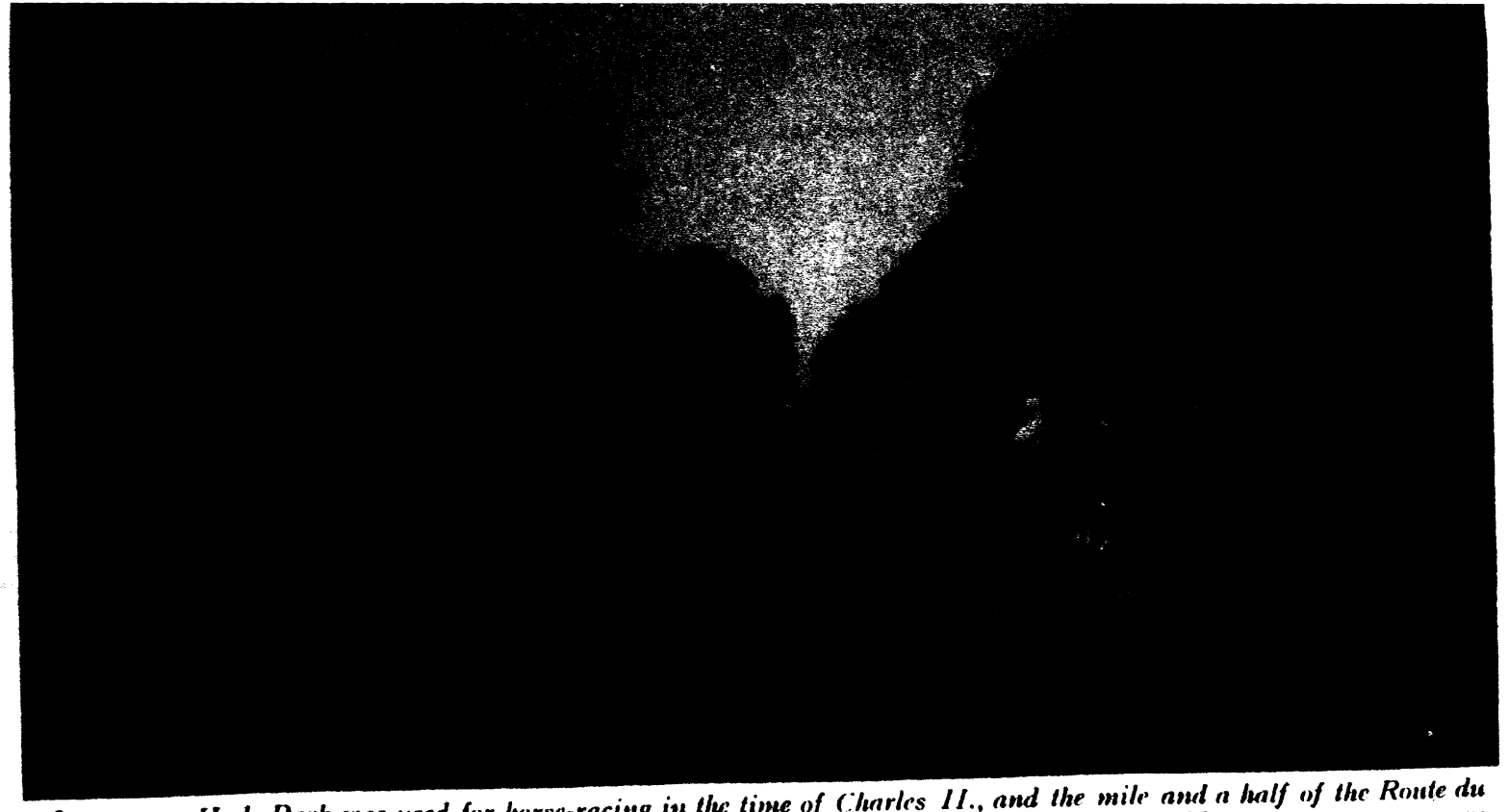
Donald McLeish

LONDON. *Kensington Gardens owes this Dutch garden by the Palace to William III., whose asthma kept him from the City fog*



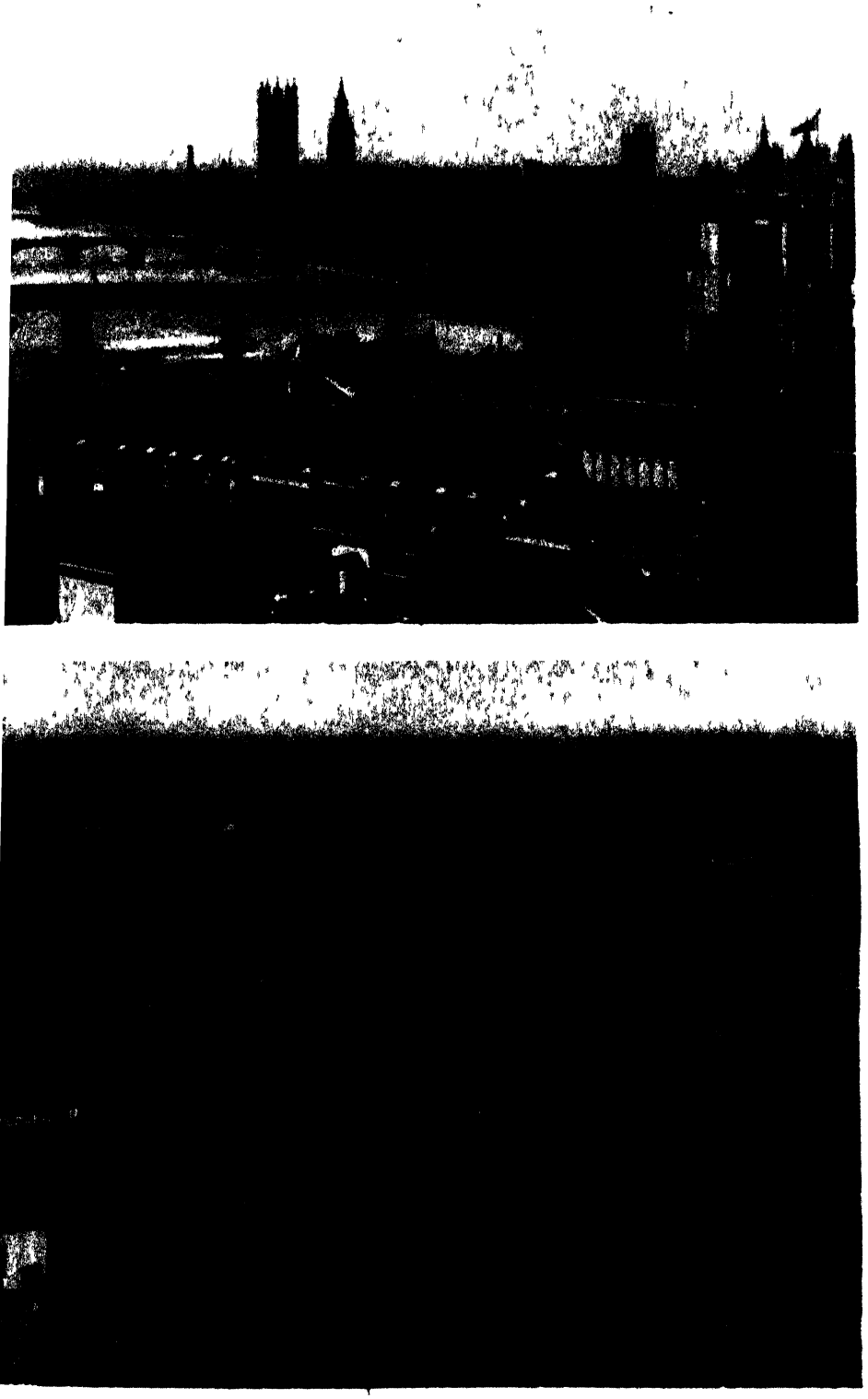
Spencer Arnold

LONDON. *Over the corner of the lake in S. James' Park the Foreign Office appears on the right and, beyond, the buildings in Whitehall. All sorts of water-birds from ducks to pelicans repair to this grass bank to preen their feathers*

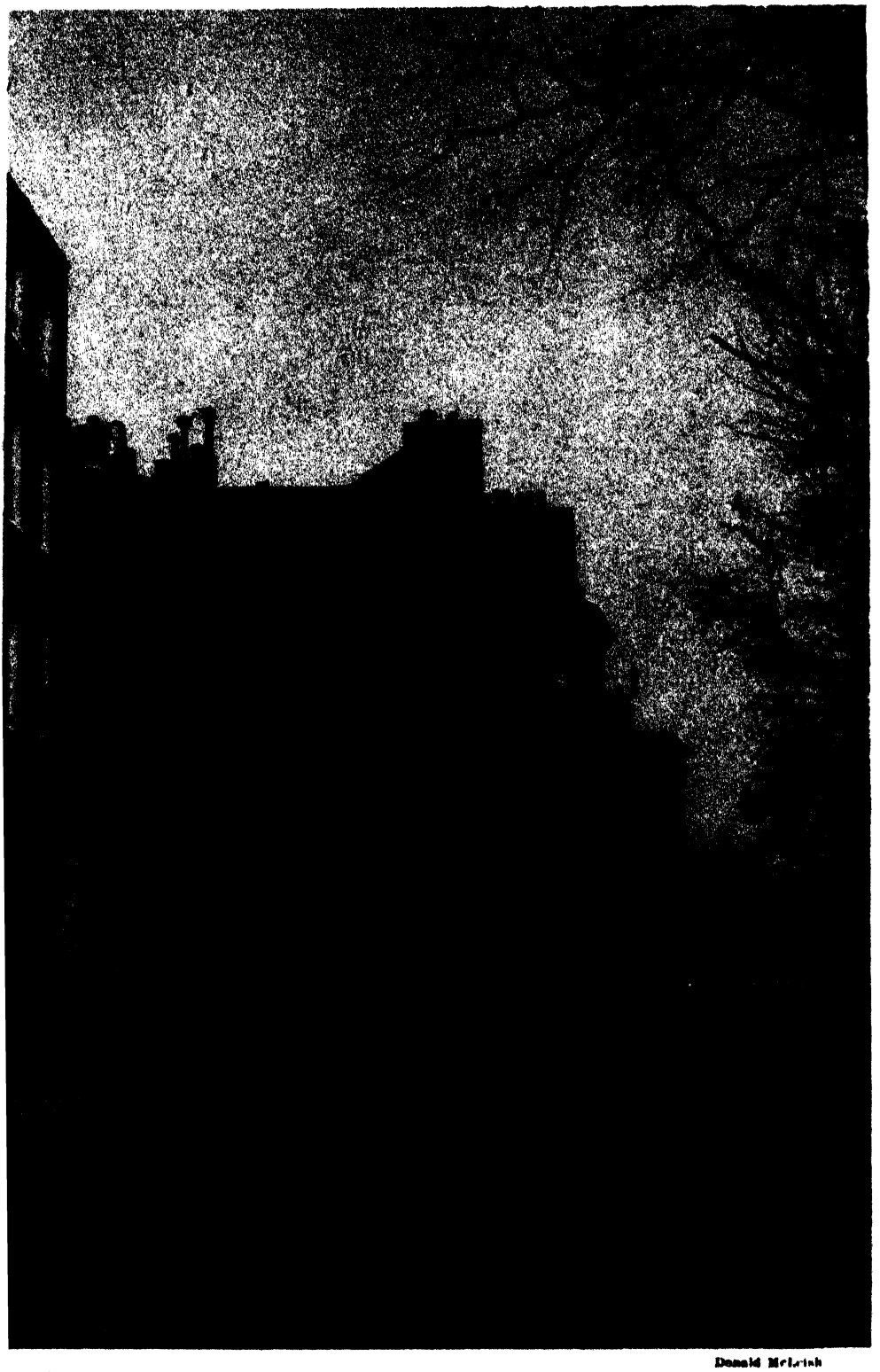


LONDON. *Hyde Park was used for horse-racing in the time of Charles II., and the mile and a half of the Route du Roi, corrupted into Rotten Row, is still the finest riding track in the metropolis, though riders may race no more*

LONDON. *From Bush House, Strand, one views this vast city stretching south-east to the distant heights of Blackheath eight miles away.*

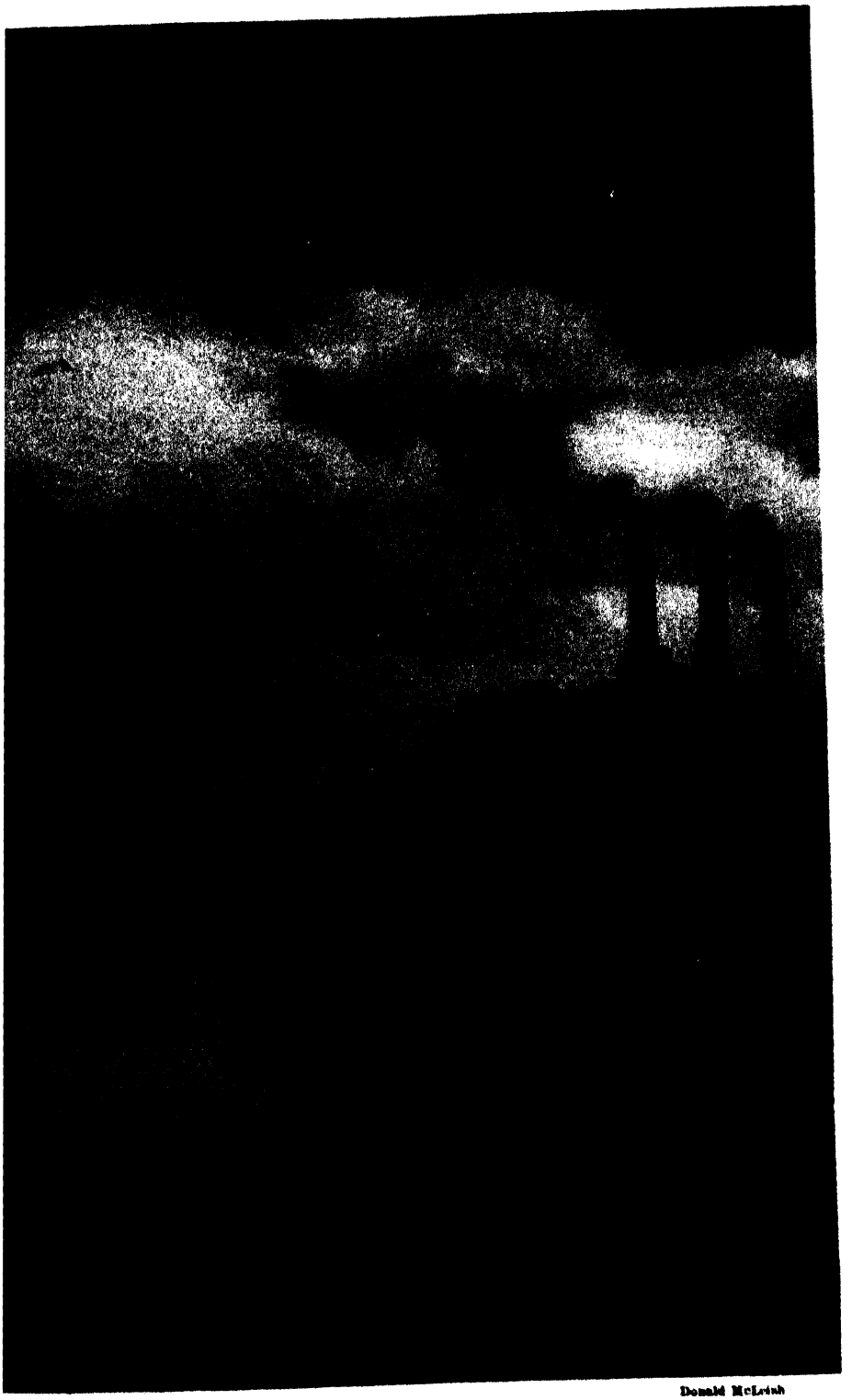


Above, the river is seen from Waterloo Bridge to Battersea as it winds by Westminster to more smoke-veiled hills in the south-west



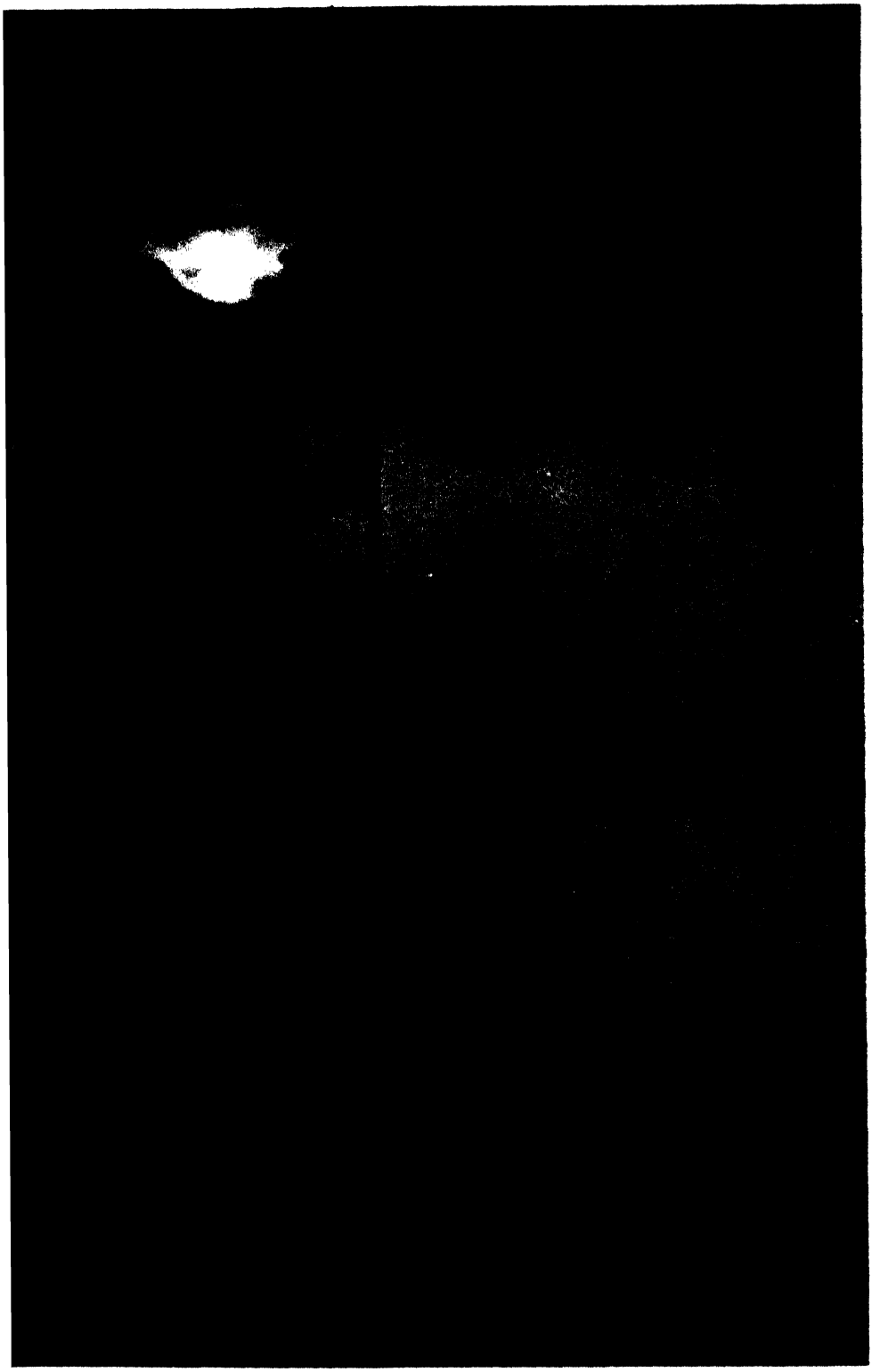
Donald McLeish

LONDON. *Cheyne Walk, Chelsea, has 18th-century houses with bright painted doors and looks over railed shrubberies at the river*



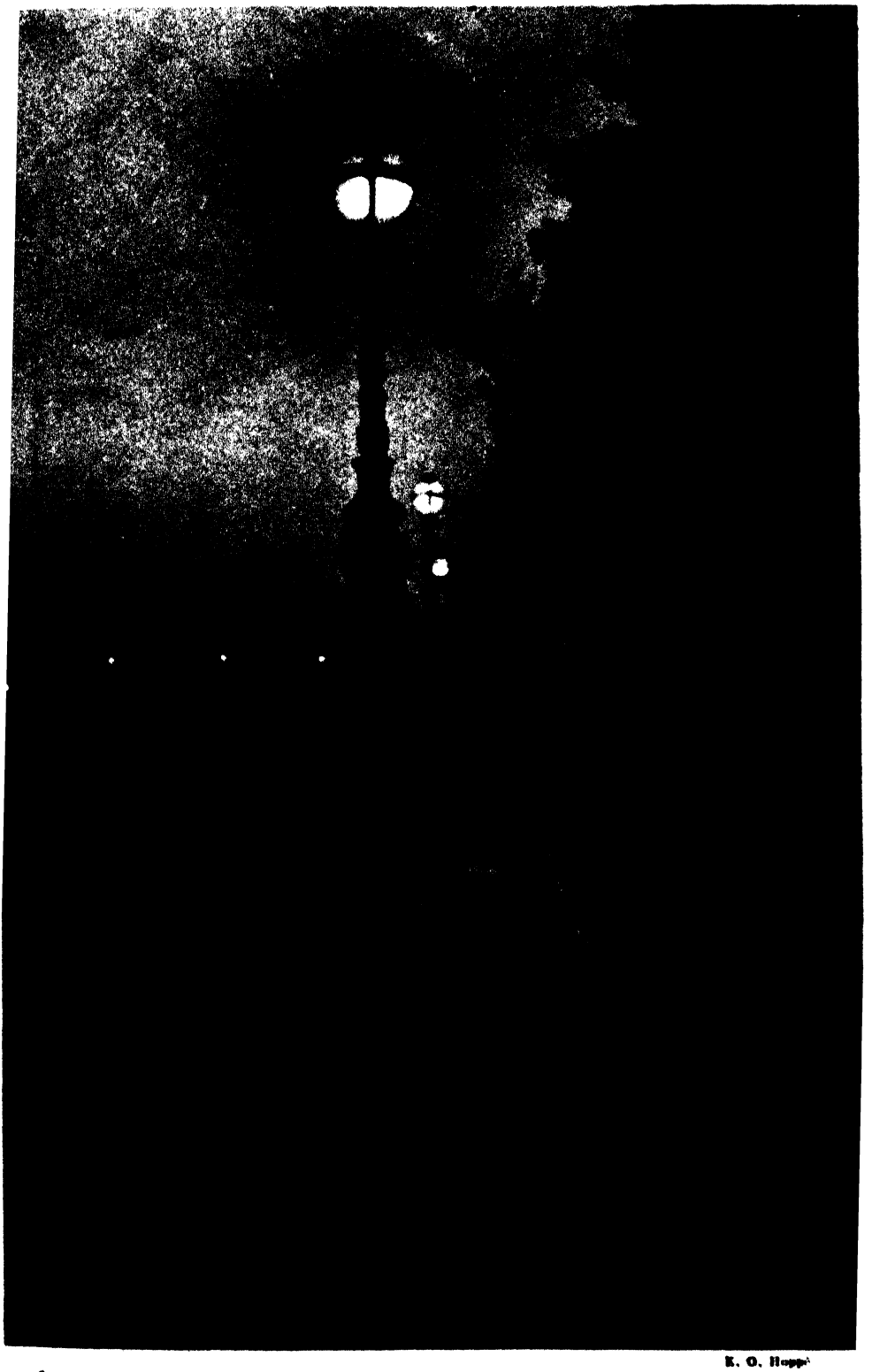
Donald McLeish

LONDON. *Near the site of Cremorne Gardens there is the electric power station at Lots Road where the Chelsea Embankment ends*



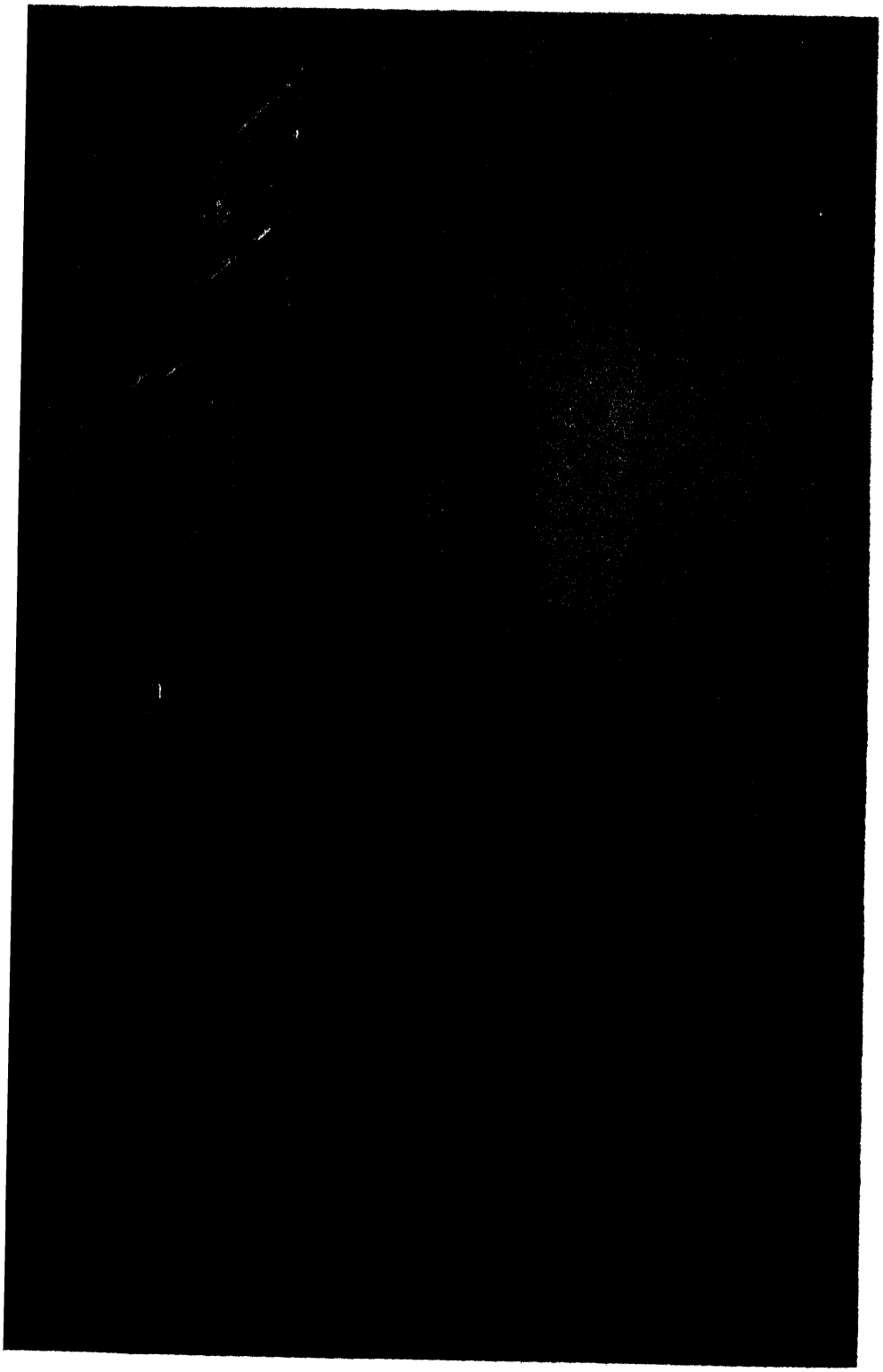
E. O. Hoppé

LONDON. *Lighting the fog, the veiled sun shows an island of barges by Waterloo Bridge and the old Shot Tower etherialised in the murk*



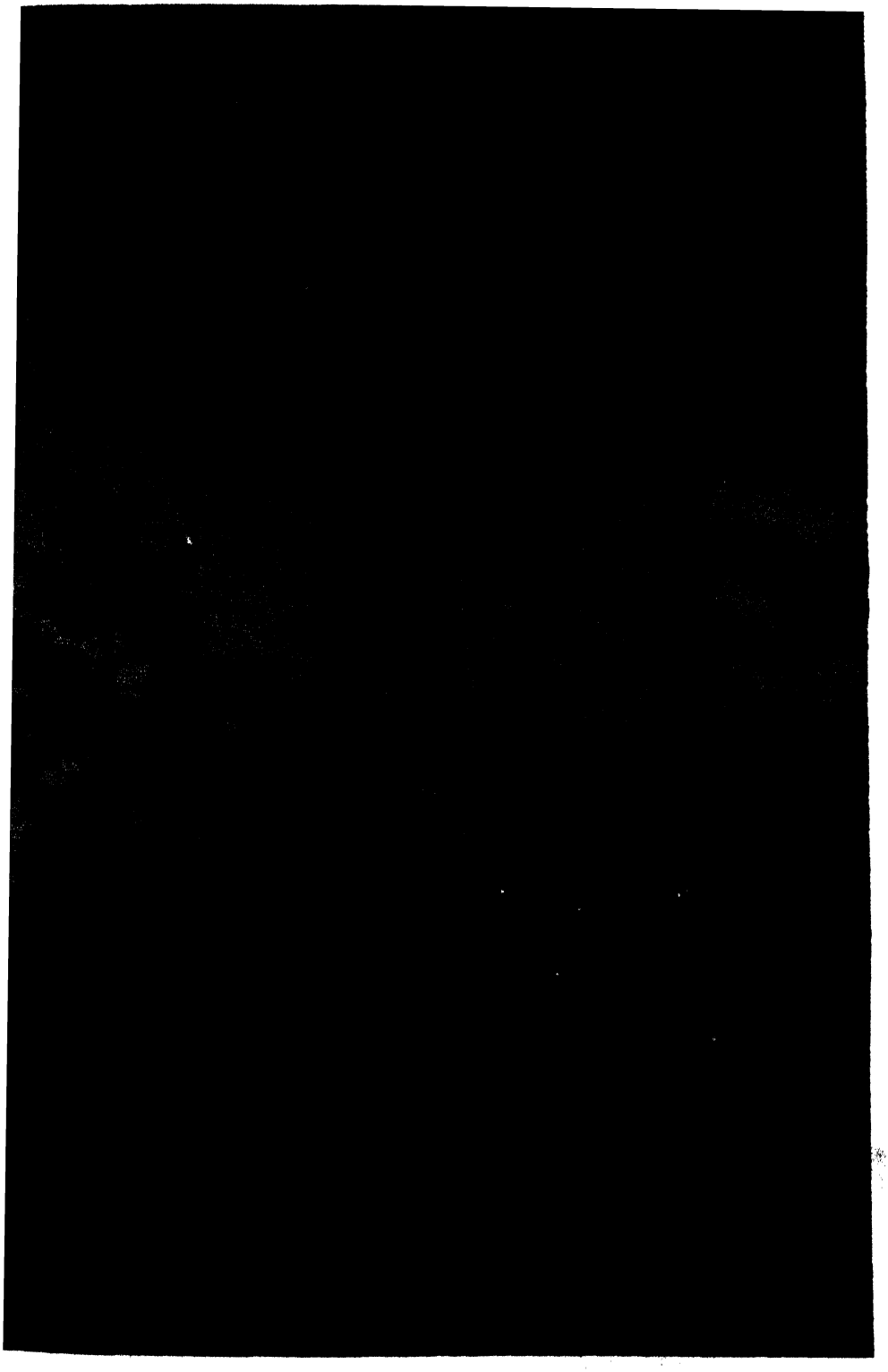
E. O. Hopper

LONDON. *Lamps light and leaves drift down on the street-artist's neglected work when autumn twilight comes to the Embankment*

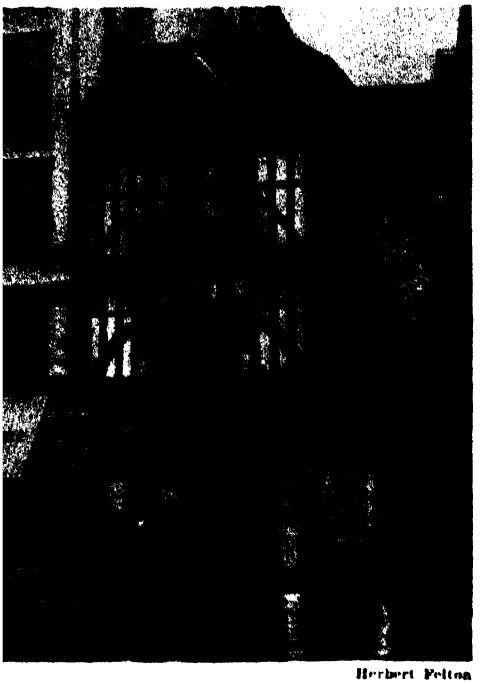


Spencer Arnold

LONDON. *Strength and grace are blended in the architecture of the Port of London Authority's splendid offices on Tower Hill*

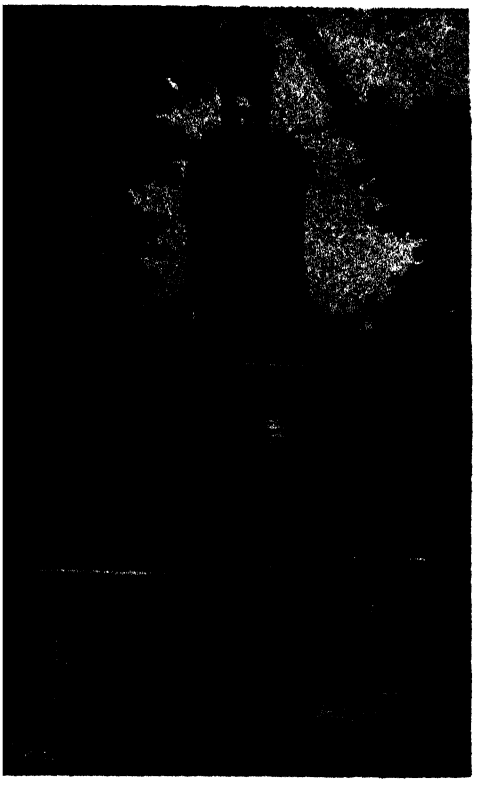


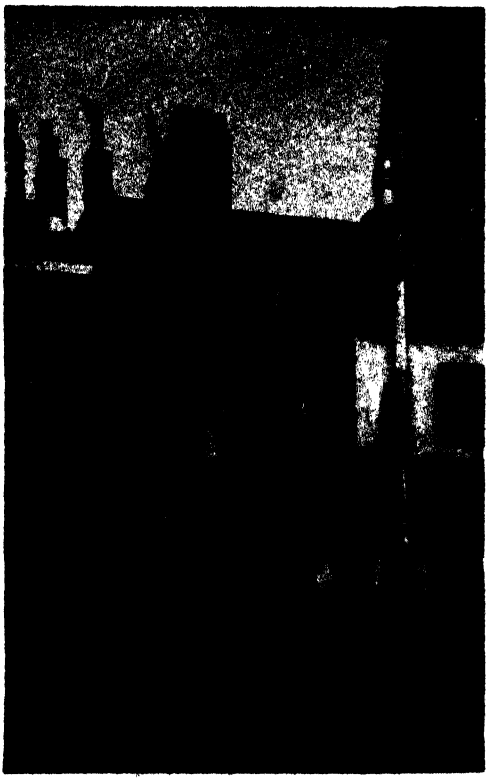
LONDON. *Kew Gardens are by the river on the western outskirts opposite Isleworth. The pseudo-Chinese Pagoda was built in* 1761



Herbert Felton

Old timbered entrances lead to S. Bartholomew the Great in Smithfield and, on the right, from Fleet Street to Temple Church





Humphrey Joel

LONDON. *S. Helen's, Bishopsgate, is a fine old city church; while Market Street, Mayfair, is hid in the very heart of the West End*

Colet's foundation seems far away from the cathedral.

Patriotic Englishmen are not wont to invite the foreigner to pay special attention to their street statuary. It is an art in which we compare badly with the French, and indeed with some other nations. Even when the details are good, as in the Albert Memorial and the new memorial to Queen Victoria in front of Buckingham Palace, the whole effect is often unpleasing, and sometimes grotesque. The reason may be partly that in our climate a man standing or sitting on a pedestal, with or without a great coat, almost inevitably looks absurd, and modern costume does not help the sculptor. There is one good statue of George III.—an unpromising subject, but the horse is excellent; a fairly good one of Gladstone in the Strand; a vigorous effigy of Cromwell at Westminster; and some, not portrait statues, of greater merit have been set up in the parks.

Houses of Rich and Poor

In the Guildhall, besides the ever popular Gog and Magog, there is a life-like statue of Lord Mayor Beckford presenting an address of remonstrance to George III. His expression of humble deprecation, combined with an evident intention to speak his mind, is inimitable.

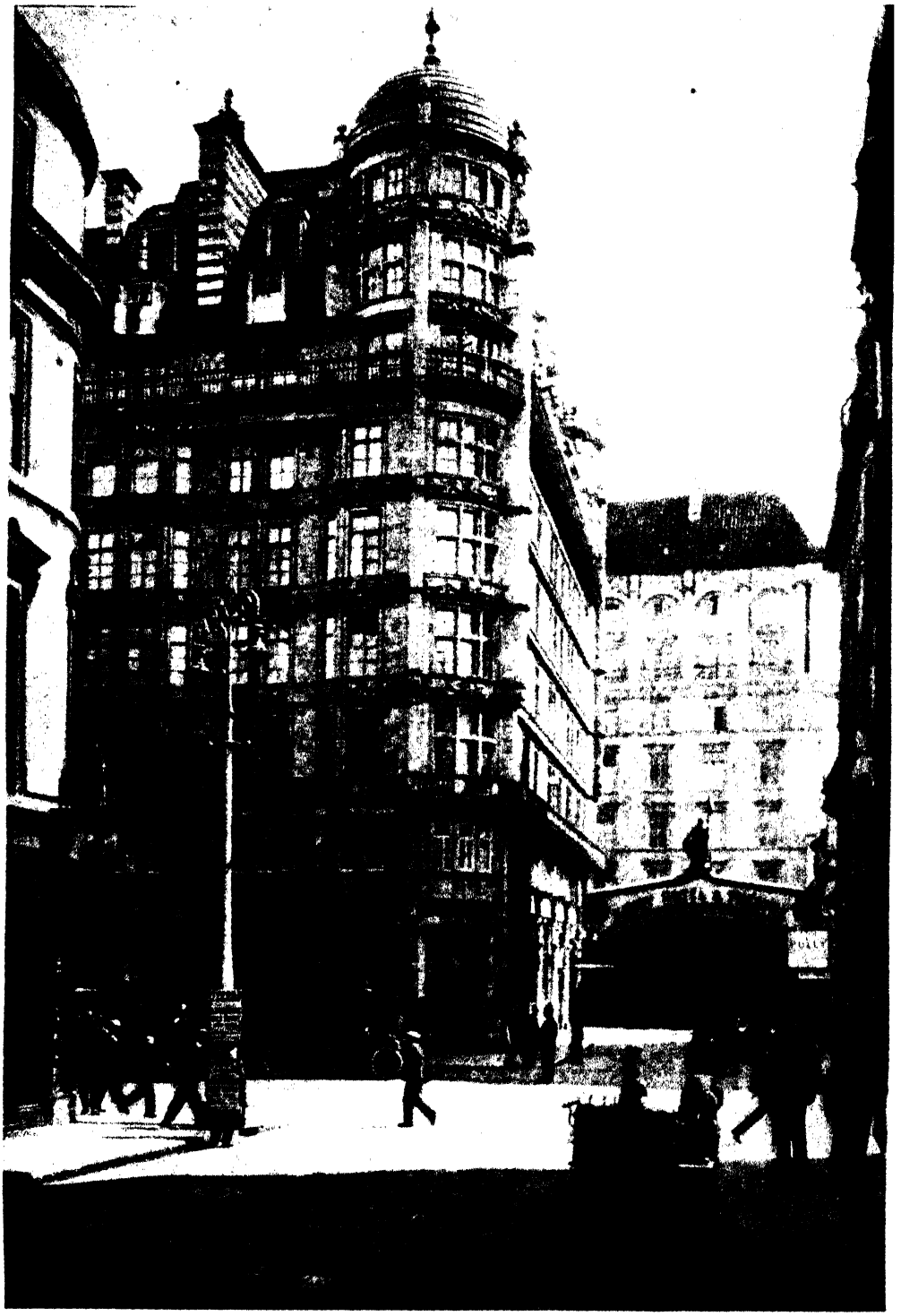
There is not much romance about the West End, which was built mainly in an age of solid comfort and defective artistic sense. The monotonous rows of towering white houses testify to the diffusion of wealth, and also to the curious fact that in London you cannot tell from a man's address in a fashionable quarter whether he has £3,000 or £30,000 a year. Park Lane, which was re-christened from Tyburn Lane, and a few other small areas, are alone reserved for the very rich. There is the same difficulty in judging the extent of poverty in other parts of London. Some of the very poor are crowded in districts once fashionable, where the dignified, if shabby, appearance of the houses gives no indication of the squalor which may exist within. The continental city knows little of the square miles of low cottages which make up the East End. The Englishman likes to have a little house of his own, and those who have entered East End cottages often realize with surprise how much more air and sunlight come into them than into the six-storey houses of the wealthy.

Why Portland Place is Wide

Mayfair marks the site of a real fair, which was held in this district during the eighteenth century and long before, in the last fortnight of May. Oxford Street was complete at the beginning of George I.'s reign, but the streets north of it sprang up between 1715 and 1800. It is interesting to learn that the great width of Portland Place, which makes it almost the handsomest street in London, was due to the protest of Lord Foley, who had lately built a grand house where the Langham Hotel now stands, and objected to the view from his window being obstructed. Marylebone Gardens, which Pepys mentions with appreciation, were enclosed and built over about the same time. Lord Eldon had a good-sized garden, with excellent vegetables and even peaches, behind his house in Gower Street.

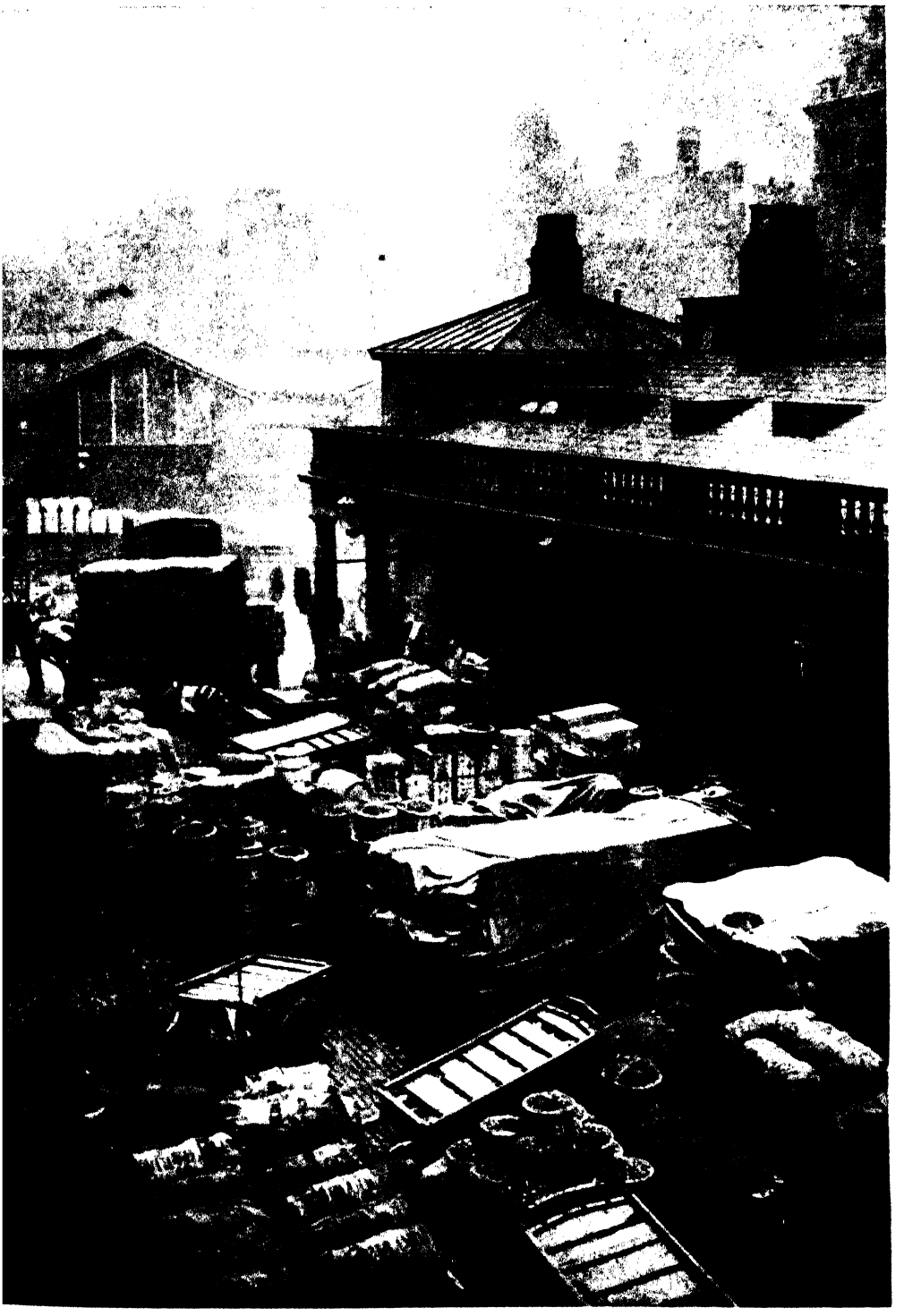
A Debt to the Monarchy

But though some pleasant open spaces were sacrificed, there is hardly any capital which enjoys such spacious parks as London. It owes them, of course, to the monarchy. S. James' Park was once a marshy field, belonging to a leper hospital. Henry VIII. and Charles II. were chiefly responsible for its beautification, but George IV., who, with all his faults, was fortunate as a builder and designer, laid out the beautiful lake, which makes it the most attractive of the London parks. Birdcage Walk reminds us that the Stuarts kept an aviary here. The king's two palaces are modest structures compared with the huge barracks belonging to the former emperors of Russia and Germany.



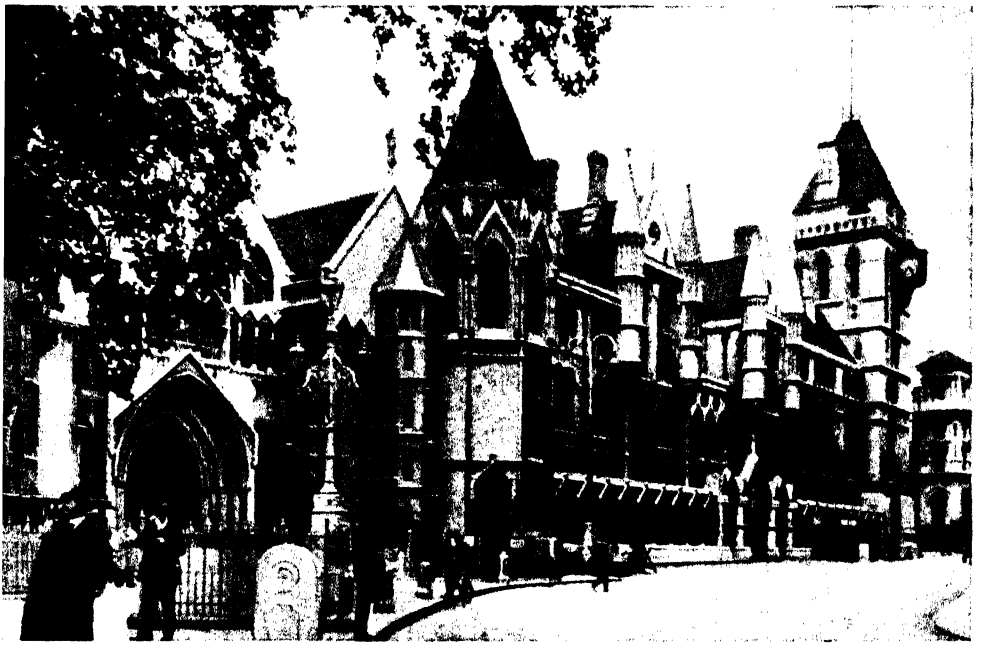
SAVOY HOTEL AND THEATRE ACROSS THE STRAND FROM NORFOLK STREET

On the south side of the Strand, between Savoy Court and Fountain Court, are the handsome Savoy Buildings, masking the Savoy Hotel. Savoy Court leads to the hotel and theatre. The hotel was built partly on the site of the Savoy Palace and that of Worcester House, being extended in 1903-4. The theatre was opened in 1881, being the first in London to be lit by electricity



CROWDED CORNER OF LONDON'S GREAT FRUIT AND VEGETABLE MARKET

London's chief market for vegetables, fruit and flowers is at Covent Garden, just north of the Strand, and since the first market sheds were built in the seventeenth century the wholesale business has not ceased to grow. Several thousand hands are employed and market days on Tuesdays, Thursdays and Saturdays, when the costers and flower girls collect their day's supplies, are well worth seeing



GOTHIC PILE OF THE ROYAL COURTS OF JUSTICE IN THE STRAND

Designed by G. E. Street and opened in 1882, the Law Courts, including the four added in 1913, contain 23 courts and 1,100 rooms. The arcaded Strand front of Portland stone, pierced with Gothic windows and distinguished by gables and pinnacles, is 500 feet in length. Opposite the south-east angle is the Temple Bar Memorial, where the Strand ends and Fleet Street and the City begin

KINGSWAY, ONE OF LONDON'S FINEST THOROUGHFARES

Most of the slums of Seven Dials were swept away when Kingsway was laid out to provide a main road from the apex of the Aldwych to High Holborn. An underground tramway runs beneath the street with the entrances to the stations in the middle of the street. Near the Aldwych end, on the east side, is the Stoll Picture House which was originally built as the London Opera House

Spencer Arnold

S. PAUL'S FROM FLEET STREET IN THE QUIET OF SUNDAY

S. Paul's was designed by Sir Christopher Wren and the foundation stone laid in 1675, the entire structure being completed in 1710. The cathedral is in the Renaissance style and dominated by the famous dome, which is surmounted by a cupola and lantern with a golden ball and cross. The bridge carries a branch of the Southern Railway between Holborn Viaduct and S. Paul's stations

Buckingham Palace, originally a ducal mansion, was bought and made a royal residence by George III.

Hyde Park, which, together with Kensington Gardens, covers more than 600 acres, was enclosed under Henry VIII., and stags were hunted there in the sixteenth century. It is not now such a lively place as it was in Queen Victoria's reign, when riding and driving in the afternoon were a regular habit of the fashionable world. The most refreshing sight now is the crowd of early bathers in the Serpentine, and the most depressing the numerous vociferating cranks, surrounded by listless and indifferent crowds. There is probably no other capital where the licence of public meeting is more unrestricted than in London. Not only the parks but Trafalgar Square are frequently the scenes of gatherings at which a domestic or foreign anarchist utters blood-curdling threats against society, under the protection of a good-humoured policeman. The doctrine of the "safety-valve," which causes such surprise to foreigners, is a deeply-rooted principle of British political philosophy.

Kensington Palace is surely the most unpretentious of royal residences; but the gardens are a great addition to Hyde Park. Regent's Park we also owe to the third and fourth Georges; the houses which surround it are eloquent of the same period. The famous Zoological Gardens no longer oppress the visitor with the sight of birds and animals kept in too close confinement, and as a collection it is one of the finest to be seen in the world.

It would be tedious to trace the rapid expansion of the "great wen," as London has been impolitely called, in the nineteenth century. Its unmanageable and unwieldy size is the price an empire

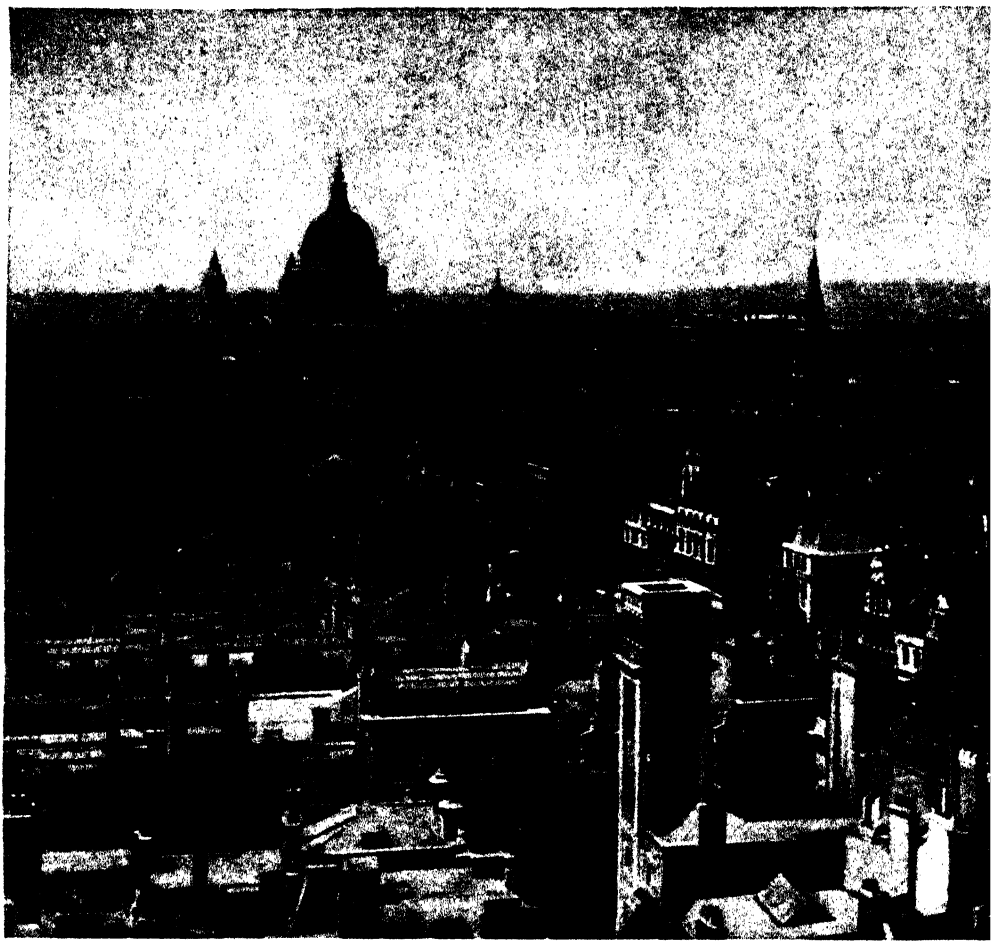
CORINTHIAN PORTICO OF THE ROYAL EXCHANGE AT THE BANK

Opened in 1844, the Royal Exchange is the third on the same site and a flight of steps, from which a new sovereign is proclaimed on accession, leads to the portico, 96 feet wide. In the centre of the tympanum is a crowned figure of Commerce holding the Charter of the Exchange. In front of the building is an equestrian statute of Wellington and a War memorial

Spencer Arnold

COMMEMORATING THE GREAT FIRE: MONUMENT FROM FISH STREET HILL

Erected after the design of Sir Christopher Wren in 1671-77, the Monument, a lofty 202-foot Doric column surmounted by a gilt urn 42 feet high, is a memorial of the Great Fire which broke out about 200 feet away in Pudding Lane. A winding stairway gives access to a platform near the top of the monument, whence a fine view of the City is obtained, as may be seen in the following pages



FROM THE HEART OF THE CITY TO THE HEIGHTS OF HAMPSTEAD—
It is necessary to climb to some considerable height before it is at all possible to understand the enormous extent of the world's greatest city. The Monument, near the north end of London Bridge, is an excellent vantage point, and it was from its summit that the camera recorded this photograph. Of all people, Londoners themselves are least apt to realize the size of their county of houses.

of fourteen million square miles has to pay. Town-planning is a new science, and the haphazard way in which the metropolis expanded is characteristic of the nation which built the greatest of empires, it has been said, "in a fit of absence of mind."

There are whole square miles of London which are unnecessarily ugly and depressing; the visitor may wonder that they do not harbour a population of revolutionaries. This again is typical of the age in which these mean quarters grew—an age bent on increasing to the utmost the aggregate wealth and prosperity of the country, and too forgetful of the obvious fact that the new population was deprived of most of the amenities of life. Many practical improvements have been made, especially in the departments of lighting, sanitation and transport.

Among the newer bridges, Waterloo Bridge is one of the finest in Europe, Charing Cross or Hungerford Bridge perhaps the ugliest; the Tower Bridge, though impressive, does not win the admiration of the purist in architecture. We can hardly imagine the Thames without its Embankment, and the underground railways, together with their extensions out into the country, are almost a necessity of existence for the Londoner.

Spencer Arnold

—CLIMB THE MONUMENT AND ALL LONDON LIES AT YOUR FEET

There are houses all the way from Enfield to Purley, a distance of about 23 miles, and from Ilford to Ealing, over 20; and the total area covered exceeds 600 square miles. Above we have a view of the city just north of the river. The one street whose pavement is visible is King William Street leading to the Bank, and to the left the course of Cannon Street can be traced as far as S. Paul's Cathedral

One result of the transport facilities has been to leave the City almost a wilderness at nights; the suburbs spread farther and farther afield, and Greater London is as large as a small county. Many thousands thus live amid pleasanter surroundings, but the amount of time spent in the double daily journey is a serious loss, except to the proprietors of the newspapers, which are now the chief intellectual provender of the large majority. And no solution has yet been found for the congestion of traffic in the main streets, especially where two arteries cross each other. No continental city suffers to the same extent from this trouble, which, nevertheless, greatly impresses the foreigner, as he observes the genial and unquestioned authority exercised by the burly London policeman, and the orderliness and good humour which distinguish a London crowd.

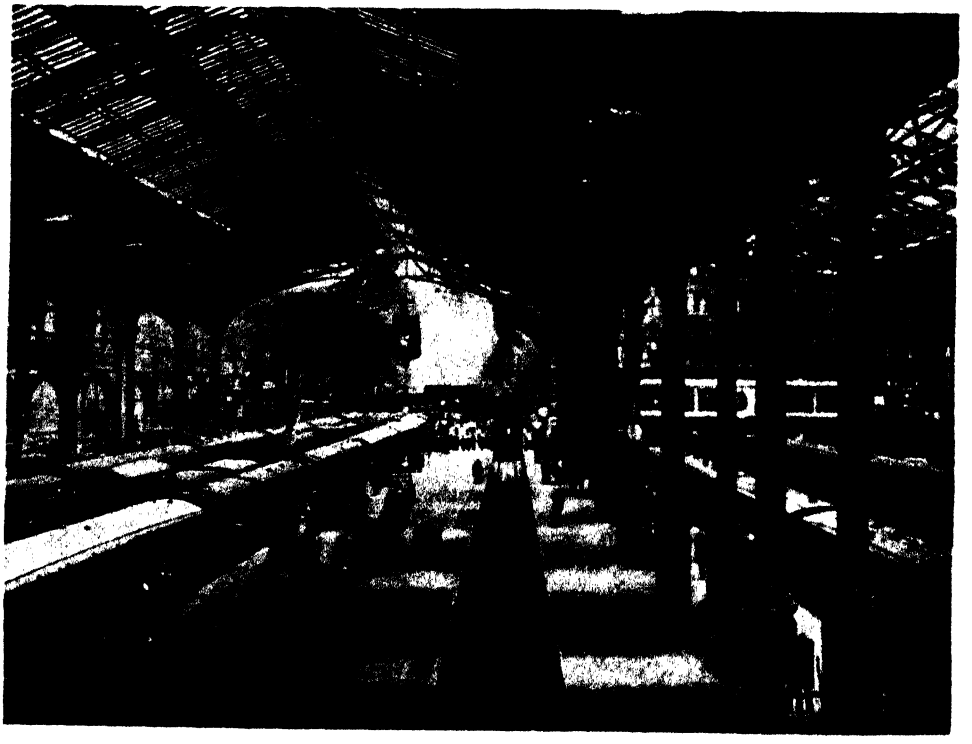
But perhaps another characteristic of the Londoner will interest the foreign visitor even more—the growing love of amusements taken in common. The Bank Holiday crowd, and the Derby crowd, are no modern innovations; and the two great cricket grounds, Lord's and the Oval, have long been national institutions. But football and the cinema are new. Till within living memory, football was played chiefly at

the public schools; and as each great school had its own game, with rules different from any other, there could not be much competition. The universities standardised the two types of game, Rugby and Association, and the latter has now become, together with horse-racing, the greatest interest for the leisure hours of the democracy.

The crowds increase every year, till nothing short of a vast amphitheatre can contain them. It is no doubt a pity that the populace only watches games, and bets upon them, instead of playing them; but the causes are easily intelligible. The prominence given to betting in the newspapers strikes the eye on every hoarding; this, and no longer drunkenness, is now the chief national vice. The habit of going to theatres, and to pictures, has also increased enormously, and the stranger will note that thousands of Londoners can spare the time to wait for more than an hour in long queues outside the theatre doors.

He will also note the vast extension of holiday travelling, both by train and charabanc. For better or worse, the poorer Londoner now requires an abundance of excitement, recreation and enjoyment, and is able to indulge in them. The ideals of hard work and thrift, the gospel according to Samuel Smiles, no longer appeal to Englishmen; it is obvious to the most casual observer that the younger generation is "out for a good time."

These characteristics of London life, which touch on moral and economic questions, are mentioned here only as part of the spectacle which the great city presents to every intelligent visitor. On Sunday he will find the churches moderately well attended, except in the poorest quarters; but he will probably come to the conclusion that organized religion has lost some influence in the



LIVERPOOL STREET STATION SERVING THE NORTH-EASTERN SUBURBS

A network of railways, on the surface and under ground, intersects London which has over 630 railway stations, and all the large trunk lines which serve the country have termini in the Metropolis. Liverpool Street Station in Liverpool Street is a terminus of the London and North-Eastern Railway and the station for the Eastern Counties and the Continental route via Harwich

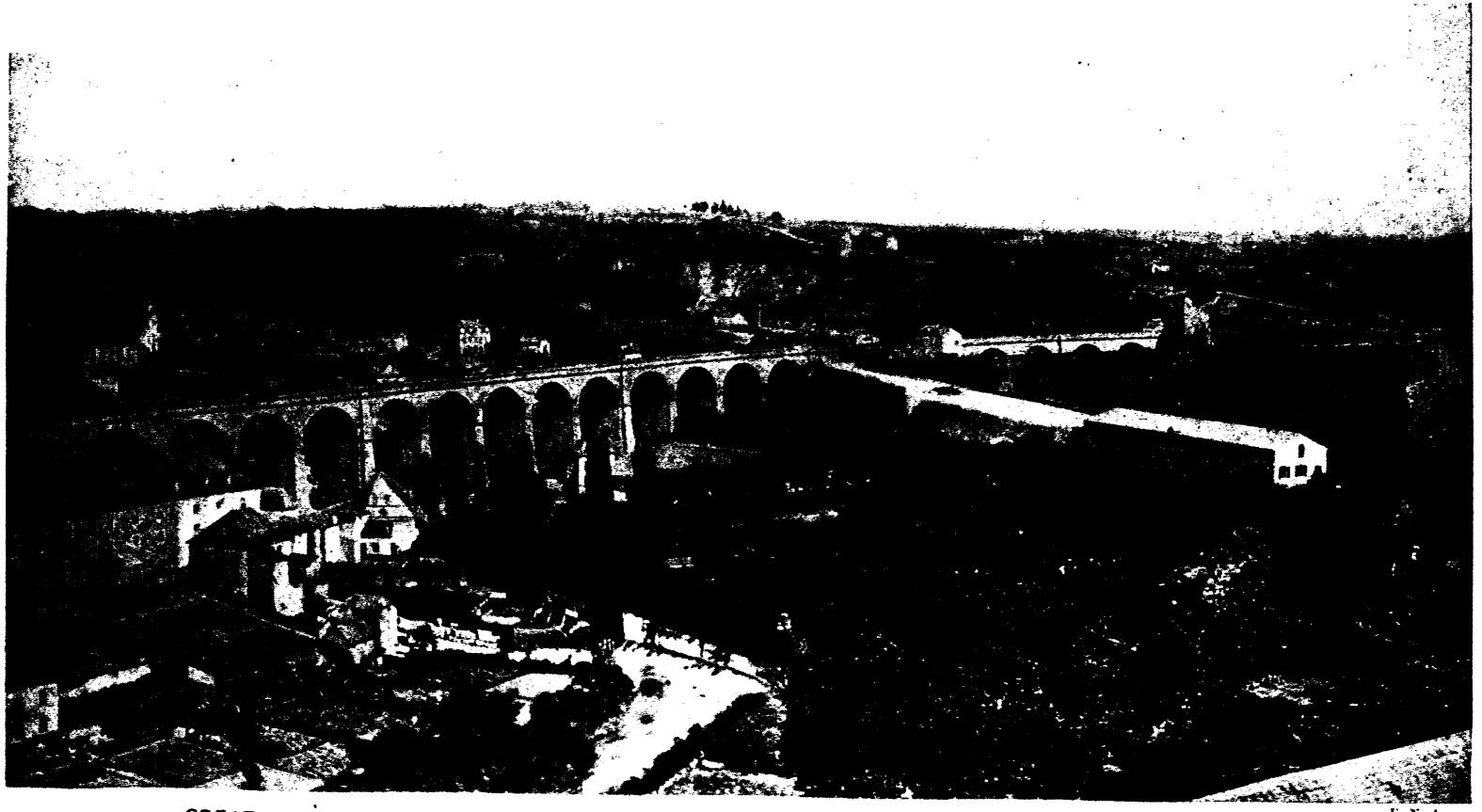
LONDON'S DARKER SIDE: A GLIMPSE OF THE EAST END

Wentworth Street is a turning off Middlesex Street, which was formerly known as Petticoat Lane, and is in the centre of the Jewish quarter. The Sunday morning market here and in Houndsditch, a little to the west, is a wonderful sight. Anything and everything can be bought or sold at the stalls, while the streets are rendered almost impassable by the seething masses of aliens.

last generation, and that the young are prone to "see and hear some new thing," in this as in other matters. New cults and even old superstitions captivate the minds of many.

In intellectual matters there is a profusion of talent and great activity, but an apparent absence of outstanding genius. The long line of London-born poets, a list which includes Chaucer, Spenser, Milton, Herrick, Cowley, Shirley, Ben Jonson, Pope, Gray, Keats and Browning, has not been lately enriched by new names equal in literary merit to most of these.

But the capital of England makes a strong appeal to poets, as well as to sturdy prosaic minds like Samuel Johnson. It was Wordsworth, the prophet of rural beauty and rural solitude, who said, in one of his finest sonnets, that "earth hath not anything to show more fair" than Westminster Bridge by night.



E. N. A.

GREAT VIADUCT ACROSS THE PETRUSSE VALLEY AND SOME OF THE OLD FORTIFICATIONS

From the railway station at Luxemburg the Avenue de la Gare leads north to the fine viaduct, built in 1861, which spans the deep valley of the Pétrusse. In a rocky hollow to the right of the viaduct is the church of S. Quirinus, a fourteenth century structure, hewn out of the solid rock. On the right of the photograph can be seen the ruins of an old tower and some of the casemates cut out of the face of the cliff, reminiscent of Gibraltar. A new suburb of Basse-Pétrusse has sprung up on the south side of the Pétrusse ravine beside the railway station, which is the junction of several international routes

LUXEMBURG

Tiny Duchy 'twixt Three Great States

by Demetrius C. Boulger

Author of "Belgium and the Belgians"

THE Grand Duchy of Luxemburg attained separate autonomy in 1890. Down to the French Revolution it had formed the southern part of the province of the same name in the realm of Belgium with which by nature and history it had always been associated. But when the kingdom of Belgium was formed in 1830-9, the southern portion of the province was taken from it and assigned as a personal inheritance to the Nassau family. Originally attached under this arrangement to the king of the Netherlands, it passed, on the failure of his male heirs in 1890, to the German branch of Nassau-Weilborg, an entirely foreign family without any pretensions to rule within the old Burgundian Circle.

The area of the grand duchy is as nearly as possible 1,000 square miles. Its greatest length from north to south is 51 miles and its greatest breadth from east to west 37. Its shape is irregular, but somewhat resembles a pear, the haft being wedged between Belgian and Prussian territory. It has frontiers, totalling 212 miles, with three states. The frontier with Germany is indicated in the main by the Moselle, the Our and the Sure, but with France and Belgium it is traced on land. Besides the three barrier rivers the duchy is watered by several of their tributaries, the Wiltz, the Alz and the Alzette.

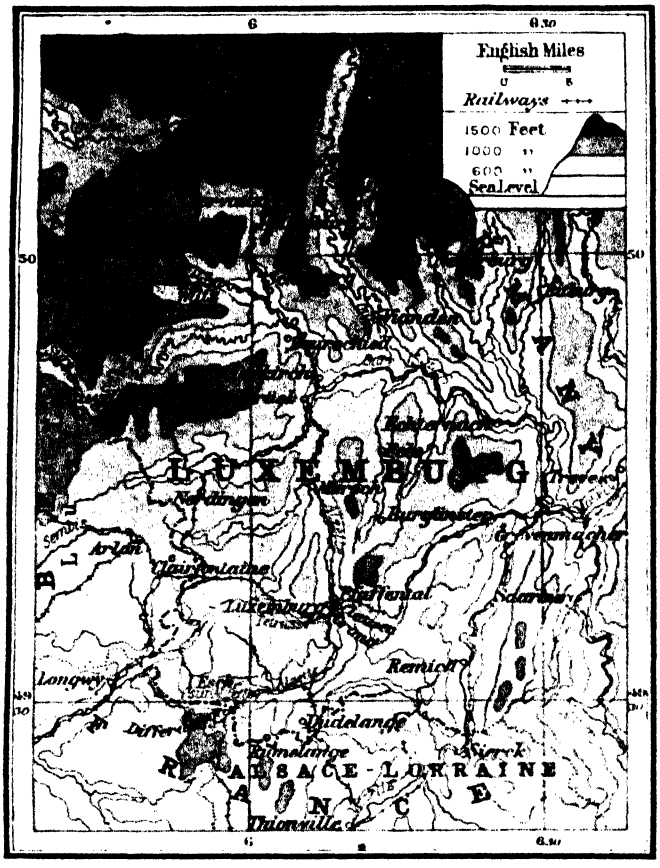
Sparse Living on Meagre Soil

The soil of the grand duchy, like that of the whole of the Ardennes region in which Luxemburg is included, is poor, being deficient in lime and phosphates, and at all periods agriculture has had to be pursued under great difficulties which have had to be modified by the introduction of chemical restoratives. Even these have not availed to produce generous crops, those of potatoes and oats being the most abundant. The absence of grain has also been unfavourable to the rearing of cattle, and the Luxemburg people present the features and characteristics of a race reared through centuries on a diet that did not include fresh meat. This has necessarily produced a distinct type which is common to the Belgian province as well as the duchy—a lean, spare race, toughened by hereditary hard work, and representing the survival of the fittest.

Cold Climate and Cold People

Another contributory cause is the elevation of the country, the larger half averaging not less than 1,500 feet above the sea and only falling to 1,000 feet as it approaches the valley of the Moselle. The climate is cold, so is the soil, so are the people. In the long struggle with unfavourable circumstances they have laboured with true Celtic tenacity to overcome the hardness of the rock which lies so close to the thin layer of cultivable soil that has been spread over it by the unceasing efforts of so many generations.

Notwithstanding, it is computed that 250,000 acres, nearly a half of the area of the state, are under some form of cultivation, and it is somewhat surprising in the circumstances that 90,000 persons, including women and children, are stated to be employed in agriculture. The tenures are of very small dimensions and large farms are unknown, cultivation being carried on in individual or at the most family plots. The duchy is compelled to import the bulk of its



CHILL UPLANDS OF THE GRAND DUCHY

food supplies. If cattle are not abundant owing to lack of pasture there is still a good quantity of game—deer, hares, etc.—left in the northern districts, and shooting is subjected to few, if any, restrictions after the necessary purchase of a gun licence.

Of the few industries, tanning is perhaps the most active. Horticulture also gives a good deal of employment, and the export of flowers, especially roses, is considerable. Linen and woollen goods are manufactured for home use, but not for export. A market, dating from the fourteenth century, is held in these products in the month of August on the banks of the Alzette at Luxemburg.

A little wine is produced from the vineyards on the banks of the Moselle, but it is mostly of inferior quality. However, if nature has been grudging in some respects it has been generous in others. The grand duchy, for its dimensions, is one of the richest areas of Europe in a mineral sense, for its iron-field is extensive and apparently inexhaustible. It shows an annual output of nearly 4,000,000 tons, and its foundries turn out nearly 700,000 tons of steel. The mines are situated in the south-western corner of the state with Esch as a centre. In addition to iron there are some copper and lead mines in the northern part of the state, but these are not very productive at present. More important are the quarries, which include some marble.

The Black Country of the duchy lies immediately contiguous to the French frontier between Longwy and Thionville. This also is the most thickly populated part of the state and includes a large Italian colony. The four largest towns, after the capital, are included in this area. They are Esch (population 20,672), Differdange (13,229), Dudelange (9,834), and Rumelange (4,998). These towns present no attractive features, thus being in striking contrast with those that draw so many tourists and visitors to the other regions of the duchy, more especially during the summer months.

Statistics are not wholly trustworthy, but the population of the duchy totals about 268,000, and of these 235,000 declared themselves to be native born. The Germans who were employed on the railways and customs, which were under their control, have taken their departure, and there has been a considerable influx of Belgians, but in

numbers the Italian colony still holds the first place among immigrants. The capital, Luxemburg, is the only place deserving the name of a city. It occupies an imposing position above the little stream called the Alzette, and in old days was famous principally for its fortress, which was dismantled by the terms of the London Convention in 1867.

A census in 1921 placed the population as high as 45,900. It is not clear how much of this total represented a fixed population and how much a casual influx. The city contains some fine buildings, notably the Ducal Palace, the Palais de Justice, the Hotel de Ville and the cathedral of Notre Dame. The suburbs of Clausen and Pfaffental are busy industrial centres in contrast with the quiet of the old official town.

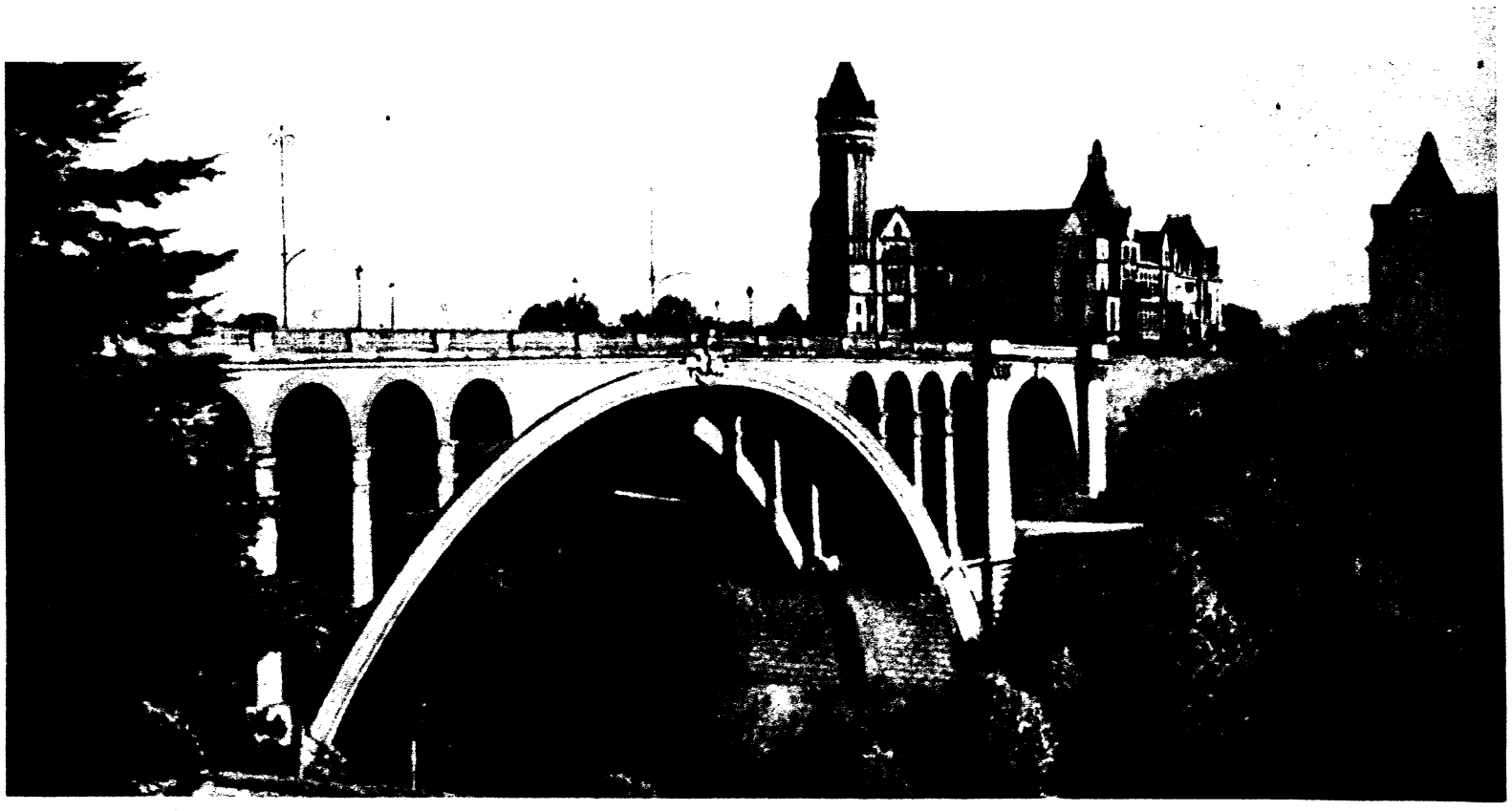
The towns of Diekirch (population 3,770), Echternach (4,300) and Vianden (2,000), are interesting in another sense. Diekirch is the chief resort for those who fish in the Sure; Echternach, also on that river, is visited for the interesting ruins in its neighbourhood, and also for the procession of dancers, a curious medieval festival that is celebrated at Whitsuntide; while Vianden, apart from its picturesque situation, possesses a fine castle which belonged to William the Silent. In old days Luxemburg was famous for its castles and abbeys. The latter suffered during the French Revolution, and several have been diverted to secular purposes, but Clairfontaine (now in Belgium) remains as dedicated. Among castles, Clervaux, Schieburg and Bourschied are fine examples of the house-fortresses of the Middle Ages.

In the year 1919 the constitution was reframed on the principle of self-determination. A very considerable minority voted for an economic union with France. A much smaller minority were in favour of a similar union with Belgium. But the situation was cleared when France declined to avail herself of the opening afforded her, and passed on any right she might claim under the national vote to Belgium. This resulted

York & Son

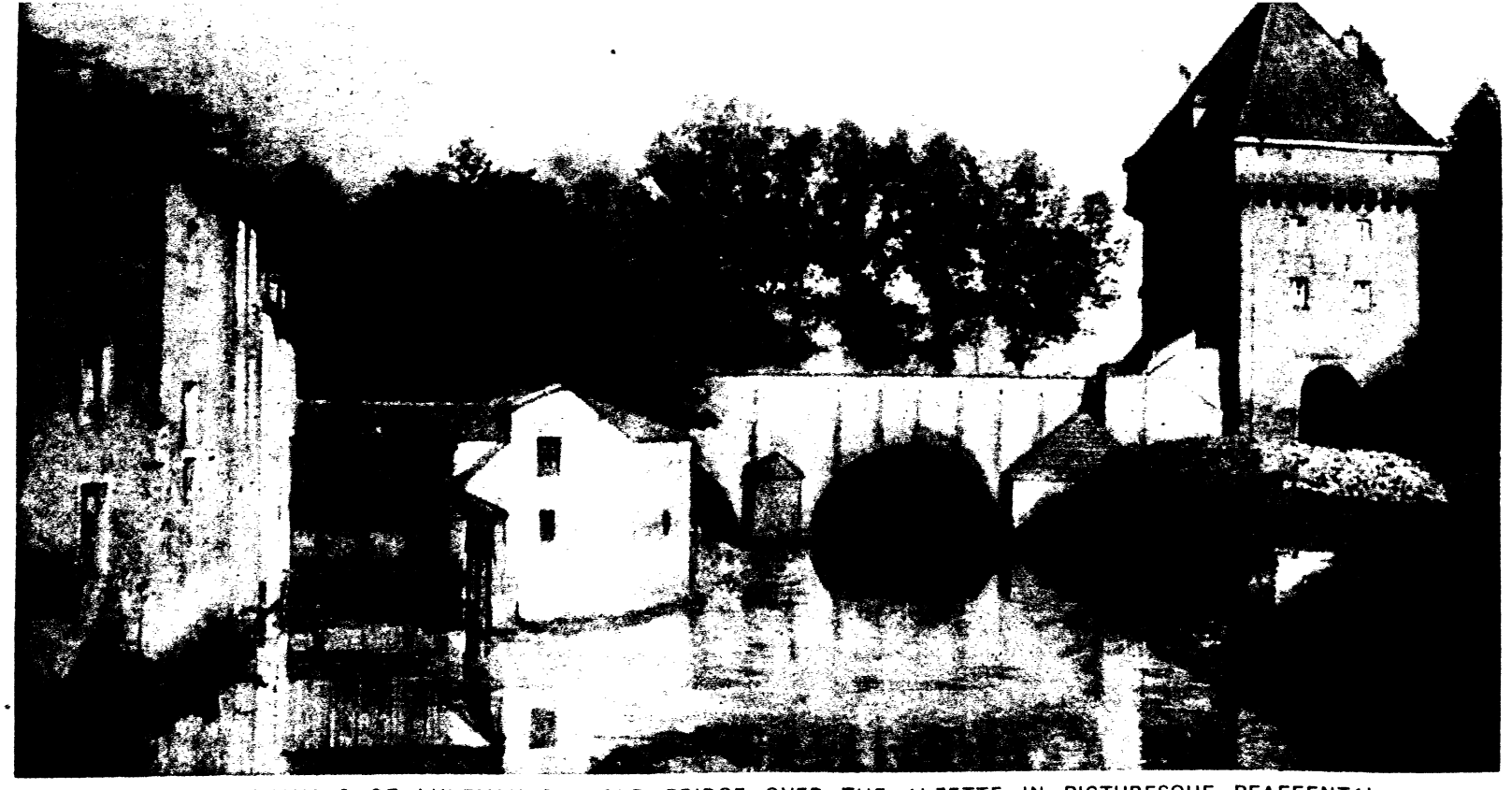
MAGNIFICENT RUINS OF THE OLD CASTLE AT BEAUFORT

Beaufort is about seven miles north-west of Echternach and two miles from the German frontier. It is a quiet and delightfully situated summer resort with fine ruins of a thirteenth century castle and a château built in the seventeenth century which has been turned into a distillery. In the east of the duchy is the well-wooded district called "Little Luxemburg Switzerland"



GRACEFUL BRIDGE OF OLD LUXEMBURG ACROSS THE PRECIPITOUS RAVINE OF THE PETRUSSE

Near the south end of the public park, which has been laid out with woodlands on the site of Luxemburg's old walls, the Pont Adolphe, a handsome bridge erected in 1903, flings a single mighty arch over the gorge of the Pétrusse, and connects the Boulevard Royal with the Avenue de la Liberté. The latter of these spacious and well-kept thoroughfares passes into the Place de Paris and thence, known as the Avenue Adolphe, leads on to the railway station (Gare Centrale). Just south of the bridge, on either side of the Liberty Avenue, rise the imposing buildings of the Administration Publique



IN THE SUBURBS OF LUXEMBURG; OLD BRIDGE OVER THE ALZETTE IN PICTURESQUE PFAFFENTAL

The old portion of Luxemburg city still stands in a unique position on a cliff, three sides of which drop down almost precipitously into the valleys of the Alzette and the Pétrusse. East of the city, and watered by the Alzette, the three industrial suburbs—Pfaffental, Clausen and Grund—are situated. Leaving Luxemburg on the north-east, a road, known as the Descente du Pfaffental, leads across the Alzette by an ancient fortified bridge into Pfaffental and its interesting thoroughfare, the Rue Vauban, where a fine archaeological museum is found installed in the old Vauban Barracks

TOWN OF LUXEMBURG ON THE CLIFFS HIGH ABOVE THE INDUSTRIAL SUBURB OF GRUND

Luxemburg, the capital of the grand duchy, was at one time considered to be the strongest fortress in Europe after Gibraltar, but it was dismantled in 1867. The Alzette, on which the suburb of Grund with its factories and iron and steel works stands, has carved out a sinuous course for itself beneath the black crag in whose face are rows of dark holes from which projected the iron mouths of cannons in former days. The older portion of the town, with the palace and public buildings, occupies a central plateau, up which the streets zigzag or ascend by steps

Underwood

IN THE VALLEY OF THE SURE NEAR THE PLEASANT TOWN OF DIEKIRCH

Some of the loveliest scenery in the Grand Duchy of Luxemburg is found in the valley of the Sure, or Sauer, a tributary of the Moselle. Here, in a broad sweep of the valley, some two miles and a half by rail from the important railway junction at Ettelbruck, lies Diekirch, a quaint little town in a charming setting among the encircling hills. It possesses few special features of its own, save the modern Romanesque Church of S. Laurent, and houses only about 3,700 people, but the town, owing to its fine central situation, is nevertheless the chief rendezvous for excursions to the many beauty spots in the surrounding districts.

FIFTEENTH CENTURY BATTLEMENTS OF LUXEMBURG CITY

Luxemburg was a walled city for many centuries, but now the fine old ramparts serve as pleasant boulevards. A few remnants of the once splendid defensive works are, however, still standing and on the Plateau du Rham, in the gorge of the Alzette, east of the city, are several ancient pieces of masonry, including the crumbling towers seen above, dating back to the fifteenth century

eventually in an economic union between Belgium and Luxemburg which was to endure for fifty years from May, 1922.

The new constitution excluded all foreign pretensions to any control over the government of the country, and the nation was declared to be sole and exclusive sovereign. While the throne was to be retained by the existing dynasty, the grand duchess was to rule through a responsible minister, representing the legislative chamber.

For its size the state is well served by railways—the mileage exceeded 330 miles in 1921; of course, much of this total is represented by light railways or rather steam tramways. The most important main lines are those from Arlon to Luxemburg, bifurcating there into two branches, one to Treves and the other to Metz and Strasbourg. The old Prince Henry line connects with the Belgian eastern railways near Gouvy. It is believed that the economic union with Belgium will lead to a considerable improvement in the railway system of the duchy, and more especially in regard to the introduction of light railways to supersede the somewhat antiquated steam tramways.

Luxemburg is to be classed as a neutral state, but the signatories of the act of neutrality are not bound singly to go to her defence. As Luxemburg is without any means of offering resistance to an invader, she is doubly defenceless. Perhaps the upshot of this will be that at last, realizing her position, she will voluntarily attach herself to one or other of her friendly neighbours.

LUXEMBURG: GEOGRAPHICAL SUMMARY

Natural Division. Politically the existing grand duchy is a unit, geographically it is a fragment of the Ardennes-Eifel section of the block mountains of Central Europe, relics of the ancient pre-Alpine mountains. (Cf. Belgium.)

Products. Agricultural. Barley and the hardier cereals. (Cf. Luxembourg province in Belgium.)

Mineral. Iron ore and steel. (Cf. the minette iron ores of Lorraine, v. Alsace-Lorraine.)

Communications. Apart from steam tramways and light railways, the railways are connecting links across this neutral territory between the more important neighbouring states.

Outlook. Smaller than many English counties, without any geographical reason for its continued separate existence, the state will probably serve the future of its people best by uniting with France or Belgium and ceasing to function as a separate political unit.

MADAGASCAR

Mysterious Island Torn From Africa

by Robert Machray

World Traveller and Writer on Foreign Affairs

ONE of the largest islands in the world, Madagascar is, in several ways, the most interesting of them all. It presents a problem, or rather it is a mystery, which nobody, at any rate so far, has been able to solve completely. Part of the answer is known, the rest is silence—a silence that perhaps will never be broken.

Madagascar came into existence as an island ages after it had been in existence as part of the mainland of a continent. Geologists and biologists have no doubt of the truth of this statement, because the evidence is decisive. But they cannot tell when the tremendous convulsion of nature took place which tore Madagascar from the side of Africa and thrust between them a sea channel 10,000 feet deep and more than twenty times as broad as that which separates Dover from Calais. It is a profound mystery.

Nor is the date of the insulation of Madagascar the only mystery. For much that scientists say about the island is guesswork—very good guesswork—but no more than that. One of the reasons for the statement that Madagascar was once part of the African continent is derived from the discovery of fossil remains of huge animals such as belong to Africa, as, for instance, the hippopotamus.

Puzzle of Animal Life

But strangely none of these creatures is to be found in the island alive, nor is there even any memory of them; indeed, it is as certain as a matter can be which is incapable of absolute demonstration, that they had ceased to exist in Madagascar before it became an island. The supposition is that that part of Africa had become colder and colder, with the consequent retreat of the big beasts into warmer regions before the titanic, volcanic change occurred.

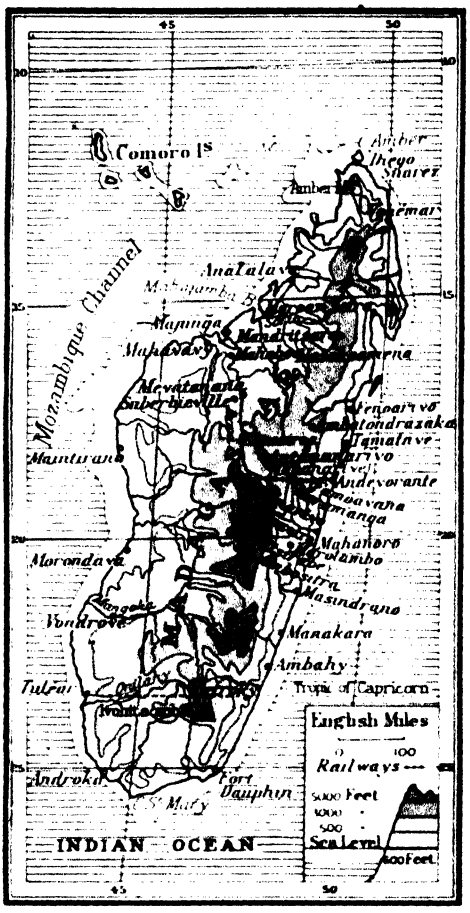
There were some survivals in Madagascar from what may be termed its continental period, such as the crocodile. But in general it is the case that the island has developed a characteristic and distinctive wild life of its own.

Malays Far From Home

Another fascinating element of mystery about Madagascar is its population. As might be expected, the island contains tribes of obviously African origin, but it also has tribes, such as the Hova, whose origin is just as obviously Malay. How came they there? Was Madagascar, before that vast upheaval in the far-distant past, in close touch with some eastern continent, of which Malaya, as we know it now, is all that is left? Or are the Malayan peoples of Madagascar the descendants of men who had been swept by storm from their ancestral abodes to this land, or perhaps had adventured daringly across the seas to find new homes? Simply, we do not know. All we can say is that whatever it was it happened long, long ago, for these peoples are in no sense newcomers.

For a quarter of a century all the tribes of Madagascar have formed a political entity under the flag of France. The island is one of her most important and valuable possessions.

Madagascar lies off the south-east coast of Africa, from which it is separated by the Mozambique Channel, whose narrowest part is about 240 miles. From north to south the island is not far short of 1,000 miles in length, and at its broadest, from east to west, it is



THE WORLD'S THIRD ISLAND

some 360 miles wide. Its area is about that of France together with the combined areas of Holland and Belgium.

This is a fact that should be remembered, because though Madagascar looks small on the map by the side of Africa, it is really a very large island. Its population is upwards of 3,500,000, of whom some 25,000 are non-Malagasy, and the majority of these are French, mostly officials and traders. France holds the island with a small force of about 2,400 of her own troops, supplemented by some 6,000 native soldiers. The conquest of the country gave the French a great deal of trouble, but they have bettered their title to it by performing a real civilizing work.

Part of the difficulty the French experienced came not from the fighting qualities of the islanders, but from the natural obstacles they had to overcome for success. In brief, the struggle was hard because of the configuration of Madagascar, much of it being mountainous and, in those days, almost without roads, except on the west where a fairly broad coastal plain gradually rises in terraces to the interior tableland. In that area the natives, known there as the Sakalava, had some well-beaten tracks and trails.

But the French attack proceeded from the east side— from Tamatave to Antananarivo, the capital; and there the physical conditions are very different. For from the interior tableland the ground sinks in steep, heavily-forested or naked rock escarpments to the straight eastern coast, and these the French troops had to climb. It was then a region without a road, but with plenty of hot, damp, thick woods and rough, slippery rock surfaces. It was then, as now, a very wet district, rain, often heavy, falling nearly every day, and as a consequence thick vegetation grew wherever the granite was covered with soil. Configuration and climate cooperated, it might be said, to make the advance of the French forces, with their artillery, as arduous a task as may well be imagined.

Madagascar's high interior tableland is composed of ranges of mountains that stretch like a backbone from the north almost to the south of the island, the elevation of these highlands being from 4,000 to 6,000 feet above sea-level. Almost in the centre is the Imerina plateau, where the mountains reach their greatest altitude. Everywhere can easily be discerned the signs of great volcanic activity in the past.

There are many extinct volcanoes, the principal being Mount Ankaratra, nearly 9,000 feet high. Smaller but still huge extinct volcanoes are Mount Amber in the north and Mount Ivohitsomba in the south-east. At present volcanic activity manifests itself solely in rumblings. The west and south parts of the island are comparatively low-lying, being about 600 feet above sea-

level, and form a great cattle area. One of the curious natural features of Madagascar is its straight eastern coast —straight in its sense of being unindented by bays; and this means that the rivers on that side of the island are short and unimportant. This arises from the fact, already noted, that the land, a little back from the shore, stands up sheer and abrupt like a wall, though in front of part of it is a succession of lagoons, which skilled French engineers have connected and turned into a fine waterway.

As this wall faces the trade winds the result is the abundance of rain that falls on that side of the island. Speaking generally, Madagascar has a tropical climate, and the east of it is always hot as well as damp, conditions that severely try Europeans and are not without effect even on the natives, who are far less active than those in the highlands.

The west side is much drier, partly because the great wall mentioned above and indeed the whole interior tableland shut out the rain-laden winds from the Indian Ocean. On the other hand, this side has some rivers of considerable length, but mostly very rapid and of little use for navigation, such as the Mangoka and the Onilahy in the south-west and the Ikopa in the north-west. Near the mouth of the estuary of the last-named river is the port of Majunga, founded centuries ago by the Arabs and once the centre of a big trade in slaves. It has a good harbour.

In the north-west is Diego Suarez, one of the best natural harbours in the world. Starting from Marseilles, the traveller to Madagascar, voyaging by way of Zanzibar, will touch first at Majunga, go on to Diego Suarez, and leave the steamer at Tamatave. This is the chief port of the island, and connected by railway with Antananarivo—which has been shortened by the French into Tananarive. He will have seen some magnificent scenery, especially during the last stages of his trip, and he can hardly have failed to notice that while on the west he saw great beaches of sand, on the east he sailed into Tamatave through reefs of coral.

Varying with the elevation of the land, the soil is far richer on the west and south. Bearing in mind how mountainous much of Madagascar is, we cannot be surprised to find that

Guy Nind

MOUNTAINOUS ROAD FROM ANTANANARIVO TO MEVATANANA

This road was almost wholly cut out of the mountains for its length of 226 miles. The highway has been made suitable for motor-cars, which complete the journey in about twelve hours, while the native bullock carts take nearly thirty days. The French have constructed carriage roads from the interior to the principal ports as well as to connect the chief towns

Guy Nind

CROSSING A RIVER IN MADAGASCAR BY MEANS OF A FILANZANA

As yet few of the rivers in the island have been bridged, but fortunately fords are frequent and sufficiently shallow to permit the passage of a filanzana. This carrying chair consists of two poles fastened together by iron rods, and secured to other rods in the centre is a sort of chair made of heavy canvas with a foot rest, attached to the poles, in front

Guy Nind

TRAVELLING IN THE HIGHLANDS OF INTERIOR MADAGASCAR

Madagascar is mountainous, especially in the centre, the greater part of the island being covered by two plateaux, which are separated by a low ridge. There are a number of extinct volcanoes, Ankaratra, the highest, rising to 9,000 feet. Except for roads between the chief towns the only means of communication are native tracks often impracticable for carts and awkward even for the filanzana

BEE-HIVE BUILDINGS IN A VILLAGE OF NORTH MADAGASCAR

Not far from the magnificent Diego Suarez haven, in the extreme north of Madagascar, lies this orderly native village. Houses differ in various localities, the more primitive type comprising oblong and circular huts of wooden frames plastered with mud and surmounted by palm thatched roofs. Geese, fowls, pigs and dogs form the livestock, and most villages have fenced enclosures for cattle

E. N. A

THATCHED HOUSES IN A WELL-KEPT STREET OF DIEGO SUAREZ

Diego Suarez stands on the bay of the same name at the northern extremity of Madagascar. It has one of the finest harbours in the world, and is the headquarters of the French military colony, while there is an important meat-preserving industry. Many of the houses with high-pitched roofs, thatched with grass or rush, are being replaced by buildings of bricks and tiles

CASCADE AROUND HUGE ROCKS AND BOULDERS ON THE RIVER BEMARIVO NEAR AURANODONDONA Guy Sind

Aurandondona is not far from Masokoamena in the province of Mevatanana. The Bemarivo flows into Mahajamba Bay on the north-west coast of Madagascar. Few of the rivers of the island are of much use for navigation except the Betsiboka, which can be ascended by small steamers for about 100 miles. Rocky bars frequently cross the courses of the rivers, forming many cascades and waterfalls. On the east coast the rivers have made magnificent gorges through the mountain walls and descend to the sea in a series of rapids and cataracts. The falls of the Mattiana are nearly 400 feet high

VIEW OF A SECTION OF MADAGASCAR'S PLEASANT CAPITAL, SHOWING THE PREVAILING STYLE OF ITS ARCHITECTURE

Madagascar is one of the largest islands in the world; it is even larger than its mother country, France, by whom it was officially occupied at the end of the nineteenth century. Antananarivo, or Tananarive, the capital, is situated in the interior of the island at an altitude of 4,750 feet above sea-level and enjoys a fairly healthy climate. The city occupies a conspicuous position on a hill rising abruptly 500 feet from a plain, there being no other eminence of any size for several miles around. It contains the residence of the governor-general and the administrative offices, and the population is estimated at 94,800, including some 3,500 Europeans

B. N. A.

RUE NATIONALE IN TAMATAVE ON THE EAST COAST, THE PRINCIPAL PORT OF MADAGASCAR

Tamatave stands on a sandy projection almost at right angles from the eastern coast of the island. It has an excellent harbour with two entrances, and is connected with Antananarivo by railway and telegraph. The main street is the Rue de Commerce, containing most of the shops and merchants' offices. In the Rue Nationale is the office of the local newspaper, "La Dépêche de Madagascar." Steamers of both British and French companies call here, and the exports include hides, raphia, timber and indiarubber. The native population has been removed from the town and settled in a village to the north-west

only about 3,000,000 acres are under cultivation. Except upon the lofty Imerina plateau and other highland areas, where farming is difficult though successfully pursued by the inhabitants, mostly Hova, the natives of the country do not work hard, partly because of the climate and partly because they obtain the kindly fruits of the earth with little effort.

Rice is the great crop; all the natives eat it. Another is manioc, from which cassava and tapioca are obtained. But sugar, coffee, tobacco, cacao, butter beans (the butter bean is a Madagascar speciality), cotton, rubber and silk are produced. Many valuable woods are found in the forests.

Life Peculiar to the Island

The mineral wealth of the island is considerable, and is being developed by the French. There is plenty of graphite and some gold, but very little coal. Apart from agriculture, cattle-raising is the chief occupation of the natives, who have upwards of seven million cattle among them. There are extensive meat-preserving factories at Majunga, Diego Suarez, Tamatave and Antananarivo. There is also an important fishing industry. It will now be quite evident that France has a very valuable possession in Madagascar; but just how good it is becomes even more evident when it is known that exports far exceed imports in value.

Before considering how France got this rich island and what she is doing for it, a few words must be said about the specialised wild life that Madagascar has developed as an island. Now that the aepyornis, a gigantic sort of ostrich, is gone, the most notable examples are the lemurs and a creature called the aye-aye; these are allied to the monkeys, but exhibit some differences of an important kind. Some are as big as foxes, others as small as mice. It is in Madagascar that the typical forms alone are now found. Hardly less remarkable is the bird-life of the island, as it has more than a hundred birds peculiar to itself, many of them very beautiful. The flora is abundant, and includes such a curiosity of vegetation as the "traveller's tree," which once was thought to be a provision for the thirsty, but is not, the liquid it provides being a thin insect soup. The raphia-palm is also peculiar to the island, and is of great use in many ways, but chiefly in the making of the native huts.

Early European Posts

When Madagascar was first discovered by Europeans—the Portuguese—it was named the Island of S. Lawrence. At that time it was inhabited by many tribes who were independent from each other, the chief of them being the Hova in and about Imerina and the Sakalava along the west coast; another tribe of importance was the Betsileo, whose territory adjoined that of the Hova. In 1700 the French established some posts on the island, but lost them to Great Britain in the course of the Napoleonic wars.

Tamatave was in British hands in 1811; British missionaries penetrated into the interior and converted many of the natives to Christianity. By that time a prince of the Hova tribe, Radama, was king of the whole island. The king who came next soon died, and was succeeded by a queen who persecuted the Christians, and meanwhile France had regained something more than a footing in the land. Negotiations took place between France and England, with the upshot that both Powers agreed to respect the independence of Madagascar. That was in 1865.

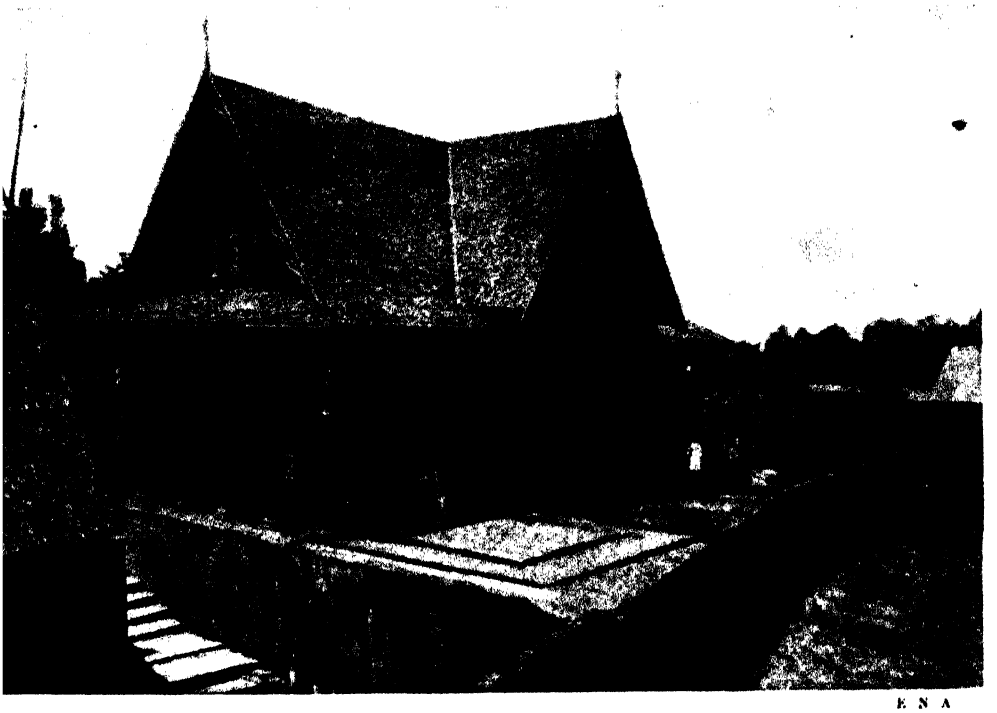
Conquest by the French

Three years later Madagascar's second queen, Ranavalona II., ascended the throne, stopped the persecution and surrounding herself with Europeans bade fair to consolidate her power.

For some time all was well, but in 1878 the French renewed their claim to a protectorate which a small chief in the north had given to them in 1840.

CLASSIC COLUMNS OF THE PALACE OF JUSTICE, ANTANANARIVO

Antananarivo, the capital of Madagascar, stands on a hill in the central plateau of the island, and contains the administrative offices, royal palaces and the two cathedrals. Many parts of the city are too steep for roads and are connected by broad flights of steps. Since the introduction of stone and brick much of the town has been rebuilt, while the French have laid out several beautiful gardens



E N A

RESIDENCE IN EUROPEAN STYLE IN MADAGASCAR'S CAPITAL

The general appearance of Antananarivo conveys the impression of a picturesque and prosperous European town. Handsome stone and brick churches, palaces, schools and colleges are numbered among the chief buildings, several of which have even a pretentious style of architecture in contrast to the native huts in the villages. This neatly planned house was a dwelling of Queen Ranavalona

ROYAL PALACE OF THE LAST NATIVE QUEEN OF MADAGASCAR

Ranavalona III., the last native sovereign of Madagascar, who died in 1917, governed the island with the help of her husband, the Prime Minister, from 1883 until 1896, when she was deposed by the French and deported to Algiers in 1899. Her palace, crowning a steep street in Antananarivo, is an important-looking stone structure of three storeys, with a high-pitched roof and a square turret at each corner

This led to a war which began in 1883, but lasted to 1885, Tamatave being bombarded and taken in the course of the operations. By the peace wrung from the queen, the French obtained Diego Suarez and a certain control over her foreign policy.

France continued to be aggressive in her actions and in 1890 France's protectorate of all Madagascar was recognized by Britain. The natives, however, refused to accept the French protectorate, and this led to another war, in which Antananarivo was captured by French troops; and the reigning queen, Ranavalona III., was deposed and banished to Algiers where she died in 1917, the last of her line. In 1896 Madagascar was declared a French colony, but it took three years longer and some more fighting for France to establish her authority over the island completely.

Though Madagascar is a French colony, it has no representative in the French Parliament, nor has it an elective assembly. At the head of the administration is a governor-general, who is assisted to some extent by a consultative council. It may be mentioned here that the governor-general also has charge of the Comoro Islands, which lie to the north-west of Madagascar and are valuable for vanilla and perfume plants, such as patchouli. In 1918 Madagascar was divided into twenty-four provinces, and the Comoro archipelago was included as the twenty-third of these provinces.

Everything is regulated by French officials, with the aid of natives in subordinate positions, the majority of whom are Hova, for the Hova are by far the most intelligent of the Malagasy peoples. Education is compulsory and every child has to learn French. Not a few of the natives have been educated in France, others in England; some of them practise as doctors, dentists, lawyers or teachers in the capital and the other large towns.

France has not only given the island the advantages of ordered government and settled conditions of life, but she has made these practicable by the building of railways and roads. It is sometimes forgotten that civilization is in much a matter of routes and roads. And Madagascar was a roadless land before the French took over the administration—which is much the same as saying that it was a barbarous land.

Already the French have constructed about 800 miles of railway, and one of the most striking things in the capital is its great railway station. In addition, they have built excellent, well-metalled roads running from the capital to all parts of the island; and on the roads there are regular motor services. These railways and roads are developing the island's commerce very rapidly, and greatly augmenting its prosperity. The French, too, have put up many fine buildings in the capital and elsewhere. They have turned Tamatave into a wonderful port, full of a kaleidoscope of life, with its mixture of Europeans, Malagasy, Indians and Arabs, all apparently busy and happy. Only just before the beginning of this century nothing was to be seen there except a few mud huts round a swamp.

MADAGASCAR: GEOGRAPHICAL SUMMARY

Natural Division. Fragment of the ancient continent of Gondwanaland. (Cf. Southern Africa and the Deccan.) A central tableland, with a scarp facing the east. (Cf. the Western Ghats and the Drakensburg Mts.) An archaean core is overlaid with horizontal sedimentary rocks, lava deposits and volcanic cones. (Cf. the Deccan.)

Climate and Vegetation. Rain from the south-east trade winds, especially on the east side. (Cf. the Philippines.) Tropical heat and jungle forest. (Cf. the West Indies.) Rice, manioc, cane sugar, palms. (Cf. Mauritius, the Deccan and Malaysia.)

Communications. In recent years railways and metalled roads have been made. Steamships connect the island with France.

Outlook. As in Ceylon and Java to a high degree, and in the Philippines and Malaya to a less well-developed extent, so in Madagascar, to a low but gradually expanding degree, the French are developing the natural resources of the country. (Cf. Indo-China and the Barbary States.)

MADRAS

The Metropolis of Southern India

by Edward E. Long

Author of "British Rule in India," etc.

THERE is no other city in India which has quite the same place in the affections of an Englishman as Madras. Bombay was founded by the Portuguese, and became English later; Calcutta is of English foundation, but it is half a century younger than Madras, which was the first city in India to be founded by the English and is a proud monument to the courage, foresight and untiring perseverance of its earliest settlers and those who followed in their footsteps.

In the year 1639, in order to acquire a settlement nearer to the centres of the dyeing and weaving industries of southern India, Francis Day, the chief official of the East India Company at Armagon, obtained the grant of a small strip of land on which a small fort was erected on the present site of Madras, and which, named Fort St. George after the patron saint of England, was the first fortified position held by the East India Company in India, with the exception of Armagon.

When Fort St. George was Madras

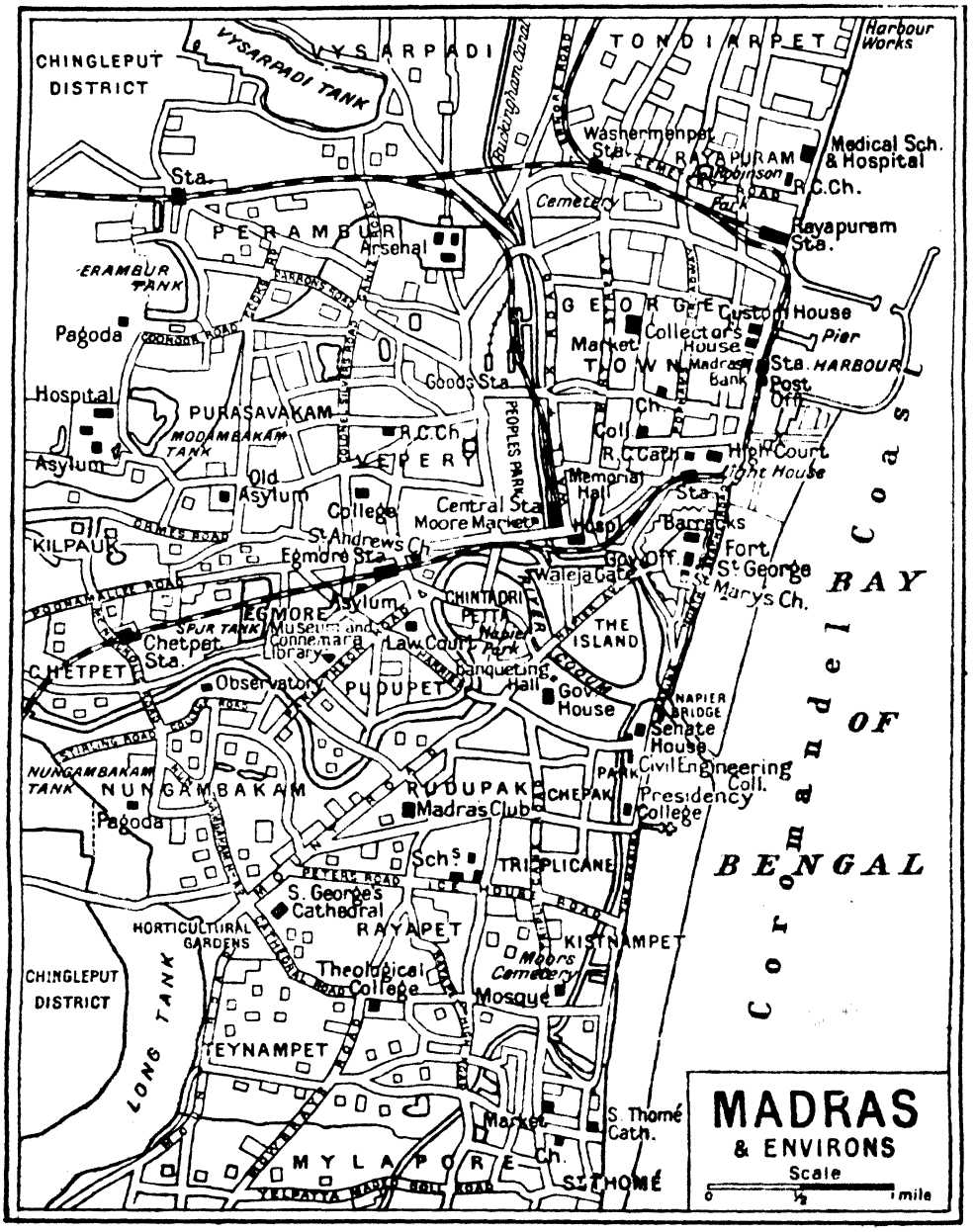
Close by, at St. Thomé, was a Portuguese settlement which was not prospering, and the Portuguese invited Day to build there; but he preferred independence, and to his little station, by the exceedingly wise offer of exemption from all taxation for a period of thirty years, he attracted several hundred families of weavers and others and Fort St. George soon became quite a busy and thriving spot. In 1641 it was made the headquarters of the East India Company on the Coromandel Coast and in 1658 the trading stations in Bengal were placed under its control.

For many years Fort St. George was Madras. It consisted of a tower, or house, enclosed by a rectangular wall 400 yards long by 100 yards wide with bastions at the four corners, and a number of roughly-built Indian houses outside and surrounding it. Close to the sea, it was easily assailable therefrom, especially as it was both held and fortified weakly for many years.

A Struggle for Mastery

Attacks by Dawood Khan, a general of the great Aurungzebe, and by the Marathas, were beaten off, but when in 1746 Dupleix's lieutenant, La Bourdonnais, attacked the Fort, Governor Morse capitulated tamely and he and his council were taken off to Pondicherry. The great Clive was at that time a writer in the company's service at Madras, but he managed to avoid the ignominy of imprisonment by escaping with a few companions to Fort St. David. The French held Fort St. George for three years, when the Treaty of Aix-la-Chapelle restored it to England, and when the East India Company regained possession it was improved and strengthened; the old fort became practically enclosed within a new one, and this enabled the governor, Lord Pigot, to beat off an attack of the Frenchman Lally in 1759.

The greater part of the Fort was restored between 1763 and 1800, but in its present condition it retains its old-time character, and is a stirring memorial of the early days of British rule in India. It is still in use as a fortress, garrisoned by British troops, and contains many of the principal government offices—the secretariat and council chamber and the military headquarters—and has an arsenal and a barracks, the former possessing many interesting trophies of



GREAT MARITIME CLEARING HOUSE FOR SOUTH INDIA'S TRADE

the wars in which the old army of Madras was engaged.

Madras is unlike any other large city in India. Situated 13° 4′ north of the Equator, by sea 770 miles distant from Calcutta and nearly 800 from Bombay by rail, it is low-lying and almost dead level, its highest point being only 22 feet above the sea; and it is so widespread, has such broad, tree-flanked roads, with buildings, often standing by themselves, in such large gardens and so hidden by the foliage surrounding them, that the impression gained is not that of a city at all, but rather of some tropical garden suburb.

The area covered by the city is nearly 30 square miles, or larger than that of either Calcutta or Bombay with their very much greater populations. This is

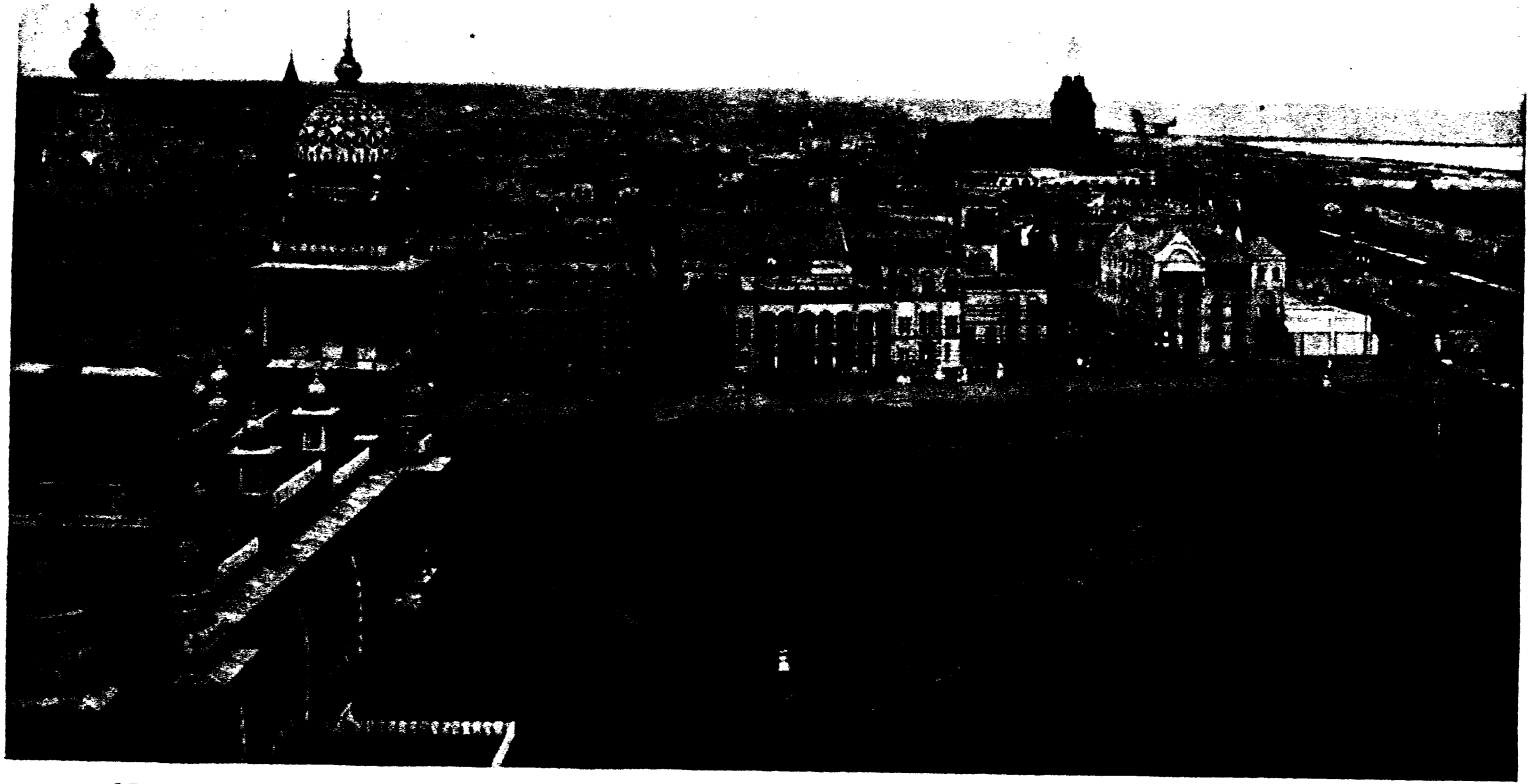
due to the fact that it has no obstacles to lateral expansion, such as the cities named; the cheapness of land, generally, encourages people to be content with houses of fewer storeys and more breathing space, and the whole city is more a collection of large villages, linked together and separated from the surrounding country by an arbitrary boundary line, than a city in the ordinary sense of the word.

You have to remain for some time in Madras before you can realize that you are even near a big city. And then the place has such a sleepy old-world atmosphere, and such a number of the European-inhabited private houses are of the capacious and picturesque type of bygone days. Here, indeed, one can conjure up visions of the English who went to India nearly three hundred years ago. Their memory is still about the place. I am sure that at night their ghosts may be seen in pleasant lanes out Egmore way, in pairs, and later flitting into the Fort past the sentries—without the password.

Most of European Madras was built at the end of the eighteenth and the beginning of the nineteenth centuries, and the place to-day stretches along the shore from Tondiarpet in the north for a distance of nine miles, and inland from a mile and a half to four miles. On the north it is flanked by the Madras Railway and on the south by the Adyar river. A huge tank, known as the Long Tank, borders it on the south-east, and a small river, the Cooum, possessing like the Adyar little water except during the rains, meanders through the heart of the city from west to east. This stream falls into the sea just south of the Fort, near which it divides and forms a small island, connected with the mainland on both sides by bridges. On the south, opposite this island, is Government

THRONGED STREET OF THE DENSELY POPULATED NATIVE QUARTER

Formerly known as Black Town, George Town was renamed in honour of the visit of King George V. The commercial quarter faces the harbour, and behind this is the thickly-inhabited native section with wide streets served by electric trams, and low houses and open-front shops. South of Chepak Park is the Mahomedan quarter of Triplicane, bounded on the east by the Marina



E. N. A.

GENERAL VIEW OF GEORGE TOWN AND THE NORTHERN PORTION OF MADRAS FROM THE HIGH COURT

Just north of Fort St. George is the esplanade in which stands the High Court, and on the other side of the road passing these buildings is the crowded quarter of George Town. The prominent building with the two towers is the General Post Office, with one of the harbour breakwaters beyond. The fine three-storeyed structure opposite the High Court is that of the Y.M.C.A., and west of this are the Pachiappa College and Hall, the former having been opened in 1842. After skirting the shore for about one mile and a half the railway turns inland, separating George Town from Rayapuram and Tondiarpet

INDO-SARACENIC EDIFICE OF THE HIGH COURT AND THE LIGHTHOUSE TOWER OF MADRAS

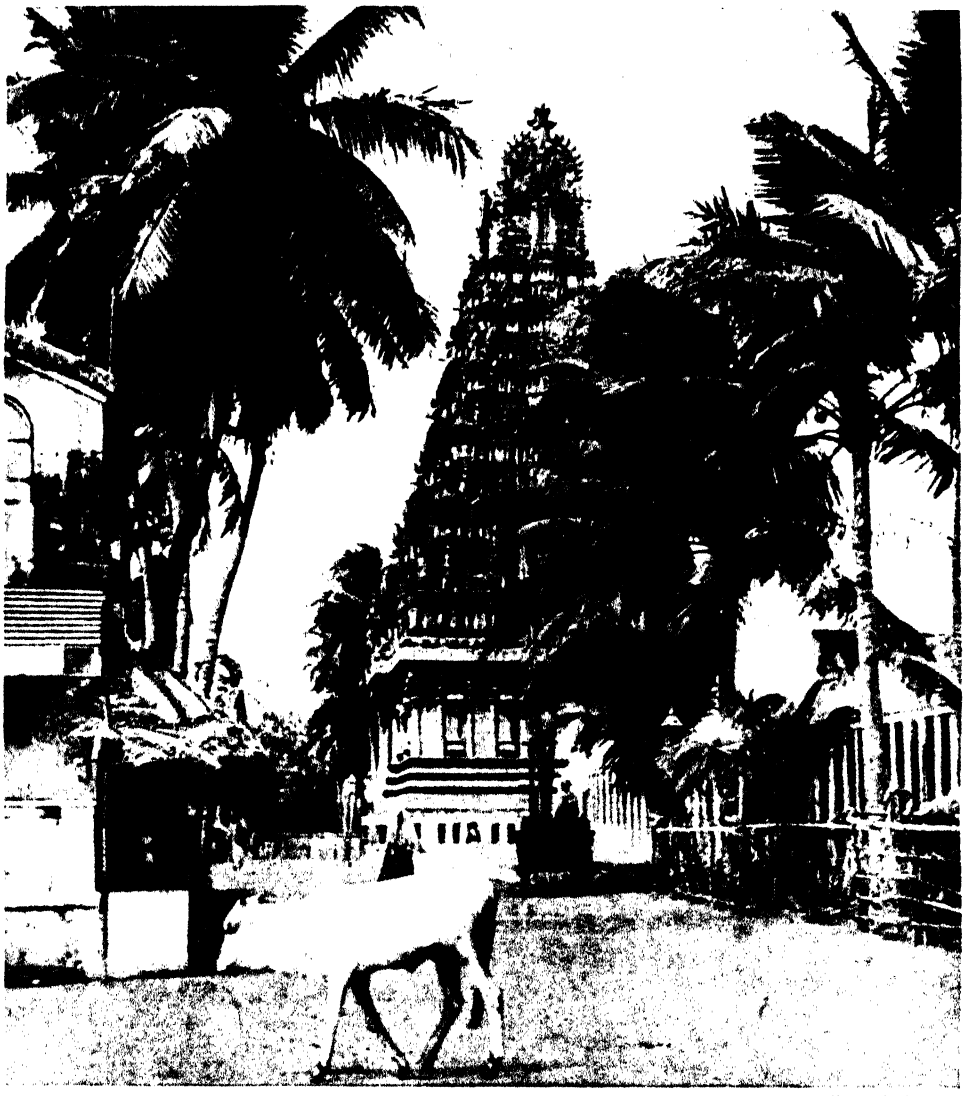
North of Fort St. George is the Old Lighthouse on the esplanade, which has been superseded by a tower on the High Court. The tower is 160 feet high and the light is visible 20 miles away at sea. The High Court and the new buildings form a handsome pile occupying an area of 100,000 square feet. They were commenced in 1888 and the Law Courts were opened in 1892. The interior is beautifully ornamented with wood carving and painted glass. To the west of the Law Courts is the modern Law College, a fine building designed in a similar style

LIGHTHOUSE TOWER AMID THE DOMES OF THE HIGH COURT

Seen thus from above its roofs the city skyline breaks out in dome and tower, spire and minaret, while the streets drive deep chasms between. A novel feature is the celebrated tower of the lighthouse, the highest structure in this view, that overlooks all from its vantage above the High Court of which it is the most imposing part

House and the Banqueting Hall, surrounded by a spacious park extending to the sea front, and variously situated on the front are the beautiful office of the Revenue Board, the fine Presidency College, the Senate House, the Civil Engineering College and other government buildings.

The Fort is in the centre of the sea front, along the greater part of which runs a magnificent esplanade, the Marina, equal in construction, appearance and upkeep to the marine drive of many English watering-places, and here every evening the fashionable world of Madras repairs in its motor-cars to catch the cooling sea breezes and fortify itself for the pleasures of the night and the labours of the morrow. Just north of the Fort lies the harbour which has been greatly improved and extended and can now accommodate many vessels of heavy tonnage. It is a great boon to the place, for in the old open roadstead



Kenneth Comyn

INTRICATELY CARVED GOPURAM ON THE OUTSKIRTS OF MADRAS

Madras and its suburbs contain a large number of temples and pagodas, the majority of the former having the elaborately embellished gateways as shown in the photograph. The chief temple is the Parthasarathi in Triplicane. As elsewhere in India the sacred cows meander about the streets as they please and take titbits from the fruit and sweet stalls without let or threat from the helpless owner

days landing was a laborious and hazardous process and frequent cyclones played havoc with the shipping. In 1746 La Bourdonnais lost three of his ships and two prizes, in 1782 a hundred native craft were wrecked, and in 1872 nine British and many native vessels were driven ashore, the wind pressure being 53 pounds to the square foot.

The mercantile quarter of Madras centres about the harbour, where are the General Post Office, Customs House, Collector's House and various banks and mercantile offices, well-built and imposing structures. Formerly known as Black Town, but re-named George Town after the visit of King George V. when Prince of Wales in 1906, it is the most thickly-populated quarter, and a good deal of it is ill-built and squalid. Triplicane, the Mahomedan quarter just south of the island, and Purusavakam and Vepery, on the west, where most of the many Eurasians live, come

E. N. A.

GENERAL POST OFFICE ON THE WATER FRONT OF GEORGE TOWN AND SURF-BOATS LANDING CARGO

Like the greater part of the east coast of India, the coast at Madras is a sandy beach shelving out very gradually. The harbour, therefore, has had to be entirely artificial. It covers an area of about 200 acres and is formed by breakwaters extending out from the shore 1,000 yards apart and guarded at their seaward end by a similar work Both the Madras and Southern India railways have lines running along the top of the beach in front of the General Post Office and the Custom House to expedite the transit of goods, but unfortunately the two systems use different gauges

BASKET-MAKERS AT WORK IN THE SHADE OF THE TREES BY THE ROADSIDE IN MADRAS

One of the many local industries of Madras is that of basket making. The workers bring their stock of broad-leafed rushes to some shady place that has been occupied by the practisers of their craft from time immemorial, and there they carry out their work for everyone to see. The baskets as a rule are of two kinds, the wide-mouthed for general purposes, and the bottle-shaped for storing grain. The knowledge of the trade is kept within the family, the various families forming something approaching a guild. Other local specialities are cotton weaving, ornaments of silver and sandal-wood carvings

RAS

Kenneth Gowen

BROAD HIGHWAY OF MOUNT ROAD, THE PRINCIPAL EUROPEAN SHOPPING CENTRE OF MADRAS

Mount Road extends from the Long Tank to Napier **Avenue, which** is a continuation, **and** on or near it **are** most of the best hotels, shops and banks. At the south-**west end** of the road are the Horticultural Gardens, which occupy an area of 22 acres and are beautifully laid out. Half-way between Government House and **S. George's Cathedral** is the Madras Club, in front of which is the statue of Brigadier-General Neill, who fell at the relief of Lucknow. Opposite Government House is the statue of King Edward VII., by G. F. Wade, unveiled in 1903

2590

xt in point of density. The native vn is not very interesting, the houses ing generally low-built and of the en shop-front type, but the streets are t so narrow and winding as those of Indian quarters of most other Indian ies, Madras having been laid out on ore sensible lines. S. Thomé, the l Portuguese settlement, lies along sea-front, in the Mylapore district, d is now a part of Madras. Founded attached to them, which bear witness to the different social customs of those days.

Handsome thoroughfares connect these quarters with the city proper, the principal, Mount Road, running from the Waleja Gate of the Fort, across the Island, past Government House, the Madras Club, S. George's Cathedral and the Horticultural Gardens, skirting the Long Tank, crossing the Adyar by a bridge built in

GOVERNMENT HOUSE AND THE GARDENS BY THE COOUM RIVER

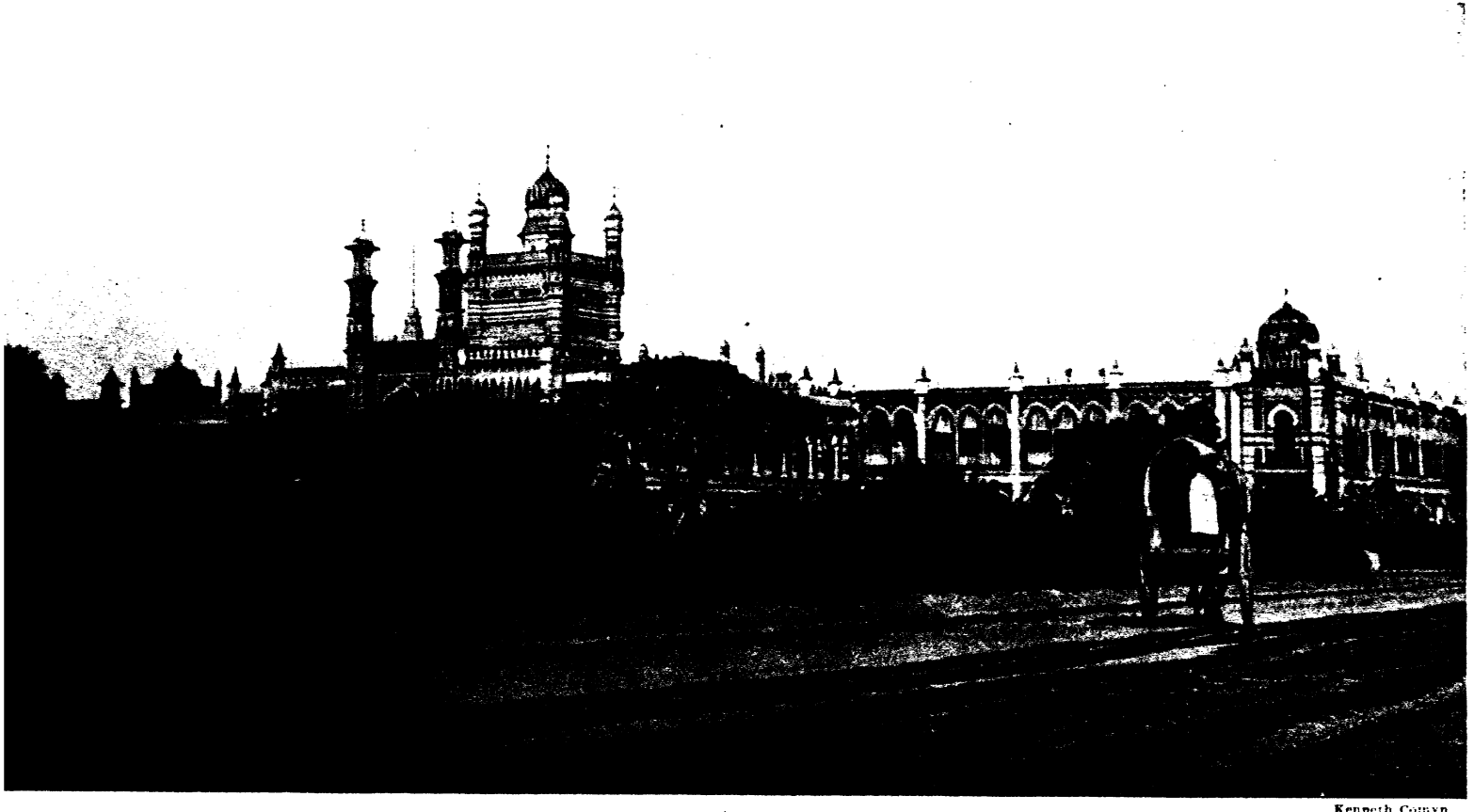
about one mile from its mouth the Cooum is divided by the Island, and Government House stands n the bank of the right arm. It is a white, three-storeyed building, having deep verandahs in the ront and surrounded by magnificent grounds. The Banqueting Hall, in a detached building and built to commemorate the fall of Seringapatam, is a lofty room 80 feet long and 60 feet broad

the Portuguese in 1504, it was held the French from 1672 to 1674, sacked the Mahomedans in 1698, and upied by the English in 1749.

The principal European quarters are the west and south, in Egmore, etpet, Nungambakam, Kilpauk and ynampet and on the north bank of Adyar river. Here were built the uses of the merchant princes of dras and the early servants of John mpany, and many, such as Brodie stle, Doveton's House and Gambier's rdens, still bear the names of their st owners. Of brick, cased with shell-

1726 by Petrus Uscan, the most notable of the Armenians of Old Madras, to the governor's country residence at Guindy and the cantonment of S. Thomas's Mount, nine miles from the Fort. Nearly parallel to this runs Mowbray's Road, with its fine avenue of banyan trees, which leads to the Adyar Club and is crossed, near S. George's Cathedral, by Cathedral Road and the Nungambakam High Road, the latter leading to the once fashionable quarter on the Poonamallee Road.

Scattered as they are, the impressiveness of the many handsome public



Kenneth Comyn

CHEPAK PALACE: ONCE THE RESIDENCE OF THE NAWABS OF THE CARNATIC, NOW THE REVENUE OFFICE

pak Palace, occupied by the Board of Revenue offices, is on the sea-front to the east of Government House, and surrounded by a park. The government improved the palace, the whole building now being in the Moorish style. The entrance is through an ornamental gateway with porcelain representations of the ous incarnations of Vishnu. Attached to the palace on the south is the Presidency College, a fine structure in the Italian style. East of the last, on the seashore, is the marine aquarium, which is the only one in India; north of the palace is the Senate House

Clive in 1802, Government House, the Museum and Connemara Library, S. George's Cathedral, Ionic in style and finished with polished plaster-work resembling marble, the Memorial Hall, erected by public subscription to commemorate the exemption of Madras from the horrors of the Mutiny, the Senate House and the Revenue Board Office, formerly the palace of the nawabs of the Carnatic. Many of these buildings are copies of the Italian and other European schools, but in newer buildings, such as the High Court, the Law College and the Bank of Madras, an Indo-Saracenic note is struck which is far more suitable and attractive, and the red brick and grey granite of these structures is a pleasing contrast to the earlier erections of plaster-cased brick.

Historic Public Buildings

Statues of Queen Victoria near the Senate House, King Edward VII. opposite the Mount Road entrance to Government House, Lord Cornwallis in the Fort Square, Sir Thomas Munro by Chantrey on the Island, General Neill of Mutiny fame opposite the Madras Club, and others, grace the city, while many of its churches are of extreme interest. The foundation stone of the Luz church bears the date 1516 and the oldest European inscription in India. S. Mary's Church, in the Fort, consecrated in 1680, is the oldest Protestant place of worship in the country, and here are buried Governor Morse, a great-great-grandson of Oliver Cromwell, Lord Pigot, the famous missionary Schwarz and Sir Thomas Munro.

The Roman Catholics have a cathedral erected by the Capuchins in 1775, S. Mark's, George Town, was consecrated in 1804, S. George's Cathedral in 1815 and S. Andrew's, the Scottish church, in 1821. S. Thomé takes its name from S. Thomas the Apostle, who is said to have preached the Gospel in southern India and been martyred at S. Thomas's Mount, on which a shrine was erected by the Portuguese in 1547. His body is supposed to have been buried by his disciples at S. Thomé, and the present S. Thomé Cathedral, which has memorials to Portuguese pioneers commencing with the year 1557, was erected in 1896 on the site of the old-time church said to mark the spot. It is interesting to note that "Christians of S. Thomas" still survive in southern India as a distinct sect.

Amenities of Town Life

The amenities of Madras are many. It has for its principal recreation ground the Island, nearly a mile in length and half a mile wide, the People's Park, consisting of ornamental grounds and a zoological collection, Napier Park and the Robinson Park. Particularly interesting in the Museum are the sculptured marbles from the railing of the Buddhist stupa at Amaravati, in Guntur District, and a fragment which is supposed to be one of the bones of the body of Gautama Buddha which was found at Bhattiprolu, in the same district, in a rock-crystal casket enclosed in an outer stone case inscribed with the statement that it was made to contain a relic of Buddha. Madras has, too, a gymkhana club and cricket, boating and racing clubs, and the racecourse at Guindy, also the principal "meet" of the Madras hounds, is one of the best in southern India. The two favourite resorts of Madras Society are the Madras Club and the Adyar Club; the former one of the oldest in India, the latter with a charming situation.

Health Despite the Heat

Of the climate of Madras hard things have been said, and it is certainly always hot in the daytime like Singapore and Colombo; but the heat is often tempered by cooling sea breezes, and I have known delightfully cool evenings in December and January when, walking along the seashore Adyar way, I have felt almost as invigorated as if I had been walking along the beach at Brighton. Anyhow, Madras ranks as one of the most healthful cities in India. The mean temperature for the year is

Kenneth Conyn

CENTRAL RAILWAY STATION AND THE COOUM RIVER, MADRAS

The Central Railway Station is one of the finest in India, and is surmounted by a clock tower 130 feet high. Opposite the station is the General Hospital, which has accommodation for 500 beds and records going back as far as 1829. The bridge over the Cooum, an unimportant stream flowing through the city, carries the continuation of the Poonamallee Road towards Fort St. George

83° F. and the annual rainfall 49 inches, the fall being heaviest during the north-east monsoon, from October to December. Vegetation is very profuse and the frequent rains give the place a radiant freshness which goes far towards mitigating the oppressive heat and makes it comparatively dust-free, no small boon for an Indian city. Madras is very fortunate, too, in having several beautiful hill stations in the Nilgiris of which the chief is Ootacamund.

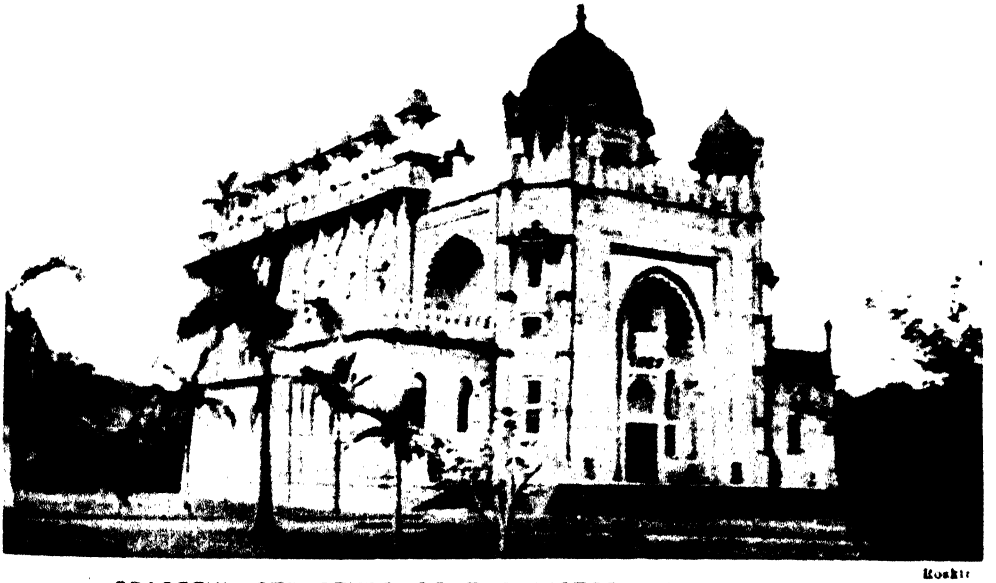
Madras is the capital of the Madras Presidency and the seat of the government, which is, however, moved to Ootacamund during the hottest weather, and the residence of the governor. The revenue of the city is administered by an Indian civil servant who is termed the Collector and the internal administration is in the hands of a municipal corporation, the most important of the municipal undertakings being excellent waterworks and drainage systems, while the Moore Market is well constructed and maintained. There is an efficient police force and the municipal roads are well metalled and kept.

Communications are good. Railway lines run from Madras along the coast to Calcutta, across country to Bombay, south-west to Cochin and south to Tanjore and Madura, and thence to Rameswaram for Ceylon, while there are frequent steamer services to Calcutta and to Rangoon, to Colombo, the Straits Settlements and China, and to

Roskin

ARCADED BUILDING OF THE MUSEUM IN PANTHEON ROAD

The Museum is one of the finest public edifices in Madras, and contains a collection formed in 1846. The departments of antiquities and archaeology have some very beautiful remains from the Buddhist stupa at Amaravati and a fragment, which is reputed to be one of the bones of Gautama Buddha, in a rock crystal casket. A number of archaeological remains are arranged in the grounds



Roskin

GRACEFUL STRUCTURE OF THE VICTORIA MEMORIAL HALL

Pantheon Road leads south-west to Anderson's Bridge over the Cooum river, and on the right-hand side is a fine group of buildings, including the Museum, technical institute, library and the new theatre, to which the Victoria Memorial Hall, opened in 1909, has been added. These are all situated in the Egmore quarter where the magnificent houses of the merchant princes were built

Europe. The Buckingham Canal provides cheap transit to and from places along the coast, connecting with the Kistna and Godavari canal systems, and all the great military roads of the south converge on Madras as a centre. An electric tramway service gives cheap and speedy transit about the city.

A Great Educational Centre

As the chief educational centre of the Presidency, Madras has a fine university, constituted in 1857 and modelled on the style of London University. The general standard of education is remarkably high and the peculiar facility with which the English language is acquired by the Madrasi is an outstanding fact, no less than 14 per cent. of the Indian inhabitants of the city being able to read and write English; and it is quite a common thing for an ordinary Madrasi servant to use excellent English with quite a good pronunciation. As may be imagined, Madras is politically distinctly go-ahead, and it has furnished the Reform movement with many of its ablest writers and orators.

Madras is not an industrial city of any importance and its great distance from the coal-fields handicaps it severely. Indigenous handicrafts are decaying and they are not being replaced by factories of a modern type. However, it has some cotton mills, iron foundries, cigar factories and tanneries, and the Madras Railway has its workshops there. The chief indigenous arts are silk and cotton weaving, silver-work and embroidery. The silver-work is of fine quality and deserves to be better known.

Trade with Great Britain

The chief importance of Madras is as a distributing centre for southern India, and it ranks fourth among the ports of India in tonnage and fifth in the value of its trade. More than 70 per cent. of the imports and nearly 60 per cent. of the exports are brought from and sent to Great Britain the largest item in the imports being European piece-goods, then cotton-twist and yarn, iron and steel, machinery and railway plant and kerosene oil. Hides and skins are the chief export, and then, in considerably less quantities, Indian piece-goods, indigo and raw cotton.

In point of population Madras is still the third city in India (527,000), but it bids fair to be displaced eventually, for its population is almost stationary. The explanation is that the wealthy and rapidly expanding city of Rangoon, just across the Bay of Bengal, offers high wages to labourers, and accordingly the Madrasi is continually seeking pastures new. Madras itself has little industrial development, is unable to retain much of its surplus population, and thus loses a good number of its virile workers.

Creeds and Castes of the Madrasis

Of its people, mostly Hindus, the Tamil and Telegu castes, Dravidian by race and Hindu by religion, largely predominate. There is a fairly large Indian Christian population, 80 in every 1,000, due to the connexion with the Christian Church from its earliest times, the very old European establishments in southern India, and the special efforts of all Christian missions amongst the lowest caste and non-caste, pariah peoples—a most meritorious work. The percentage of Mahomedans, 112 per 1,000, is also high, the residence in Madras of the Mahomedan Prince of Arcot and his followers contributing to this.

Commerce and industry, government, personal and domestic service furnish the bulk of the population with its means of livelihood, but the learned and artistic professions are proportionately much larger than elsewhere in India and the number of persons of independent means is unusually high. The capital acquired by past generations is responsible for this, and as the centre of administration and capital of the Presidency Madras must always be able to maintain a numerous and influential population, while its facilities as a port should ensure its reputation as the commercial metropolis of southern India

MADRID

City of Old Romance & New Democracy

by Mrs. Steuart Erskine

Author of "Madrid, Past and Present"

THE capital of Spain is a white town, 2,412 feet above sea-level, set on a spur of rising ground in the midst of a vast plain that stretches northward to the Guadarrama range and southward to the mountains that guard Toledo.

Madrid owes a great deal to her position. The bulk of the town stands high, the streets sloping down to the Manzanares on one side and on the other to the deep furrow that was the bed of a torrent in prehistoric times. This furrow is now occupied by the avenues of the Prado, the Recoletos and the Castellana which constitute, apart from the shopping centres, the principal thoroughfares of Madrid. To north and east the new quarters stretch out some way, but to the west the town ends abruptly on an eminence where the royal palace stands on the site of the old Moorish fort; from this point of vantage a magnificent view can be obtained of the snow-capped range of the Guadarrama mountains.

The City called Magerit

The first historical mention of the present capital of Spain is made in A.D. 939, when Ramiro II. of Leon, anxious to harry the Moors, then the masters of all that part of Spain, stormed the "City called Magerit" on a Sunday morning, threw down a portion of the walls and slew the infidel "with a horrible slaughter," aided by the "divine clemency." The town was therefore already walled and fortified, as was only natural, considering that it occupied an important strategic position for the defence of the Moorish capital Toledo.

Ramiro did not retain the fort. The Moors built up the walls and towers and continued to keep watch over the plains towards the Sierra de Guadarrama, from which direction they might expect bands of Christians advancing from their strongholds in the north. A hundred and ten years later Fernando I. of Leon destroyed a part of the defences on his way farther south, but it was not until 1086 that Alfonso VI. of Castile finally wrested the fort from the hands of the Moors.

Long Years of Stirring History

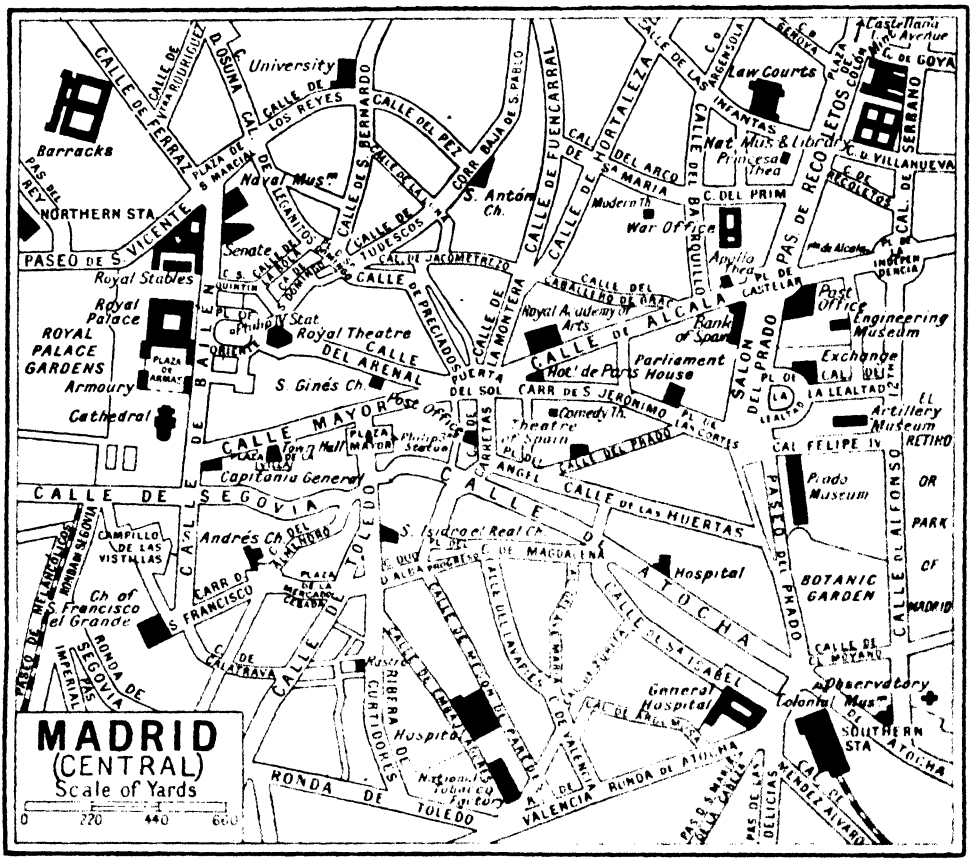
After this date Madrid remained in the hands of the Christians, though often attacked by her old masters, who once, in 1109, established their camp in the garden of the present royal palace, known to this day as the "Campo del Moro."

The gloomy Moorish Alcázar now became the residence of successive kings, and here the wife of Henry IV. bore an illegitimate daughter, so placing his sister Isabel on the throne; and the marriage of that queen, so well known to history as "Isabel the Catholic," with Ferdinand of Aragon, brought about the union of Castile and Aragon which founded the monarchy of Spain.

Ferdinand and Isabella often brought their wandering court to Madrid, but they were incessantly on the move owing to the concluding actions of the reconquest. Their grandson, Charles V., converted the old Alcázar into a royal palace; his son, Philip II., brought his court here in 1560, constituting Madrid the capital of the Spains.

So much of the complicated history of Spain it is convenient to recall when

Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited.



PLAZAS AND THOROUGHFARES OF SPAIN'S STATELY CAPITAL

visiting Madrid. The older buildings were burned down and destroyed several times before the present imposing palace was erected between 1737 and 1764. The rooms in which Philip IV., the Planet King, entertained the wits of the golden century, and in which he watched Velazquez paint his immortal portraits, is no more. Instead, we have the massive grey granite structure designed by Filippo Jubara, an Italian architect, and completed after his death by his pupil Giovanni Battista Sachetti.

Built on sloping ground, its western façade is higher than the others, and the most imposing view of the palace is to be obtained from the other side of the Manzanares. But it is a magnificent building from any point of view. Four hundred and seventy feet square, and a hundred feet high, the main body of the palace is built round a courtyard; one wing runs on the east side of the enclosure known as the Plaza de Armas; another, ending in an open arcade flanked by the Armoury, marks the western boundary. Iron railings connect the two wings, but the great doors are always open, and the outer courtyard of the king's palace is practically the playground of the poor. A sign, if one were needed, of the democratic spirit of modern Spain.

As you approach the entrance to the Plaza de Armas, you see a mounted guard pacing up and down, his silver helmet gleaming in the sun. Within the enclosure, if you time your visit to the right hour, you will be able to watch the halberdiers performing their daily evolutions, watched by an admiring crowd. When they have paced slowly and ceremoniously round the enclosure and have marched away, the crowd is admitted and proceeds to swarm all

over the plaza. The women squat down on the sandy ground; some have brought work, others put a handkerchief or newspaper over their heads to protect themselves from the sun. Innumerable children play about, men and women sell oranges, beggars settle themselves picturesquely with their backs up against the railings. A beggar asks a passer-by for a light; the gentleman gives a light and a coin as well. "Do you know who that is?" someone in the crowd might say. "It is the king!" This is the real Spain, not the stately country of the romancers.

The Armoury that stands in the south-west corner of the Plaza de Armas has had nearly as many vicissitudes as the palace. The base of the collection was formed by Charles V. and Philip II. and was placed by the latter in a building constructed by Gaspar de Vega, where it remained intact until 1808. In this year the Spanish rose up against the French who then occupied Madrid; having no weapons to fight with they invaded the Armoury and took three hundred swords and many other weapons, which were never returned. In 1811, Joseph Bonaparte gave a ball in the Armoury and all the invaluable exhibits were turned into the garrets.

Alfonso XII., father of Alfonso XIII., caused the armour to be catalogued and rearranged, with wooden effigies of men and horses. In 1884, after three years' work, the museum was burned down and the wooden effigies destroyed together with many valuable objects such as banners and leather shields. Nothing daunted, the king built a new museum and rearranged the collection to the best advantage. As it now appears, it is a vision of beauty. Even those who do not know a solleret from a brassard, or Maximilian fluted armour from plated Gothic, cannot fail to delight in this most artistic exhibition.

The realistic effigies of men in shining armour, often richly chased, sit astride effigies of great Flemish horses with their flanks protected by steel "bards"; Charles V. is conspicuous by upstanding tufts of peacock's feathers on his helmet, little Prince Baltasar Carlos, endeared to all those who love the work of Velazquez, sits gallantly on his sturdy pony—perhaps that "devil of a pony" sent him from Flanders by his uncle Fernando—looking just as if he had been brought to life from his

C. H. E. West

PALACE, CONVENT AND COLLEGE OF THE ESCURIAL, NEAR MADRID

Although the Escurial is nearly 26 miles north-west of Madrid, the two are indissolubly linked together by reason of their associations. The building, which was completed about 1582, is a rectangle in the severest Doric style with the great dome of the church in the centre. On the north side is the palace containing the apartments of Philip II. and on the east is the palace of the Infantas

Waymark

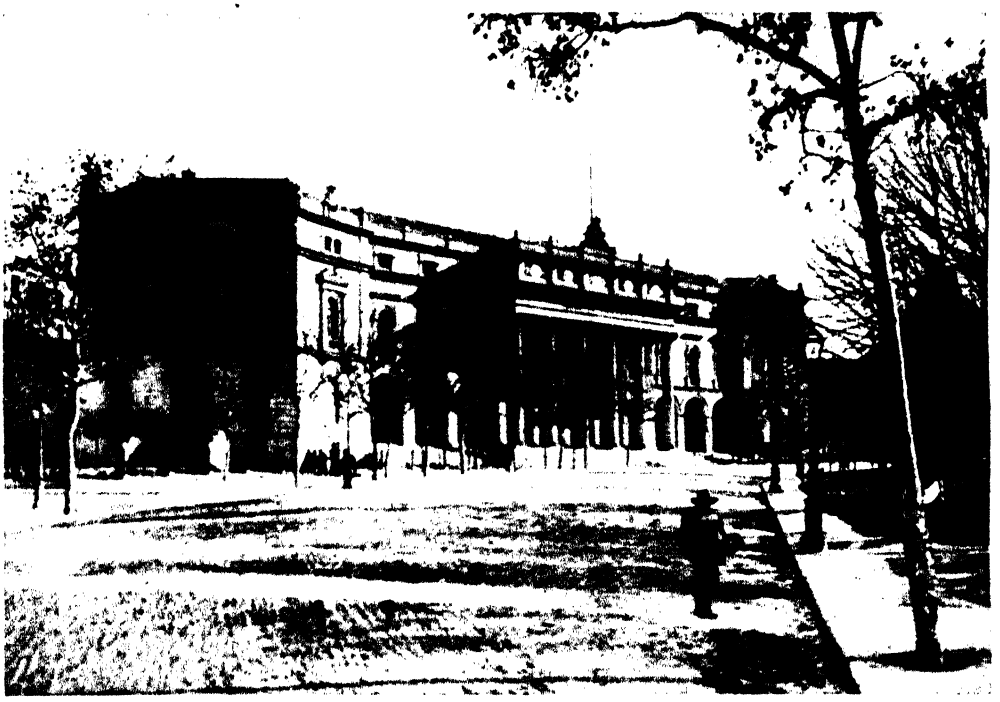
CALLE DE ALCALA LEADING TOWARDS THE PUERTA DE ALCALA

On the right is the post office in the Plaza de Castelar in which is the fountain of Cybele. The Plaza de la Independencia, surrounded by handsome private houses, has the Puerta de Alcala in the centre. This triumphal gateway was erected in 1778 by Sabatini for Charles III to commemorate his entrance into Madrid. The gate consists of five arches and is 72 feet high.

K. H. W. Lincoln

HEAVILY LADEN OX-CART ON THE TRAMWAY LINES IN MADRID

Madrid has an extensive electric tramway system which has been developed and improved to such an extent that it is one of the best in any great city. As a contrast, oxen are still used for draught purposes in the outlying districts and are often seen in the capital. This cart is ingeniously braked by a strong pole lashed tightly at the rear, thus bearing hard upon the hub.



FACADE OF THE STOCK EXCHANGE ON THE SALON DEL PRADO

The Bolsa de Comercio or Stock Exchange was established in the Plazuela de la Leña in 1831 and installed in the present building with a handsome colonnade facing the Dos de Mayo in 1880. The Salon del Prado is a broad tree-lined road leading from the Plaza de las Cortes to the Plaza de Castelar, and at the corner is the new telegraph and post office

Waymark

MADRID'S FINEST THOROUGHFARE: THE CALLE DE ALCALA

Almost in the centre of the photograph is a corner building surmounted by a phœnix supporting a figure; this is the Fénix Espagnol (an insurance company) at the corner of the Calle del Caballero de Grac. The dome to the left down the Calle de Alcalá belongs to the Iglesia de las Calatravas, dating from the seventeenth century. On the right of the photograph is the Apollo Theatre

Ewing Galloway

ARCADED PLAZA MAYOR AND IN THE DISTANCE THE HUGE STRUCTURE OF THE ROYAL PALACE

At the termination of the Calle de Toledo is the Plaza Mayor in the centre of which is a bronze equestrian statue of Philip III. This square was long used for tournaments, bull-fights and autos da fé; the locality, 434 feet long and 334 feet wide, being specially suited to these spectacles. The plaza is now a garden and under the arcades are shops full of Spanish toys, coarse laces and the striking cotton handkerchiefs worn by the peasants. In the Calle de Toledo are the open shops in which hang the red and yellow flannels which form a gay part of the costume of the poorer people

equestrian portrait in the Prado. At the end of the gallery is the tent that Francis I. used at Pavia and a battered old carrying chair used by Charles V. in his gouty days; perhaps it was the one in which he travelled over the rough roads of the Sierra de Gredos on his way to his self-imposed exile at Yuste.

While in the neighbourhood of the palace, it is well to see the extensive stables, where the king's stud may be seen as well as some historic coaches. Farther down the Calle de Bailen is the cathedral. It stands on the site of the oldest church in Madrid, Santa Maria de la Almudena, once a converted mosque.

Passing across the Plaza de Oriente, for the sake of which Joseph Bonaparte demolished a church, some convents and five hundred houses, and noting by the way the equestrian statue of Philip IV., modelled by Pietro Tacca after the portrait by Velazquez, you pass the famous opera house, the Royal Theatre. From thence the Calle del Arenal, redeemed from a sandy waste, or the more famous Calle Mayor, leads to the Puerta del Sol, the true heart of Madrid.

Madrid's "Gate of the Sun"

At first sight it is disappointing. It has little or no architectural distinction, being an oblong space with ten roads leading out of it, arteries carrying the traffic to all parts of the town. In the centre of the plaza is a tangle of tram lines and a congestion of yellow tramcars; all round are the many balconied houses and the shops and cafés that have replaced the convents and the churches of past times. But it is the people that rivet the attention. "The Gate of the Sun," says Edmond de Amicis, "is at once a salon, a promenade, a theatre, an academy, a garden, a place of arms, a market. From daybreak till after midnight there is a motionless crowd here as well as a multitude that comes and goes to and from the ten great streets that lead to the plaza."

To anyone interested in humanity, there are few more entertaining spots in Madrid than the Gate of the Sun. Everyone passes through it at some time of the day or night. The contrasts so noticeable in Spain are everywhere evident in the traffic. Smart motor cars alternate with country carts drawn by mules, while monumental oxen drag after them great blocks of granite from the Sierra. Among the pedestrians can be seen characteristic types engaged in characteristically vehement conversation.

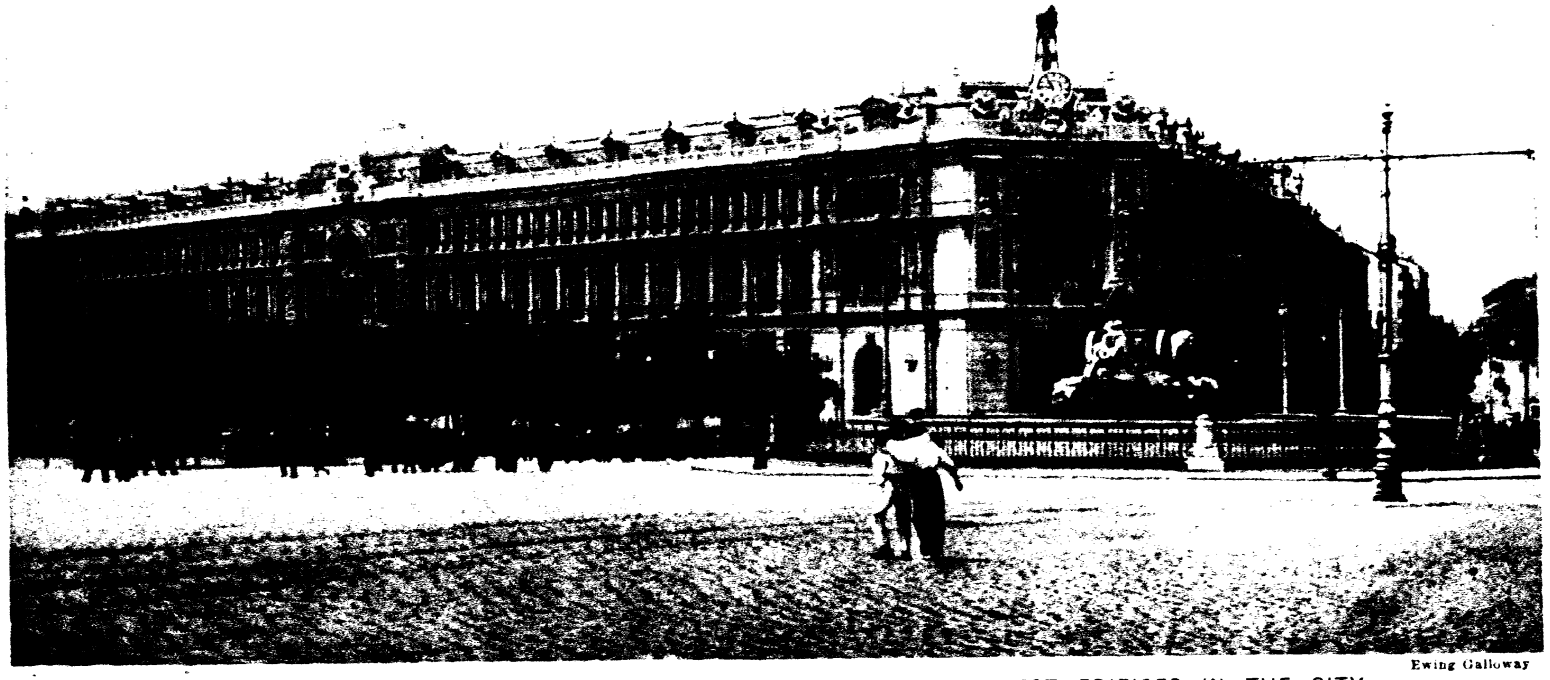
A Kaleidoscope of Humanity

Many groups, chiefly if not entirely composed of men, stand on the sunny side of the plaza in winter and on the shady in summer, discussing the topics of the day. Priests with open breviary, women with the little mantillas that they wear going to church, nurses and babies, women shopping, pedlars carrying little portable frames on which are displayed such things as postcards, rubber bands and braces, professional idlers of all sorts, thread their way among the stationary groups. Blind minstrels stand in a line making music that is drowned by the traffic, beggars sit in the sun, old women cry out to all and sundry to buy lottery tickets; cars dash across the open space, hired carriages crawl and a couple of mounted policemen – the celebrated "pareja" – sit motionless on their sturdy horses

Hour of Ghosts in the Puerta

There are no hours of the day, and very few of the night, that do not afford food for amusement or reflection. As night begins to fall the plaza is still full of life, but it is more palpitating and subdued. Cars skim past on their way to the palace or the opera, motor horns hoot, tram bells ring, the traffic and the passers-by have now something mysterious about them as the skies fade from blue to translucent green and the stars come out, one by one, in the clear firmament over the flaming sky-signs of the shops in the plaza.

It is late, or rather early, before the last loiterers have drifted away and the tram bells have ceased their petulant



Ewing Galloway

SPLENDID BUILDING OF THE BANK OF SPAIN, ONE OF THE FINEST EDIFICES IN THE CITY

At the junction of the Salón del Prado and the Calle de Alcalá in the Plaza de Castelar is the Bank of Spain, one of the finest public buildings in Europe, costing over half a million pounds. The Salón del Prado is one of the four main sections of El Prado, the grand boulevard of Madrid, which extends along the greater part of the east side of the city. It was formerly a meadow and was transformed into a promenade by Charles III. The three other divisions are the Paseo del Prado, the Paseo de Recoletos and the Paseo de Castellana. The length of the Prado is about two miles and a quarter

Ewing Galloway

HUGE, LAVISHLY EMBELLISHED PILE OF THE POST OFFICE IN THE PLAZA DE CASTELAR

At the corner of the Plaza de Castelar, opposite the Bank of Spain, is the new post and telegraph office which with its ornate towers, turrets and intricate carving has the appearance rather of some ecclesiastical building than of a public office. The old post office was in the Calle de Carretas which leads into the Puerta del Sol. On the north side of the plaza is the Paseo de Recoletos at the top of which is a monument to Columbus in a debased Gothic style. The sides are decorated with reliefs, and the whole is surmounted by a white marble statue of the great navigator

Ewing Galloway

WESTERN FACADE OF THE ROYAL PALACE AND THE GARDENS SLOPING DOWN TO THE MANZANARES

Facing the Plaza de Armas is the royal palace, a massive six-storeyed building, 460 feet square and from 80 feet to 105 feet high, which is considered to be one of the most magnificent in the world. The base is of granite and the window work of white stone from Colmenar. The present palace was begun in 1737 on the supposed site of the Alcázar of the Moors, but the general effect is spoilt by the irregular, unsightly chimney-pots. The palace gardens occupy part of the site of the Campo del Moro and extend to the humble dwellings by the Manzanares—the wash tub of Madrid

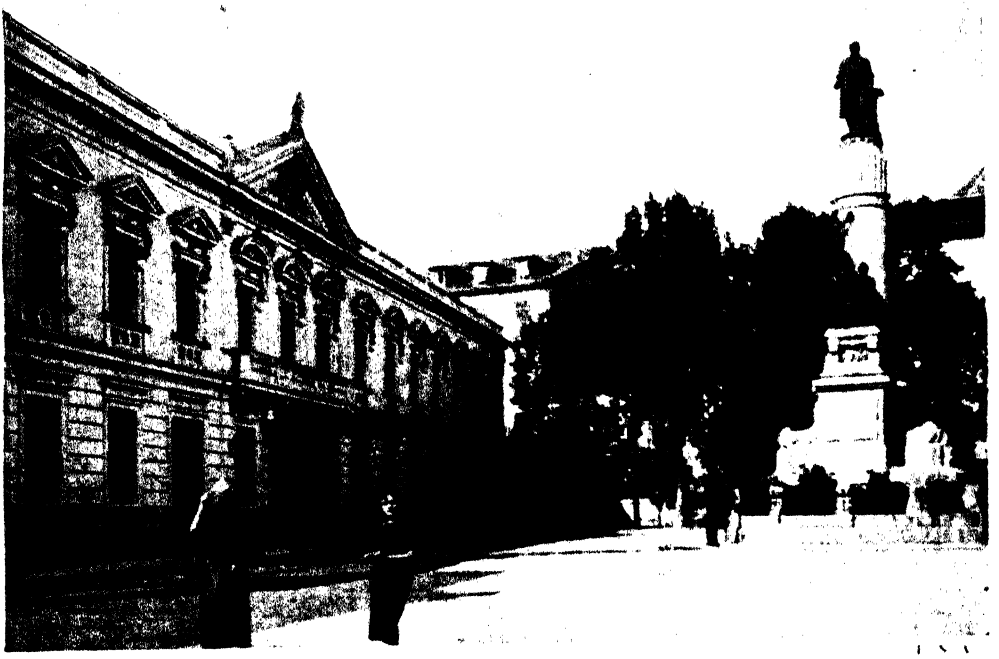
sound; when at length all is still, the Puerta ceases to be the centre of modern Madrid and becomes once more the site of many historical events, the most tragic being the contest between the unarmed Madrileños and Murat's Mamelukes, who charged up the Calle de Alcalá and massacred the townspeople at the foot of the Buen Suceso Church, which occupied the position now taken by the Hôtel de Paris.

Before leaving this quarter we must glance into the Calle Mayor, where Cervantes, and later Calderon, lived and where Lope de Vega was born close to the pretty little Plaza de la Villa, in which we find the pale brick Tower of Lujin where Francis I. of France was confined after Pavia. Here, too, is the palace once occupied by the great Cardinal Cisneros and the imposing town-hall, dating from the end of the seventeenth century. From the Calle Mayor you pass through a high archway into the plaza, the scene of bull-fights, autos da fé, executions and theatrical performances in the good old times. It is still picturesque with its five-storeyed houses and their hundreds of balconies where once the rank and fashion of Madrid assembled. The Panaderia, which has frescoes painted on the exterior, was restored by the mother of Charles II., and bears an inscription to that effect. From the plaza you can descend into all sorts of quaint streets in the older part of the town; one of the attractions of Madrid that nearly always appeals to foreigners is the second-hand market, the Rastro, where everything can be bought from a saucepan to an antique.

OPEN-AIR MARKET IN THE POOR QUARTER OF EL RASTRO

Dirty lanes lead to the east from the Calle de Toledo to the Rastro, which has one of the largest rag fairs in the world and where a market is held on Sunday mornings. The plaza is covered with baskets, booths and book stalls, the long line stretching from the Plaza del Rastro to the Ronda de Toledo below the huge national tobacco factory

Those who come to Madrid fresh from Toledo with her relics of five dynasties, or Burgos with her wonderful cathedral, or indeed from any of the old towns of Spain with their palaces, universities and Roman remains, may be disappointed with Madrid. But besides the charm of the capital, the many points of interest and the beautiful surroundings, there are, of course, some of the most famous collections in the world. The Prado Museum alone is worth a journey to Spain, and there are besides the great national museums,

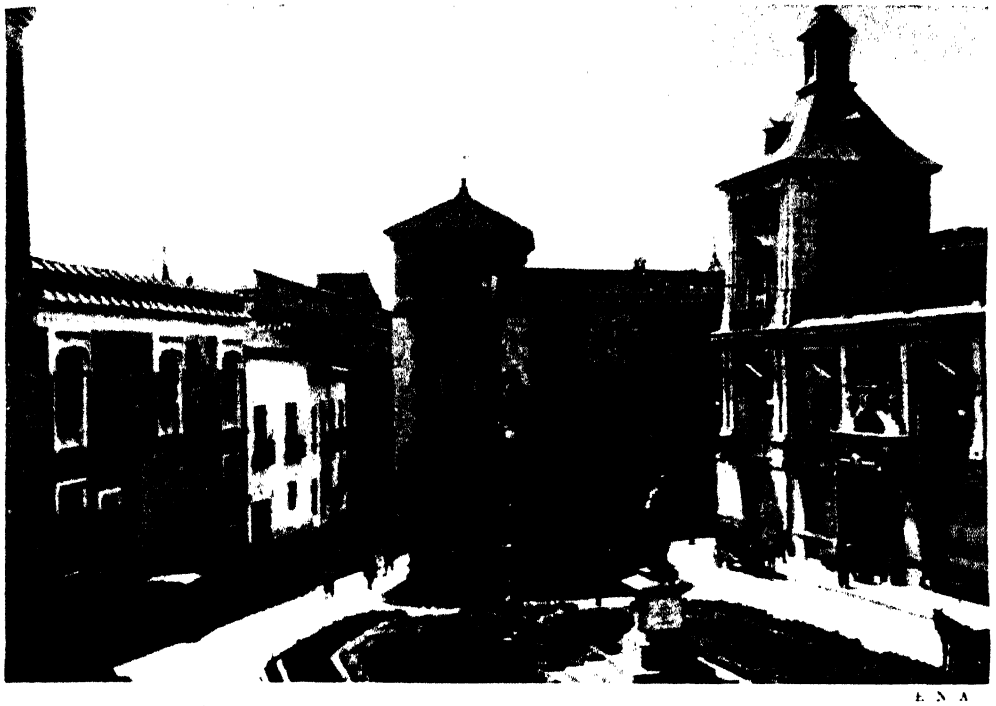


EL SENADO, THE MODERN BUILDING OF THE UPPER CHAMBER

In the Plaza de los Ministerios stands a bronze statue of Antonio Cánovas del Castillo, the statesman, by J. Bilbao. On the north-west side is the Senate, the Upper Chamber, originally an Augustine college but now completely modernised. It was the meeting place of the first Cortes in 1811. The building adjoins the Ministry of Marine and contains some very fine modern Spanish pictures.

FINE PUENTE DE TOLEDO OVER THE MANZANARES AT MADRID

The Puente de Toledo spans the Manzanares at the south end of the Calle de Toledo. It has nine simple arches and is 128 yards long by 36 feet wide. In the centre of the bridge are two ugly statues of San Isidro, patron saint of Madrid, and his wife looking at the trickle of water crossed by this magnificent bridge. At the other end of the Calle de Toledo is the Puerta de Toledo.



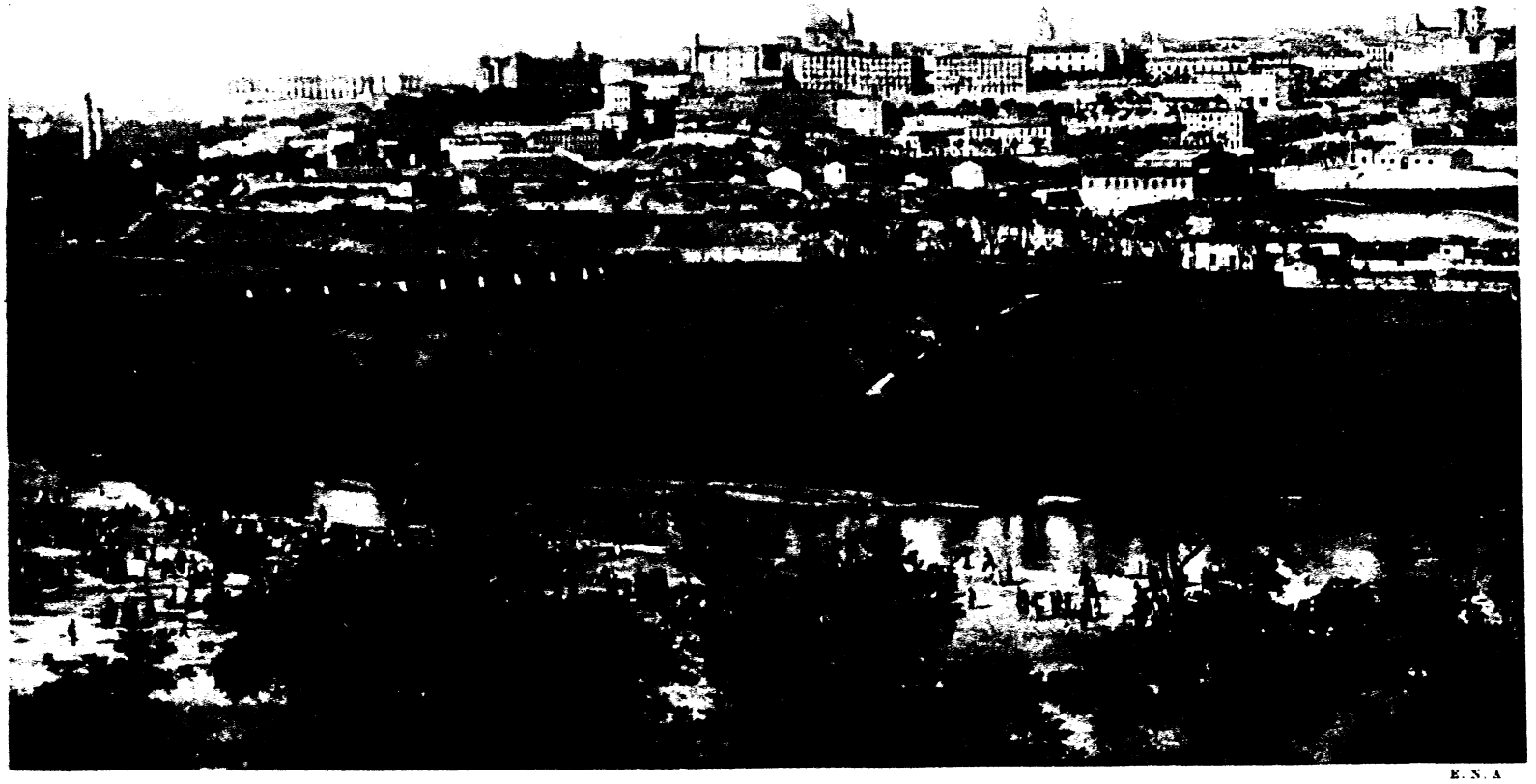
E. N. A.

PLAZA DE LA VILLA WITH THE CASA DEL AYUNTAMIENTO

At the west end of the Calle Mayor is the Plaza de la Villa in which stands a bronze statue of Admiral Alvaro de Bazán by Mariano Benlliure, and the Casa de Ayuntamiento, or town hall. This building was erected in the seventeenth eighteenth centuries and contains a fine staircase and a chapel ornamented with frescoes from the life of S. Isidro by Antonio Palomino.

PLAZA DE LAS CORTES AND THE PALACIO DEL CONGRESO

El Congreso de los Diputados, the House of Commons, is held in the handsome edifice on the north side of the Plaza de las Cortes. The building was completed in 1850. The steps leading up to the Corinthian portico are flanked by two bronze lions. In the distance are the spires of the church of San Jeronimo el Real, built in 1503 and restored during the years 1879 to 1882.



E. N. A

LOOKING TOWARDS MADRID FROM THE HIGH GROUND ON THE WEST BANK OF THE MANZANARES

On the left of the photograph is the royal palace with the Seminario to the right. Almost in the centre is the dome of San Francisco el Grande which was the national pantheon up to 1881. To the right of San Francisco is the church of San Andrés which dates in its present form from the seventeenth century. The twin towers on the extreme right are those of the church of San Isidro el Real, which was a Jesuit church built in 1651. On the expulsion of the Jesuits in 1769 it was [illegible] to S. Isidro, whose bones were brought hither. The church contains some fine decorative painting by Coello and others

Ewing Galloway

CELEBRATED PUERTA DEL SOL, THE UNIMPOSING CENTRE OF LIFE AND TRAFFIC IN MADRID

This famous square was once the eastern entrance to the city and is now the centre. It is an oblong-shaped space from which ten roads radiate, the chief of which are the Calle Mayor and the Calle de Alcalá. The square is surrounded by shops, cafés and hotels, and in the centre all the tramway lines are linked up. The south side is occupied by the Ministerio de la Gobernación (the Home Office), a square, isolated building which was constructed for Charles III. by Jaime Marquet in 1768. The Puerta del Sol is the rendezvous for the idlers and gossips of Madrid

the priceless National Library, as well as lesser-known collections such as that brought together by the late Señor de Osma. In this museum are to be seen specimens of the arts and crafts of Spain, including a collection of the beautiful Hispano-Mauresque pottery.

Prevailing Blue Skies

The museum itself, built for a science museum, has been much improved lately, no less than twenty new rooms, tastefully decorated and well-lit, having been added. The pictures have been rearranged very advantageously. As is well known, there is no other place where Velazquez can be really studied; there is also a room devoted to El Greco, and many of Goya's most typical works may be seen here, so that these three outstanding luminaries of Spanish art can be studied together.

The climate of Madrid has been much abused. It is very hot in summer, and can be very cold in winter when the wind whistles over from the snowy peaks of the Guadarrama. But it is almost always sunny, and the sky is frequently of a vivid and translucent blue. Even in winter one is often quite warm walking down one of the great avenues, which become veritable sun-traps. On a fine day the drive to the Escurial, a distance of twenty-six miles, is a most enjoyable experience; or the shorter excursion to the Pardo, the hunting lodge of Charles V., has its undoubted charm. Alcalá de Henares, with its Gothic university, Segovia, with its Roman aqueduct, and many other places of interest, are within reach of Madrid.

Madrid at its Gayest

The gayest time in Madrid is between Easter and June, after which date people drift off to San Sebastian and Biarritz, or perhaps to the cool regions round about Burgos. Society is very friendly, existing as it does among people who know each other well, and who are often bound by ties of relationship. Among the artistic set there is much activity and a great "esprit de corps." Intellectual life is full of energy, and there is much talent to be found among the poets, writers, painters and sculptors. The educational question is also well to the fore, a centre of activity being the residence for students situated just outside the town, where foreigners can share the advantages with the natives. The Ateneo, the literary club, is also a centre where lectures are given and which contains an excellent library.

Society goes a good deal to the two principal hotels for amusement; most people are also subscribers to the "Real" and the "Princesa" theatres, which are specially gay on certain nights of the week. There are balls and concerts at court, and, at certain seasons, religious functions which anyone may attend. Although the suites of rooms with their satin-covered walls, their few perfect pictures and their multitude of "objets d'art" cannot be seen on the occasion of a "Capilla Publica," when the sovereigns walk in procession to the royal chapel, the public is admitted into the corridor that runs round the courtyard of the palace, and the glorious tapestries that are hung on the walls on these occasions are well worth a visit.

Long Nights of Gaiety

There is a new regime in the Spanish capital, and it is possible that many of the characteristic features and customs of the city may be changed in the future. Now that the officials of the public offices are expected to arrive at their desks at ten o'clock, perhaps the late hours so prevalent in Madrid will be modified. Tea at six o'clock, lasting perhaps till nine, dinner at nine-thirty or ten o'clock, theatres that begin at half-past ten and never end till after one o'clock, make the night short for the worker. Whatever changes may come over the political and social life of Madrid, let us hope that it will retain the elements of pleasant intercourse, and freedom to live the life that suits the individual, which have always characterised it in the past.

MALAYA

Where Riches Lie in Mine & Jungle

by Richard Curle

Author of "Into the East," etc.

THE peninsula of Malaya is a unit partly in a geographical sense and partly because it is made up of land either in the possession, under the protection, or under the surveillance of Great Britain. Strictly, Malaya also includes various islands belonging or subject to Great Britain, which are considered in the chapter on the Malay Archipelago.

The surface of the peninsula is mainly undulating and is well watered by numerous streams and rivers. Portions of the interior, however, are mountainous, and there is a range of hills which forms a watershed for rivers flowing both east and west. The mountains are an almost unbroken chain from north to south near the centre of the peninsula, and some of the peaks are 7,000 feet in height. There are also isolated groups of hills here and there.

The climate is thoroughly tropical, with much rainfall, but the wet and dry seasons are less clearly marked than in many other parts of the tropics.

Administration of Malaya

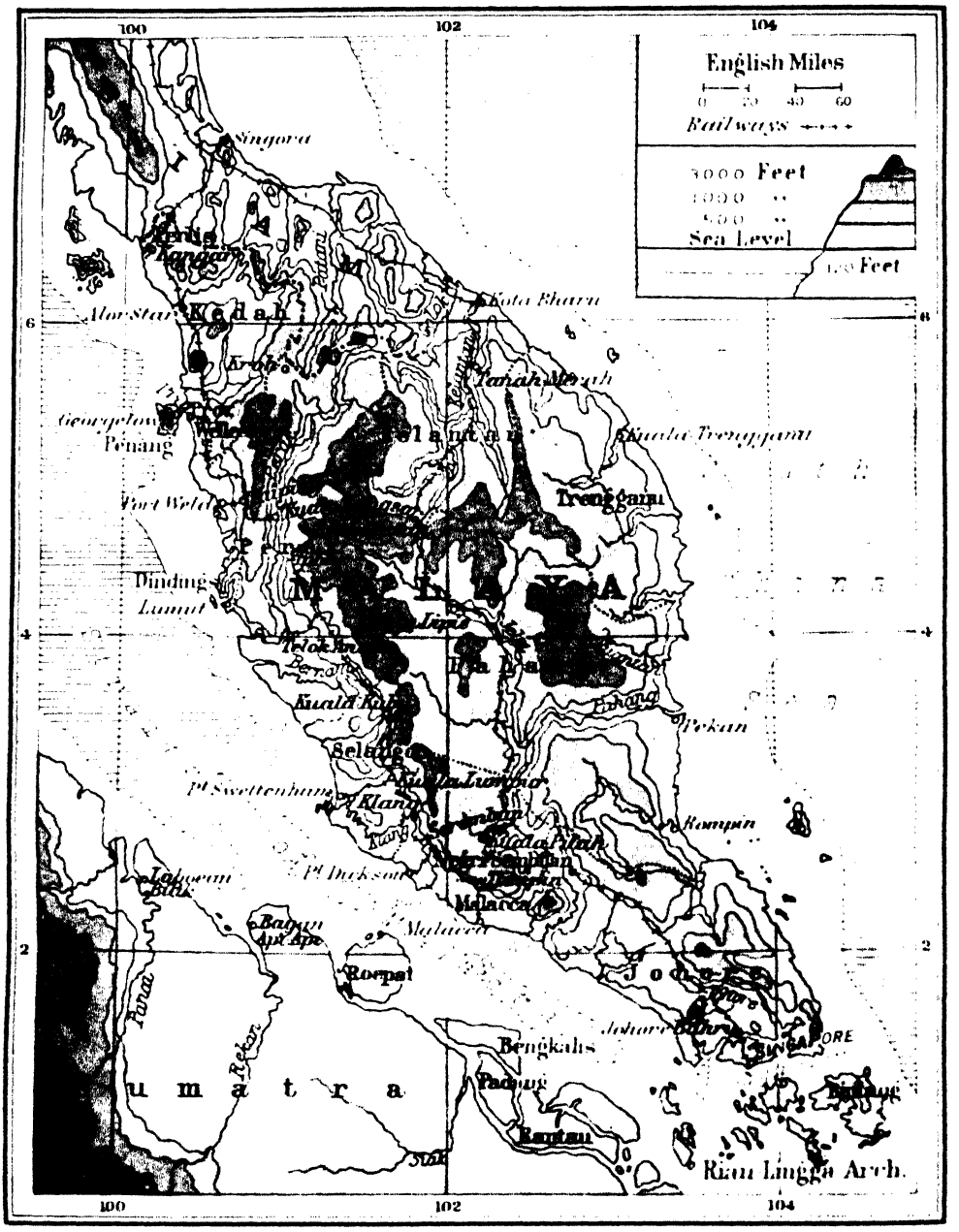
Politically speaking only the Straits Settlements, which include the islands of Singapore and Penang and small portions of the mainland at Malacca and Province Wellesley, are British territory. The Federated Malay States, which are under direct British protection and are ruled by British officials although they have sultans of their own, are Perak, Selangor, Pahang and Negri Sembilan. The Non-Federated States, over whose governance British influence is only nominal, are Johore, Kelantan, Trengganu, Kedah and Perlis. The governor of the Straits Settlements is high commissioner for the Malay States, and all foreign policy, even in independent states, is in the hands of Britain.

Malaya is 500 miles long and varies in breadth from 40 to 200 miles. The total area is 75,000 square miles; of this, 52,600 square miles—an area about the size of England—is under direct British protection. It is bounded on the north by Siam, on the west by the Strait of Malacca, on the east by the South China Sea and on the south by the shallow waters in which are the islands of the Riau-Lingga Archipelago.

Harbours in a Long Coast-line

The coast-line of Malaya is, on the whole, regular and flat. Most of the rivers have a bar at the mouth, and on the east coast there are numerous lagoons. Apart from the harbours at Singapore and Penang, the harbour at Port Swettenham is the only one capable of receiving ocean-going steamers and also connected with the interior by railway. There are, however, several smaller harbours on the west coast, at Malacca, Port Dickson, Lumut, etc., and on the east coast at the mouths of such rivers as the Pahang, the Kuantan and the Kelantan.

The three chief rivers are the Pahang, 200 miles long, the Perak, 170 miles long, and the Kelantan. Other streams of note are the Patani and the Golok, which is the boundary between Siam and Malaya, both flowing to the east, the Johore and the Pulai, flowing to the south, and the Kesang, the Linggi, the Klang and the Bernam, flowing to the west. The boundaries of most of the states composing Malaya are river-boundaries, and in a country such as this, which is made up mostly of tropical jungle, these are the boundaries



THE LONG, FOREST-CLAD PENINSULA OF MALAYA

one would expect. There are no lakes of any size in Malaya, but in various spots there are hot springs with temperatures varying from 90° to 180° F.

The aspect of the country away from the towns and cultivated areas is one of vast green forests covering plains and mountains alike, and interspersed by turbid rivers which form deep valleys.

The soil of Malaya is extremely rich. There are coastal alluvial deposits, and a bore of 352 feet taken near the mouth of the Bernam river did not reach the bottom of them. The soils of the country may be divided into three classes: the alluvial deposits of the coasts or river banks, which are usually heavy; the laterite, loamy soils of the

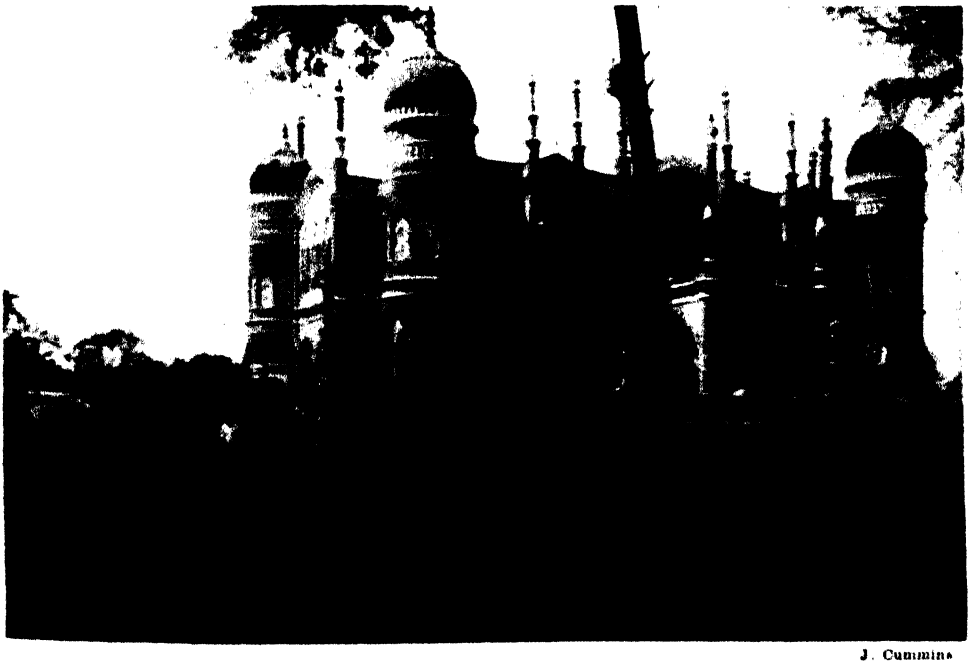
hilly areas of the interior; and the peat soils found mostly near the coast and also in inland swamps.

There is no part of Malaya which lies very far from the Equator, and consequently the heat is usually great. A mean daily maximum temperature of 95° F. in the shade at Tanjong Rambutan is probably the hottest, whereas at Kroh, which is about 1,000 feet above sea-level, the mean daily minimum of 64° is recorded. This proves how even a slight elevation may afford great relief. As for sun temperatures the figures in Kuala Lumpur range between 140 and 151. So far as concerns locality as distinct from elevation, Malayan temperatures seem to change but little throughout the year, and so seasons scarcely exist.

In the mountains the rainfall is extremely heavy but in other parts, though still heavy, is much less marked. Frequently there is a tropical downpour towards evening, but these downpours are often extraordinarily local and generally last but a short time. It is a land of blazing sunshine, but the approach of rain is swiftly heralded by heavy clouds which as swiftly disappear and give way to skies of blue when the downpour has ceased.

There are two seasonal winds, the south-west and the north-east monsoons, but Sumatra breaks up the south-west monsoon, and the only really important wind is the north-east monsoon which blows off the Gulf of Siam between November and March. The period of the south-west monsoon is from May to October, and this is marked by soft southerly winds on the east coast. Really powerful winds with the strength of a typhoon are unknown, but the squalls are at times sufficient to damage rubber estates and lightly-constructed native buildings.

As regards health, Malaya varies enormously. In some parts it is highly malarial and in other parts, such as the country around Kuala Lumpur, there seems to be comparatively little serious malaria, though, of course, the danger always exists. When Europeans are ill



J. Cummins

IMPOSING PALACE OF THE SULTAN OF SELANGOR AT KLANG

Klang is a small town of Selangor on the river of the same name about eight miles from Port Swettenham. A branch of the railway from Kuala Lumpur passes through the town to Port Swettenham, which is a port of call for ocean-going steamers and after Singapore the chief rubber port of Malaya. Klang is the seat of the sultan of the state

TOWERS OF THE OLD CHURCH IN SLEEPY MALACCA AND THE BRIDGE ACROSS THE RIVER

Malacca is a town on the west coast of the Malay Peninsula and with the territory around it forms one of the Straits Settlements. It stands on the Malacca river on the right bank of which lies the old Dutch town which is connected by a bridge with the business quarter, inhabited chiefly by Malays, Eurasians and Chinese. Malacca is a somnolent little place with an indifferent harbour, and the trade of its once flourishing port has been drawn to Singapore and Penang at either end of the Strait of Malacca. Tapioca is cultivated, but the district is especially noted for rubber planting

COVERED MARKET IN JOHORE BAHRU, THE CAPITAL OF THE MALAY STATE OF JOHORE

Johore Bahru is the capital of a sultanate in the Malay Peninsula under British protection, and lies at the mouth of the Johore river opposite the island of Singapore. The fine palace, built by the Sultan Abubakar, is the most notable building of the town, which is a favourite resort of the inhabitants of Singapore, being cooler than the latter. It was once famous for its gaming houses. The population is over 15,000 and the Chinese outnumber the Malays. Areca nuts, copra and rubber are the principal exports. The railway from Singapore crosses to the mainland at Johore Bahru over the Johore Causeway

J. Cumming

RAILWAY UNDER HUGE GREEN-TOPPED CLIFFS IN SELANGOR

Granite mountains, which stretch in a south easterly direction for about 350 miles, form the backbone of the Malay Peninsula. The country is covered with limestone in many districts, and large bluffs of this formation occur on the western and eastern slopes. Magnificent caves are found on both declivities, those at Batu, near where the above photograph was taken, being the finest on the west coast

J. Cumming

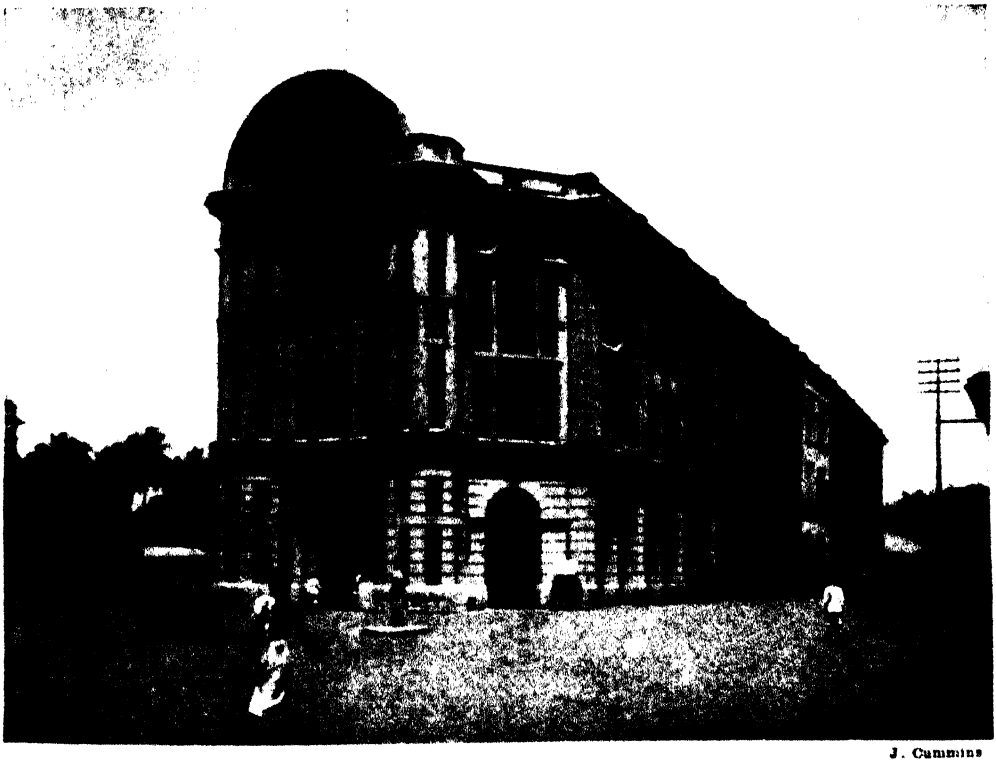
BRIDGE OVER THE KLANG RIVER OUTSIDE KUALA LUMPUR

All the towns and principal mining centres in the states of Perak, Selangor and Negri Sembilan are connected by metalled roads which are well bridged and carefully kept up by the government. Motor cars ply for hire over these roads from every town and village. An important road 85 miles in length connects Kuala Kubu in Selangor with Kuala Lipis, the capital of Pahang

J. Cummins

KUALA LUMPUR: CLOCK TOWER OVER THE GOVERNMENT BUILDINGS

Besides being the chief town of Selangor, Kuala Lumpur is the capital of the Federated Malay States and possesses some fine public buildings as well as the principal residence of the chief secretary. Port Swettenham is its outport. To the left in the photograph is the statue of Sir Frank Swettenham who was resident at Selangor in 1882 and resident general of the Malay States in 1901



J. Cummins

HONG KONG AND SHANGHAI BANK BUILDING AT KUALA LUMPUR

Kuala Lumpur, the capital of the state of Selangor, is the largest town and chief railway junction of the Federated Malay States. It stands on the Klang river 27 miles from its mouth and is connected by roads and railways with the tin-fields. The town is on the railway which runs from Singapore to the Perlis-Siam frontier and thence to Bangkok. The population is about 80,000

J. Cummins

LABOURERS TAPPING THE TREES ON A RUBBER PLANTATION IN THE MALAY PENINSULA

Rubber and coconuts practically monopolise the attention of the European planters. With rubber the Hevea variety is chiefly used and is grown both on the coast plain, farther inland than the coconut, and on the undulating land leading back from this to the main central range of the peninsula. The trees have to be tapped deep enough to obtain the maximum amount of latex, or sap, without injuring the tree. A good coolie will tap from four to five hundred trees a day. Rubber is the most important export crop of Malaya, but rice, cultivated by Malays, is the staple food crop.

STOCKADED ENCLOSURE NEAR TAPAH, PERAK, WITH WILD ELEPHANTS READY FOR HOBBLING

Elephants range through the jungles and lower forests of Malaya and drives are organized to capture beasts in order to train them for draught purposes. The beaters drive the huge animals in the desired direction by blowing trumpets and beating tom-toms. The elephants are herded along a gradually converging fenced track ending in an enclosure surrounded by a strong stockade. The entrance of the trap is closed by a portcullis or an abattis. The captives usually exert their giant strength in trying to pull down the sides of the stockade, but they are repulsed by men outside armed with spears and blazing torches

they usually go to Java to recuperate, though there are a few hill stations in Malaya. But it is not a country in which the European can readily find those changes of climate that make India bearable.

Layers of Forest Life

As we have seen, Malaya is primarily a country of huge, unbroken forests. Its flora is extremely rich and immensely complex. The recorded number of species of flowering plants and ferns is over 9,000, and of these about 30 per cent. are trees. There are, indeed, more different species of trees in Malaya than in the whole of British India and Burma. The typical Malayan forest is, as it were, several storeys high: top, trees from 150 to 200 feet; second, trees of about 100 feet; first, small trees and shrubs; while the ground floor of the forest is one mass of tangled plants and ferns. Along the coast are great mangrove swamps, and in the interior there are vast fresh-water swamps which cover about one-tenth of the peninsula's surface. Beyond the altitude of 2,000 feet the forests are of a different type; trees are comparatively short and their trunks are covered with mosses, lichens, orchids and ferns.

In some parts the forests have been considerably denuded already and other parts are not profitable to work. The swamp woods have no value, and the forests at a higher altitude comparatively little. Moreover, it is dangerous to cut down the hillside forests, as they protect water supplies and stop erosion.

Wealth of Animals and Birds

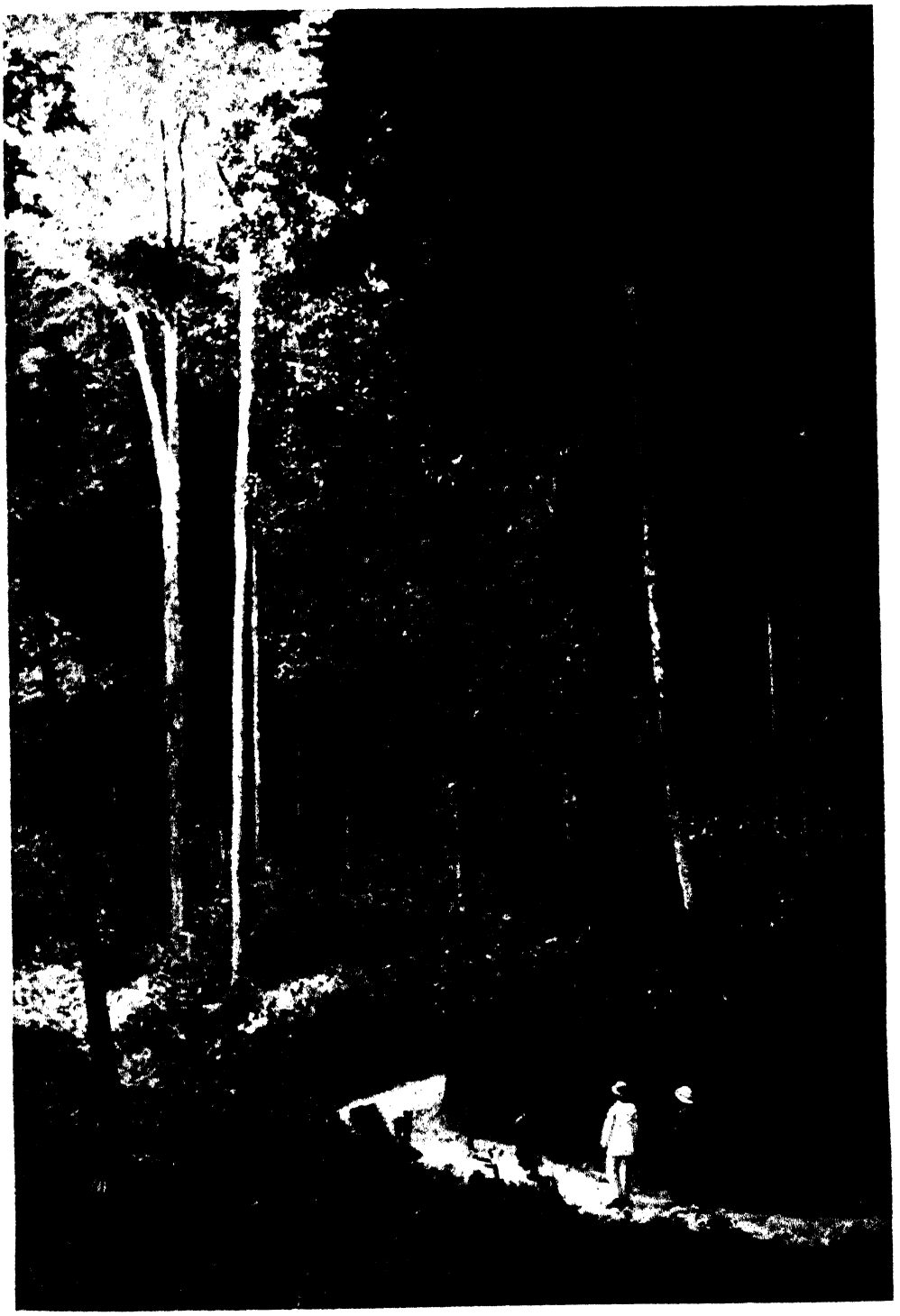
A single square mile of forest will usually contain several hundred varieties of trees, but more than half of the woods commercially valuable is produced by the trees of the family of Dipterocarpaceae. The standard timber is chengul. Other valuable forest products are canes, damar and gutta-percha. The rattan semambu is made into the Malacca cane of commerce, but rattan segar is of even greater importance. Camphor is also found to a small extent. Apart from alienated forest lands, the forests belong to the states, and their control is in the hands of a forest department.

As regards animals, Malaya is singularly well equipped. There are three species of anthropoid ape, two or three of gibbon and four other kinds of monkey. Tigers, leopards, wild cats, civets, mongooses, otters, small bears, elephants, rhinoceroses, tapirs, pigs, deer, wild cattle, squirrels, rats, porcupines—all these are to be found in the peninsula. There are bats in incredible numbers—one may see, hear and smell them by day in the enormous dolomite caves which are a feature of the country—also crocodiles, tortoises and lizards. There are over 130 different snakes and about 650 species of birds. Butterflies are in great variety, many of them of exquisite beauty.

Technique in Rubber Growing

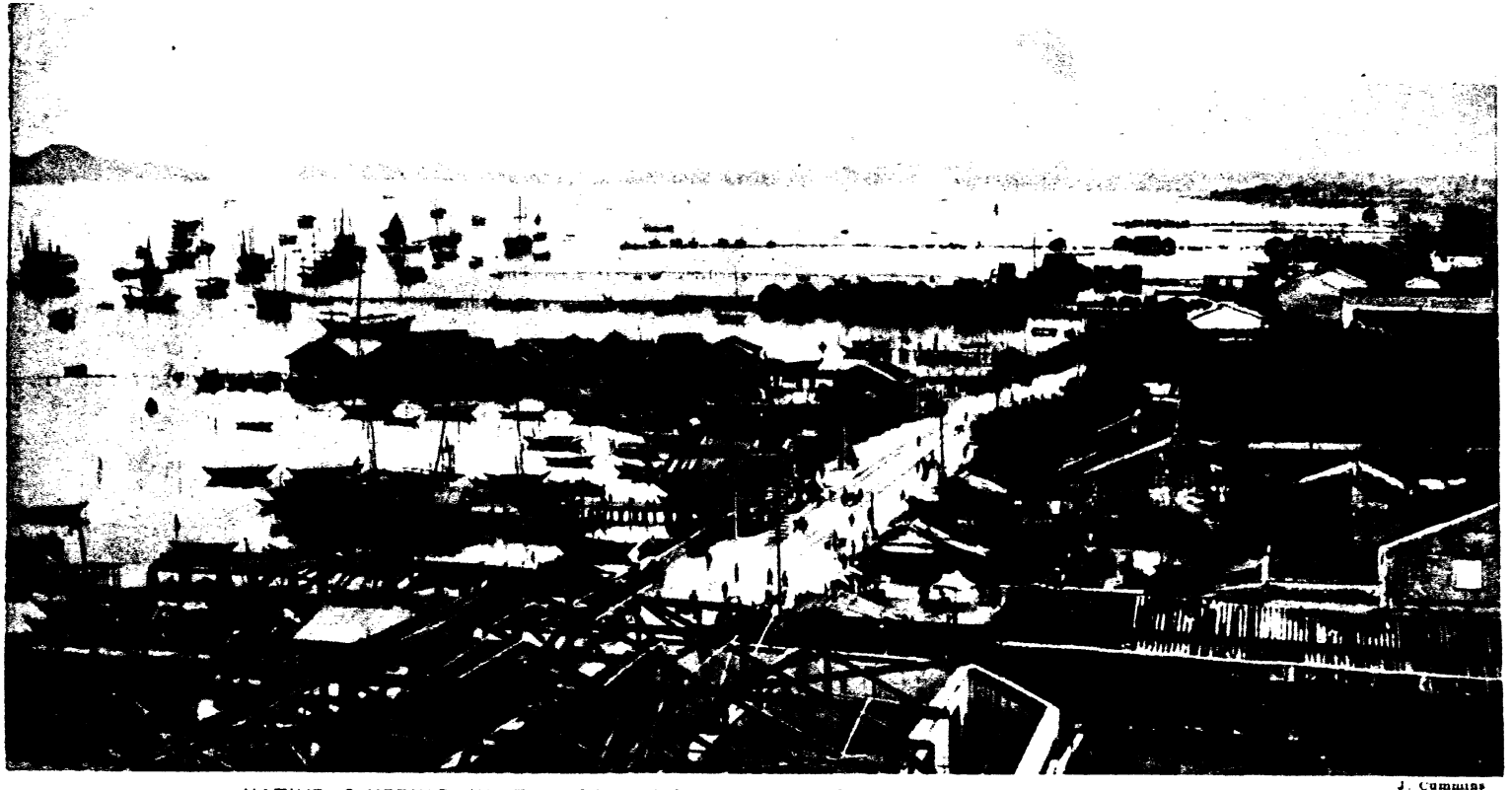
Rubber is, of course, the mainstay of Malaya, and thousands upon thousands of acres have been won from the jungle and planted with the Para rubber from the regions of the Amazon. The rubber planter has to wage a ceaseless warfare against the encroaching forest, and gangs of coolies are always at work on every estate, weeding and keeping the place clean. The Lalang grass, especially, which seems to spring up almost in a night, is what the planter dreads. Rubber planting and the treatment of drainage and soils have developed into a highly scientific profession, as also has the fighting of that pest which attacks the bark of the rubber-trees. In the earlier days the planters were able to earn such large profits, and had so little experience, that they made many mistakes with impunity, but now there is a whole technology of rubber planting, and the planter knows from experience the best way to tap, when to tap, and how to keep his trees healthy.

The soil of Malaya, as I have already remarked, is so naturally rich that almost any tropical produce will grow in it. But now rubber has supplanted



PATH THROUGH THE FORESTS OF THE HIGHLANDS OF MALAYA

Almost the whole of the peninsula may be described as one huge forest which is intersected in every direction by streams and rivers. Only a very small portion of the forests and jungles has been visited by human beings as the Malays travel along the banks of the rivers. The forests contain valuable timber such as chengal and meranti, and the jungles yield gutta-percha, jelutong and rattans



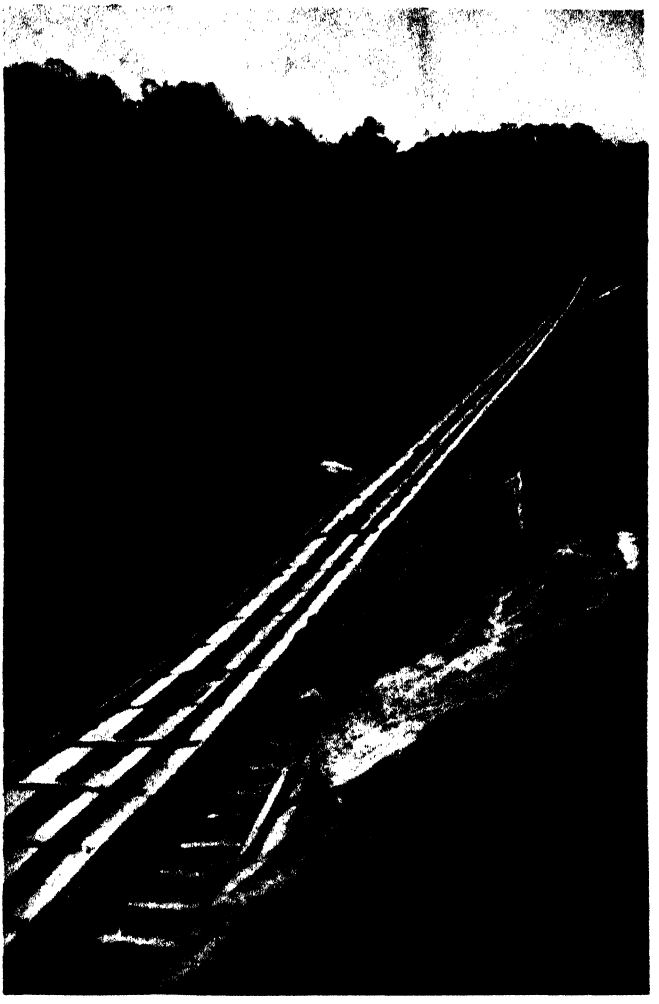
J. Cummins

NATIVE SHIPPING IN THE SPLENDID HARBOUR OF THE ISLAND PORT OF PENANG

Penang is situated on the island of Penang which lies two and a half miles from the west coast of the Malay peninsula. The town is built on a promontory at the point nearest the mainland and possesses an excellent harbour, but has suffered from the competition of Singapore. It was the capital of the Settlements until 1837, when the seat of government was removed to Singapore. Coconuts grow along the coast and rice is cultivated in the interior. One of the features of the town, which is also called Georgetown, is the clusters of native huts on piers which project from the shore out into the harbour

practically everything else. Before 1906, however, sugar, coffee, sago, tapioca, gambier, pineapples, spices and bananas were grown in considerable quantities. With the recent slump in the price of rubber there have been some signs of return to earlier crops, but apart from the coconut trees on the coast and some rice, the planted portions of the peninsula are still almost entirely given over to rubber.

The rock formations of the peninsula are in the main granite, but in the tin-mining district of Perak and Selangor limestone occurs, and it is these limestone ranges which are so remarkable for their precipitous appearance and rugged summits. Until recently, tin, which is the great mining industry of Malaya, was worked almost entirely alluvially, but nowadays there is a tendency to dig deeper. Tin always occurs close to granite, but many of the granite rocks appear to be quite without any tin in them. In some parts tungsten ores are found, usually mixed with tin ore, and they also occur in granite formations.

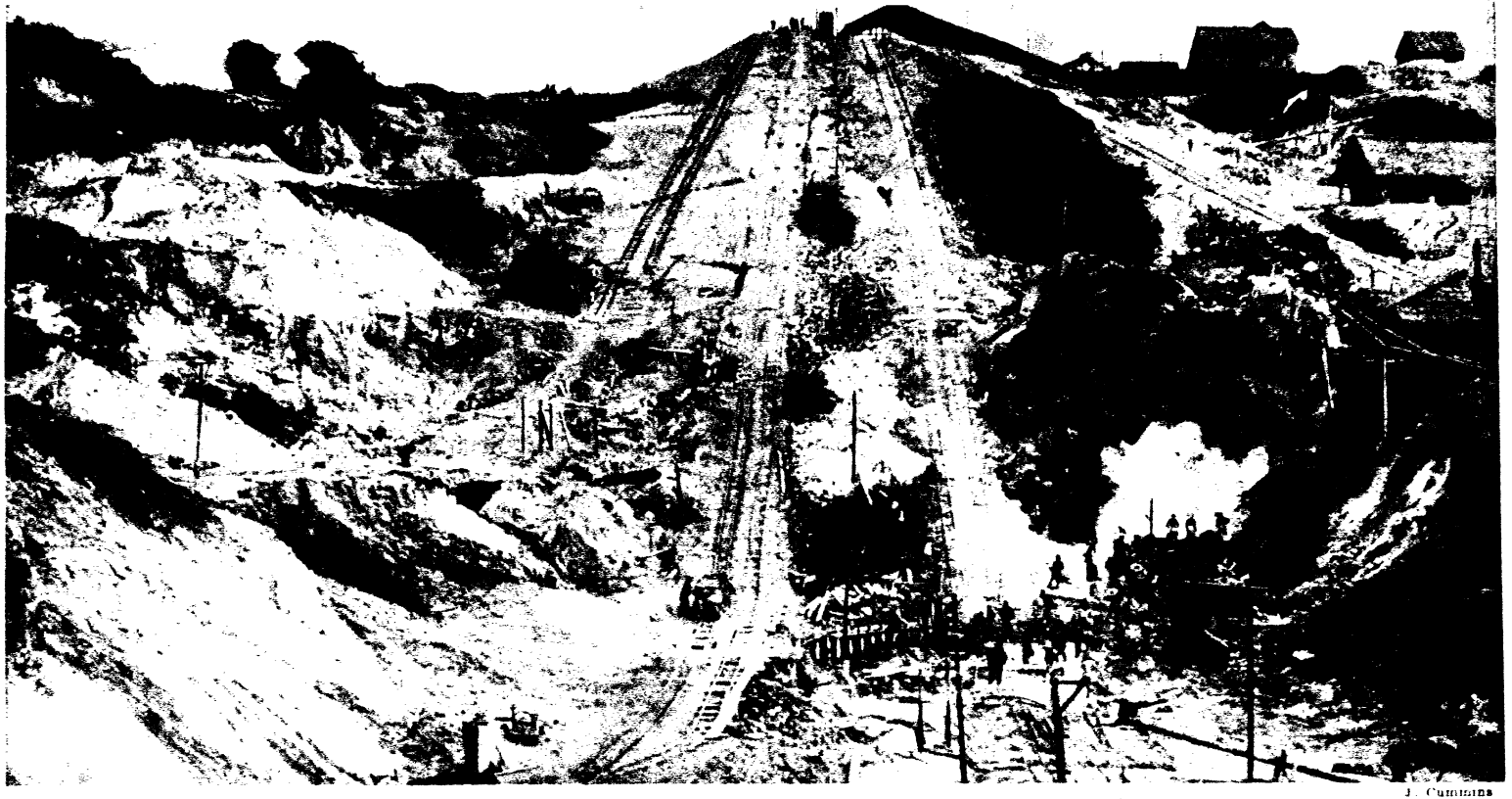


VIEW ON THE PENANG HILLS RAILWAY

This magnificent viaduct is on the Penang Hills Railway. The line is electrically operated and is the first hill railway in Malaya. Penang is one of the Straits Settlements, comprising Penang island, Province Wellesley and territory known as the Dindings

Gold is scarce, though there is a certain amount mined in the state of Pahang. But when one thinks of Malaya in terms of minerals one can only think of tin, of which this country produces about a third of the world's supply. Malaya is more or less saturated with tin, and there are certain districts, such as those around Kinta and Kuala Lumpur and Kuala Kubu, where the deposits are particularly rich. Some of the mines are in the hands of Europeans and some in the hands of Chinese; nearly all the labour is done by the latter. There are smelting works at Singapore and Penang, and the concentrates are conveyed thither from all over the peninsula.

The Malays are great fishermen and great lovers of fish, both dried and fresh, and the fishing industry around the coast is of the highest importance. Nevertheless, their methods are still primitive, and it is probable that the yield could be considerably increased. In 1920 over 7,000 tons of fresh fish and 5,000 tons of dried fish were sent inland from the coast, and fishing is,



J. Cumming

LINES AND TRUCKS IN ONE OF THE MANY TIN-MINES OPERATED BY CHINESE IN MALAYA

The Federated Malay States to-day produce just a little more than 30 per cent. of the tin of the world. The tin is won mainly from alluvial deposits in the states of Perak, Selangor and Negri Sembilan on the west coast, while in Pahang there are large areas as yet untouched. For a long time the mines were almost exclusively worked by Chinese capital and labour, but the few lode workings are now practically all in the hands of Europeans and many of the alluvial deposits which the Chinese gave up owing to inflow of water have been reworked with success when modern dredging methods have been employed.

indeed, the occupation of no fewer than 30,000 Malays.

Forestry, as we have already seen, is an industry of real value, but, apart from the collection of various rare woods, gums, etc., the people occupied in the forests are more largely concerned with cutting them down to prepare the land for plantation than with reafforestation, though this is done in the forest reserves. With the exception of rubber, farming is almost entirely for home consumption. Chinese market gardeners supply the towns with vegetables and Chinese farmers breed pigs. But the meat eaten by Europeans is mostly brought from Australia, and it cannot be said that a farming industry, in the European sense, exists at all.

There are very few manufactures in Malaya, though pineapple canning was once an important industry in Singapore and has now revived again. Others are the production of tapioca and china clay. Oil milling from various nuts is also a local industry, and, as I have already observed, the tin concentrates are smelted on a large scale but the two great products of Malaya, rubber and tin, leave the country unworked.

Goods Foreign and Oriental

There are a number of large wholesale buying houses and firms in Malaya whose business it is to act as middlemen for the purchase of products and metals. As regards shopping facilities, there are big stores in the various towns which receive shipments by every European mail and enable the residents to live in an up-to-date European style. There are many Indian jewellers whose stores are full of Malay silver, gold ornaments, precious stones in the rough and fine Chinese silks. And visitors can always obtain souvenirs which, if not always of local manufacture, are at least Oriental.

Banking facilities are universal, and competition is divided between two of the great Indian banks and one of the great Chinese banks. The higher staff are all British, and both the resident and the traveller find no difficulty in transacting suitable business.

It may be said that all the higher grades of civil servants, doctors and educationalists are British. Their status is, of course, of the first rank, but in Malaya there are numerous rich and respected Asiatics who have a status which in its own way is almost as marked as that of the sultans.

State Railways that Pay

Such parts of the peninsula as are opened up are covered by extremely well laid and well kept roads. In the Federated Malay States these have a length of 2,305 miles, but in the other states the road system is little developed as yet. Of railways there are now over 1,000 miles, all of which are owned by the government or leased to the government. It is a remarkable fact that the capital spent on the government railways, some £17,000,000, has all been raised out of revenue.

The main line runs from Singapore in the south to the coast opposite Penang in the north, with a continuation, mainly in Siamese territory, on to Bangkok in Siam, and, as the present writer knows from personal experience, is well managed and comfortable. A change of trains is made at the halfway stopping point of Kuala Lumpur, and in either direction dining cars and sleeping berths are available. The railway has been carved out of the jungle, and it is a strange sight to see the forests pressing close on either side of the line.

Sand-bars at River Mouths

The telegraph system is universal over the developed portion of the peninsula, and cabling to Europe and elsewhere is an everyday occurrence. There are government wireless stations at Penang and Singapore and telephones in most of the large towns.

The sand-bars at the mouth of the majority of the rivers vastly lessen the importance of water transport, but the marked excellence of the roads, which, on the whole, compare very favourably

with those of England, make this a matter of less consequence than it would otherwise be. The peninsula is well served both by main steamship routes to most parts of the world and by local coast craft. One may wonder, indeed, whether there are many portions of the globe easier to get to or to get from than Malaya.

Malaya is not a self-supporting country, and foodstuffs form about half the total imports. The only duties levied are on alcoholic liquor, tobacco and petroleum and oil for local consumption. Most of the exports go to England and the United States, but there is also a large trade with the Dutch East Indies. Singapore, dealt with in a separate chapter, is a great oil-distributing centre and the Asiatic Petroleum Company have most of this business in their hands.

Penang, an island about the size of the Isle of Wight, has a population of 123,000, but almost the whole of this is concentrated in the capital, Georgetown, which is usually itself called Penang. It is a beautiful town, with a great hill rising just beyond, and is full of Eastern colour and the fine houses of Chinese merchant-princes.

The town of next importance is Kuala Lumpur, the capital of the state of Selangor and the seat of the Federal Government. This has a population of some 80,000, and is a thoroughly modern town of handsome government buildings and general offices. Ipoh, in Perak, the centre of a rich tin district, is a growing town, situated like Kuala Lumpur on the main line.

Malacca, on the east coast, is now of much less importance than it used to be, though it is actually the oldest European possession in the Far East and still retains some evidences of the Portuguese who were its first rulers.

The foremost town in Johore is Johore Bahru, which lies on the main line just across the Strait from Singapore and used to be the place, before the causeway was built, where passengers for Singapore had to leave the train.

Although many natives live in the towns, the real native life can only be studied in the jungle villages or kampongs. The modern Malay likes to dwell in a wooden hut, and he still retains his affection for dwellings built on piles. Some of the aborigines, however—for the Malays probably came from Java not so many centuries ago—live in lofty tree-huts or in leaf shelters propped on sticks. While the cities and considerable towns have a strong veneer of European characteristics, the country villages are entirely unsophisticated. The bungalows of Europeans on the estates are usually thatched with palm, and are constructed mainly on the principles of keeping out the sun and of airy roominess.

MALAYA: GEOGRAPHICAL SUMMARY

Natural Division. South pointing peninsula, part of the fringe of the Pacific Ocean. (Cf. California Peninsula.) A mountainous backbone is flanked by coastal lowlands with mangrove swamps and is drained by rivers which make extensive alluvial flats. (Cf. Queensland, Java.)

Climate and Vegetation. Tropical heat and tropical rains, with seasonal winds. The (summer) south wind connected with the south-west monsoon of the Indian Ocean and the (winter) north-east trade wind from the Pacific Ocean. Tropical forest.

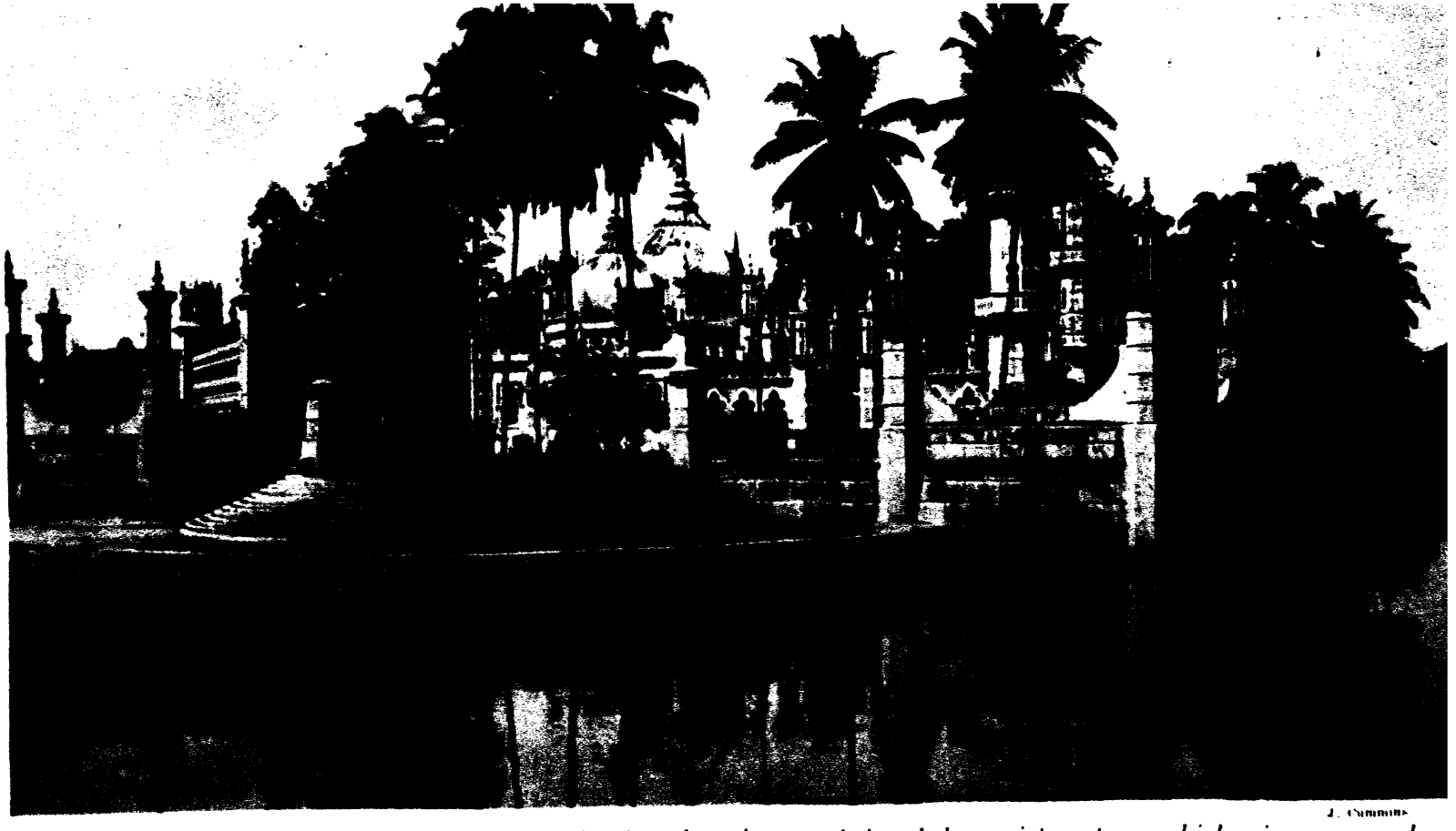
Products. Mainly plantation rubber (cf. Ceylon, Java) and tin (cf. Banca, in the Malay Archipelago). Also copra, damars, rattans, palm-oil, gutta-percha, pineapples and gambier. The tapioca, pepper and spice trade is no longer of primary importance. The products are exported in the crude state.

Communications. The Strait of Malacca is almost as great a "steamer passage" as that of Gibraltar. Singapore is one of the world's great entrepots. The railways admirably serve the interests of the trading community.

Outlook. Malaya has been developed by the labour of aliens—Tamils as labourers, Chinese as entrepreneurs and Europeans, notably British, as capitalists and organizers. In a strong position as regards tin but weakly dependent upon world supplies and world prices as regards rubber, the country's recent development into a peaceful and law-abiding community is a happy augury.

MALAYA. *The railway that runs from Singapore to Siam sends a branch to Prai, whence a steam ferry plies to this terminus at Penang*

MALAYA. *The rush screen on the right is to hide Malay ladies while they wash. Nor are they deterred by the crocodiles which soon get to know these spots. The stakes to the left support a fish trap*

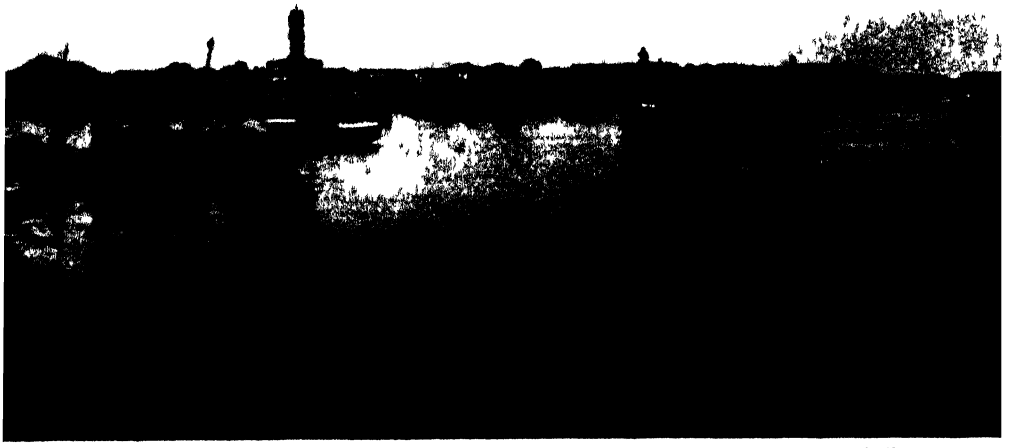


J. Cummins

MALAYA. *Shaded by the feather-duster heads of palms and laved by quiet waters, which give a second picture of towers and balustrade, this mosque is one of the sights of Kuala Lumpur by the Klang river*

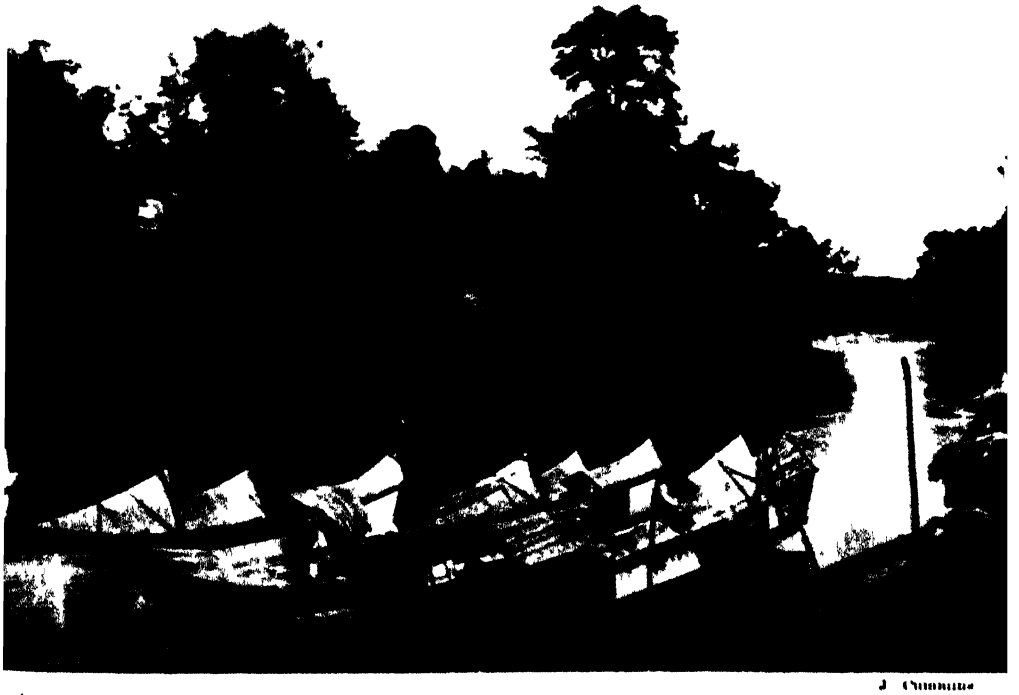
MALAYA. *Penang Island and its town are separated from Province Wellesley on the mainland by an arm of the sea about five miles across*

MALAYA. *Like the fingers of a hand in the centre of the peninsula a number of small rivers creep through the jungle to form the great Pahang*



J. Cummins

e is a fine harbour with deep water and entrances from the north south. Notice the awnings sheltering each deck against the torrid sun



J. Cummins

its curving course to the China sea near Pekan, sampans with palm-hatched cabins, piled untidily with household gear, are the usual craft

Ewing Galloway

MALAY ARCHIPELAGO. *Batavia is an old port of the Dutch East Indies trade, and the commercial part of the town has the mark its builders always left, canals with laden barges floating slowly along*

E. N. A.

MALAY ARCHIPELAGO. *Java is well supplied with rivers where thick woods, scarcely broken by occasional village clearings, come down to either bank. Only sampans can navigate their upper reaches*

E.N.A.

MALAY ARCHIPELAGO. *In Sumatra the planter has often to cut his plantations out of jungle. This is an embryo tobacco estate*

MALAY ARCHIPELAGO

Tropic Bounty of the Isles of Enigma

by Richard Curle

Author of "Into the East," etc.

THE islands of which this chapter treats rest on a vast submerged bank, at no place deeper than a hundred fathoms below sea-level. It is, in fact, a sunken continuation of the continent of Asia. The islands are divided between the regions of Asia and Australia, and this is evident in their inhabitants, their geography, their zoology and their botany, all of which, from either end of the archipelago, merge in the middle islands.

Although the appearance and scenery of the group vary greatly, nevertheless, geographically speaking, the volcanic ranges which are so general a feature may be said to be but one range. All the Dutch East Indies, with the exception of the far eastern ones, comprise, as it were, one vast continent broken up into fragments.

From the point of view of climate, the islands, which run from west to east and are clustered on either side of the Equator—the Equator actually cuts through Sumatra, Celebes and Gilolo—though chiefly on the south of it, have few distinguishing features. Of course there are infinite variations according to altitude, etc., but all the islands are situated in the centre of the tropics and all of them possess the characteristics of tropical climates.

Dutch Possessions in the East

Politically all the islands with which this article deals belong to Holland, save only a part of Timor which belongs to Portugal, and are ruled by a governor-general, who lives in Java. They lie between the Indian and the Pacific Oceans; to the south is Australia and to the north Malaya, the South China Sea and the Philippine Islands.

The total area of the archipelago, excluding Borneo and New Guinea, both of which are discussed elsewhere, is about 349,000 square miles and the total population about 46,500,000.

The archipelago, as we have seen, is extremely mountainous and extremely volcanic. The mountains run for the most part from north-west to south-east, or from west to east.

A Garment of Primeval Forest

Apart from Java, which is cultivated to the extent of about 40 per cent., the islands are still for the most part covered with primeval jungle. The coast-line differs enormously in its formation—for instance one side of Java is rugged and broken, while the other side is swampy and flat—and no statement of general accuracy can be made.

As to rivers, while they exist in immense numbers and while many of them in the larger islands are of considerable length, few of them are of much commercial importance. The islands are so steep and broken that navigation, save in small boats, is seldom practicable. The usual aspect of the islands is that of tropical riot and luxuriance. The rainfall is, on the whole, enormous, and the fecundity of nature is nowhere seen to more extravagant advantage than in the bewildering and interminable forests that overrun the islands with their green mantle.

The principal rainy season falls between October and March, and then indeed the downpours are terrific. The islands lie either under dark thunder-clouds or in a brilliant and terrible sunshine. The north-west and the south-east monsoons are the chief winds that blow, and it is curious to note that

THE FESTOON OF SCATTERED ISLANDS THAT LINKS AUSTRALASIA TO ASIA

where the south-east monsoon, which has passed over the dry deserts of Australia, touches the islands, the climate is dryer and the vegetation is less magnificent.

The climate of the archipelago is, to a large extent, more or less of an unknown quantity, for the simple reason that most of the land is virgin jungle. But Java, though of far less size than several of the other islands, is yet of far greater importance both from the point of view of population and of developed wealth than all the rest put together, for it has been proved to be a place highly suitable, in many parts, to the health both of Europeans and of Asiatics. Of course, there are unhealthy spots in Java, but the hill stations are extremely bracing and Java is, indeed, the sanatorium for the whole of the Dutch East Indies and Malaya.

The vegetation of the islands is excessively rich and extremely varied. The flora which comes within the influence of Asia is a development of that found from Northern India to the Malay Peninsula; but farther east this form mingles with the Australian. The same phenomenon occurs in the case of animals. In the more western islands are to be found those we associate with Asia, such as elephant, tiger, rhinoceros, etc., but in the more eastern islands we begin to find marsupials and monotremes. Birds also follow this changing law.

Java has enormous wealth in such artificial plantations as sugar, rubber and rice, and to a lesser extent this is true of Sumatra and other islands. The richness of a volcanic soil naturally manured by leaves is very great, and the constant rainfall assures to the planter the moisture which most tropical crops require. Insect pests are, of course, innumerable, and a constant warfare against them has to be carried on. The list of tropical crops which the islands grow is very long. It is worth noting that in the Dutch East Indies there are about 8,000,000 acres under rice, 5,000,000 under corn and maize, 2,000,000 under cassava, 400,000 under soya bean, 44,000 under sugar cane and 250,000 under tobacco. These

Ewing Galloway

OLD TOWN GATE OF BATAVIA, JAVA'S PRINCIPAL SEAPORT

Batavia, chief seaport of the island of Java, is also the capital and principal emporium of the Dutch East Indies. It consists of an old town in the business and native quarter and a new town which, built on higher ground, is the European residential quarter and contains the governor's palace and many fine public buildings. Beyond the old gate we have a glimpse of the town-hall

Ewing (Galloway)

RIOT OF LIFE IN A RICH TROPICAL ISLAND OF THE DUTCH EAST INDIES

Java has been called an island of superlatives and "the most fertile, the most productive and the most populous island within the tropics." The hot sunshine and almost constant moisture are responsible for the profuse and varied vegetation, and the progressive nature and steady industry of its inhabitants have made Java far-famed for its tropical cultivation. In some parts, chiefly in the west, the mountains are clothed with forests of unexampled luxuriance to their very summits; the soil, exceedingly fertile throughout the island, yields splendid crops and all the necessaries of life may be had in abundance

figures are merely representative to prove the assertion that artificial cultivation has made great strides.

Geologically the islands present many interesting features. There are many kinds of different rocks—granite, syenite, serpentine, porphyry, marble, sandstone, etc., and it is interesting to remember that it was in the strata of Java, belonging to the miocene or upper pliocene, that the fossil remains of Pithecanthropus erectus, a kind of intermediate type between ape and man, were found.

Very extensive discoveries of minerals have been made throughout the archipelago. Sumatra produces coal, petroleum, lead, copper and gold; Banca produces tin, as also does Billiton; Celebes and Timor produce gold; and iron ore is of frequent occurrence throughout the islands.

Tin and petroleum are the principal minerals of commercial importance. Tin mining is almost entirely carried on by Chinese, and the petroleum wells are in the hands of great European companies. The future of petroleum is undoubtedly very great, and more and more money is constantly being sunk in the development of the fields.

Prospects of Mineral Wealth

As to other mining operations, the islands are too little surveyed to make any prophecy of the least value. Probably they contain enormous deposits of valuable minerals, but in discussing future development we enter upon the region of speculation. Mining and planting are the two main primary occupations, and are best discussed, with all the questions that arise out of them, under the paragraphs devoted to the different islands.

Such manufacturing as there is, is almost entirely confined to Java. It follows that the majority of the transport workers are Javanese, and as they are a highly intelligent race and very industrious when properly looked after, they show a marked capacity for such employment as railway and transport work. Banking throughout the islands is in the hands of the Dutch, and the system, in Java at least, is organized on a comprehensive basis.

There is a perpetual flow of civil servants from Holland to the Dutch East Indies, but as many Dutchmen marry Javanese women, and as no social stigma attaches to the children of such unions, a large number of the civil servants are recruited locally among half-castes. Professional people, too, are both European and semi-Asiatic. Any Javanese woman marrying a white man immediately assumes the status of a European, and there is no hard and fast line between the two races.

Progressive Educational Policy

There are government and private vernacular schools, and the aim of the Dutch is that every village, in Java at least, should have a school. At Batavia there is a medical school for natives, and at Batavia and Surabaya and Semarang there are schools for higher education. Government schools for the education of Chinese children have been established in some of the principal towns, and there is an agricultural school at Buitenzorg. To show how seriously the Dutch have tackled the problem of education, it may be mentioned that there are in all five colleges for native schoolmasters and four for the sons of native officials.

The ideal of the Dutch has been to keep administration as largely as possible in the hands of native chieftains. For Europeans, however, there are European judges. Important European cases are heard in the high court at Batavia.

Railways in Java and Sumatra

There are in the islands in question 3,023 miles of railway, of which 3,300 are in Java and 950 in Sumatra. This shows how enormously more opened up Java is than the other islands; and the same fact holds true of other forms of communication, such as roads and telegraph wires. It is almost a case of Java first and the rest nowhere.

RICE-FIELD WHENCE THE JAVANESE STAPLE DIET IS DRAWN

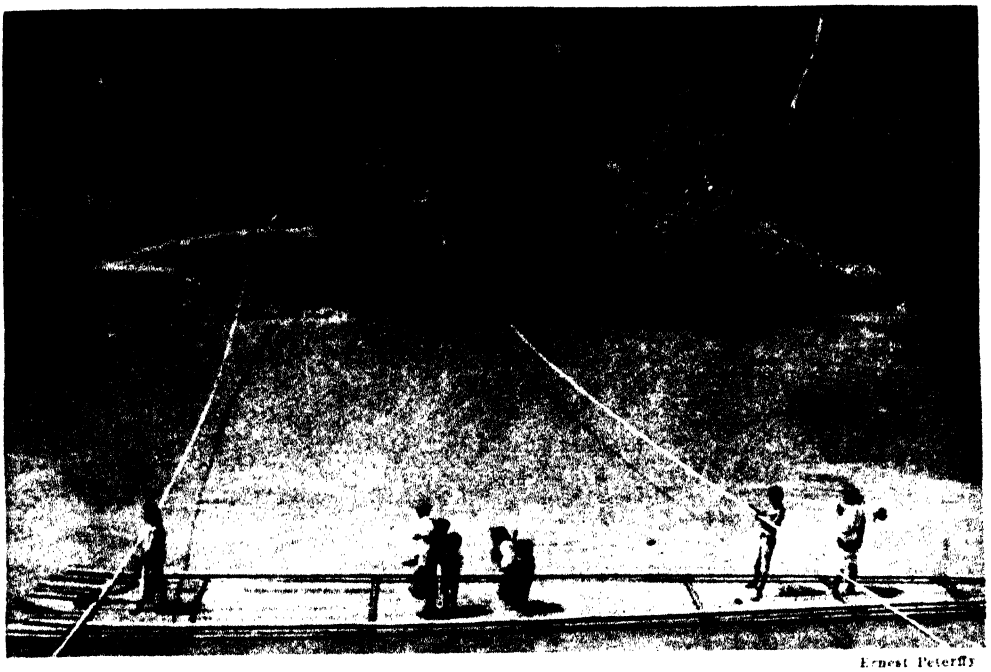
Rice is grown extensively in Java, but mainly on irrigated land, and the natives are particularly attentive to its cultivation, although they still persist in tilling their rice-fields by traditional methods and with primitive implements. Two and sometimes three crops are harvested a year, but vegetables are now grown after the first crop to prevent the soil from becoming exhausted

The government mails between island and island are carried by the Dutch Royal Packet Company, and there is also a certain amount of communication by other lines and by native craft. A regular service of steamships is kept up between Holland and Java, which is also in touch with England by constant sailings. Java is linked up with such islands as Sumatra, Madura and Bali by cable, and it is, of course, possible to cable via different exchanges with the rest of the world.

On most of the islands transport is in a very undeveloped state, and jungle tracks often take the place of roads; but in Java transport by road and railway is developed almost as it might be in Europe. The principal exports of the Dutch East Indies go to Holland, though China is a big buyer, and consist of the usual tropical products, sugar, tobacco, copra, gums, coffee, spices, rice, tin and petroleum.

All questions of towns, health conditions and characteristics of the inhabitants are apt to vary so enormously that they cannot be discussed generally but must fall under the discussions of the various islands.

The Dutch East Indies were first colonised, so far as Europeans are



Ernest Peterffy

BAMBOO RAFT AS RIVER FERRY IN WEST JAVA

Java has numerous rivers, but as means of communication they are relatively unimportant. Only two or three are navigable by vessels larger than the native praus, and the oft-repeated attempts to improve them meet with little success on account of the continual deposit of silt and the rapid growth of weed. Bridges are few and far between, but the native devices for crossing the waterways are many

E N A

NATIVE INGENUITY IN A BAMBOO BRIDGE AT BUITENZORG

South of Batavia, 35 miles by rail, lies Buitenzorg with its famous botanical garden, one of the finest in the world. Lying at an altitude of 875 feet, the town is noted for its refreshing climate and here the governor-general of the Dutch East Indies has his summer residence. This bridge is only one of the many ingenious bamboo structures of the Javanese natives

concerned, by the Portuguese in 1509. It was in 1596 that the Dutch came into conflict with the Portuguese in Java, and in 1602 that the Dutch East India Company, with which, for nearly two centuries, the history of the archipelago was bound up, was founded. From 1811 to 1816 the British occupied many of the islands, but for more than a hundred years the Dutch have been in complete nominal possession.

Sumatra's Hills and Rivers

Let us now consider in greater detail, following roughly the line of the archipelago from west to east, some of the larger islands. The vast island of Sumatra, which after Australia, New Guinea and Borneo is the largest island in the world, with an area of 160,000 square miles—over three times the size of Java and thirteen times the size of Holland—has nevertheless a population estimated at only about five millions, although it could probably support one of about sixty or seventy millions.

A huge range of hills, the Barisans, runs down the 1,100-mile length of Sumatra, and some of the peaks rise to 12,000 feet. The western slopes of this range descend rapidly to the ocean, but beyond the eastern slopes there are extensive plains. It thus follows that the rivers on the western side are of small importance, whereas on the eastern side there are several large rivers many hundreds of miles in length and navigable for long stretches by craft drawing from six to ten feet. But most of the streams contain bars at the mouth and rapids farther up, and water navigation is not of any great commercial account.

Lakes in Extinct Volcanoes

Like Java, Sumatra is highly volcanic, and many of its numerous lakes occupy the craters of extinct volcanoes. The largest lake, Toba, has an area of 800 square miles, and other lakes of importance are Maninyu, Singkara and Ranua. The temperature is very much the same as that of Java, and the average yearly rainfall is no less than 139 inches. Most of the island consists of impenetrable jungle and there is a great variety of large and splendid trees. Forest products are collected for export and there has been much careless deforestation. Sugar, coffee, rice and rubber are the most important crops, and the volcanic soil of the island makes much of the land excessively rich.

Sumatra is a great yielder of petroleum and it also contains valuable coal deposits. Gold, tin, copper and iron ore exist, and arsenic, saltpetre and sulphur are to be found in the volcanic districts.

The native population, practically all of which lives on the land, is divided into various tribes of Malay stock. Of these, the most important are the Achinese of North Sumatra, whom the Dutch have never really succeeded in subduing. They are a brave and violent people and contain in their blood a touch of the Arab. Other distinct tribes are the Bataks, Korinchis, Siaks, Jambis, etc., and there are also two very strange tribes of pure savages, the Orang-Ulu and the Orang-Lubu, who live in the depths of the forests and of whom very little is known.

Wonderful Fauna of the Jungle

Sumatra is rich in mammals. The elephant, the rhinoceros, the orang utan, found nowhere else save in Borneo, the tiger, the Malay bear, the wild dog and various deer—all these roam in the forests of this island-continent. There are hundreds of different species of birds, and the insects are so numerous that many of them have never been classified at all.

Sumatra, as we have seen, contains a good many hundreds of miles of railway, though these are a mere nothing in relation to the size of the island. There are three distinct lines of railway, and in the west coast there are some good roads. But for the most part the island, as has been stated, is still virgin forest and inaccessible mountain, and has never been properly explored. Palembang, with a population of 53,000,

ON THE SEAS OF THE LESSER SUNDAS OFF THE TIMOR LAUT

The Timor Laut, also known as the Tenumber Group, forms part of the volcano studded chain of islands girding the Malay Archipelago on the south and stretching from Sumatra, including Java, like a series of stepping-stones to New Guinea. The group lies 260 miles north-east of Timor and consists of several low lying coralline islands of which the chief are Yamdena, Selaru and Larat

E N A

MONUMENT OF HINDU GENIUS ON BALI ISLAND

Apart from Lombok, Bali is the only island of the Malay Archipelago in which the Hindu religion prevails, and its temples—monuments to the rare artistic civilization of the old Hindu builders—are its chief wonder. Above is seen a portion of the magnificently carved Hindu temple which is situated about 12 miles from Buleleng, Bali's chief town and a port on the north coast

E. N. A.

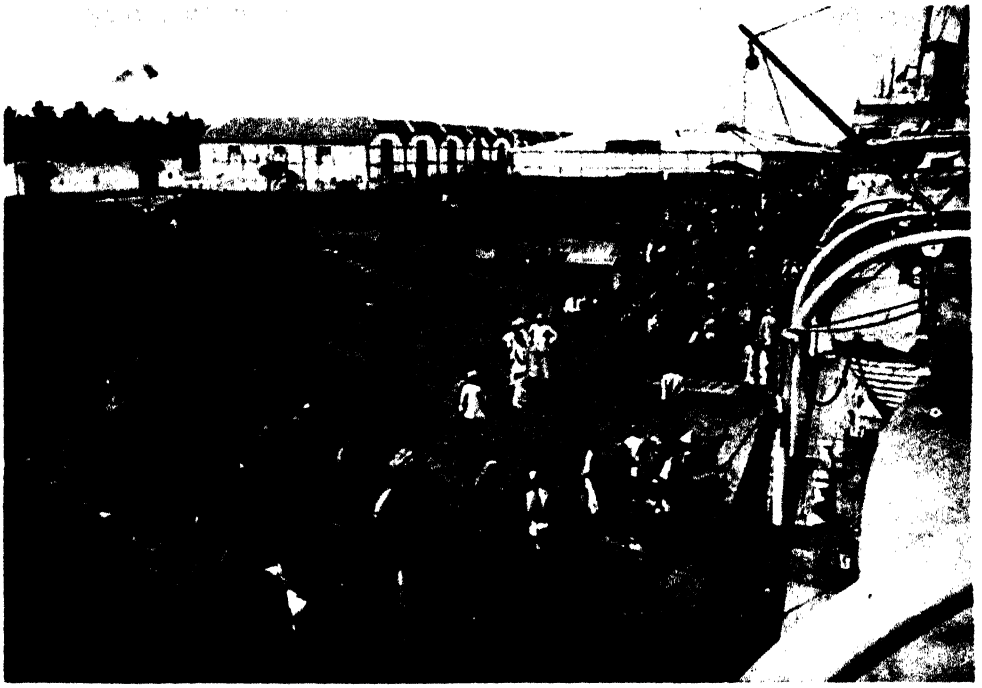
VIEW ON TERNATE ISLAND, SEAT OF THE ANCIENT SULTANATE, IN THE DUTCH SPICE ISLANDS

The northernmost of the islands lying off the west coast of Gilolo or Halmahera, in the Moluccas or Spice Islands, is known as Ternate Island and has an area of about 25 square miles. It is of volcanic origin and consists almost entirely of a conical, constantly active volcanic peak, 6,000 feet above sea-level, with four smaller peaks. The island contains a rich growth of vegetation, with many dense forests, and the flat, cleared tracts of land between the lava ribs are chiefly utilised for the cultivation of rice and maize. Several other crops are produced successfully, the chief being sago, coffee, pepper, nutmegs and cloves.

is the most important town on the east coast, and Padang, with a population of about 40,000, is the most important town on the west coast. Nor are there many others.

Next to Java, Sumatra is probably the most potentially rich of all the islands in the East Indies, and, next to Java, it is the one in which the Dutch

On the north of eastern Sumatra lie the islands of Banca, 4,460 square miles, and Billiton, 1,773 square miles. The two islands between them contain about 100,000 natives of Malay stock and about 50,000 Chinese, the latter of whom are mainly concerned in tin-mining. It is, indeed, on account of their tin and, to a lesser extent, coal,



Ernest Peterffy

COOLIES AT WORK ON THE COALING STATION IN MACASSAR HARBOUR

The curiously-shaped Dutch island of Celebes, compared to a star-fish because of its four protruding limbs, is separated from Borneo on the west by Macassar Strait. Macassar on the south-west coast is the chief town and ranks next to Batavia as a Dutch port; it has a lively trade, and its harbour possesses a government coaling station and two well-ordered landing quays

take the most interest; but it offers formidable obstacles to the advance of civilization, and its handful of a population, made up as it is of different tribes speaking different languages, can do little to tap the natural wealth of the country. There is something sombre and tremendous about the endless stretch of its primeval forests, about its clothed and rugged mountains never trodden by man and about the dark mysteries of its savage depths. It offers to the explorer a tantalising promise of great rewards, but save on its fringe is not by any means a place for the ordinary traveller to visit.

that these two islands are of such great economic importance.

Java, which for the sake of comparison may be described as about the size of Ireland, has an area of 48,504 square miles; the adjacent island of Madura, administratively associated with Java, is 1,732 square miles, and the smaller surrounding isles, also administratively included with Java, 1,416 square miles. The total population is over 35,000,000, and this figure, more than any other, gives an accurate idea of the importance of Java in comparison with the other East Indian islands. Java may be divided into three

geographical divisions. In the western division the highlands lie packed together to the south, and the lowlands form one vast tract to the north. In the middle division, which is the smallest of the three, the mountains are neither so massed in the south nor the plains so continuous in the north. In the eastern division, highlands and lowlands are mixed together, save along the south coast where a range of hills forms a long watershed.

Five Days of Rain a Week

The island is, perhaps, the most volcanic region in the world. There are about 125 volcanic centres and over 45 volcanoes, 20 of which are active.

The climate is very hot and steamy, but though unhealthy on the coast is wonderfully healthy among the lower hills. The mean annual temperature at Batavia is 79° F., and the warmer months are between May and October, though it cannot be said that there is any great variation. Thunderstorms and torrential rains are frequent, and visitors make a great mistake in going to Java from December to March, as this is the wettest season. The south coast has a heavier rainfall than the north, but even in August, the driest month, there are from three to five days of rain a week.

Land of Perennial Summer

From the point of view of vegetation, Java is a place of everlasting summer. The flora of the island is astonishing in its richness and variety, and various distinct zones are encountered between sea-level and the high mountains. There are from three to four hundred species of timber trees, but teak is the most important of these and occupies about one-third of the government forest lands. Although Java is highly cultivated, it still contains great tracts of primeval forest, and although it is densely populated, there are yet many untrodden wildernesses.

Animals abound in great numbers, from the rhinoceros, tiger, wild pig, wild cattle, leopard, down to the smaller species. There are immense quantities of beautiful birds—410 species have been classified—and hundreds of varieties of fish. As to pests, all the crops are liable to them and many are still unidentified. With regard to domestic animals, buffaloes, cattle and horses are all used. Sugar is the principal crop, and there are experimental stations in the island in which efforts are made to overcome the many diseases to which it is subject.

So far as is known, Java is not rich in metallic ores. There is a small amount of coal, but petroleum is an important industry. Volcanic rock covers about 28 per cent. of the island, and it is the volcanic soil which gives to Java its peculiar suitability for agriculture. Indeed, it is said to be, from this point of view, the richest island in the world. Most of the land is nominally in the hands of the government, but Europeans and Chinese own estates in the west, and the Javanese have had about 6,625,000 acres assigned to their exclusive use.

Many Native Industries

Many of the sugar mills are equipped with up-to-date machinery, and the whole industry is in an efficient and flourishing condition. Javanese make excellent mechanics, goldsmiths, cutlers, carpenters, etc., and they also indulge in spinning, weaving and dyeing. Boat-building is a great native industry along the north coast.

The inhabitants of Java, of whom only about one in thirty live in towns, belong to the great Malay group. The majority of them naturally are Javanese proper, but there are also many Sundanese and Madurese. Coffee-coloured and of rather small stature, the Javanese are noticeable for their amiability, for their extravagance, for their love of acting and gambling. They are decidedly intelligent, but the ambition of the majority does not soar beyond a small government post.

There are several large towns in Java, of which Batavia, Surabaya, Surakarta and Semarang all have populations of

over 100,000. These towns contain, besides Javanese, many Arab and Chinese traders and most of the Europeans of the island. Life in such places is very much what life would be in any great Eastern city. The Dutch thoroughly understand the art of making themselves comfortable, with the result that the private houses of officials and merchants are adequate and well-organized. The visitor in such a city as Batavia or in any of the numerous hill stations will find existence made extraordinarily easy for him.

Java is, indeed, becoming a centre of tourist travel and the ordinary person can succeed in seeing it, its beauty, its quaintness, its Oriental magic and its superb old ruins—those marvellous ones at Boro Budur in the centre of the island date from the ninth century and are of Hindu Buddhist type—with a facility and comfort that will certainly surprise him. This island, lying in an archipelago memorable for its savage wildness and its unmapped forests, is civilized to an extent that must appear miraculous to those who have visited only Sumatra or Borneo.

To the visitor who wants to obtain at one glance, as it were, a full perception of the glamour and beauty of Java, one cannot do better than advise a visit to the botanical gardens at Buitenzorg, which is the country seat of the governor-general. These gardens are of an indescribable loveliness, and seem to concentrate within their walks all the variety and romance of this far-famed island. If Java were famous for nothing else, it would be famous for its botanical gardens, which are probably the most splendid which the world has to show.

Bali, perhaps the most beautiful of all the islands and with perhaps the finest looking population, and Lombok, which lies close to it, are two volcanic, mountainous islands, each about 2,000 square miles in extent and containing between them about

E. N. A.

NATIVE HOUSES IN THE ACHIN COUNTRY OF SUMATRA

One of the largest islands in the world is Sumatra, a Dutch possession in the Malay Archipelago. The province of Achin lies at the northern extremity of the island and is peopled by a stubborn tribe of Malay descent. High-pitched roofs and overhanging eaves are typical features of the pile dwellings of the Sumatran Malays and present a picturesque aspect in the tree-girt villages

1,000,000 inhabitants, and are remarkable for the fact that Hinduism is still the creed of the natives. Lombok is the most westerly, from one point of view, of the Australian islands, for in its cockatoos and mound-builders it contains two typical groups of Australian birds. The natives of Bali, who resemble the Javanese, save that they are bigger and more powerful, are good agriculturalists and artisans. The natives of Lombok, who are partly Sasaks and partly Bali immigrants, are constantly fighting among themselves.

Pastoral Isle of Madura

Separated by a shallow strait from Java is the island of Madura, with a population of 1,652,000. With the exception of about 5,000 Chinese and Europeans, these are all Madurese, a race closely allied to the Javanese. The soil is pastoral rather than agricultural, and cattle raising and fishing are the chief sources of livelihood. The island is covered with hills and, with its fringe of tropical vegetation is of an attractive and mysterious aspect.

Off the eastern point of Java lie great numbers of islands stretching out in a line as far as Timor, but of these it is only possible to mention some of the larger. Flores, a considerable island 224 miles long, 5,850 square miles in extent, is volcanic, wooded and little explored. It has an estimated population of 250,000. Along the coasts the inhabitants are of Malay stock and occupy themselves in fishing, agriculture —rice, sandal-wood and cinnamon are exported—and ship-building. In the interior are savages of Papuan origin.

Dark, Unknown Celebes

But Flores, like so many of its neighbouring islands, has a strange fascination in that it is scarcely known at all. Farther east lies Timor, the largest of the lesser Sunda Islands, with an area of 12,500 square miles and a population of perhaps half a million. It is an extraordinarily mountainous island with peaks rising to 12,000 feet, and iron, copper, gold, coal and petroleum have been found.

To the north of these islands lies the great star-fish shaped island of Celebes. Its area is about 60,000 square miles and its population about 1,250,000. Few islands in the world are less known than the interior of Celebes. Its vast unbroken forests are traversed by nothing more than vague paths, and its intractable jungles are practically impassable. Sandal-wood, ebony and teak are found in its forests, and on the coast the usual tropical crops, such as rice, coffee and coconuts, are cultivated.

Its fauna is, to a considerable extent, peculiar to the island. Wild buffaloes are fairly common and there are no large beasts of prey, but it has ninety species of birds unknown to any other country, and this is also true of endless butterflies and insects.

Inhabitants who Run Amok

All its native population is of Malayan stock, and some of the tribes are skilful in the weaving of cotton. The Bugis on the east coast are the outstanding tribe, and of all the Malays they are probably the ones most given to running amok. Their fame as seamen has spread over the archipelago and their religion is a curious mixture of Mahomedanism overlaid with Hindu myths. The principal town in Celebes is Macassar which, though it has a population of only 20,000 people, is nevertheless a city of eminent importance in the early history of the islands and, indeed, of European settlement in the whole East.

Of all the islands in the archipelago, Celebes is, in some respects, the most curious and most romantic. Few white men have yet explored far into its depths and it remains wrapt in the mists of the unknown.

The Moluccas consist of all those islands which lie between Celebes on the west, New Guinea on the east, Timor on the south and the Pacific Ocean on the north. They have been divided up into seven groups, but it is unnecessary for us here to go into any

E N A

PASSAR AT PALEMBANG, CHIEF COMMERCIAL CENTRE OF SUMATRA

The "passar," or market, is held on special days in the towns of Sumatra. It is an event of no little importance to the natives, who come from long distances to take part in the barter. Palembang lies in the south-east of the island, on the river of the same name, which is also called the Musi, 54 miles from the coast, and trades principally in coffee and pepper

close detail concerning them. Only the most prominent islands can achieve mention. Off the north-east of Celebes lies the island of Gilolo or Halmahera, which in shape is a small replica of the larger island. It has an area of about 6,700 square miles and a population of about 100,000, most of whom are Malays but some of whom are of a Papuan type. Rice and coconuts are grown by the natives and trepang and pearl shells are dived for, but the sago tree is still the product of most importance on the island.

To the south of Celebes lies Ceram with an area and a population very similar to that of Gilolo. The interior of Ceram is wild and little known and is inhabited by savage head hunters of Papuan stock. Between Celebes and Ceram lies Buru, an island of 3,400 square miles in extent and overrun by forest. Its population is estimated at 15,000, most of whom are pagans little in touch with civilization.

To the north of Buru lies Bachan, an irregular island of two mountainous portions joined by an isthmus and of about 900 square miles in extent. This strange island is peculiarly rich in birds and insects and little is known about its centre, which is quite uninhabited.

Coal and certain other minerals have been discovered on it. The small island of Ternate, on which is the capital of the Moluccas proper, is a very curious place, as it consists almost entirely of one volcano, which has frequent eruptions; but the harbour is a good one, and the Dutch resident lives in the little town of some 3,000 people.

Amboyna, south of Ceram, is only 386 square miles in size, but it is of importance agriculturally and produces many varieties of crops, of which cloves are the most valuable. Amboyna wood, which derives its name from the island, is mainly obtained here and in the forests of Ceram. On this small island there is a population of about 39,000, and the chief town is unexpectedly clean and well-planned. Farther south still lie the islands known as Timor Laut, with a total area of about 2,100 square miles and a total population of about 19,000. These are in the main coralline islands and their inhabitants are mostly pagan and piratical.

It is impossible to give anything but an outline of the Malay Archipelago. In richness of vegetation, in diversity of feature, in brooding immensity of tropical verdure, in brilliance of colour and in sombre gloom of forest, the archipelago remains, as a whole, one of the great strongholds of wild nature. Save for Java and patches here and there on the other islands, the whole area has been but little exploited, and is still much what it was untold centuries ago. Malay, Arab, Chinese and European civilizations have but scratched its edge, and in the deep recesses and the unknown interiors paganism is still rife and primeval nature still triumphant.

The mountainous form of most of the islands, the treacherous climate, the uncertain natives, the riotous tangle of the jungle and the lack of adequate population make the task of developing the islands arduous and slow. The policy of the Dutch is not to hasten matters. Now that they have so wonderfully opened up Java they are turning their attention more and more to Sumatra; and gradually, it may be presumed, all the other islands, so far as is suitable, will come under their close survey. But for many years yet most of the archipelago will remain an impenetrable wilderness, and that is what gives it, to an imaginative traveller or reader, so strong an appeal.

The beauty of these islands cannot be over-estimated, but even beyond their beauty there rests upon them the enigma of untold secrets and hidden mystery. They remain, as they have remained for ages, almost unaffected by the advance of man.

MALAY ARCHIPELAGO: GEOGRAPHICAL SUMMARY

Natural Division. A festoon of islands from Sumatra to Timor, the upper portions of a range of fold mountains connected through the Andamans and Nicobars with the fold mountains of East Burma and the Himalayas. Highly volcanic (cf. Japan) and mainly mountainous, with lowlands only in Sumatra and Java connected with the shallow sea between them and Borneo.

Climate and Vegetation. Tropical heavy rains, tropical temperatures, with slight variations. Tropical jungle forests. (Cf. the Amazon and Congo Basins.)

Products. Teak, spices, *e.g.*, nutmegs, almost all the world's supply from Banda, cinnamon, pepper (the Moluccas or Spice Is.). Sago, macassar oil, sandalwood. In Java the Dutch have provided an object lesson to the world in the management of tropical plantations which yield rubber, coffee, cane sugar, rice, tobacco, tea, cinchona and copra; this centralised horticulture is being extended into Sumatra. Tin, petroleum, coal, and, possibly, other minerals.

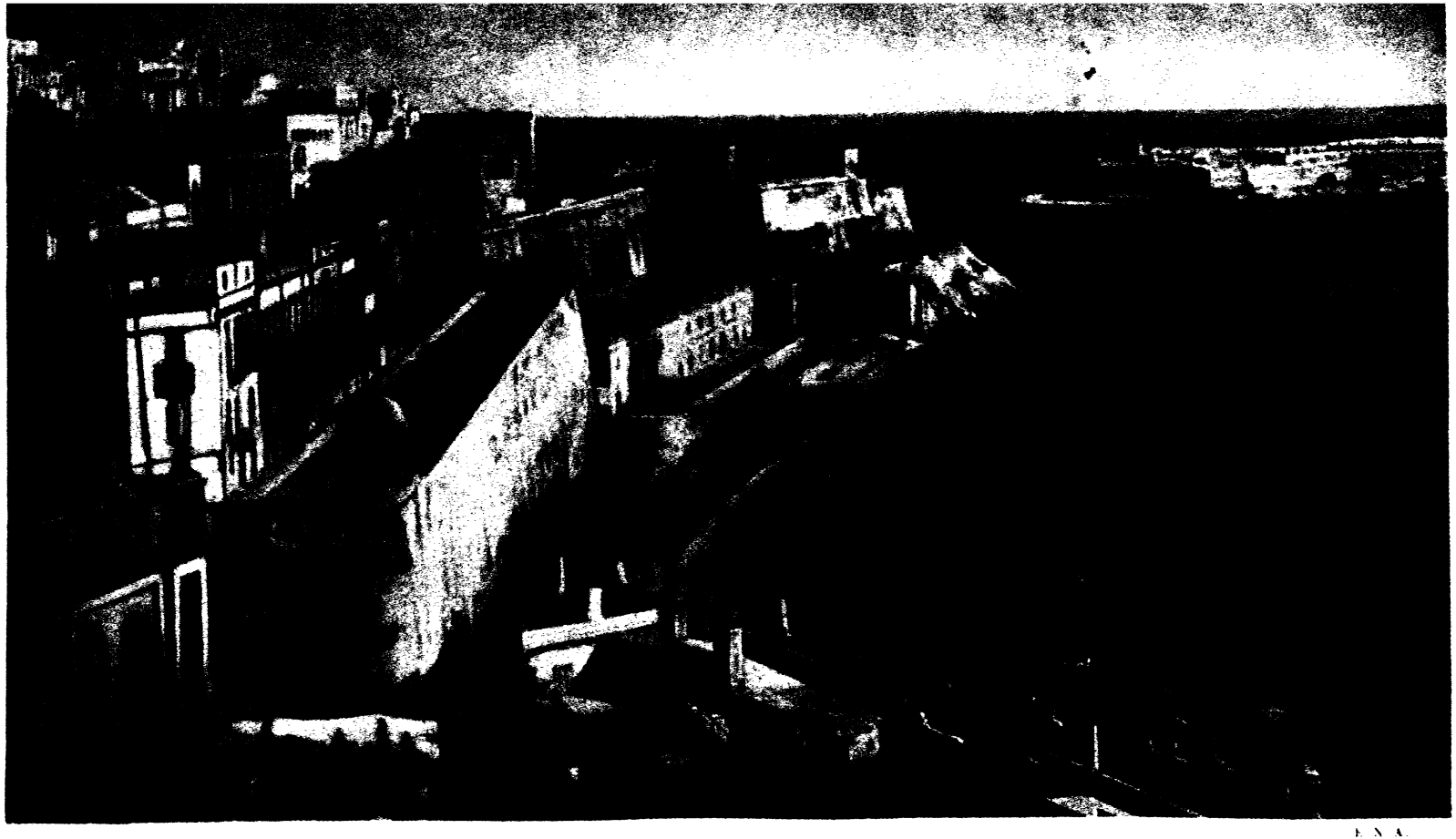
Outlook. There is a striking contrast between the highly developed "plantation" section of Java, the tin-fields of Banca, and the comparatively unknown, untrodden and unexploited areas elsewhere. For the world, a fraction of Java makes up most of the archipelago, and here the outlook promises continuous, steady progress to provide materials for the colonial trade of Holland. Most of the rest of the archipelago matters little. Its merest fringe is of immediate utility, but its luxuriant fertility promises a vast return when man finds the need to extend to it the same Dutch methods of cultivation; its natural resources are without bounds.

Ewing Galloway

MALAY ARCHIPELAGO. *Here is one of the earliest implements used by man. In Java they paint and carve their ploughs like toys*

26.5.5

MALTA. *Milk is delivered on the head in Malta by [illegible] in the early morning and [illegible] the [illegible] church of Mdina [illegible]*



E.N.A.

MALTA. ***On the left*** *beyond the Victoria Gate are the solid town walls of old Valletta, stretching out to Fort St Elmo that watches over the narrow entrance to the Grand Harbour*

MANCHURIA *These mountains are beyond Shanhaikwan, where the Great Wall began, on the frontier between China and Manchuria*

MANCHURIA. *The roofed gateways in the mighty walls of Liao-yang bristle no longer with men-at-arms, but with trees and bushes*

MEDITERRANEAN SEA. *Corfu's* lovely isle faces Albania and Greece. The wind in the cypress trees is near *Canone*; legend made it the ship, petrified after by Poseidon, that brought Ulysses to Ithaca

MALTA

The Middle Island of the Middle Sea

by Gordon Home

Author of "Along the Rivieras of France and Italy"

ALMOST exactly in the centre of the Mediterranean and in the fairway between the eastern and western extremities of that historic inland sea, the Maltese group of islands is placed in a position of exceptional importance. It required another factor, however, to give Malta the place in history which it acquired in very early times.

This was provided in the magnificent natural harbours of Valletta where, age after age, those who have sailed upon the uncertain waters of the Great Sea have found shelter. Rob Malta of its harbours and in a few years the island would be almost depopulated, for the greater part of its life is based upon the facilities it affords to navigation.

Before man determined to live on the island it must have presented an appearance of absolute sterility except in the valleys where certain evergreen oaks and other hardy trees found root and shelter against the fierce blasts of the "gregale"; and even to-day, viewed from the sea, the islands present a most forbidding aspect. In spite of this, of the smaller islands of the world Malta is the most populous, the most productive, the most interesting and architecturally the most important and picturesque.

Isle Without Lake or Stream

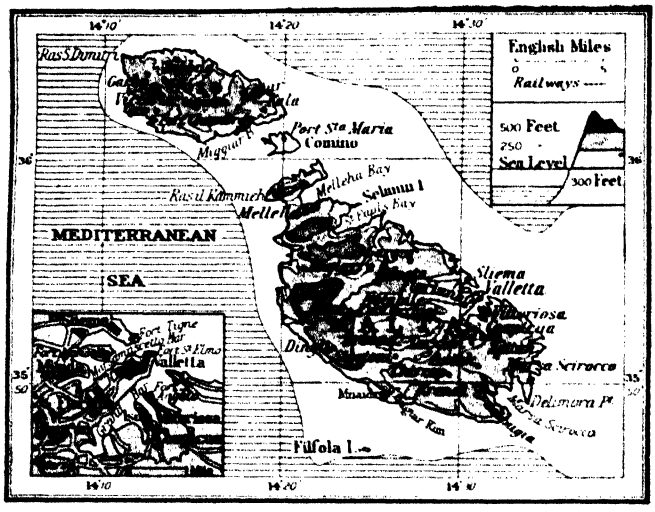
Its length is a little over 17 miles; its breadth is from seven to eight miles, and the total area about 91 square miles. By adding Gozo and the little intervening rock of Comino, the whole surface of the group reaches 118 square miles.

Throughout the island there is neither lake nor stream, and unless one counts the shallow rock-strewn ravines which carry off the violent winter rains, there is no relief to the arid character of the mass of porous rock, except for a few very carefully protected gardens and the cultivation in the walled-in fields.

On the south-western side of the island the coast consists mainly of perpendicular cliffs with steep slopes above, rising to 845 feet—the greatest elevation Malta possesses. The north-easterly shores are comparatively low between the deep inlet of St. Paul's Bay and Valletta, and also at the south-eastern extremity on either side of the broad, sheltered bay of Marsa Scirocco. Roughly, the surface of the island may be regarded as an inclined plain tilted to the south-west, and broken up with a number of shallow gorges worn in the coralline limestone.

Walls to Keep Out the Wind

The soil is exceedingly thin and would be liable to be quite washed away were not a most thorough system of terracing established wherever cultivation is carried on. Viewed from an aeroplane the island appears, during the spring and summer, to be an elaborate mosaic of green, but from the ground the very small fields—narrow strips and oddly-shaped patches—are hidden behind the stone walls built on all sides to protect the crops from the winter winds. This destructive blast, called the "gregale," blows from the north-east some six or eight times between December and March, and would make agriculture difficult were it not for the protection given by walls of limestone built throughout the island to hold up the soil. From the point of view of picturesqueness, the necessity of these walls is deplorable. On either side of the very white roads appears nothing besides



MALTA AND GOZO WITH VALLETTA PORT

stone walls in long, irregular lines punctuated by scattered bushes or stunted trees and small stone structures answering the purpose of barns.

Frost is not experienced in Malta, and the summer temperatures mount up rather high, that is between 99° F. and 103° in the four months of summer (June to September). In August and September, when the wind comes from the south-east, it brings to the island the almost suffocating heat of the Sahara, laden with moisture drawn up in passing over some 250 miles of sea. For three or four days at a time the islanders have to endure this form of ordeal, when life in the narrow streets of Valletta becomes a question of endurance, and the reason for the innumerable oriel windows becomes easily understood. In the ordinary heat of summer the temperature is increased by radiation from the bare limestone surfaces.

Winter and spring are both temperate and healthy, March, April and May being generally sunny and pleasantly warm with very little rain after March. The rainfall during the autumn and winter can reach high figures, 7¾ inches having fallen in a single December day. On the whole the changes of weather throughout the year are broadly similar to those of the south of France with extreme conditions brought about by the north-east blasts of winter and the baking south-east winds of summer.

The British garrison lives quite healthily in Malta now that the cause of Malta fever has been traced to goat's milk and its consumptionforbidden. Despite the fact that the Maltese are subject to the disease, they still consume goat's milk much as they did before the discovery was made. There is, too, a strongly rooted prejudice against having the goats milked where they are pastured; the people of Valletta insist that the evil-smelling little quadrupeds shall be milked at everybody's individual door. In this way, the otherwise very clean stone paving and great flights of steps throughout the port are daily and quite unnecessarily polluted.

There are over 43,000 goats in the island and about 28,000 sheep, and when to these are added about 9,000 horned cattle and some 16,000 horses, mules and asses, the stranger wonders how pasture and forage can be found for such herds. The modern Maltese terrier, once common, is now rarer and tends to become larger, while the ancient toy terrier, the "canis meliteus" of Linnaeus, died out in the eighteenth century. Pigs and poultry are bred in numbers for local consumption.

Except in the shallow ravines or where rock surfaces make cultivation a sheer impossibility, Malta is entirely given up to cultivation in the handicapped manner already mentioned. Wheat, barley, potatoes, onions, tomatoes, grapes and various forages, including sulla and different kinds of vetch, are grown extensively. Such large quantities of potatoes are produced that the surplus is exported. Perhaps one of the most surprising features of the island's productive capacity is the cultivation of cotton, which has been

going on for thirty centuries; the yarn is manufactured into cloth in the island. In 1923 about 43,000 acres of land were under cultivation, and of them between 800 and 900 were devoted to cotton.

Whatever was the early state of Malta and Gozo in regard to the growth of trees, and whatever may be the possibilities in the future, the islands are exceedingly bare and only in such highly developed gardens as that of San Antonio is it possible to find large trees of full growth. As a rule, trees are conspicuous by their absence, or, where they are found uncared for in exposed positions, are small and stunted. The evergreen oak, cypress, olive, ghar-ghar (producing citron wood) and palm are to be found in various parts of the island. The Norfolk Island pine grows so well that the whole aspect of the landscapes might be improved were planting carried out systematically

Roses and carnations have been cultivated in Malta from very early times and the "Rose of Malta," a variety of the Provence Rose, used to be grown for extracting its perfume. It is one of the most scented of all roses.

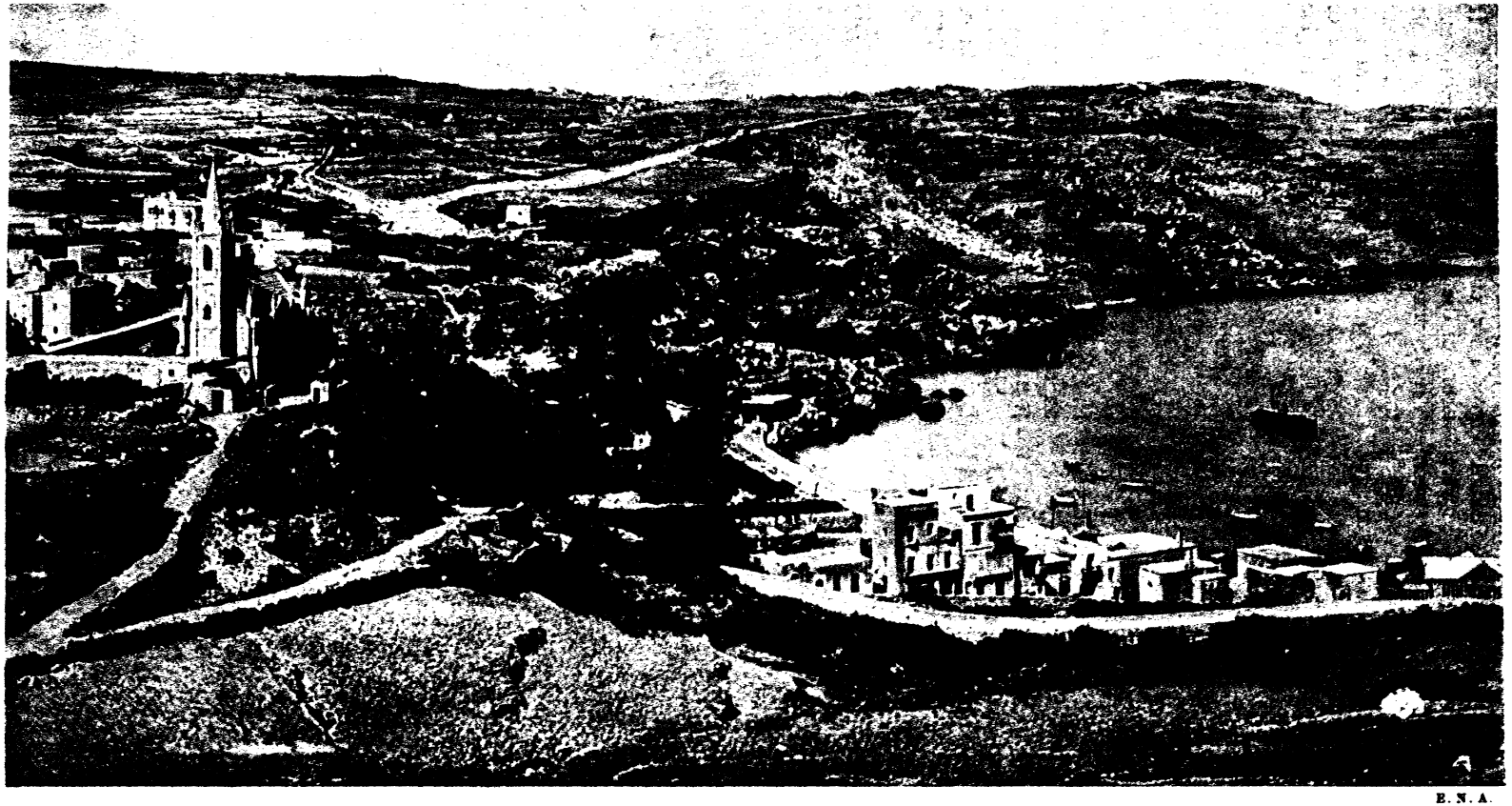
If it were at one time a difficult matter to decide whether the Maltese Islands belong, from a political and ethnological standpoint, to Europe or to Africa, it was no more easy to give this waif any recognizable geological parentage. By act of the British Parliament, Malta being part of the Empire, the group was declared to be in Europe, and it was found that while an elevation of only 50 fathoms would unite the islands with Sicily, which is 60 miles to the north, it would require an elevation of some 200 fathoms to join them to Africa.

Sir John Murray, of the "Challenger" expedition, was of opinion that the Globigerina and the upper coralline limestone, of which the islands are to a very great extent built up, at one time formed part of a land surface connecting Europe and Asia, and that through subsidence and other agencies

Gordon Home

HISTORIC HOME OF THE ARMY HEADQUARTERS AT VALLETTA

The Knights of the Order of S. John of Jerusalem ruled Malta from 1530-1798, and many of the buildings erected by them are still standing. The handsome Auberge de Castille, the finest of the great "auberges," or houses of assembly, of these Knights of Malta, stands in the Piazza Regina. Built in 1574, it was altered in 1744, and is now utilised as the army headquarters

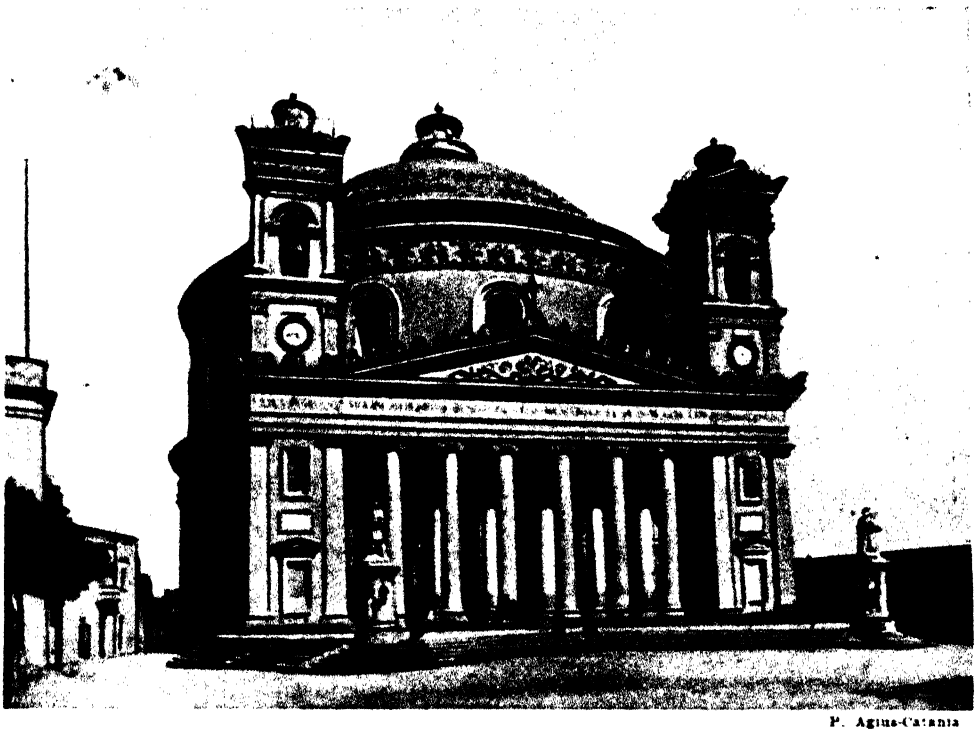


E. N. A.

PANORAMIC SURVEY OF GOZO THE SISTER ISLAND OF MALTA SHOWING MIGGIAR ITS LANDING-PLACE

The island of Gozo, in the Maltese group, is situated four miles to the north-west of Malta and measures about eight miles in length and four in breadth with an area of 26 square miles. The landing-place is Miggiar, on the south-east coast below Fort Chambray, while four miles to the north-west in the centre of the island lies Victoria, the capital. Gozo is considered to be more fertile than the main island; of coralline limestone formation its surface is varied and the well-cultivated terraced gardens and fields, encircled by high walls, produce an abundance of fruit and vegetables

only the fragments forming the Maltese group have been left. Before this land area was submerged the eastern half of the Mediterranean was a vast fresh-water lake, and in the many caves in Malta have been found remains of elephants, giants as well as pigmy (4½ and 2¾ feet high), the shark of the Miocene period, hippopotami and huge tortoises. Apart from building stone the islands possess no minerals.



P. Agius-Catania

MUSTA CHURCH WITH ITS STUPENDOUS SOARING DOME

Rounding the north-east coast of Malta, one sights the huge dome of Musta clearly visible against the horizon above the low, flat houses situated in its vicinity. This remarkable structure crowning the handsome church seen above, begun in 1853, is 118 feet in diameter, and, it is said, was constructed entirely by the villagers of Musta without the aid of scaffolding

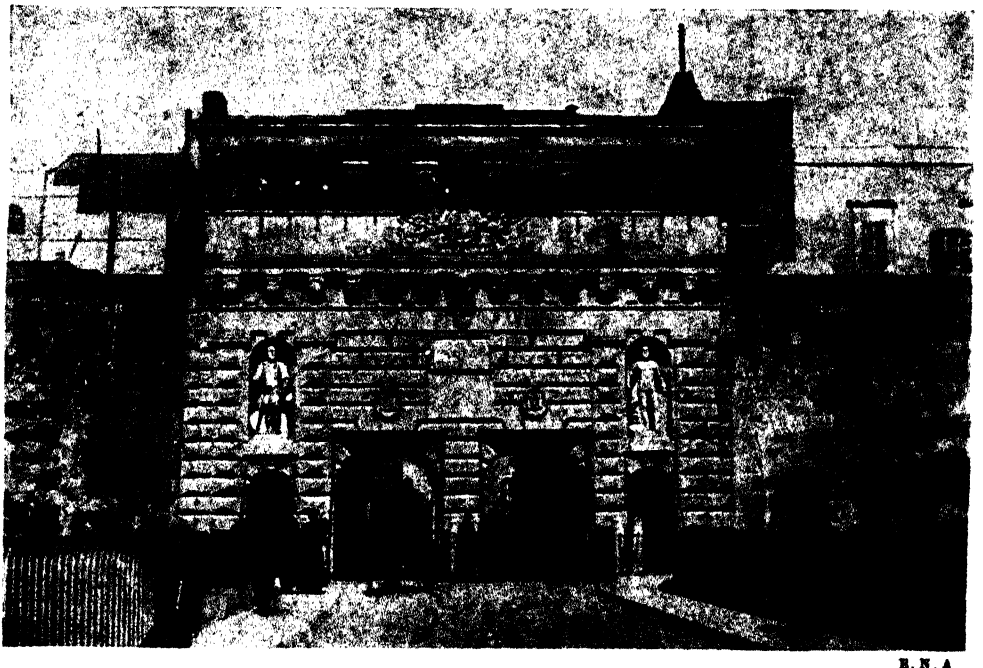
While the working of the 11,000 agricultural holdings in Malta forms its chief industry, the stranger might think that the main source of employment was the repairing and coaling of ships, for Valletta harbour is one of the most important ports of call in the world, and the Maltese, having shown themselves to be exceedingly efficient in engineering work of all sorts, have developed their opportunity to such an extent that no repairs to ships are beyond their capacities. In the creek above Isola Point in the Grand Harbour the largest ships of the British Navy are docked for repair and refitting. This work on the different units of the Mediterranean Fleet keeps a large number of men employed all the year round. Large stocks of coal are kept at Marsa, the inner end of the Grand Harbour, and the Maltese pride themselves on the rapidity with which they can fill the bunkers of ships.

The fishing industry of Malta is not organized, although about a thousand boats and between three and four thousand persons are employed, the catch of the whole fleet weighing over 1,100 tons per annum. Owing to the lack of coordinated effort, the work of this large number of people does not entirely meet the requirements of the islands, importation having to be made from Sicily. Tunny is fished at both ends of Malta, and specimens over 12 feet in length are sometimes caught,

E. N. A.

HANDSOME ARCADED ENTRANCE TO VALLETTA'S PUBLIC LIBRARY

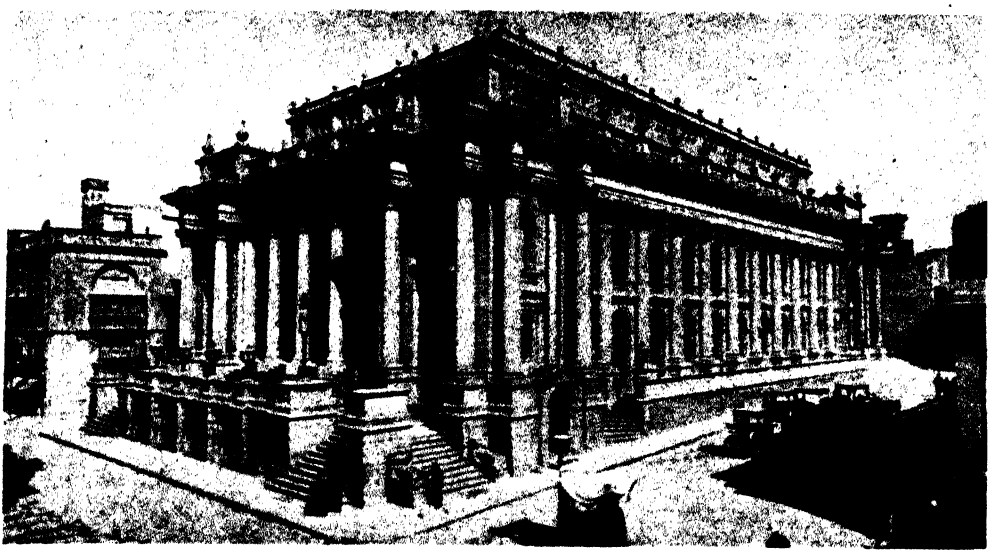
In the Piazza Tesoreria, the heart of the old town of Valletta, stands the finely-proportioned Public Library before the façade of which rises a marble statue of Queen Victoria. On the left of the photograph is seen a corner portion of the palace, a low building of unostentatious appearance, formerly the house of the Grand Master and now the seat of the governor of Malta



E. N. A.

MASSIVE GATEWAY BETWEEN VALLETTA AND ITS SUBURB FLORIANA

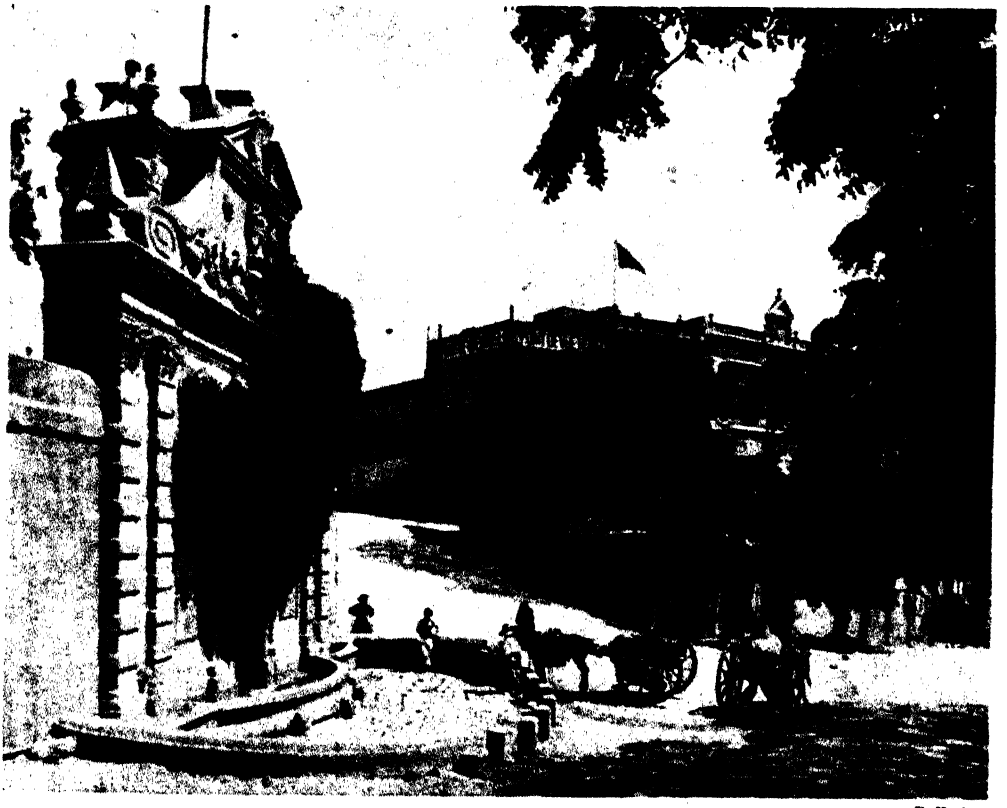
Porta Reale rises at the end of the Strada Reale, one of Valletta's main thoroughfares, beyond it lies the suburb of Floriana. In the niche on the left of the gateway is seen the statue of the man after whom the town was named, Jean Parisot de la Valette, Grand Master of the Knights of S. John of Jerusalem, who defended Malta against the Turks in 1565



E. N. A.

OPERA HOUSE OF VALLETTA STANDING IN THE STRADA REALE

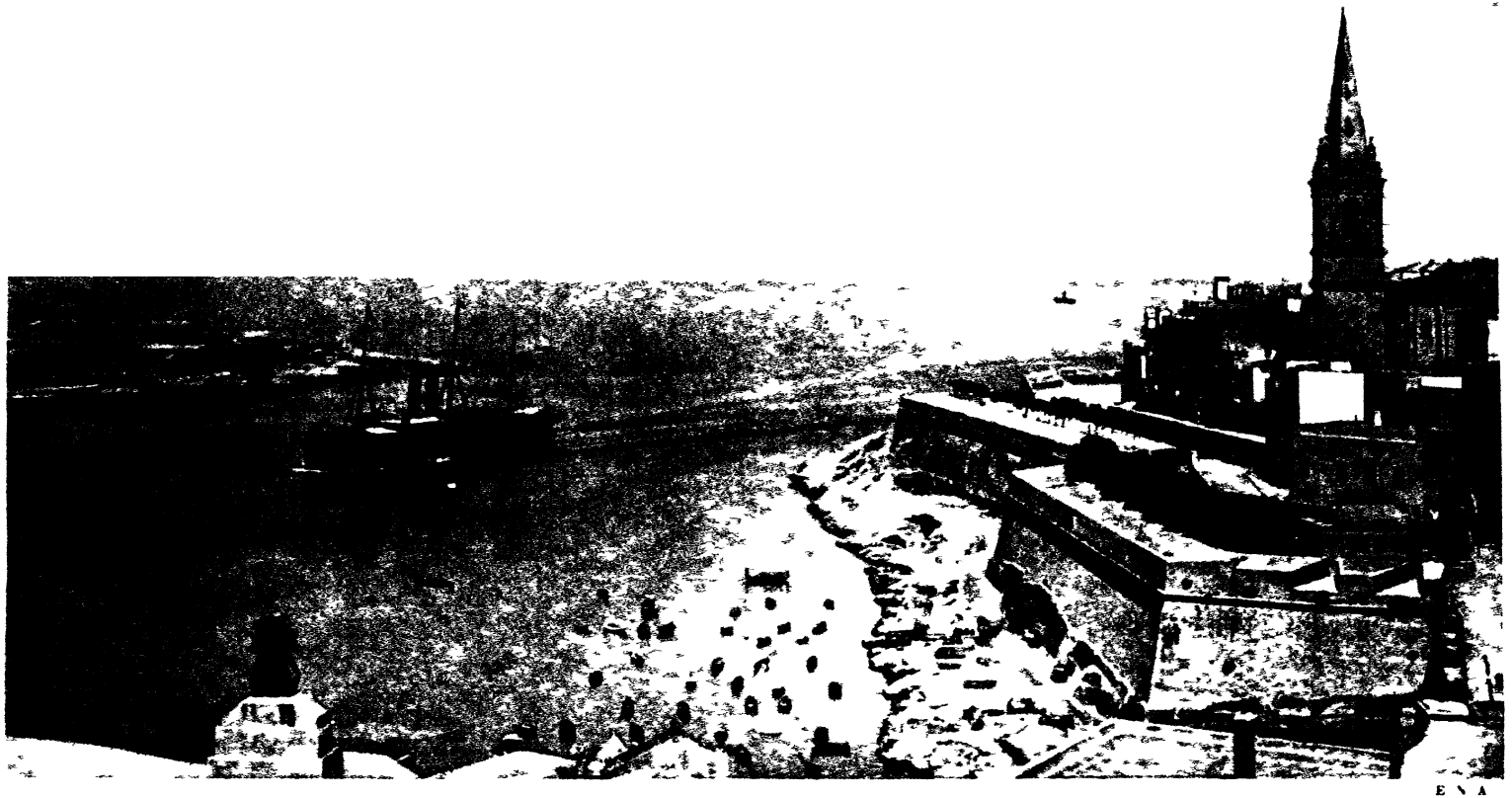
Despite the steep slopes of the promontory, Valletta is built on uniform rectangular street lines and is termed a " masterpiece of civil and military architecture." At its seaward extremity, the Strada Reale leads from Fort St. Elmo to the Porta Reale, a distance of nearly a mile, and is flanked by several noteworthy structures, including the Opera House at the corner of Strada Mezzodi



E. N. A.

BESIDE THE SAKKAJA FOUNTAIN IN MALTA'S FORMER CAPITAL

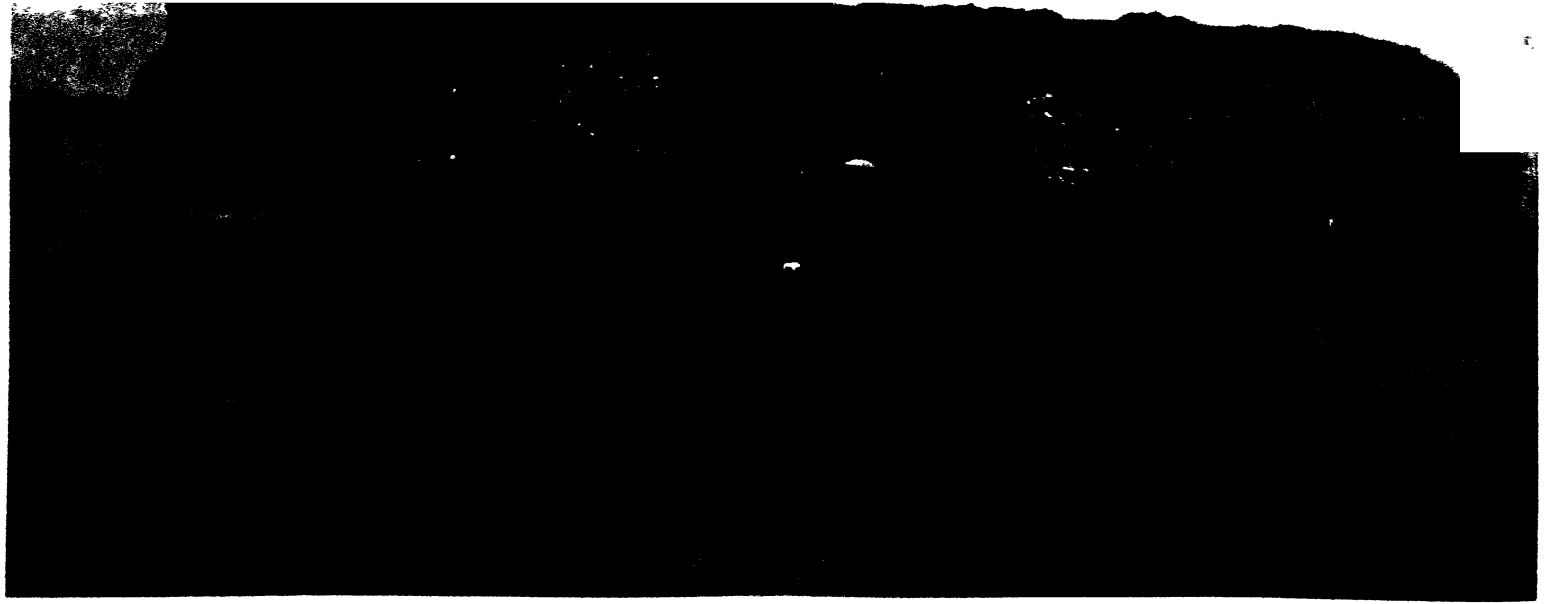
In the centre of the island lies Notabile, or Città Vecchia, the ancient capital of Malta and a fortified town in the days of the Roman rule A very attractive part of the town is this, where the Sakkaja Fountain and the Point de Vue Hotel, the latter commanding a lovely view of the environs, stand on the hillside leading down to the southern suburb of Rabato



E N A

ENTRANCE TO THE MARSAMUSCETTO HARBOUR OF VALLETTA, AN EMPORIUM OF MEDITERRANEAN TRADE

Valletta, the capital of Malta is situated on the north east coast of the island at the extremity of a promontory formerly known as Monte Sceberras, which is more than a mile in length and about half a mile in breadth and lies between two grand natural harbours, with magnificent docks which place it in the foremost ranks of the ports of call on the Suez route to the East. The Marsamuscetto Harbour bounds the promontory on its north-western side, and is guarded by three forts one of which is seen on the left, while on the right are Valletta's old town walls and white-gleaming bastions



SELMUN ISLAND, LEGENDARY SITE OF THE SHIPWRECK OF S. PAUL IN THE BAY WHICH BEARS HIS NAME

St. Paul's Bay is a deep inlet in the north coast of Malta nearly six miles to the north of Notabile. At the islet of Selmun, a wild rugged rock which rears its head in the deep northern waters of the bay, the shipwreck of S. Paul is said to have taken place and a giant statue of the great apostle to the Gentiles has been erected at its culminating point. Under the Church of San Paolo at Rabato, a suburb of Notabile, is a cavern in which S Paul is thought to have dwelt during his stay of three months on the island about the year 62

E. N. A.

FISH MARKET IN PROGRESS BENEATH THE HIGH WALLS OF VALLETTA

For their skill and enterprise as mariners, merchants and fishermen the Maltese are famed throughout the Mediterranean waters. Nearly 1,000 boats are employed in the fisheries, and very animated is the scene when, laden with their spoil, they assemble round the base of the long flights of steps which ascend steeply from the harbours, for fish is a popular diet among the islanders

E. N. A.

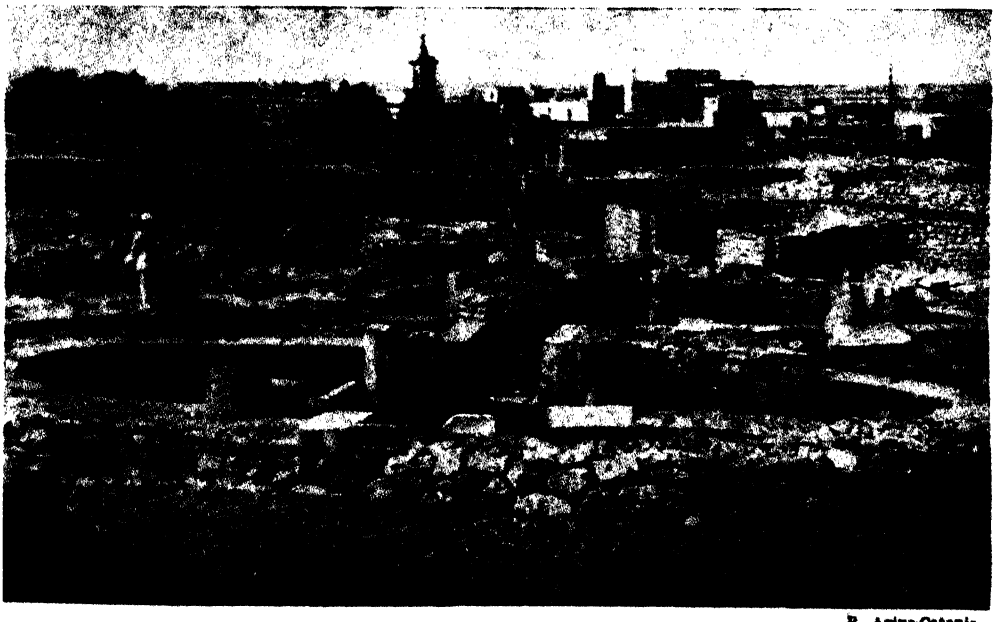
MALTESE METHODS OF SPRAYING THE DUSTY STREETS OF VALLETTA

The local water-cart, with its flexible pipe which, waved from side to side, disperses the water in fine particles about the dusty hot roads, is a familiar object in the streets of Valletta. The water supply of the town is a good one and widely distributed, on the land artificial irrigation is essential and on well irrigated land several crops may be raised in the year

P. Agius-Catania

RUINS OF A PREHISTORIC SANCTUARY DISCOVERED AT TARXIEN

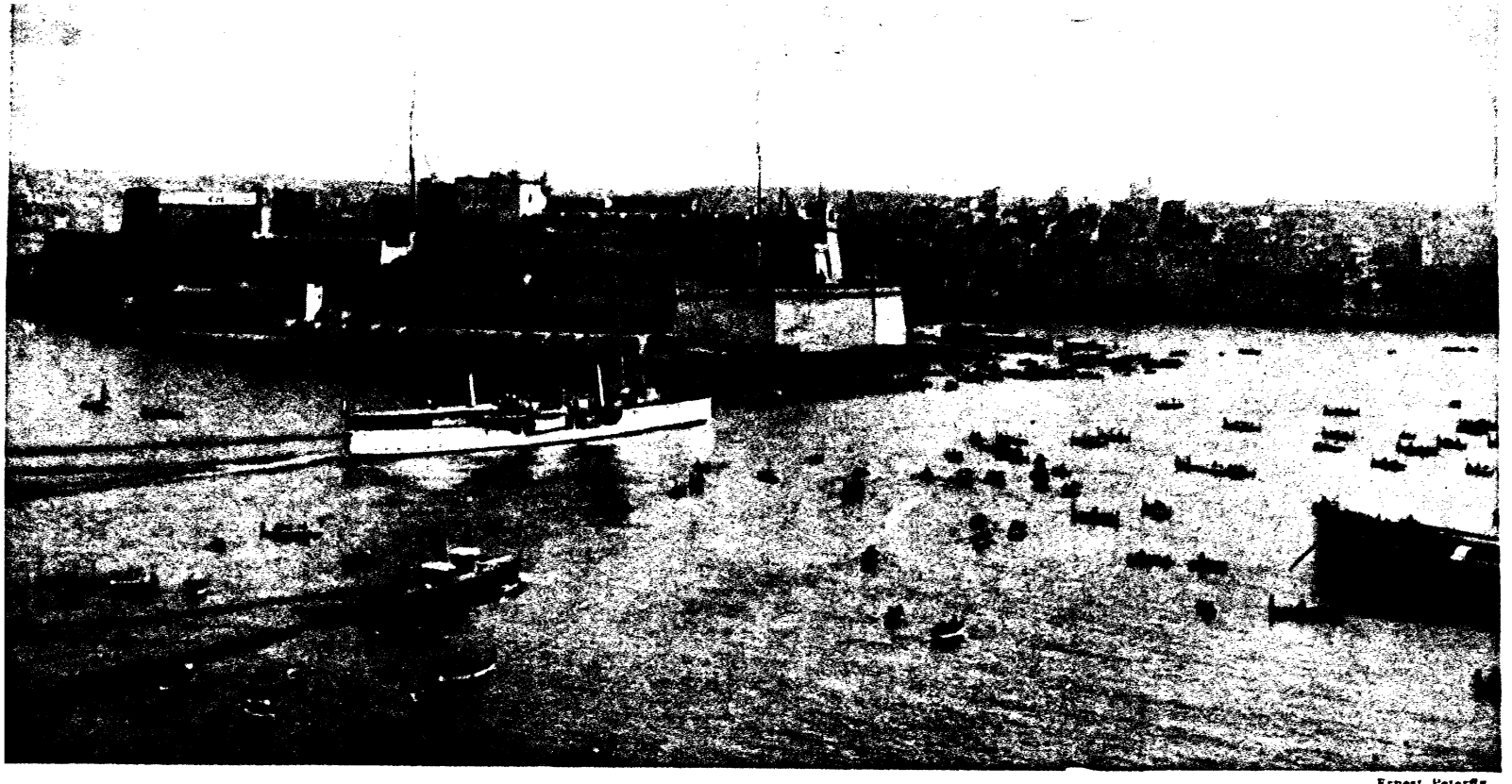
Malta has played a great rôle in history, for from the earliest days of maritime trade its possession was counted important to the strong nations on the sea. Many objects of antiquity have been discovered, dating back not only to the periods of Phoenician and Roman rule but to prehistoric times. The ancient ruins seen above form part of a temple built by some of the earliest inhabitants



P. Agius-Catania

MEGALITHIC MONUMENTS OF ANCIENT MALTA AT HAGIAR KIM

Long before the Phoenicians came to colonise Malta, about the sixteenth century B.C., the island had been in the hands of a prehistoric people, traces of whose civilization are still found in various stone structures in the cyclopean style. Among these monuments are the prehistoric ruins of Hagiar Kim, situated on the south coast of Malta, constructed of huge blocks of stone without mortar



Ernest Peterffy

SCENE IN THE GRAND HARBOUR, SHOWING FORT ST. ANGELO, THE OLDEST PART OF THE FORTIFICATIONS

Because of its strong fortifications and central position, Valletta, with its fine dockyard and arsenal, is the chief British naval and coaling station in the Mediterranean Sea, and both the Grand Harbour and the Marsamuscetto Harbour constitute an important British naval base and the headquarters of the British Mediterranean Fleet. The fortifications of Valletta are very interesting: the oldest portion of them is Fort St. Angelo, originally constructed in the ninth century by the Moors, which lies opposite the city on a creek of the Grand Harbour, whose waters are studded with the gondola-like type of Maltese craft, so striking a feature at Valletta

The lampuca, a migratory fish which comes to the islands in autumn, is caught in considerable quantities and is eaten by all classes of the people. Besides these there are turbot and sole, garfish, muraena, red mullet, bass, scad, dory, sword-fish, and the dentex and barracuda pike, both of which grow to four or five feet in length.

A railway unites Valletta with Notabile (Città Vecchia), the old capital of Malta, a distance of 7½ miles with three stations between the termini. In addition some 14 miles of tramways were laid in 1907, the chief line running roughly parallel with the railway and about a mile and a half to the south and extending as far as the village of Zebbug. Another line also starting from Floriana, the western suburb of Valletta, encircles the inner end of the Grand Harbour. A third feature of the communications of the island is the electric passenger lift to the Upper Barracca Gardens, 220 feet above the Marina at the finest point in the Grand Harbour. It is one of the highest elevators in Europe, and is a time-saver of great importance to the people of the island.

generally kept in very fair condition. Gozo's roads all come under the heading of third class, but are adequate for the agricultural needs of the island. A daily steamer carries the mails to and from Gozo, and in addition communication between the islands is supplemented by large lateen-rigged sailing boats, a picturesque feature of the Grand Harbour.

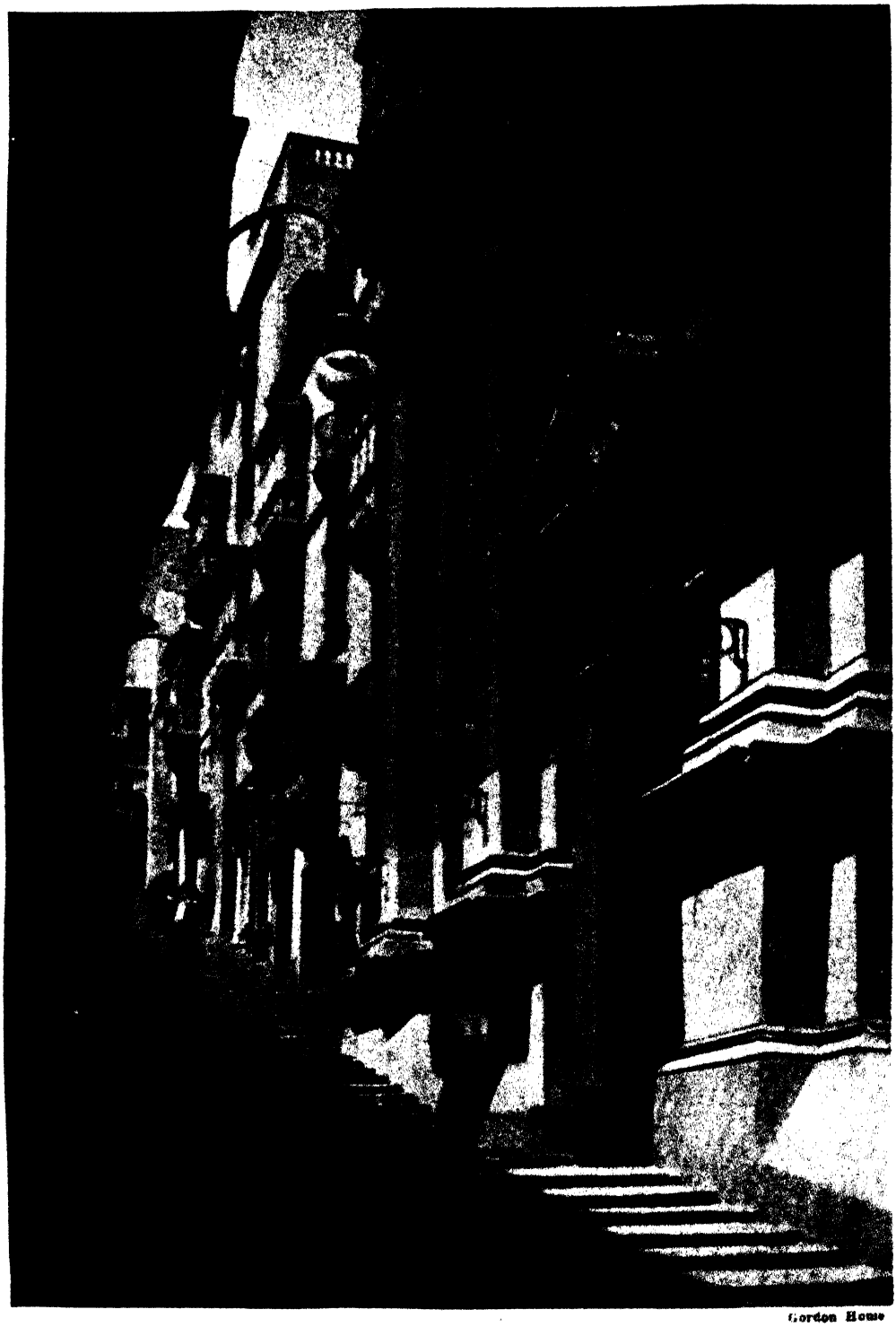
Apart from large quantities of building stone Malta's exports consist of little besides two or three thousand tons of early potatoes and small quantities of tomatoes, onions, preserved cummin, cotton and cigarettes. There has been, however, some considerable export of the fine breed of mule-getting donkeys for which the island is famous.

As a town Valletta is unique. It stands on a wall-sided tongue of rock, the sloping surface of which is about 200 feet above sea-level, with the Grand Harbour to the south and that of Marsamuscetto to the north. Local stone is everywhere employed, and almost the whole of Valletta itself consists of regularly-planned streets of houses and palaces, nearly all of them

E. N. A.

LONG ROWS OF THE OLD UNDERGROUND GRANARIES AT FLORIANA

Floriana, the suburb of Valletta, occupies the lower half of the promontory. Although many modern buildings have arisen in this quarter, which is screened by its landward fortifications and an outer line of defensive works, several interesting old features exist, and this view shows the excavated granaries where in former times the grain for consumption by the populace was garnered



Gordon Home

STEEP, OLD-FASHIONED STAIRWAY STREET IN MALTA'S CAPITAL

Enthroned on a rock above its harbours, Valletta has many steep streets which, inaccessible to wheeled traffic, are ascended and descended by means of steps. Here in the Strada S. Giovanni is seen a woman wearing the faldetta, the curious black headgear of combined hood and cape, mostly worn by women of the poorer sort, which is the only remaining relic of the ancient national costume

P Agius-Catania

AMONG THE STONE WALLS OF THE MALTESE COUNTRYSIDE

The chief pursuit of the Maltese islanders is agriculture, but it is only by careful tilling and irrigation that they can rely on the arable land to produce luxuriant crops. Horses, mules, sheep, asses and goats are reared; the last named, hardy and thriving on a miscellaneous diet, are kept chiefly as a source of dairy produce, being of particular value as milk producers

of this uniformity the town is full of picturesqueness, for at many points there are broad flights of steps going down steeply to the harbours, while the façades of churches and the palaces or auberges of the Knights of Malta are conspicuous features forming beautiful and often very impressive foregrounds to the scenes. The streets would be spotless were it not for the goats.

In addition to the suburb of Floriana others are perched on or around the tongues of rock projecting laterally into the Grand Harbour. They repeat to some extent the features of Valletta, but are not built on such fine lines. The earliest portion of the town is Vittoriosa, which was the first home of the Knights of Malta when they came from Rhodes.

On the northern shores of Marsamuscetto Harbour is Sliema, the more newly-built and open part of Valletta, where the officers of the British garrison find more airy quarters than in the narrow streets of tall houses in Valletta proper.

Notabile, the only other town of any consequence, is the old capital of Malta. It is a sleepy little place in an elevated situation, on the higher side of the island, and commands extensive views over land and sea. It is built of the creamy-coloured limestone employed everywhere in the group, and is almost united to Rabato, a place of roughly similar size. Even the villages, of which there are a score or more, consist exclusively of stone-built houses, and generally have an appearance of tidiness and regularity without any squalid features. The flat roofs were at one time an important feature, for by means of the rain taken from them the supply of drinking water of the inhabitants was maintained. Since the building of the aqueduct by Grand Master Wignacourt in the seventeenth century drinking water has been brought to Valletta from springs.

The Maltese are a remarkable people, and scientific study in recent years has come to the conclusion that they are an exceedingly pure and unmixed race. Although they speak a dialect of Arabic there seems no reason to believe that they are of Arab origin. It is quite probable that they belong to the great

Mediterranean or Eurafrican race which, long before the rise of Greece and Rome, occupied the greater part of the lands bordering on the inland sea.

The most ancient skulls found in Malta, dating probably to 3,000-4,000 B.C., are identical in characteristics with those of this primitive race discovered elsewhere; and those of the Maltese of to-day are exactly similar. In other words the same people with hardly any foreign admixture has inhabited Malta for nearly 6,000 years.

The language spoken by all is an Arab dialect which is so closely akin to that spoken along the Mediterranean shores of Africa that the Maltese finds himself quite at ease when he seeks a home on the shores of that continent. As a rule the upper classes and the people of Valletta generally speak English well, although the less-educated have some hesitation in forming a complex sentence and a good deal of accent. Italian is commonly spoken by the upper classes, and outside the towns it is not unusual to find the people unable to speak anything besides Maltese and a smattering of Italian.

The type of physiognomy usually encountered in the capital is somewhat full-faced and heavy though good-looking. Away from Valletta in the villages of the interior of the island the most ancient strain in the population is believed to be represented by those who have thin and wiry faces with keen, mobile features and, in some instances, grey or blue eyes.

The megalithic remains in the southern end of Malta and in Gozo are of great importance. They consist of elaborately constructed temples put up in the later Stone Age or neolithic period. Hagiar Kim and Mnaidra above the inaccessible cliffs south-west of Valletta are still amazingly complete and picturesque, while Gigantia, in Gozo, is a temple on a still larger scale. At Hal Saflieni there is a very remarkable series of underground chambers—a hypogeum whose walls and roofs are in part covered with a flowing design in a red pigment.

It is the industry and activity of the Maltese which has made the islands prosperous and enables them to support such a large population. By their skill and energy in agriculture they produce four crops annually from the very thin soil. They live as a rule in the most frugal manner, their diet consisting mainly of bread and vegetables. As handicraftsmen the Maltese rank high, and in the sixteenth century it was their skill in ship-building and rigging which contributed not a little to the success of the Knights of S. John against the onslaughts of the Turks. In cabinet-making, filigree work and the production of lace they show great aptitude.

It would be difficult, if not impossible, to find another hundred square miles of the earth's surface where the inhabitants have had more strenuous conditions of life than the Maltese, and where industry and skill have been so entirely successful in overcoming them.

MALTA: GEOGRAPHICAL SUMMARY

Natural Division. Insular fragment of the sunken land bridge between Italy and Africa (v. Mediterranean Sea, Sicily). Mainly limestone. (Cf. the Karst in Serbia, the Carso in Italy North.)

Climate and Vegetation. Typically Mediterranean, with droughty summers and winter rains. Winds, "gregale" and "sirocco," blow freely and cause temporary inconvenience. Very little forest or natural vegetation.

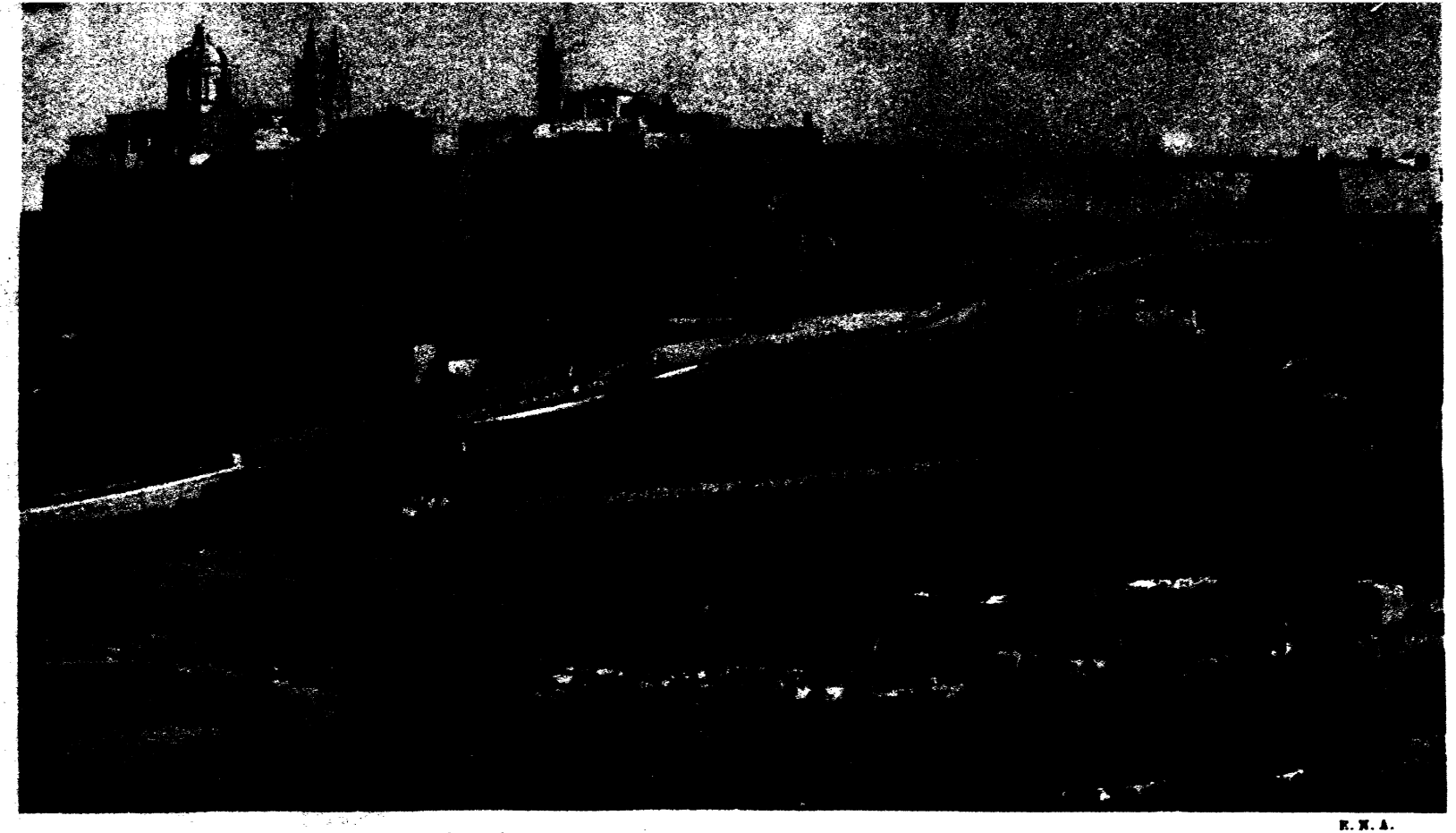
Products. Mainly horticultural. (Cf. China, Japan.) Potatoes, wheat, tomatoes, grapes, roses, cotton.

Communications. A unique nodal point, in contrast with Aden which lacks local supplies. Malta is one of the chief places in the Suez Canal route between the Atlantic and Pacific Oceans.

Outlook. The Maltese, within the limitations of the climate and the soil, have naturally had close contact with all seafarers whose varying fortunes have been reflected in the island; and the future holds little other than a continuance of these fundamental circumstances in the changing environment typified by the turbine steamer and the aeroplane.

E. N. A.

MALTA. *Strada Santa Lucia, climbing the steep ridge on which Valletta stands, is a series of steps through a canon of houses*

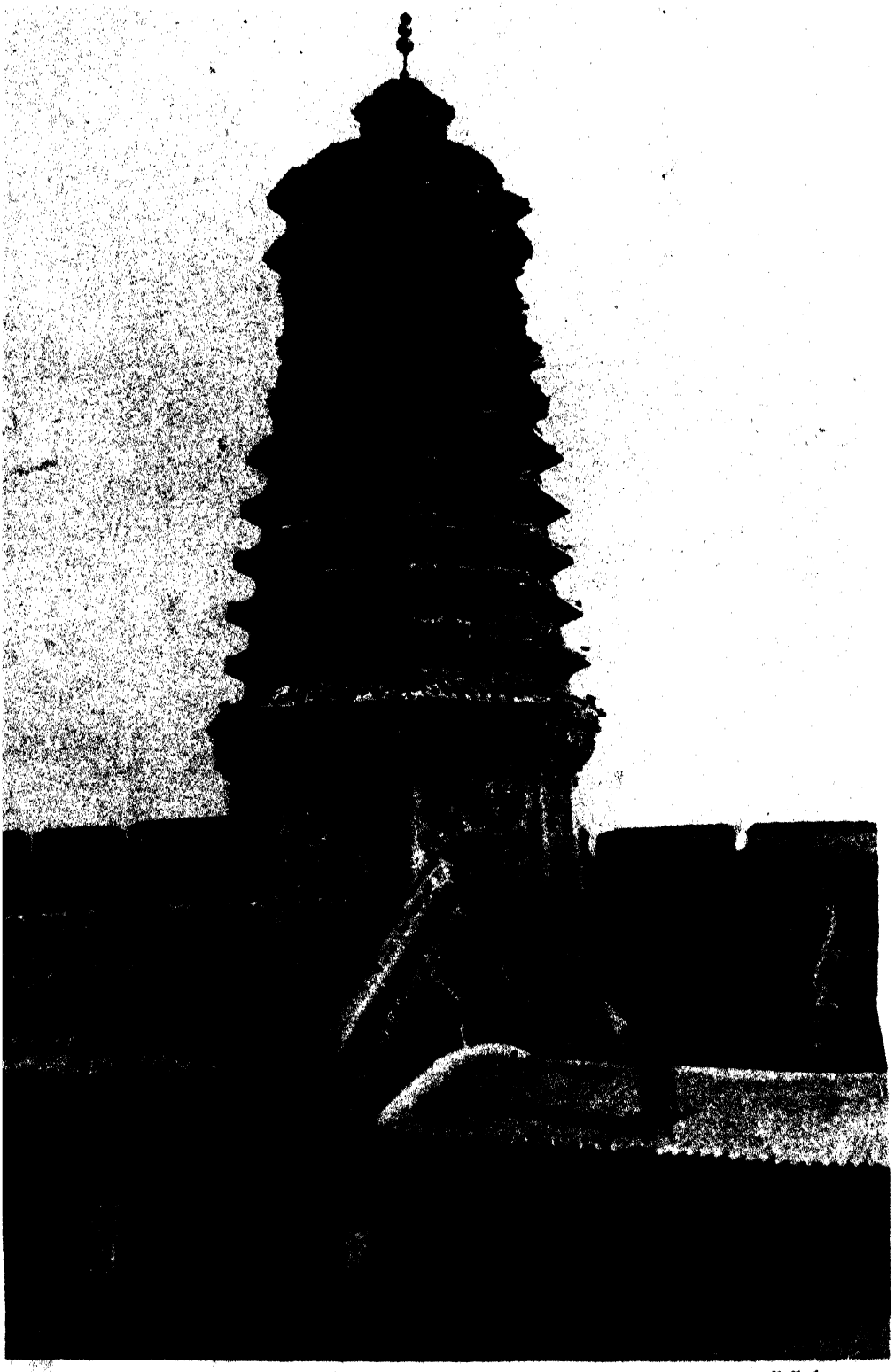


F. N. A.

MALTA. *S. Paul's Cathedral dwarfs the mighty guardian cincture around huddled Citta Vecchia, which now has only to withstand the gnawing assaults of weather, creeper, and clinging moss*

Ewing Galloway

MANCHURIA. *A carriage, which has the droshky for its prototype, stands side by side with the rickshaw of the Orient in the drive of the public building given to Dairen by the South Manchuria Railway*

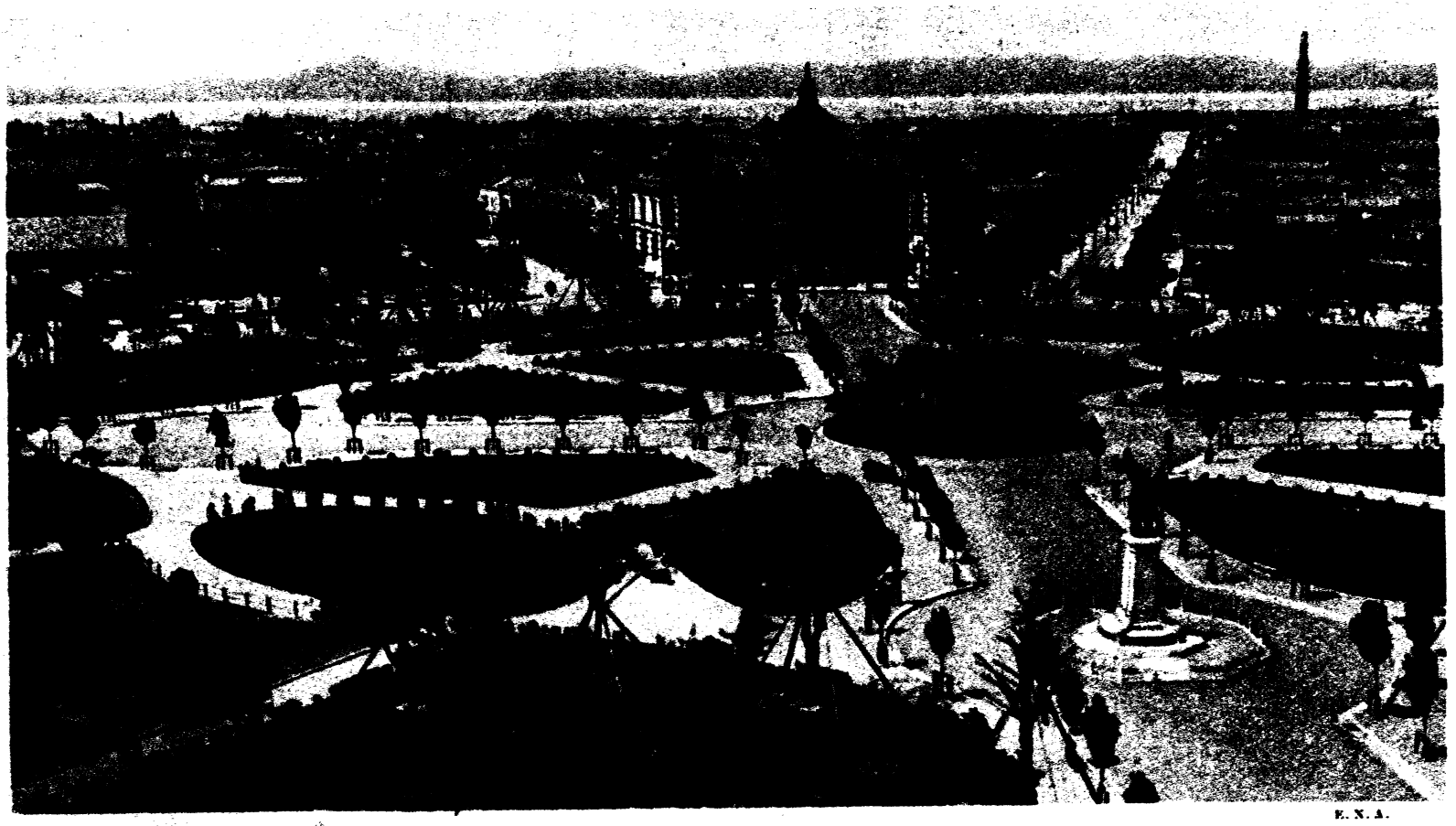


K. H. A.

MANCHURIA. *This huge and weather-worn La-ma-ta, or Tower of Lama, reputed to be 2,000 years old, dominates the west of Mukden*

Ewing Galloway

MANCHURIA. *Carved images of Buddha gaze over the garden from niches in the sides of the Pai-ta or White Tower of Liao-yang*



E. N. A.

MANCHURIA. *The hub of Dairen is the circular "Great Square," planted with trees and shrubs, from which radiate the principal streets. The fine domed building is the Yokohama Specie Bank*

Ewing Galloway

MANCHURIA. *Where for centuries the camel and the mule trod the plains and valleys, the train now runs on its iron course. The South Manchuria Railway has erected this vast station at Mukden*

E. K. A.

MANCHURIA. *Only impassive stone animals in the grass-grown courtyard watch, from beneath pines which creak in every wind, the neglected tombs of the Manchu dynasty near Mukden*

MANCHURIA

Virile Land of Forest and River

by Arthur de Carle Sowerby

Author of "Fur and Feather in North China," etc.

MANCHURIA, as it exists to-day, consists of the three provinces of Shengking, Kirin and Heilungkiang. In the old days when the Manchus rose into power it consisted of a much wider stretch of territory and included what are now known as the Amur and Primorsk provinces of eastern Siberia. These provinces were taken from the Chinese Empire by Russia in 1858.

Situated to the north-east of China proper, the three provinces of Chinese Manchuria lie roughly in the form of a great horseshoe, Shengking being the southernmost and Heilungkiang the northernmost, with Kirin forming the apex in the east. They still form part of the Chinese republic though only in name; but this state of affairs must be considered as a phase, as Manchuria, by reason of its population which now consists predominantly of Chinese immigrants from the provinces of Chih-li and Shan-tung, is essentially a part of China and sooner or later must re-unite with the latter.

A White Man's Country

It may be described as a "white man's country," that is to say, it is eminently suitable for the residence of Europeans and Americans, as in many ways it closely resembles Nova Scotia. It is a land of mighty forests and rivers, rolling, fertile plains and rugged mountains, and it is still in a comparatively early stage of development. Owing to the wonderful richness of the soil and the extent of its uninhabited areas, the country has been to China what Canada has been to England and Europe—a land of promise to settlers. Chinese farmers from the provinces of Chih-li and Shan-tung have, for the past half-century, looked to it as a land where a new start may be made and where rich, fertile land may be had for the clearing. It boasts a wealth of animal and vegetable life that is unsurpassed in this part of the Asiatic land-mass.

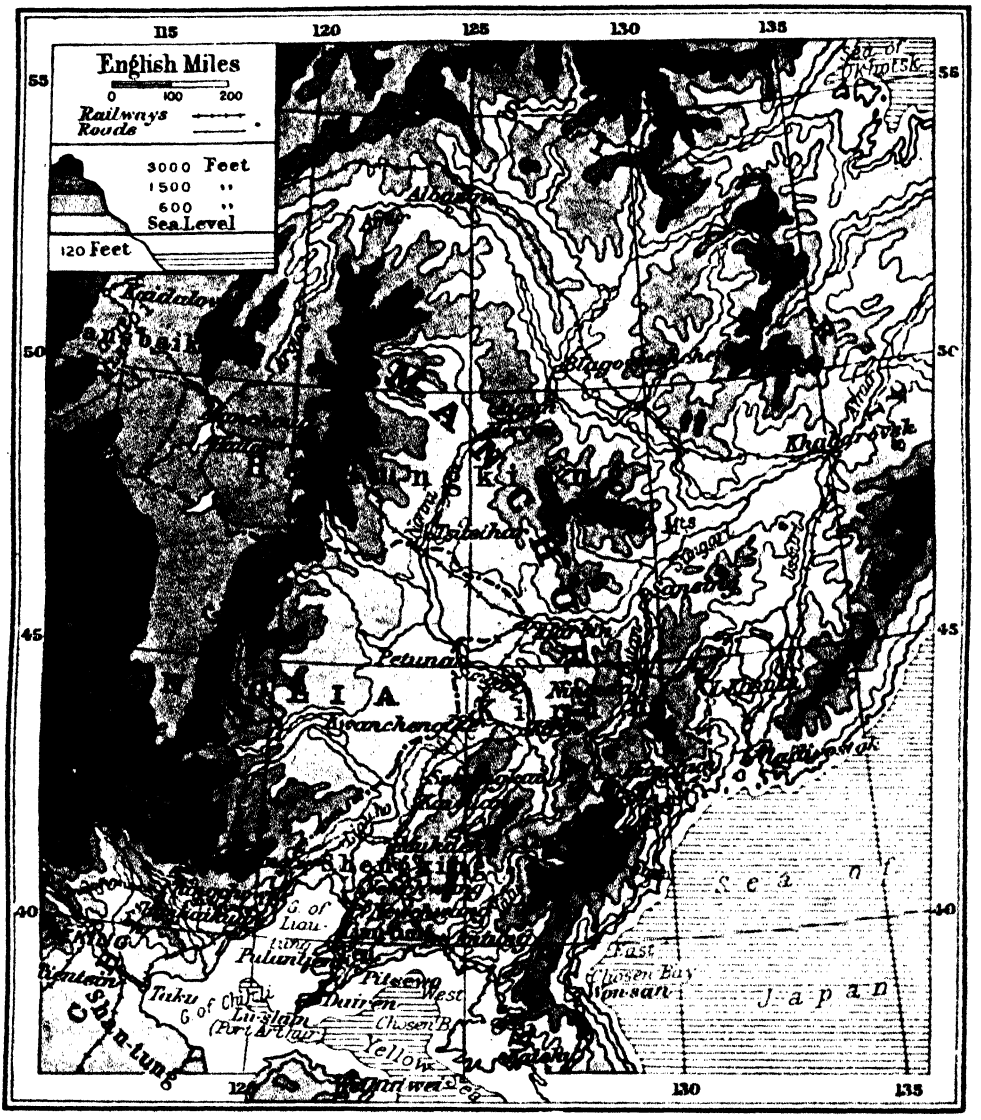
Manchuria's Three Great Provinces

Manchuria is bounded on the west by Mongolia and China proper, on the south by the Chih-li Gulf, West Chosen Bay and Korea, on the east by the Primorsk or Maritime province and on the north by the Amur province, or Pre-amur, and Transbaikalia. It lies roughly within the parallels of latitude of 40° and 56° N. and the meridians of longitude of 120° to 136° E. Its total area is about 355 600 square miles.

The greater part of the province of Shengking consists of low-lying, rolling plain with hills or low mountains along the Chinese and Mongolian borders in the extreme west and along the Kirin border in the extreme east. The Liau-tung promontory, which lies in the extreme south, jutting into the Gulf of Chih-li and dividing the Liau-tung Gulf from West Chosen Bay, is more or less covered by barren, rugged hills. In the west and north-west the country is inclined to be sandy, partaking of the nature of the Gobi Desert.

Kirin province is mainly mountainous and hilly and a great part of it is heavily forested, though the forests are being cut away very rapidly and the whole province settled up by immigrants from China. There still remain, however, enormous reserves of timber in this province, especially over the slopes of the Chang-pai-shan.

Heilungkiang is also hilly and mountainous, and, in places, heavily



GREAT MOUNTAIN TANGLE AND ROLLING PLAINS OF MANCHURIA

forested, though large areas are covered with low scrub. This province is not nearly so well populated as the two former, and, consequently, is less extensively cultivated.

Three extensive ranges of mountains occur in Manchuria, namely the Great Khingan mountains which lie in the extreme western part of Heilungkiang, extending thence southward into eastern Mongolia; the Little Khingan mountains which run through eastern Heilungkiang; and the Chang-pai-shan (Long White Mountains), which cover the greater part of southern Kirin, and whose culminating peak, the Peik-tu-shan (Old White Mountain), was the sacred mountain of the Manchu dynasty. It is an extinct volcano with an altitude of some 7,000 feet and a wonderful lake in its crater.

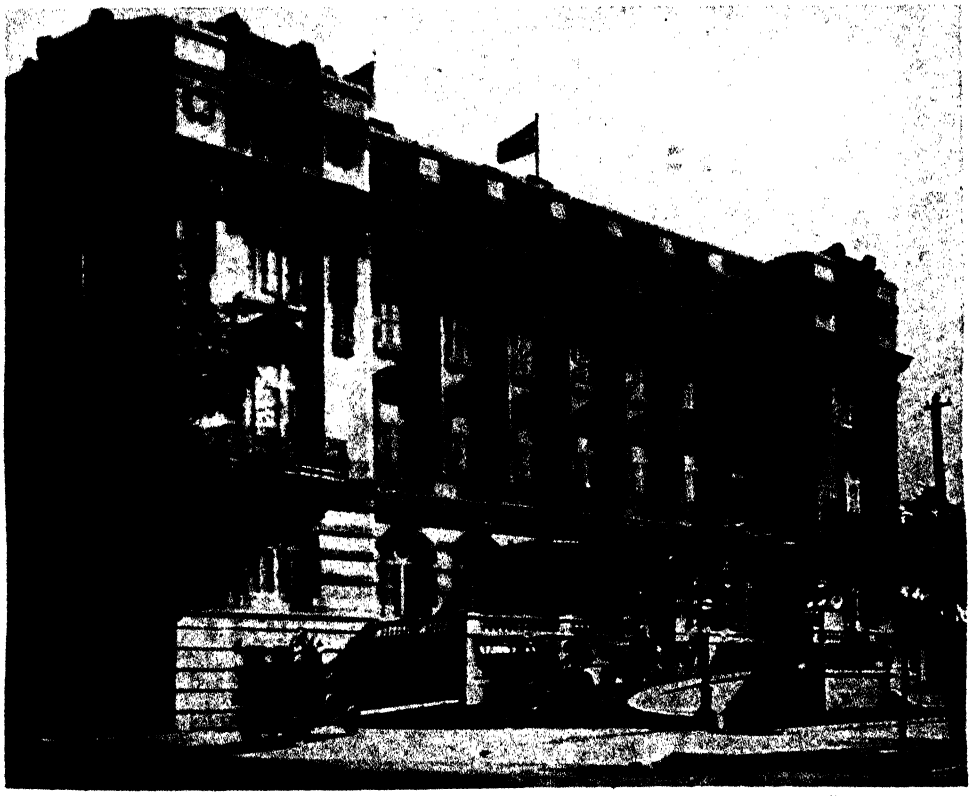
On its slopes rise the Yalu river and the Tumen river on the south and the mighty Sungari river on the north. The Yalu river flows in a south-westerly direction and forms the boundary between southern Manchuria and Korea, emptying itself into West Chosen Bay to the

north of the Yellow Sea. The Tumen flows in a north-easterly direction to the Sea of Japan, and divides Korea from south-eastern Manchuria. The Sungari flows in a general northerly direction past Kirin city, the capital of Kirin province, past Petuna and the important city of Harbin, and joins the great Amur river some 300 miles from its mouth.

The Sungari has two very important tributaries, namely, the Nonni river, which drains southern Heilungkiang; and the Mutan, or Peony, river which drains Kirin province, having the important city of Ninguta on its banks and joining the Sungari at Sansing. The province of Shenking is drained by the Liau river, which rises in Mongolia, flows eastward and then southward, emptying itself into the Liau-tung Gulf, which is an offshoot of the Gulf of Chih-li.

The Amur is one of the largest rivers of eastern Asia. Rising in Mongolia, it flows in a general easterly direction forming the political boundary between Manchuria and the Amur province. In the extreme east, forming the boundary between the Primorsk province and Kirin, lies the Ussuri river, which rises in Lake Khanka and flows in a northerly direction to the Amur at Kharbarovsk.

Scattered through the forest areas of southern Kirin are numerous small crater lakes of extreme beauty that some day, when the country becomes settled, must form very attractive watering-places. At present, however, they are buried in the depths of the primeval forests and have scarcely even been visited by white men. They are looked upon with awe by the Chinese who maintain that they are inhabited by dragon princes. The pool in the



Ewing Galloway

WESTERN ARCHITECTURE IN A FAR-EASTERN SETTING

The southern part of the Liau-tung peninsula, leased to Japan, is under a Japanese governor-general, with the seat of administration at the seaport-town of Dairen, known also as Tairend, Talien-wan and Dalny. The imposing building seen above is Dairen's modern hotel, run by the South Manchurian Railway Company, and said to be one of the finest hotels in the Far East

crater of Peik-tu-shan is looked upon as the mother of all the other lakes and is known to the Chinese as "The Dragon Pit." Strange to say these lakes are inhabited by certain species of fish and the wonder is how they ever came there, considering that many of the lakes have no outlet.

Torrential Rain in Summer

The climate of Manchuria is, on the whole, humid. A great deal of rain falls during the course of the year, but especially during the summer, when it is often torrential. In winter a corresponding amount of snow falls. The temperature is warm in summer, autumn and spring being mild and winter excessively cold. Indeed, the range of temperature is very great, zero weather being prevalent in winter, while in summer the thermometer may register as much as 95° F. in the shade even in the northernmost province of Heilungkiang. The cold weather begins in October and continues till April, after which summer comes on with a rush. Though the day may be warm, nights are always cool.

The vegetation is very luxuriant, especially where the forests, which are extensive in Kirin and Heilungkiang, have been allowed to remain. The flora is rich and varied. A wealth of gorgeous blossoms greets the traveller in spring and summer, while the autumn hues of the trees and shrubs form a blaze of colour nowhere surpassed in the world.

Wealth of the Vast Forests

The forests are composed of pine, spruce, walnut, elm and oak, besides a host of less valuable timber trees, such as maple, birch, wild pear, apple and the like. The wild grape is everywhere abundant in the forested regions, where also the undergrowth is made up of a prodigious wealth of fern, horsetail and small flowering plants. Numerous edible fungi abound, the gathering, drying and exporting of which to China forms an important industry. The far-famed ginseng (Panax) is diligently sought by herb gatherers from China, it being indigenous in the forested areas.

Corresponding with this wealth of vegetation is a very rich fauna. Over 450 species of birds are known to occur in the Manchurian region, either as residents or transient visitors. Mammals also are plentiful, the great woolly tiger, several bears, the leopard, the wild boar, various deer, wild goats and sheep, the sable, otter, mink, marten, ermine, wild cat and many others forming a fine list of valuable fur-bearing or economic animals.

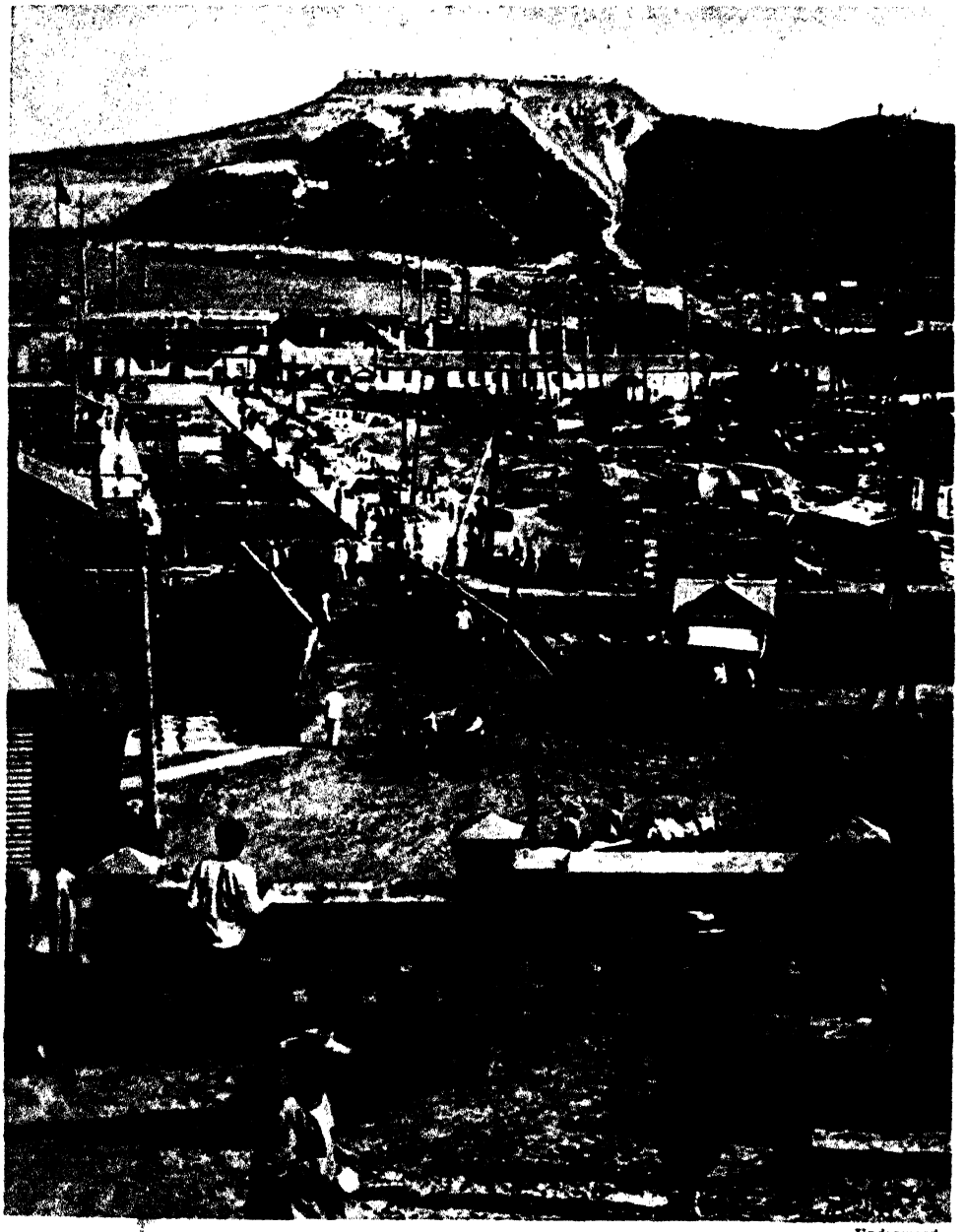
Numerous species of small rodents, such as chipmunks, rats, mice, voles, hamsters and flying squirrels, as well as bats of various kinds, shrews, moles, hedgehogs, hares and pikas complete the list of land mammals. The white dolphin, or beluga, ascends the Amur river and several species of whale, dolphin and porpoise occur off the coasts, where also a number of seals, the sea-lion and even the fur-seal are to be had. The valuable sea-otter was formerly common on the north coasts, but is now very rare.

A Fisherman's Paradise

The great rivers and lakes support a rich fish-fauna, the most valuable forms being the various kinds of salmon which run up the Amur and its tributaries to breed. The lesser streams abound with trout, charr, grayling, pike, carp, bass, catfish and other valuable species. Two forms of sturgeon are taken in the larger rivers, one a veritable giant that reaches a length of upwards of 15 feet and a weight of over 2,000 lb. The marine fisheries are also very valuable, especially in the seas to the east of Korea.

Reptiles and amphibians are comparatively few, the extremes of climate being too hard for these types of vertebrates. Insects are extraordinarily abundant. Other invertebrates are not so plentiful, though sufficiently so to give the naturalist much to do.

The greater part of Manchuria is of igneous formation, plutonic and volcanic rock forming the mass of the outcrops. Large areas of Kirin are covered with



Underwood

PORTION OF THE FAMOUS MANCHURIAN SEAPORT LEASED TO JAPAN

In 1915 Japan obtained from China the extension of the lease of the territory in the Liau-tung peninsula, including Port Arthur and Dairen, to 99 years. A strongly fortified seaport, Port Arthur, or Lu-shun, lying near the southern extremity of the peninsula, possesses a secure ice-free harbour and is the terminus of a branch line of the South Manchurian Railway which is in Japanese hands

columnar basalt, while the Chang-pai-shan mountains are largely volcanic. Nevertheless the carboniferous series is represented in many parts of Shengking province, coal being mined extensively and forming a valuable industry. Throughout the central, eastern and northern areas placer gold is abundant, but it is more or less monopolised by the government. Other metals are iron, silver, copper and lead.

The most important resources of Manchuria are agricultural, the soya bean being the main stand-by of the

agricultural population and the chief export. From it bean cake, bean oil, soya sauce and bean curd are made, all except the curd being extensively exported. Wheat is also extensively grown as well as other cereals such as sorghum, millet and maize. Wheat flour is milled in many places. Tobacco too is very widely cultivated. In south Manchuria the wild silkworm is cultivated, the hills being largely planted with scrub oak on the leaves of which the worms feed. They produce a high grade of tussore silk, which is largely exported to Shan-tung in China, where it is manufactured.

Scourge of the "Red Beards"

The human population of Manchuria is, as already indicated, mainly Chinese, largely composed of immigrants from Shan-tung and Chih-li. It is steadily on the increase, and the Chinese are rapidly overwhelming the aboriginal population of Tungus tribes, such as the Giliaks, Goldis, Orotchis and the like. The Manchus, the former masters of Manchuria and the last rulers of China previous to the present republic, are rapidly becoming absorbed by the Chinese, whose speech they are adopting, together with their customs and culture.

Besides the Chinese, Manchus and other Tungusic tribes, there are a number of Russian and Japanese settlers, mainly along the railways, the Russians keeping to the north and east and the Japanese to the south, where in the Liau-tung promontory they have a large leased territory. The whole country, especially the less thickly populated parts, is infested with bandits, who go by the name of "Hung-hu-tze," which means "red beards." They are a terrible scourge to the people.

Divergent Railway Routes

Several important railways operate in Manchuria; first there is the Peking-Mukden Railway which runs from Peking, the capital of China, to Shanhaikuan on the Chino-Manchurian border, thence north-east to Mukden, the capital of Shengking province. A branch line runs south from Kowpangtze to Newchwang, or Yingkow, at the mouth of the Liau river.

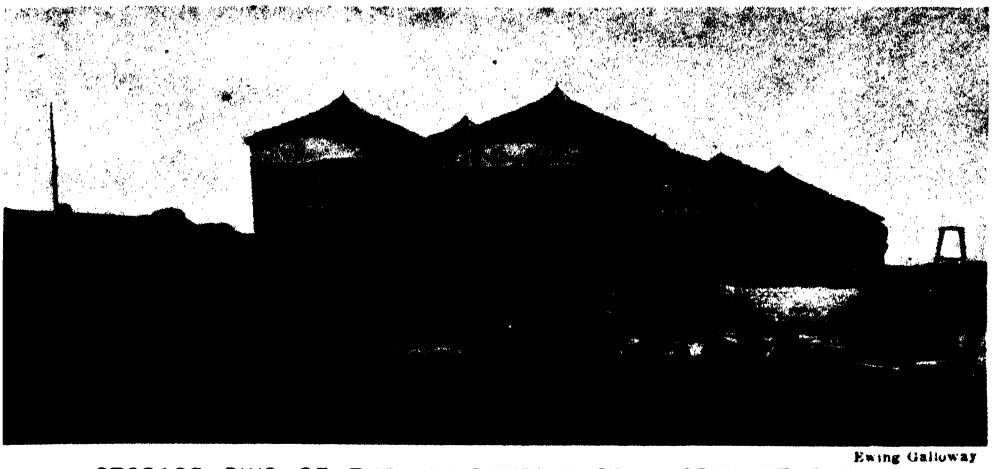
The Chinese Eastern Railway runs from Manchouli on the Siberian border of Heilungkiang (where it joins the Trans-Siberian Railway) to Vladivostok in the Primorsk province, passing the important towns of Tsitsihar, Hailar, Harbin and Ninguta on its way. A short branch line runs from Harbin south to Kwanchengtze, or Changchun, where it links up with the South Manchurian Railway, owned and controlled by the Japanese, which runs from Changchun south to Mukden, and thence on to Antung at the mouth of the Yalu river, connecting with the Chosen Railway in Korea. A branch line runs south from Mukden to Port Arthur and Dairen (Dalny) on the Liau-tung peninsula.

Traffic by River and Road

Finally, there is the Changchun-Kirin Railway which runs from Changchun eastward to the city of Kirin, capital of Kirin province. Other railways in the vicinity of Manchuria are the Ussuri Railway, running from Vladivostok northward down the valley of the Ussuri to Khabarovsk on the Amur, and the Amur Railway, which branches from the Trans-Siberian Railway at Kaidalova and follows the Amur valley to beyond Blagovyeshchensk.

A considerable amount of steamer traffic plies on the Amur and Sungari rivers, steamers ascending the latter as far as Kirin city. Traffic between Petuna, Harbin, Sansing and other large towns on the banks of the Sungari and the Amur is entirely by river steamer or native sailing boats. The Yalu also carries a considerable amount of traffic, though not navigable for steamers beyond Antung.

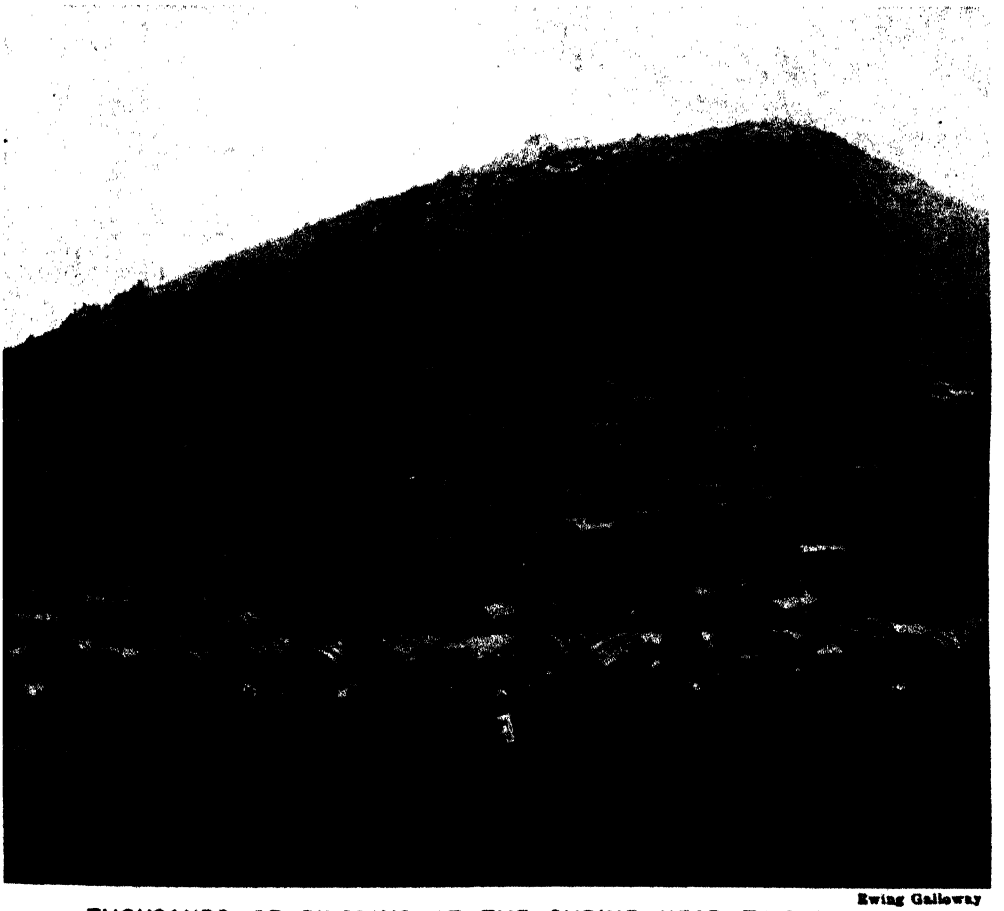
There are numerous roads in Manchuria, but they are excessively bad, being absolutely impassable during the rainy season. All traffic on these is by cart, drawn by teams of mules, and by ponies. Sledges are extensively used in



Ewing Galloway

STORAGE BINS OF THE MANCHURIAN SOYA BEAN AT DAIREN

Manchuria is primarily an agricultural country, and its soil is considered one of the richest in the world. Among the chief crops are soya beans, millet and wheat, the first-mentioned being the principal export. A native of tropical Asia, this annual herb, the mainstay of the agricultural population, is cultivated extensively as a source of bean oil, bean cake—a valuable cattle-food—and soya sauce



Ewing Galloway

THOUSANDS OF PILGRIMS AT THE SHRINE NEAR TA-SHIH-KIAO

Ta-shih-kiao is a village about 50 miles south-west of Liao-yang, and on a hill outside the town stands an old temple, within which is a shrine dedicated to the three sisters of Chau-kung-ming. In April of the Chinese calendar a great festival is held in memory of these sisters, when pilgrims come on foot and in mat-roofed carts from all quarters of the countryside

the winter, when the great rivers become highways for such traffic.

The most important towns and cities in Manchuria are situated in Shengking province, which is the most thickly populated and longest settled part of the country. Mukden is not only the capital of the province, but is the seat of government of the whole of Manchuria. It was the old capital of the Manchus before they conquered China and moved their seat of government to Peking

Cities and Their Associations

Chingchowfu and Kaiyuan are important cities to the south-west and north respectively of Mukden, and both are famous in history as being Chinese strongholds which held out against the rising Manchu power in the sixteenth century. Petuna is a large town which lies on the most westerly bend of the Sungari river. Newchwang, or Yingkow, is an important town at the mouth of the Liau river. Port Arthur, famous for its terrible siege during the Russo-Japanese war in 1904-5, and Dairen are important ports on the Liau-tung peninsula. Antung is an important port at the mouth of the Yalu.

Kirin city, whose Chinese name is Chuan-chang (meaning "field of ships"), is the capital of Kirin Province (Ki-lin or Chi-lin, meaning "clear forests"), and is a great mart for the timber which comes down the Sungari river from the great forests on the slopes of the Chang-pai-shan. It is also the market town for immense quantities of grain from up-river farms and settlements.

Manchuria's Long Past

Harbin, on the Chinese Eastern Railway, is perhaps the largest and most important city in Manchuria. It is composed of several extensive sections, namely Old Town, New Town, Harbour Town and the Chinese section. The three former are largely occupied by Russians. Its importance is due to the railway and its position on the banks of the Sungari river. Ninguta, on the Mutan river, is another important city in Kirin province, as is Sansing at the mouth of the same river.

Hailar and Tsitsihar are the two most important cities of Heilungkiang, which province is the wildest and least settled of all. It contains immense possibilities, but suffers from a bitterly cold winter, scarcely compensated for by the short, though hot, summer.

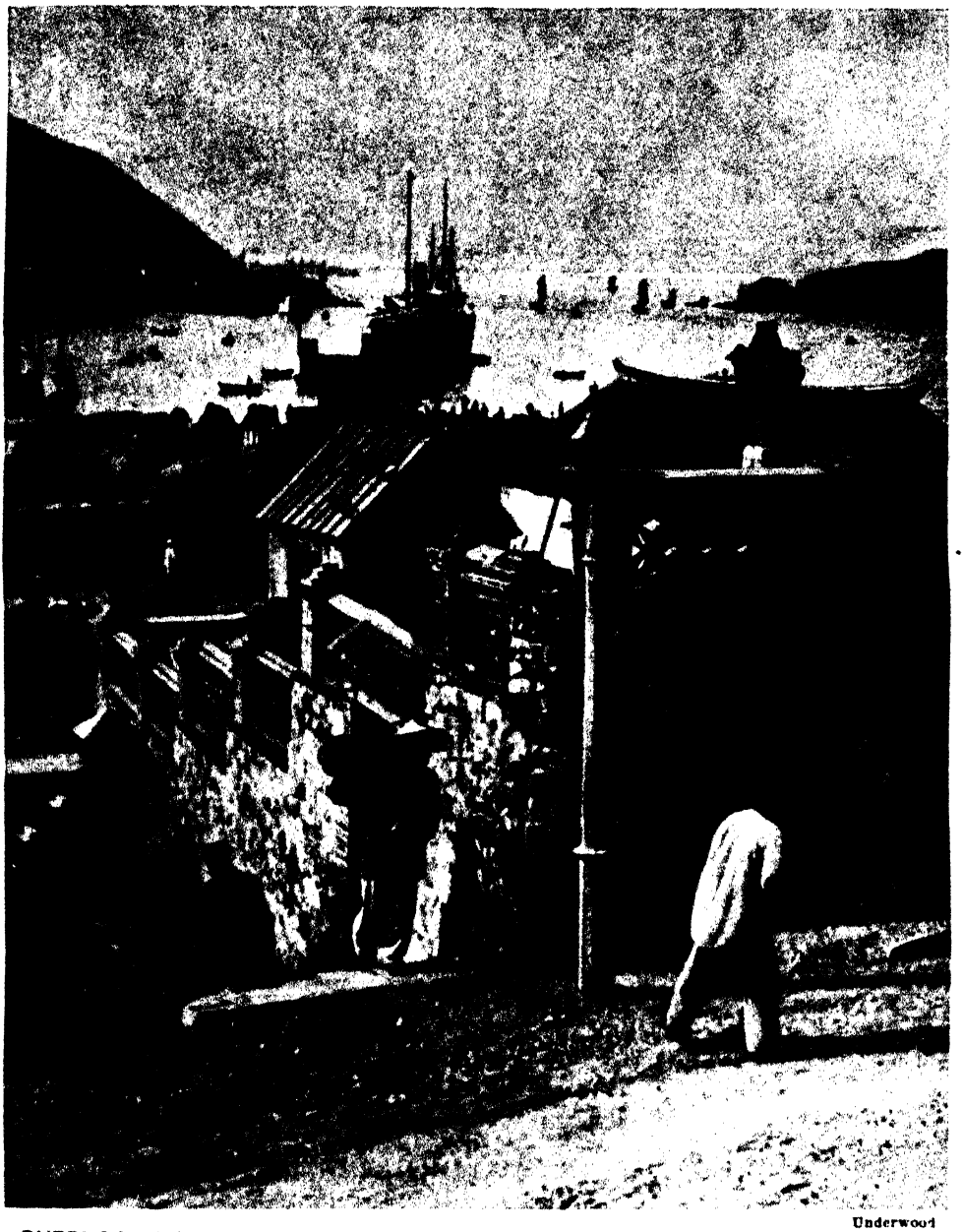
The history of Manchuria is interesting, especially in its relation to China, for thrice within a period of a thousand years China was conquered by Tartars from Manchuria, and Manchurian dynasties were established upon the throne of China.

Like that of most countries, the history of Manchuria tells of a time when the inhabitants of that fertile land were mere savages, naked or clothed only in skins. The province of Shengking, sometimes known as Fengtien, and especially that part known as Liau-tung (east of the Liau river), was the first to become civilized, and history states that it was conquered by the Chow Dynasty of China about the twelfth century B.C., during which period the Great Wall was commenced

Cockpit of Three Peoples

The country was held by China till about the second century A.D., when a Korean Dynasty named Kaoli conquered this territory, after which the Tang Dynasty of China (about A.D. 800) once more assumed control. At last one of the many Tungus tribes rose into power, and about the seventh century A.D. one of these became sufficiently powerful to demand and receive the recognition of the Chinese.

This was the Bohai. For two hundred years this kingdom flourished, but in the end was deposed by another tribe known as the Ketans, who not only subdued the whole of Manchuria but invaded and conquered north China as far as the Yang-tze Kiang, establishing themselves in that country about the ninth century A.D. under the name of the Liau (Iron) Dynasty. To this day the Russians speak of the



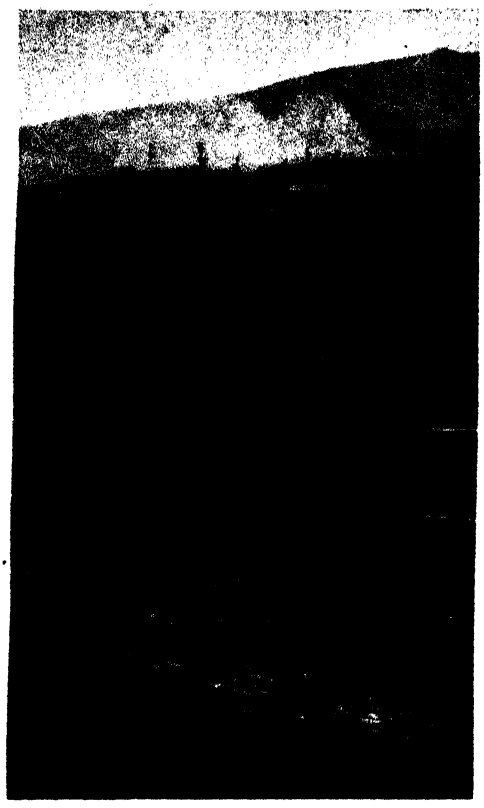
Underwood

OVERLOOKING THE DOCKS OF DAIREN, PREMIER PORT OF MANCHURIA

The fine harbour of Dairen, treaty port in the Liau-tung peninsula, is ice-free and protected by a breakwater 1,000 yards long. Its numerous sheds and warehouses are under the control of the South Manchurian Railway Company which has its headquarters in the town. Dairen is connected by rail with Port Arthur and Mukden, and is the customs port for all the territory leased to Japan

Chinese as the Kitai, while the word Cathay is also derived from Ketan. The Ketans were overthrown by another tribe, the Nuchens, from Manchuria, who established themselves as the Chin (Golden) Dynasty in China, and who were the ancestors of the Manchus.

After the overthrow of the Nuchens by the Mongols under Jenghiz Khan in the thirteenth century, Manchuria seems to have relapsed into partial savagery at least, the whole country breaking up into small tribes. One of these, that which formed the remnant



OPEN CUT, FUSHUN COLLIERY
Fushun colliery lies 30 miles south-west of Mukden and has an area of 13,700 acres. The photograph shows the open cut near Chien-chin-chai

of the Nuchens, began to grow in power and in the end conquered all the others and began attacking the Ming Empire, which, meanwhile, had replaced the Mongol (Yuan) Dynasty in China. This new tribe called themselves Manchus. In the end they conquered and overran China, establishing themselves as the Ch'ing (Clear) Dynasty. Thus for the third time a Manchurian dynasty ruled in China. The Manchus continued in power till 1912, when they were overthrown and China, including Manchuria, became a republic.

Meanwhile, the Russians had extended their conquests across Siberia, coming into contact with the northern outpost of the Manchu Empire in the seventeenth century. In 1689 a treaty was signed with Russia making the Yablonoi mountains and the Argun and Gorbitza rivers the boundary line between the Russian and Manchu empires. Russian aggression continued, however, and in 1858 the treaty of Aigun was signed, which gave her the Amur and Primorsk provinces, with the Amur river as the boundary.

Next Japan went to war with China in 1894 and occupied a large part of southern Manchuria. She was prevented from keeping any of this territory by the other powers, notably Russia, who in the end extended her sphere of influence all over Manchuria, building strategic railways and establishing an extensive naval base at Port Arthur.

In 1904 Japan went to war with Russia, whom she defeated on land and sea, subsequently taking over Port Arthur and a large piece of territory on the Liau-tung peninsula on a long lease from the Chinese Government. Japan's sphere of influence was extended to Chang-chun, while that of Russia was confined to the line of the Chinese Eastern Railway northward. Japan still retains her grip on south Manchuria, but the north reverted to China when the Russian Tsarist system fell to pieces.

MANCHURIA: GEOGRAPHICAL SUMMARY

Natural Division. An old land, with evidences of great volcanic activity, part of the ancient continent of Angaraland. (Cf. North-East Canada.)

Climate. East coast marginal oceanic climate, with great extremes, severe winters, hot summers, short intervening seasons rains in summer and winter snows. (Cf. Newfoundland, Quebec and Nova Scotia.)

Natural Vegetation. Forest both broad-leaved and deciduous, near the oceanic border (cf. Quebec, New Brunswick); desert in the west.

Products. Timber, soya bean, wheat, tobacco. Coal and gold.

Communications. Railways are increasing in mileage, rivers serve for local purposes.

Outlook. With great natural resources, yet not so inviting an area as Australia or British Columbia, Manchuria awaits development under a steady political regime by an energetic and industrious people.

MEDITERRANEAN SEA

Cradle of the World's Sea Trade

by Lewis Spence

Author and Anthropologist

THE shores and waters of the Mediterranean sea, the "Mare Internum" of the ancients, provided a fitting and picturesque setting for the successive acts and scenes of the stormy drama of early human history.

Its borders have witnessed the rise and fall, the triumphs and vicissitudes of Egypt, of Greece, of the Syrian maritime cities, of Carthage, the ancient queen of commerce, and of the Latin empires of Rome and Byzantium. On this vast lake, the shores of which are continents, perhaps the first sea-going vessels were launched. It has experienced so many cycles of alternate prosperity and decay that in a manner it serves the historian as a species of pulse by the throb of which he is enabled to test the world's heart-beats.

Even to-day it is still the most vital of the arteries of our planet. But the 800,000 square miles of this almost land-locked canal of the middle earth, once the jealously guarded preserve of successive powers, are now regarded as the common property of humanity.

Two Huge Depressions

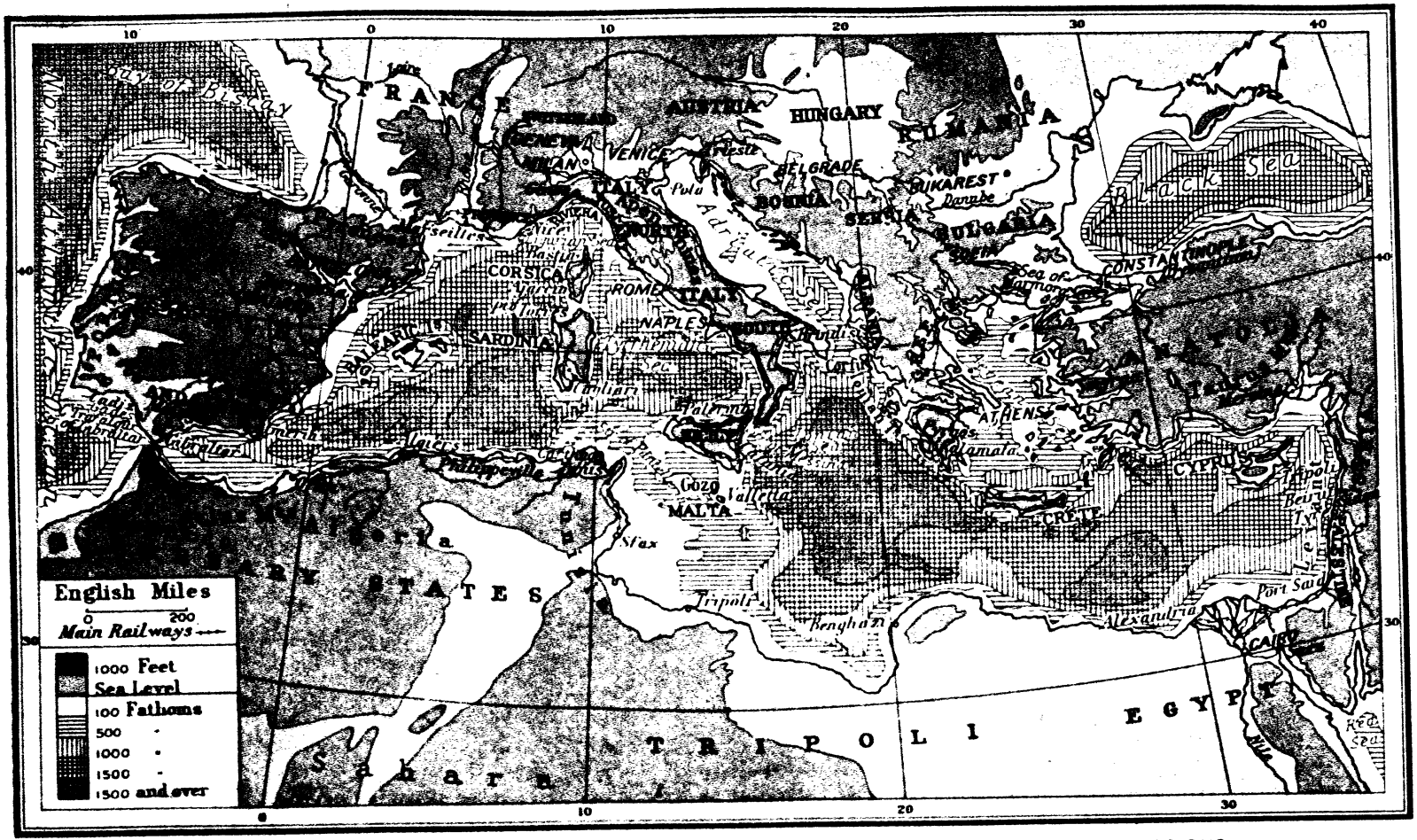
The mighty forces of time and terrestrial upheaval, of earth-pressure and volcanic cataclysm, have divided the vast land-locked sea into two great basins, western and eastern. The first, indeed, presents almost the appearance of a separate ocean, only the comparatively narrow channel between Sicily and Tunis giving its waters ingress to the oriental area. Here the coasts of Spain, France and Italy, forming a deep inlet or arch, confront the more regular coast-line of Morocco, Algiers and Tunis. But in the eastern area it is the African littoral, Tripoli and Egypt, which dips away from the jutting peninsulas of Italy and Greece, the opposing shores meeting at last in the cul-de-sac formed by the Levant. The principal natural areas of this vast expanse have come to be described, with reference to their coastal environment, as the Balearic, Ligurian, Tyrrhenian, Adriatic, Ionian and Aegean seas, names richly eloquent of historical and poetic memories.

Sharp Contrasts in Coast-line

The European littoral is for the most part lofty, steep and bold, but the shores of northern Africa are, with the exception of a few rocky headlands, shelving, flat and sandy. The Levantine limits, again, rise in their more northerly shores into rugged cliffs which gradually merge into the level flats and shoals of Syria and Egypt. Many great and historic rivers, among them the Nile, Rhône, Ebro and Po, to take them in order of magnitude, empty their floods into the waters of the Mediterranean.

Ships plied upon the Mediterranean at a very early period. Recent research claims to have established the fact that the invention of sea-going vessels was due to the Egyptians of pre-dynastic times. At a later date they initiated trading intercourse with Crete, Cyprus and Morocco. Certain "Easterlings," too, whose precise racial identity is doubtful, traded with Spain, which they partially colonised at some time between 2,000 and 3,000 B.C. The Phoenicians of Tyre and Sidon followed in the wake of these pioneers, exploiting Cyprus for its copper and working the lead and silver mines of Gades in Spain.

About 850 B.C. they founded the great colony of Carthage in north-west Africa, which for more than five


English Miles
0 200
Main Railways
1000 Feet
Sea Level
100 Fathoms
500 "
1000 "
1500 "
1500 and over
FRANCE
AUSTRIA
HUNGARY
RUMANIA
SERVIA
BULGARIA
GREECE
ITALY
CORSICA
SARDINIA
MALTA
Gozo
Valletta
Black Sea
Sea of Marmora
CONSTANTINOPLE
ATHENS
CRETE
CYPRUS
EGYPT
TRIPOLI
Sahara
Tripoli
Benghazi
Alexandria
CAIRO
Port Said
Suez
Red Sea
Nile
Sea of Azof
Sea of Biscay
Gibraltar
Algiers
Tunis
Sfax
Palermo
Naples
Rome
Venice
Trieste
Pola
Adriatic
Belgrade
Bukarest
Danube
Smyrna
Rhodes
Beirut
Jaffa
Tyre
Haifa
Marseilles
Nice
Genoa
Milan
Turin
Corsica
Bizerta
Philippeville
Bona
Oran
Tangier
Gibraltar
Balearic Is.
Malaga
Cartagena
Valencia
Barcelona
Perpignan
Toulon
Corfu
Crete
Cyprus
Rhodes
Smyrna
Constantinople
Sea of Marmora
Black Sea
Danube
Nile
Red Sea
Suez
Port Said
Alexandria
Cairo
Tripoli
Benghazi
Sfax
Tunis
Bizerta
Philippeville
Bona
Algiers
Oran
Tangier
Gibraltar
Malaga
Cartagena
Valencia
Barcelona
Perpignan
Toulon
Marseilles
Nice
Genoa
Milan
Turin
Venice
Trieste
Pola
Adriatic
Belgrade
Bukarest
Danube
Naples
Rome
Palermo
Gozo
Valletta
Malta
Corsica
Sardinia
Balearic Is.
Sea of Biscay
Sea of Azof
Black Sea
Sea of Marmora
Constantinople
Smyrna
Rhodes
Crete
Cyprus
Athens
Beirut
Jaffa
Haifa
Tyre
Suez
Port Said
Alexandria
Cairo
Nile
Red Sea

centuries remained the mistress of the Mediterranean. But their monopoly of its commerce was disputed by the Greeks almost from the first, and Hellenic trading stations sprang up along the northern coasts of the sea from Anatolia to Marseilles. Under Greek influence Alexandria in Egypt became the commercial capital of the great Middle Sea.

On the conquest of the Mediterranean basin by Rome, the character of its ancient commerce underwent but little alteration, those peoples who had formerly monopolised it, Greeks, Syrians and Jews, continuing to do so under Roman direction. But upon the break-up of the Empire in A.D. 476 commercial activity languished. Pirates and sea-rovers scoured the ancient sea-lanes, and water-borne trade was thus compelled to follow the rivers.

Vicissitudes of Sea Traffic

Even during this lapse into barbarism the commerce of the Levant flourished exceedingly under the cautious and efficient mercantile genius of Byzantium, and in the ninth and tenth centuries attained a degree of prosperity till then unknown in human affairs. This was due chiefly to the importation of raw silk from the East which underwent an almost magical change at the hands of the cunning weavers of Byzantium, whence fabrics of the most exquisite description were exported to all parts of the known world. But this picturesque trade fell into desuetude and a period of decay set in which was unbroken until the rise of the maritime cities of Italy about the end of the tenth century.

The entire chivalry of Europe now set its face eastward, attracted thither by the trumpet-call of the Crusades, and the transport trade of Venice and Genoa experienced a long and remunerative boom in carrying troops and supplies to the Holy Land. Through this agency these cities became the joint masters of the commercial world, and in the event Venice developed into the principal port and outlet for the natural wealth of Central and Northern Europe to the Mediterranean lands.

But the introduction of vessels of a more seaworthy type, and of the compass, effected a vast change in sea-borne commerce, and the land-routes by which the metals, hides and dried fish of the North had been conveyed to Venice were discontinued in favour of the sea-voyage from Flanders to Italy.

Da Gama's Great Discovery

The trade avenues, too, between the East and Constantinople became blocked by the rapid conquests of the Turks. Consequently the prices of Oriental goods in European markets rose by leaps and bounds, and new and cheaper sea-ways to the East were eagerly discussed. When Vasco da Gama reached India by sea in 1498 the commercial front of the world veered with shattering suddenness from the Mediterranean to the Atlantic and prosperity abandoned its coasts for many a decade.

The climate of the Mediterranean is of the mild, subtropical type, equable, and with occasional winter rains of short duration. The heat of summer is everywhere tempered by refreshing sea-breezes. The surface temperature during the summer months is 75-82° F., falling to 55° F. in February in the north-west basin and 56.5° in the south-east basin. This slight chilliness is, however, tempered by the hot sirocco from the interior of Africa. But the average winter temperature of the whole basin is 14° F. above that of most other regions in the same latitude.

Clear Skies and Squally Winds

The winds prevalent over this stretch of 2,000 miles of blue water are naturally of a varied character. Between Cadiz and Cape Trafalgar dry and squally gusts are usually encountered, accompanied by a fairly clear sky.

Local tradition asserts that these winds continue in a sequence of triads of days, three, six and nine. Some danger has to be apprehended in this area from south-west winds, and the narrow

funnel of the Strait of Gibraltar catches the full force of the Levantine or easterly and the Poniente or westerly wind-currents. It also occasionally deflects the south-west Vendevoles, unpopular with mariners of all times.

Rainfall and Waterspouts

In the Mediterranean proper, westerly winds prevail from October to May, and easterly in the remainder of the year, although this rule is subject to considerable modifications owing to local conditions, the proximity of high land and other causes. The counter winds known as Contrastes which blow simultaneously from opposing quarters and under a cloudless sky usually raise heavy coastal seas, and are most commonly experienced at the period of equinox in March and April and in September and October, especially in the Strait of Gibraltar and on the coasts of Spain and southern France. From November to April violent gales from the north-east or north-west frequently blow with great force, especially in the western area. Waterspouts are of usual occurrence at all seasons, but more especially in the autumn, and give rise to thunderstorms and heavy rains.

The incidence of rainfall varies with locality. On the Moroccan coast the rainy season extends from October to April, but rain occurs every month of the year, the maximum in December, the minimum in July. More rain falls, as a general rule, during the night than through the day. The maximum fall on these coasts varies with locality from 8 to 47 inches annually.

Teeming Life of Land and Water

The vegetation of the Mediterranean is among the most varied in the globe. The prolonged droughts characteristic of these latitudes favour the growth of evergreens rather than deciduous trees and shrubs. In the warmer regions pines, stone pines and oaks are most commonly encountered, and the underwoods are composed for the most part of myrtle, arbutus and mastic, though resinous and aromatic shrubs and climbing plants are numerous. Among the cultivated trees the silver olive is preeminent and the vine and fig-tree are of remote antiquity throughout the entire area. The orange was imported by the Portuguese from China about the middle of the sixteenth century and the aloe was introduced from America.

The average depth of the Mediterranean, if its three great hollows or basins be taken together, is more than 5,000 feet. The enormous depth of 13,000 feet is sounded in the eastern basin. Evaporation, due to the high average temperature, is on a large scale and the waters of the Mediterranean are of an extraordinary salinity which increases with depth. The steady flow of the currents along its shores assists silting at the river-mouths and the formation of deltas as in the case of the Po and the Nile. The natural warmth of the sea promotes the growth of sponges and coral and several of the species of fish it contains are important commercially, especially the tunny-fish, the sardine and anchovy.

Effect of Greater Salinity

At the Strait of Gibraltar an interchange of water takes place between the North Atlantic and the Mediterranean, an upper current flowing into the latter from the former and an undercurrent flowing out of the Mediterranean into the greater ocean. This interchange is due to the lowering of the level of the Mediterranean by excessive evaporation and to the extraordinary difference in specific gravity and salinity of the two seas. There is also a similar interchange of currents between the Mediterranean and the Black Sea caused by the excessive influx of rivers and difference in salinity.

The radiolaria so frequently found in the Adriatic are rare in the Mediterranean proper, which however is rich in other foraminifera, and above all in globigerina. In certain parts to the south-east of Sardinia at a depth from 1,200 to 2,500 feet these foraminifera

give forth an acid effervescence, a fact noted by most oceanographers.

Geologically, the Mediterranean is one of the few visible remains of that immense fault which at one time girdled the entire circumference of our globe, forming a species of gigantic world-ditch. The origin of this depression dates perhaps from the earliest geological period, but though countless thousands of years have elapsed since its formation its neighbourhood still manifests a frequent tendency to volcanic disturbance. The vast rift which now constitutes the bed of the Mediterranean formerly stretched far into Central Asia, and consequently that sea extended for hundreds of miles into the Asiatic land-mass, forming an immense oceanic lake known to geologists as Tethys.

Geology Mightily at Work

Three great rock-masses of the early period still survive in the Spanish, Italian and Balkan peninsulas, which are all of palaeozoic origin. Once of almost Alpine proportions, these were gradually levelled in the course of ages by subsidence, aerial denudation and wave-action, but subsequent movements of the earth's crust produced fresh folds and mountain-ranges by transverse pressure so enormous as to sever the Balearic Isles from the mainland. The constant action of the tides wore away the nexus of land which joined Europe with Africa at what is now the Strait of Gibraltar, and the gap has been considerably widened during the historic period. But a submarine bar still connects the continents at a depth of about 650 feet and retards the colder waters of the Atlantic from invading the warmer Mediterranean area to any appreciable extent. The growing depth of the Strait of Pantelleria formed by transverse cleavage a great natural approach to the main basin.

The Maltese islands are fragments of a former plateau which is still gradually undergoing denudation by constant wave-action. The Italian-Sicilian peninsula, too, was formerly joined to North Africa until comparatively late geological times. The Italian crust-movements, commencing in the mesozoic period and growing more marked during the tertiary age, still continue, but in the succeeding quaternary phase a large depression which had been formed between Italy and Sicily was almost filled up by volcanic action, leaving only a small outlet in the Strait of Messina.

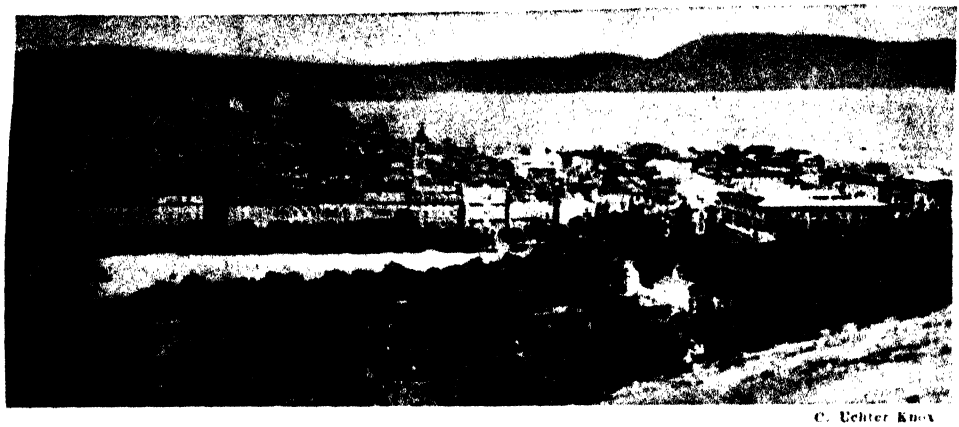
Recent Forming of the Levant

The Rumelian or Balkan peninsula is probably of the same age and origin as the north-western portion of Anatolia. The crumbling of this mass toward its southern extremity formed the hill-country of Greece with its extensive seaboard, a great stepping-stone of culture between Europe and Asia.

The Eastern Mediterranean to the south of Malta and Cyprus lies within the area of the great desert tableland of North Africa, Arabia and Syria, from the subsidence of part of which this portion of the sea with its level and monotonous shores was formed. Much of this area, and especially the Levant, is, geologically speaking, of recent origin. Syria forms a cul-de-sac of the same character as the barrier once presented by the Italian peninsula, but the rocky nature of its coast-line protects it from serious erosion.

Cargoes from Great Britain

One of the most important streams of British shipping, that bound for the Indian Ocean, passes through the Mediterranean. On the way it picks up a large quantity of intermediate traffic, especially in the form of passengers and mails, while at Port Said it is joined by an overflow of ships in ballast. British trading bottoms in the Mediterranean are chiefly those carrying coal to the south of France and Italy, to which Britain also ships iron, steel and machinery, but a large percentage of this is carried in foreign hulls. Only a small proportion of these return to British ports with Italian commodities,



C. Uehter Knox

LOOKING ACROSS CORFU TO THE ISLAND'S NORTHERN MOUNTAINS

Separated from Albania by a wide strait, Corfu, the largest and most northerly of the Greek Ionian Isles, lies in picturesque solitude on the blue Mediterranean waters; its bold rocks and peaceful bays, rich valleys, and barren heights combining to render its scenery very attractive. Corfu, the fortified capital, lies on the east coast and has a considerable trade in oranges, wine and olive-oil

the remainder proceeding to Egypt, where they ship cotton, cotton-seed and oil-cake for the home journey.

Rumania takes large quantities of British coal, steel and miscellaneous manufactures, but sends back ample cargoes of maize, wheat and oil. She also exports heavily to Belgium and the Netherlands, in which carrying trade British vessels have a considerable share. Algiers and Tunis also absorb very large cargoes of British coal, sending in return ores, grain, manures and esparto. Eleven million tons of shipping under the British flag pass eastward through the Strait of Gibraltar annually.

The principal routes of sea-communication in the Mediterranean are those from Gibraltar to Naples and Genoa by the Orient Line; from Toulon or Marseilles to Naples by the same line and the French "Messageries Maritimes"; from Genoa to Tunis via Leghorn ("Societa Nazionale"); from Naples to Tunis ("Ferrovie dello stato"); London and Marseilles via Genoa and Naples to Alexandria and Port Said ("P. & O.", Orient, Royal Mail, White Star and Bibby lines, and Rotterdam-Lloyd); and from Marseilles to Constantinople ("Messageries Maritimes").

The only Mediterranean islands of any importance not mentioned elsewhere in special chapters in this work are those of the Corfu or Ionian group. Corfu, the principal of these, is 227 square miles in area, and has a population of 122,000. It is chiefly remarkable for its varied and striking scenery, in which bold and craggy uplands are diversified by level plains. Its fairy-like bays have inspired many striking descriptions.

MEDITERRANEAN SEA: GEOGRAPHICAL SUMMARY

Natural Division. One of the oldest stretches of water in the world, the relic of the ancient Middle Sea which laved the shores of the three ancient continents of Arctis, Angaraland and Gondwanaland.

Climate. The typical climatic region of winter rains—warm, wet winters and hot dry summers. It shares in the abnormal winter warmth of the coast-lands of Western Europe. This climate is typical of all lands on the eastern margins of the great oceans and on the polar edges of the hot deserts.

Vegetation, etc. Evergreens, drought-resisting plants. Citron trees. Maquis.

Its coast-lands are lands of *wheat*, but not of rice or rye; *oil*, i.e., olive oil, but not butter or lard or palm-oil; *wine*, but not beer or toddy. The characteristic animal is the goat (cf. the mohair of Anatolia) rather than the ox or sheep; the characteristic fruit is the fig or grape.

Outlook. The Mediterranean lands formerly held a monopoly in the supplies of citrons and dried fruits. Their future lies in their reply to the fierce attack on this monopoly from the "Mediterranean" areas of other continents; cf. the marketing in London of South African oranges, Californian plums, Australian raisins.

MELBOURNE

A City Planned on Model Lines

by Boyd Cable

Author of "By Blow and Kiss," etc.

MELBOURNE has been laid out without any of the hampering restrictions in town-planning that have been inherited in ancient cities through their growth during the centuries. There is no question here of narrow and tortuous thoroughfares, close-packed huddles of slums, streets built for the traffic of hundreds of years ago and forced to accommodate the traffic of to-day.

Melbourne, the capital of Victoria, founded in 1835 and named after the British Premier, has an area of 163,366 acres and a population of 816,000, or greater than those of Dublin and Edinburgh together, and is situated on the magnificent harbour of Port Philip about 500 miles south-west of Sydney, New South Wales.

The central business portion, distinctively known as the "city," lies about three miles inland on the north bank of the river Yarra. The city is laid out in a series of parallel streets, running from east to west and north to south, the main ones 99 feet wide, the secondary ones slightly less and all lined with great shops and stores, hotels, fine private and public buildings whose architecture is displayed to the best advantage by the mile-long vista they enhance. Some of the buildings are ten, twelve and fourteen storeys high.

Trams both Cheap and Good

Through the city streets, and connecting with the suburbs, is a network of cable trams and some other of the suburbs are served by overhead trolley electric trams and by the railways. A circle of populous suburbs runs about three miles out from the centre of the city, and about another dozen large suburbs are within a five-mile radius of it.

The sub-surface cable trams have a total of forty-six miles of double track, and the overhead electric systems comprise 120 single-track miles. The fares on the former run between ½d. and a 1d. a mile, while on the latter they are about 1d. a mile.

Beside the Banks of Yarra

From the main city streets one looks east to the fine buildings of the Commonwealth Houses of Parliament and the Treasury, and west to Spencer Street Station, while the intersecting streets run south to Flinders Street Station and the two wide bridges that here span the river Yarra.

Wide boulevard-avenues to the city, pleasant green velvet lawns, trim shrubs, excellent roads, tree-bordered walks and drives, brightened by beautiful flower-beds along both banks, the stream straightened and widened, all combine to make the Upper Yarra pleasing to the eye; and the scene there during "Henley-on-Yarra," the great regatta, is a sight to be remembered.

The flower beds are at their brightest, the grass, shrubs and trees their greenest; the river is ablaze with colour, packed with boats of all kinds and lined with decorated houseboats, while high above the picturesque scene towers Government House rising from woods and clumps of greenery.

But the Yarra is for use as well as ornament and pleasure. In the lower river vessels of 3,000 tons may berth practically in the heart of the city, while on the South Melbourne side are docks, repair yards and foundries. This river port must not be confused

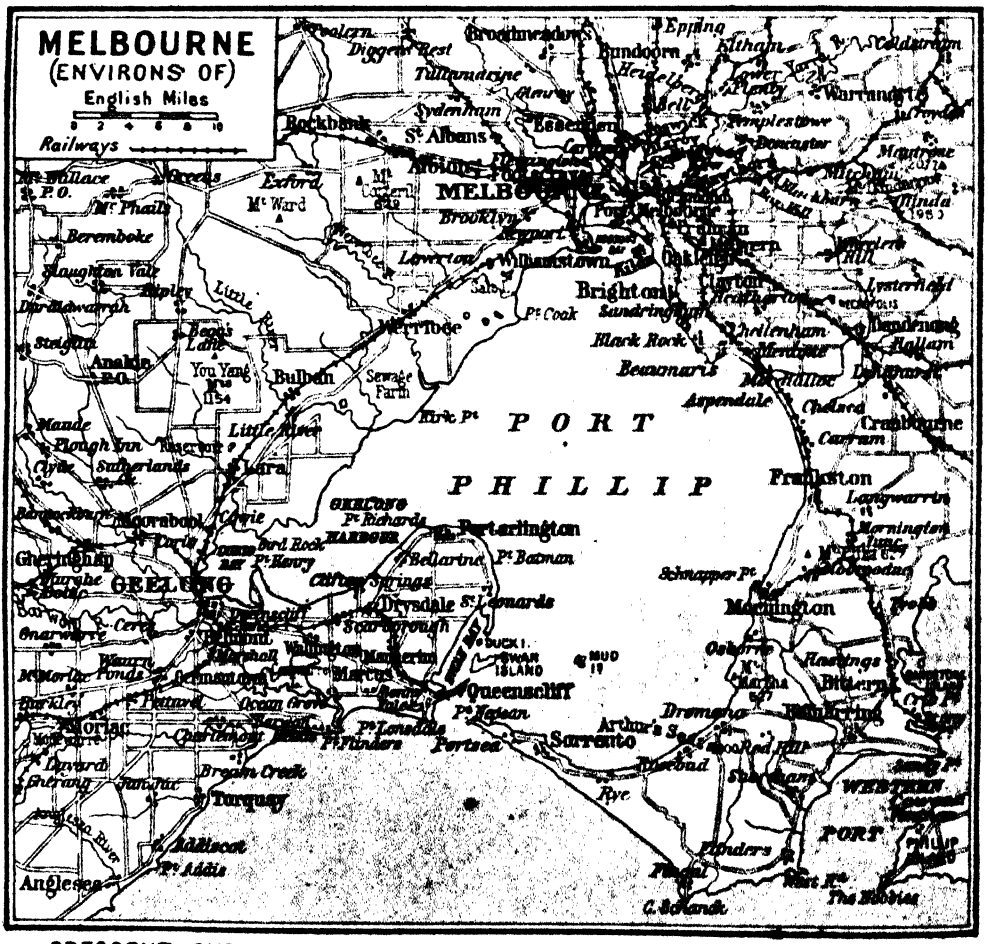
Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited.

with the "Port Melbourne" on the shores of Hobson's Bay, an indentation in the harbour of Port Phillip distant about three miles from the centre of the city.

From Port Melbourne runs the great sickle-shaped curve of the beaches, where all Melbourne turns to bathing and swimming for the greater part of the year and especially in the summer months. From one end to the other the length of this beach resort is about twelve miles, and strung along it are the suburbs of South Melbourne, Albert Park, St. Kilda, Brighton, Sandringham, Black Rock and Beaumaris. The nearest is distant only about twenty minutes by tram, the farthest about forty minutes from the centre of the city. All the beaches are well provided with extensive and comfortably fitted bathing sheds, and well organized life-saving clubs constantly patrol the beach ready to help any swimmer in difficulty, although only carelessness or ignorance can be the cause of any danger since there are no currents or eddies to make bathing unsafe.

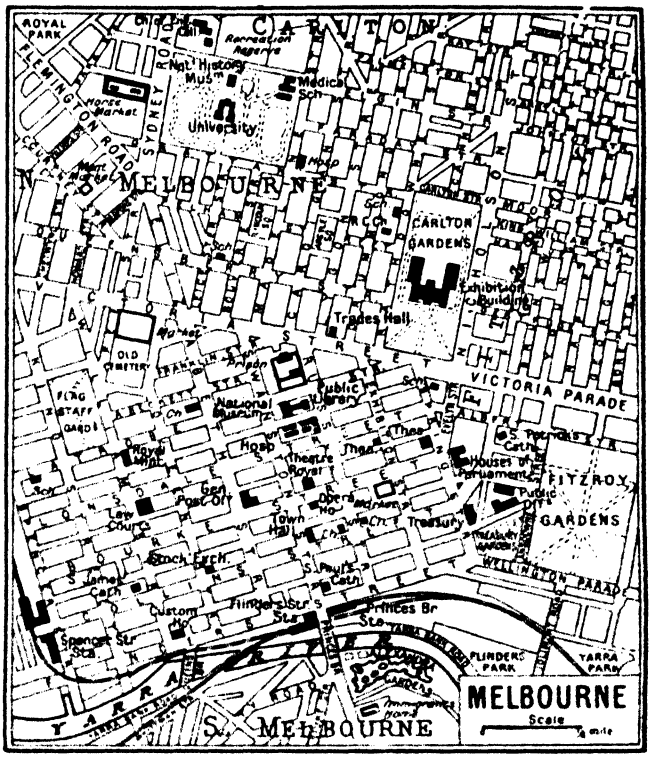
The accessibility of the sea naturally attracts swarms of people for bathing and also for boating, Port Phillip, large enough to give ample scope for sailing and yet sufficiently landlocked to guard against any heavy seas, making an ideal sailing water. Practically all the year round fleets of motor-boats and yachts may be seen cruising about the harbour. By far the greater part of the yachts are small open boats carrying a huge sail area and large crews in proportion to their size. Almost all are owned by the men who sail them.

From the "city" of Melbourne to St. Kilda, the most fashionable of these



CRESCENT CURVE OF MELBOURNE'S SUBURBS ROUND PORT PHILLIP

beach resorts and suburbs, runs what has reasonably been claimed there to be "the finest thoroughfare in the world." The St. Kilda Road is five miles long, and throughout its entire length is a model of what a modern road ought to be. Down the centre runs a line of cool, shady trees. On either side of it is a wide, well-paved road reserved for fast light traffic, its outside bordered by a belt of well-kept grass, ornamented with shrubs and flowerbeds. A section of road for heavy and slow traffic comes next, then a broad footway and another width of grass, shrubs and flowers in ornamental beds.



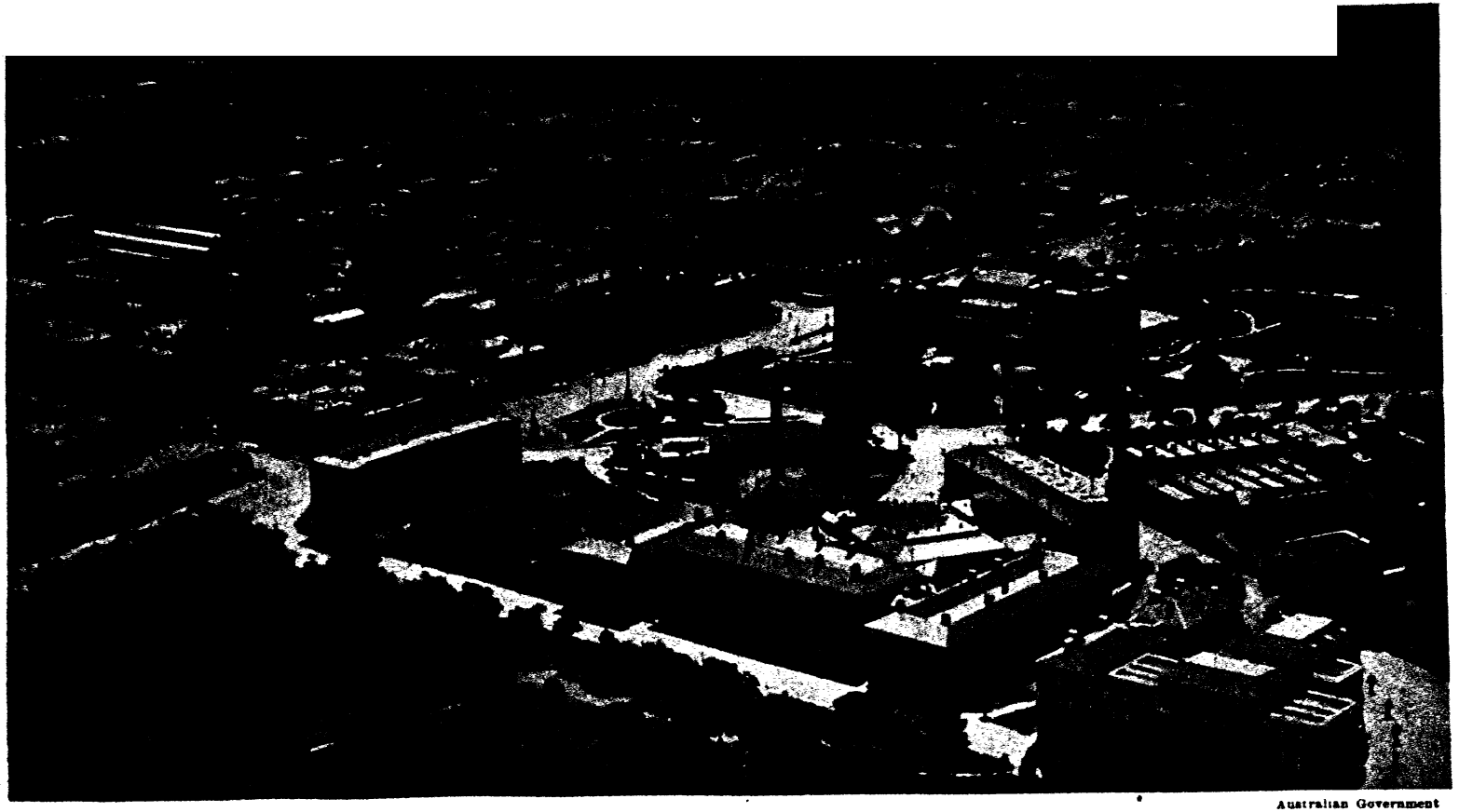
STREET PLAN OF VICTORIA'S CAPITAL

This road is an example of the eagerness of Melbourne to strive for beauty as well as convenience in her amenities of life. There are many fine streets, avenues and drives inside the city bounds, while the number of parks and open spaces is extraordinary, and show how man may add to or at least give scope for the display of the beauties of nature in the middle of a bustling city. There are in all 1,824 acres of parks and gardens, all perfectly kept and extensively used by the citizens.

The grounds of the Flemington Racecourse are of world-wide fame, and it has truly been said that a big race meeting there is more like a social garden party. Over a quarter of a million pounds has been spent on improving the course and its surroundings. Two magnificent carriage drives run from the entrance to the grand stand, the Members' Drive offering half a mile of the most perfect example of landscape gardening. There are huge carriage and motor "paddocks" or enclosures, and a magnificent grand stand. It is only a few steps from this stand to the Terrace and Lawn, the latter providing accommodation for thousands of spectators. In the hottest and driest summer its grass is always green, soft and smooth as velvet, ablaze with beds of bright flowers and sparkling with fountains.

The Melbourne Cup is the "Derby" of the Southern Hemisphere. Thousands flock to Melbourne from all parts of Australia and New Zealand for "Cup Day"; it is a high day and holiday on which businesses close and no man works throughout Melbourne, except, of course, the traffic and race-course and catering staffs. On one occasion at least it is recorded that there were over 120,000 spectators.

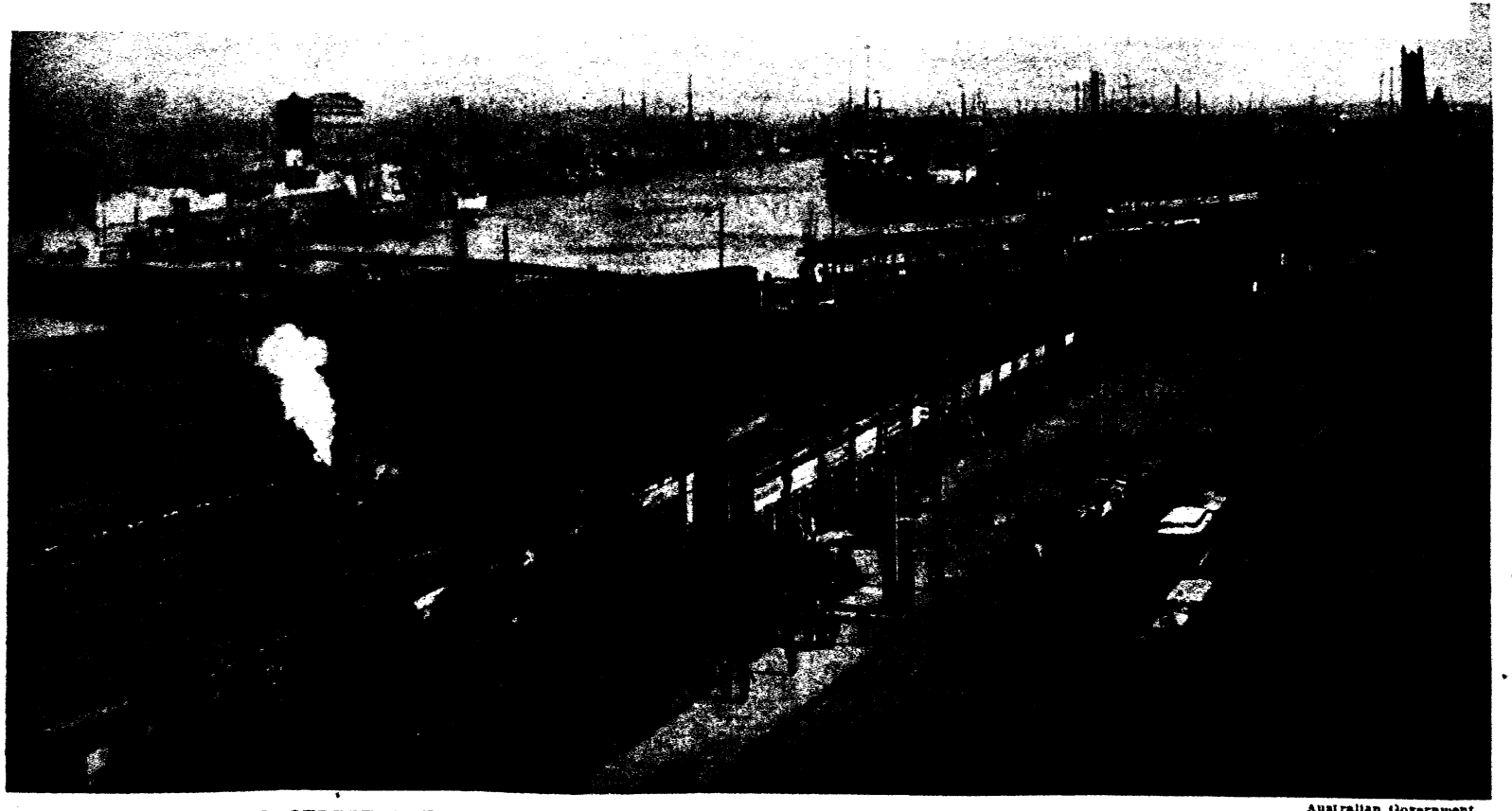
Melbourne Cricket Ground is another space where the game is played and watched in comfort amidst beautiful surroundings. The ground is only ten minutes from the centre of the city and accommodates 55,000 spectators. The club has a membership of thousands,



Australian Government

ONE OF MELBOURNE'S SPLENDID ARTERIES: VIEW OVER SPRING STREET FROM AN AEROPLANE

In the foreground of the photograph are the well-wooded Treasury Gardens. Opposite is a block of government offices, on the left hand of which, and separated from them by a small clump of trees and shrubs, is the Treasury. On the same side of Spring Street, but farther along, is Parliament House, between which building and the Treasury is a statue of General Gordon. Beyond Parliament House, on the opposite side of the street, is a corner building, the Princess Theatre. Spring Street extends from the junction of Flinders Street and Wellington Parade to Victoria Street. In the distance is the rotunda of the Public Library



Australian Government

FLINDERS STREET WITH QUEEN'S BRIDGE ACROSS THE HEAVILY LADEN BOSOM OF THE YARRA

Melbourne is situated at the north end of Port Phillip on the banks of the river Yarra, which flows into Hobson's Bay, an inlet of Port Phillip. The Yarra is navigable to the heart of the city for vessels of 22 feet draught, the distance from its mouth to the city being shortened by the Coode Canal. There is also Port Melbourne, which is three miles away and connected with Melbourne by road and railway, on Hobson's Bay. Queen's Bridge leads to the Yarra Bank Road in South Melbourne, where are the docks, ship-building yards and foundries, while Flinders Street is given up to maritime trade

Australian Government

STATELY PILE OF ORMOND COLLEGE, MELBOURNE UNIVERSITY

The university, which was established in 1855, is a congeries of buildings set amid extensive grounds about a mile north of the heart of the city. It consists of the university buildings proper, a medical school, a natural history museum, the Wilson Hall—a building in the perpendicular style—and the three colleges of Trinity, Queen's and Ormond, the last being the Presbyterian College

Australian Government

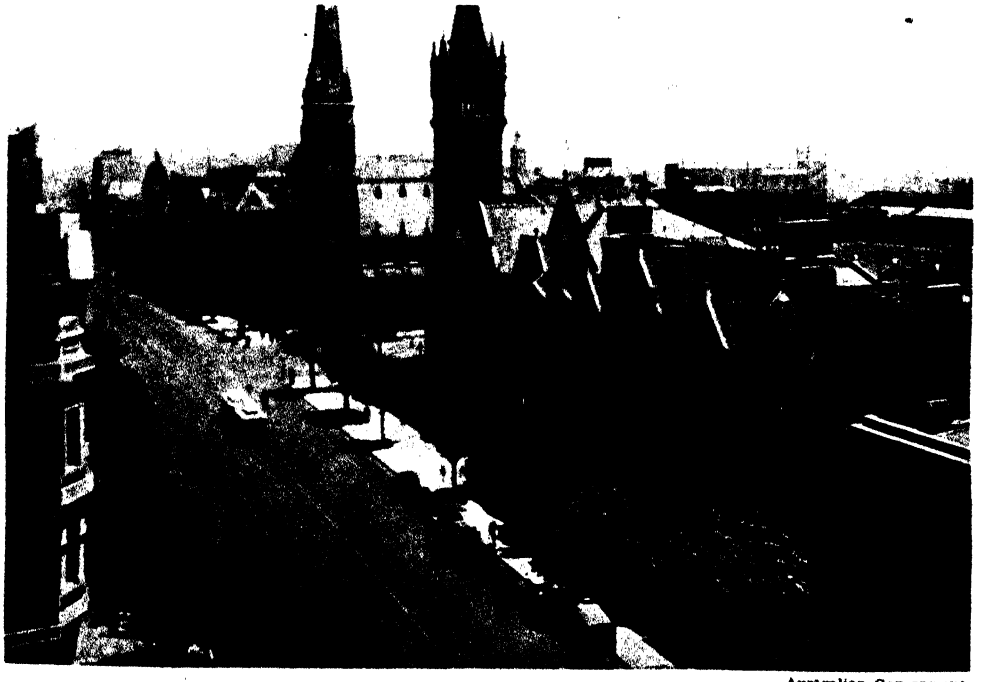
CLOCK TOWER OVER THE SPLENDID TOWN-HALL IN MELBOURNE

Melbourne has a fine town-hall at the corner of Collins and Swanston streets. The building contains a vast central hall capable of accommodating 2,500 people; in this hall has been installed a magnificent electric organ. About here is the central district called the "city," which occupies two hills, and in the valley between these eminences runs Elizabeth Street, which is parallel to Swanston Street

Australian Government

SOUTHERN PORTION OF THE "CITY" FROM ALEXANDRA GARDENS

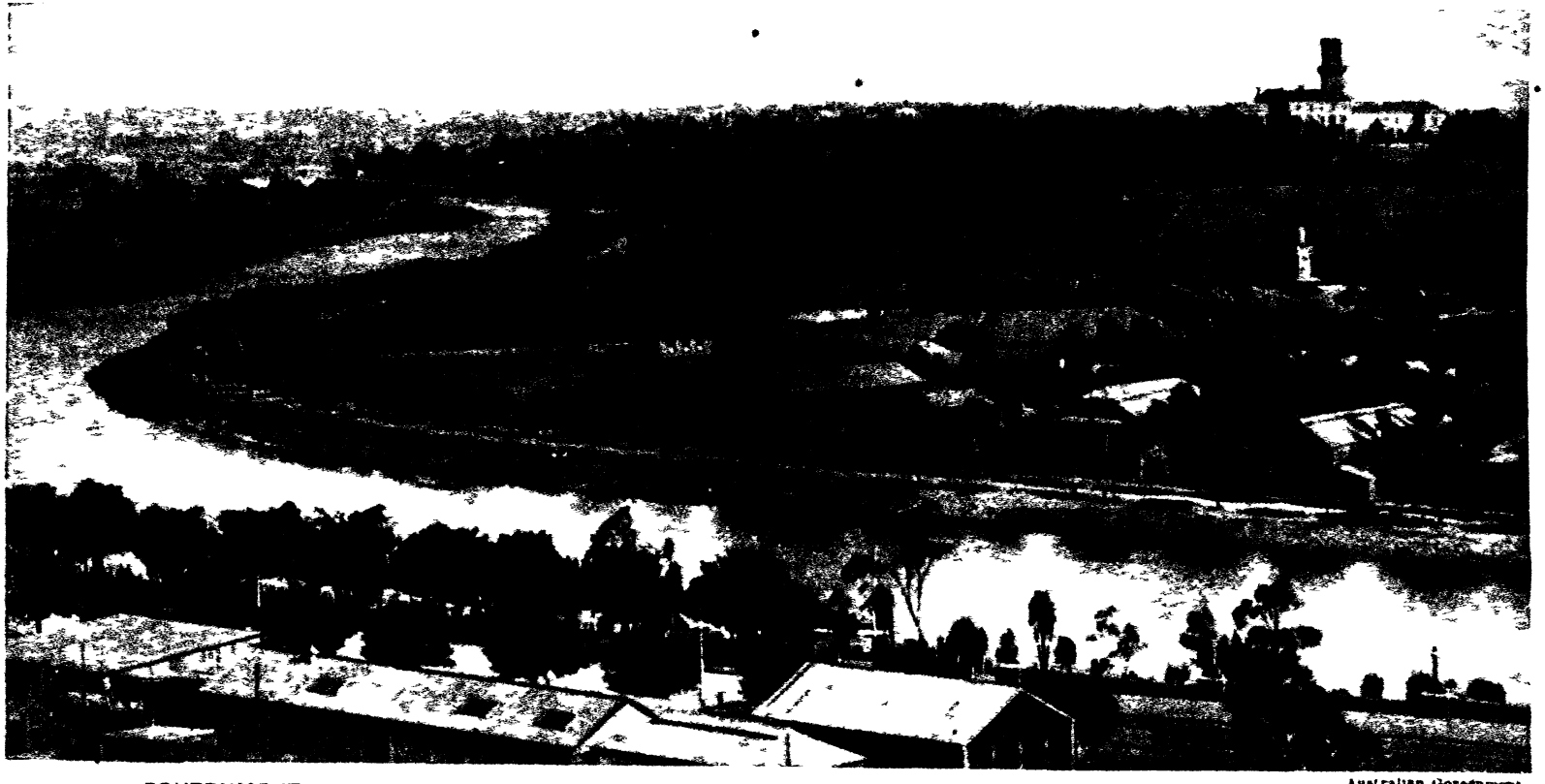
On the south bank of the Yarra there is a fine expanse of gardens stretching to the Botanical Gardens; the portion in the photograph has been named the Alexandra Gardens. On the left are the campanile and spire of the Independent and Scots churches; in the left centre is the dome over Flinders Street station, to the right of which, on the corner of Swanston Street, is S. Paul's Cathedral



Australian Government

LOOKING DOWN COLLINS STREET TOWARDS THE TOWN-HALL

Collins Street is one of the fashionable thoroughfares of the city, and in it are many of the best shops. The road runs from Spring Street to Spencer Street. Opposite each other, on the corners of Collins and Russell streets, are two churches. The first is the Independent church, a fine Saracenic building with a massive campanile; the second, a Gothic edifice surmounted by a lofty spire, the Scots church



Australian Government

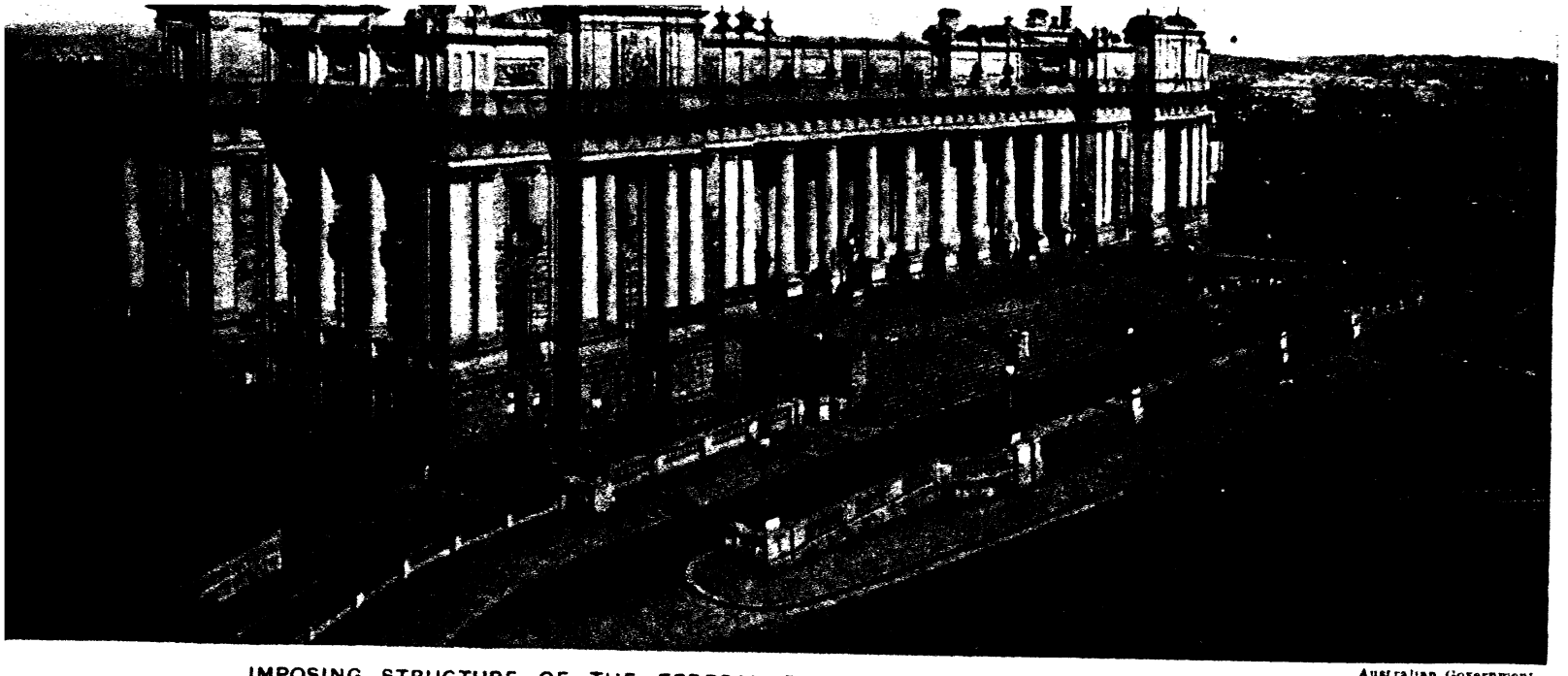
GOVERNMENT HOUSE WITH ITS TOWER HIGH ABOVE THE WOODED BANKS OF THE RIVER YARRA

Government House, the residence of the governor general of the Commonwealth, stands in extensive grounds sloping down to the Yarra The grounds are continued in the Botanical Gardens, which lie on the farther side of Government House In the distance are the suburbs of Richmond and Prahran and on the left is Yarra Park, which contains the Melbourne Cricket Ground, while to the west of the Botanical Gardens lies the Observatory South of Prahran is St Kilda, one of the most fashionable suburbs and connected with the city by the famous St Kilda Road, which is five miles in length and has sections allotted to each class of traffic

Special Press

BOATS GAILY DECKED AND CROWDS LINING THE BANKS DURING THE ANNUAL REGATTA

Henley-on-Yarra is the great annual regatta on the river, and this event is to the people of Melbourne what Henley is in England. Houseboats and almost every conceivable type of river craft are to be seen upon the river, and thousands of people occupy the tree lined banks along the whole length of the course. Another great sporting festival of Melbourne is the race for the Melbourne Cup at the Flemington race-course, which lies between the suburbs of Flemington and Kensington, and the Saltwater river to the north-west of the city. By the Yarra is Studley Park, which has been left in its natural state



Australian Government

IMPOSING STRUCTURE OF THE FEDERAL PARLIAMENT HOUSE IN SPRING STREET

Opposite the top of Bourke Street stands the Parliament House, a massive square building with a broad flight of steps leading up to the magnificent colonnaded façade. The edifice, lent by the state to the Federal Parliament pending the completion of the new House at Canberra, is lavishly ornamented in the interior, and contains a library of over 50,000 volumes, besides the legislative chamber. In the vestibule is a statue of Queen Victoria, and a group commemorating the three explorers, Robert O'Hara, Bourke and William Wells, who died in endeavouring to cross Australia from north to south

and members have the use not only of cricket grounds but also of tennis courts, bowling greens and a gymnasium, while the Club House is a model of comfort or even of luxury.

Outdoor sports are fostered by the climatic conditions which allow open air games to be played for at least ten months out of the twelve. Occasionally very hot winds blow from the north for two or three days at a time, but these periods are exceptional and for the greater part of the year the days are dry and mild and the sky clear. Snow is practically unknown, and the average annual rainfall is 25.58 inches. The mean temperature is 57.3° F.

But although such conditions naturally attract the sport-loving Australian to the open air, Melbourne is by no means unheedful of the needs of the more studiously minded, and especially of those seeking the advantage of a first-class education.

The university, established in 1855 and housed in a picturesque pile of buildings in the large grounds of Parkville, comprises in its buildings the university proper, a large natural history museum, the Wilson Hall and the three affiliated colleges of Trinity (Anglican), Ormond (Presbyterian) and Queen's (Wesleyan), besides the Medical School.

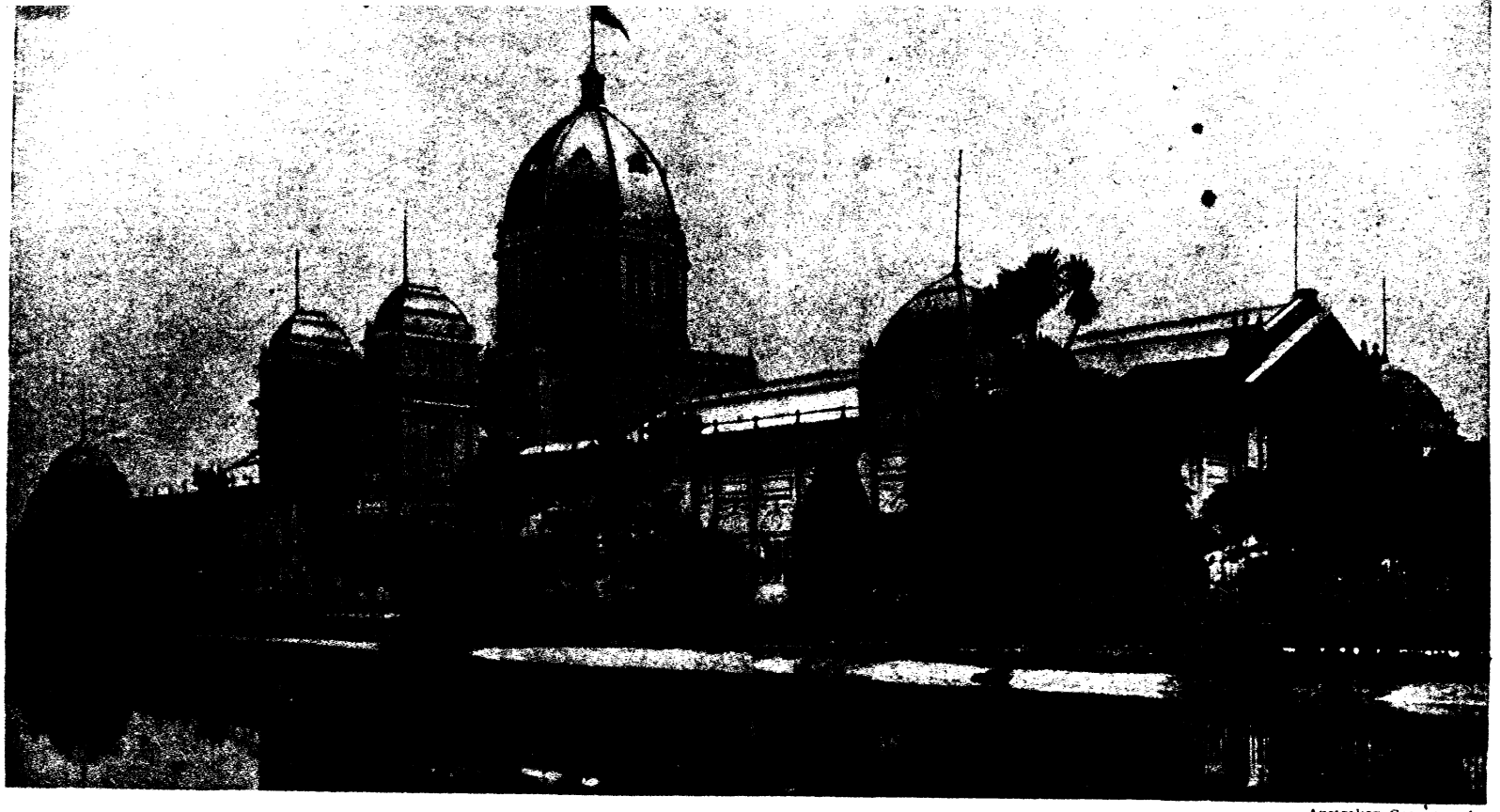
The university is undenominational and grants degrees in the faculties of Arts, Law, Medicine, Science, Civil Engineering and Music.

TWO-MILE VISTA DOWN ELIZABETH STREET TO NORTH MELBOURNE

Elizabeth Street is one of the longest roads in Melbourne, extending from Flinders Street in the south to Flemington Road in north Melbourne, a distance of over four miles. The clock tower on the right-hand side is that over the General Post Office on the corner of Bourke Street. Some of the commercial buildings are miniature skyscrapers, being twelve or fourteen storeys in height

The Public Library and National Museum includes a technological museum, a sculpture school, a national picture gallery and one of the finest collections of standard books in the world of over 200,000 volumes. There are an additional 40,000 volumes in the Free Lending Library.

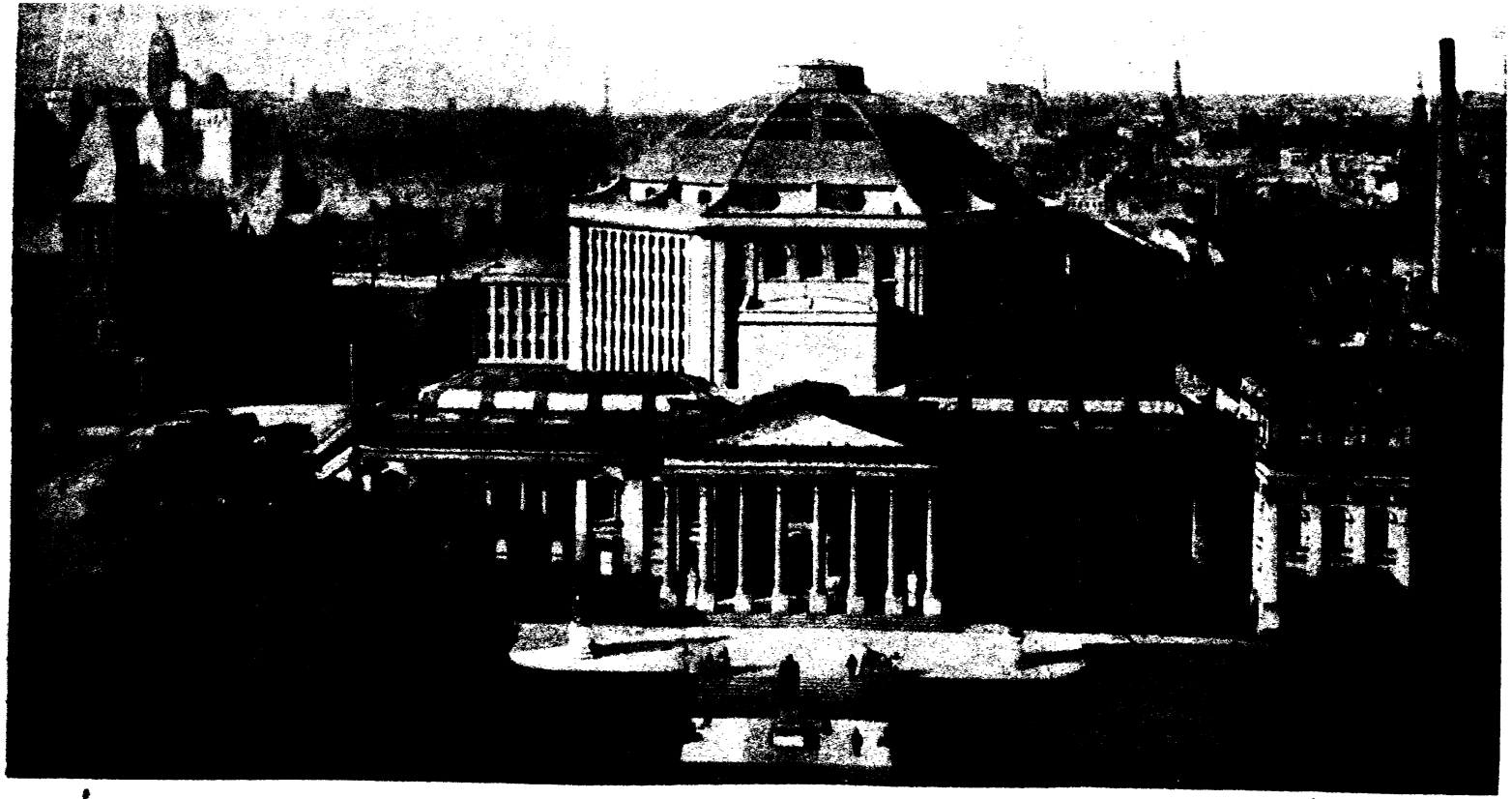
Other notable buildings are the town-hall with its spacious hall accommodating 2,500 and with a famous and splendid electrically controlled organ; the Houses of Parliament at the top of Bourke Street, lent by the state parliament to the Commonwealth until the House



Australian Government

HUGE STRUCTURE OF THE EXHIBITION BUILDING BY THE LAKE IN CARLTON GARDENS

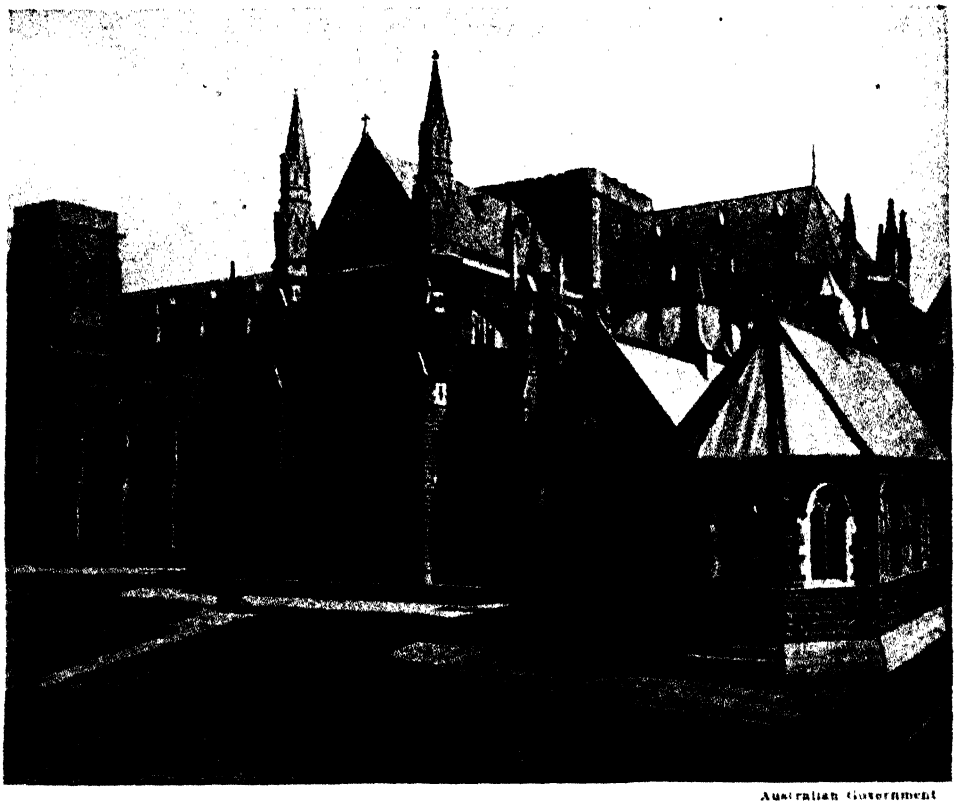
Exhibition Building stands on the hill in Carlton Gardens, and was erected in 1881. It consists of a large cruciform hall, surmounted by a dome and flanked by two annexes. King George V., then the Duke of Cornwall and York, opened the first Federal Parliament here in May, 1901. It is now temporarily housing the Victorian legislature. Carlton Gardens are on the north side of Victoria Street, almost immediately above the point where it is renamed Victoria Parade. Within the city proper are three gardens, Carlton, Fitzroy and Flagstaff, all with magnificent tree-lined avenues and ornamented with ponds and fountains



Australian Government

CORINTHIAN PORTICO OF MELBOURNE'S MAGNIFICENT PUBLIC LIBRARY

In Swanston Street there stands the colossal building of the Public Library, which also contains the museum of sculpture, the art gallery and the museums of ethnology and technology. The library is considered to be one of the finest of its kind, and contains over 300,000 volumes. In front of the building is a statue of Sir Redmond Barry, first Chancellor of Melbourne University. Swanston Street leads from Prince's Bridge, over the river Yarra, past the town-hall into Victoria Street. On the left of the library is the prison, at the junction of Latrobe and Russell streets, and beyond can be seen the Exhibition Building



Australian Government

BLUESTONE PILE OF S. PATRICK'S ROMAN CATHOLIC CATHEDRAL

S. Patrick's is the Roman Catholic cathedral of Melbourne, and the seat of the archbishop. It is a somewhat squat and irregular structure in Albert Street, constructed of sombre bluestone. S. Paul's Cathedral, in Swanston Street, is the seat of the Anglican bishop, and has a graceful exterior; but it is overtopped by surrounding buildings and loses some of its impressiveness

at the new capital of Canberra should be ready; Treasury Building in Spring Street; S. Patrick's Roman Catholic cathedral, the Scots church and the Independent church, all centrally situated; the Law Courts and the Exhibition Buildings.

The railway system of Victoria centralises in Melbourne, through which passes the main line from Adelaide to Sydney. From Melbourne two lines go eastwards to Port Albert and Orbost in the Great Valley.

Magnificent as the city is, her people are not content to rest on their laurels and are planning an extensive scheme for civic betterment which in some respects is unique. Proposals which have been adopted by the Town Planning Association and are to be submitted to a commission include the formation of an agricultural belt, an outer ring of park lands, a civic centre and a garden suburb. Other problems are concerned with the control of subdivisional sales, reserve areas in suburbs, health resorts and recreation areas, children's playgrounds, zoning system and road construction.

The proposed agricultural belt will be three miles wide at a radius of about ten miles from the city, and on this no further building except farm and orchard buildings will be allowed, the object being to prevent unwieldy growth and permit the economical transport of farm produce to the metropolis. The result must be a healthy conjunction of city and country life such as is unknown to-day in any great city in the world.

The other proposals for a civic centre and so on will also add to the magnificence of appearance in a city which is already notable in this respect.

MESOPOTAMIA

The Birth-place of Civilization

by Edmund Candler

Author of "The Long Road to Bagdad," etc.

FEW countries lend themselves so easily to geographical definition as Mesopotamia. Its boundaries are deserts and mountains. The Arab geographers, following a natural delimitation, have divided it into two distinct areas.

The lower and fertile zone is Irak. This is the alluvial delta. The upper zone is known as Jezireh, or "the island," that is the land between the rivers. The dividing line may be drawn roughly from the Tigris to the Euphrates some 50 miles above Bagdad, a little to the north of the point where the two rivers are nearest to converging. South of this natural boundary between the desert and the town we have a dead flat, cultivable and occasionally cultivated soil—five per cent. perhaps of the potentially fertile area has been brought under cultivation; while to the north of the alluvial deposits there extends a rolling, undulating plain, intersected by outcrops of rock, arid, bare and treeless, a land of unrelieved sterility until one comes to the submontane tracts to the north of Mosul, the glacis of the tablelands of Armenia and Anatolia. More than half the population is nomadic.

Great Wastes as Boundaries

To the east, south-east and north-east the same featureless desert stretches to the uplands of Kurdistan and the Persian border. The western boundaries to the south and north are the Arabian and Syrian deserts. On all sides the terrain has a gentle upward slope from the central depression. Bagdad, 350 miles from the sea in a straight line, is only 105 feet above sea-level.

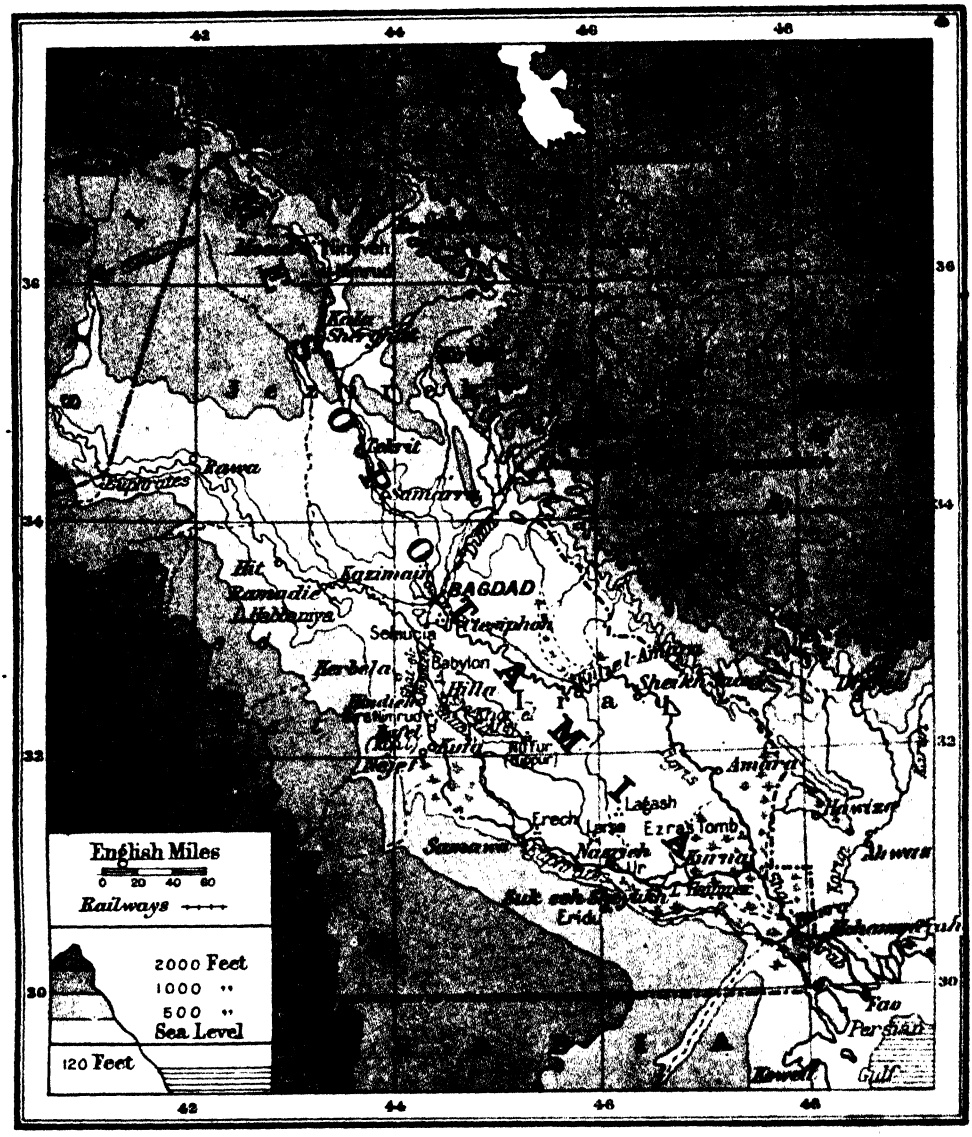
Mesopotamia, including Irak and Jezireh, desert, steppe and mountain, has an area of 150,000 square miles; yet a rough estimate of its population gives a census of less than 2,800,000. This ratio of 13½ inhabitants to the square mile is an indication of the inhospitality of the soil. Probably the greater part of the plains area has always been desert; much of it that was once under cultivation has been abandoned; while the rugged mountain walls that enclose the plain to the east and north are equally uninhabitable.

Cradle and Grave of Mankind

The only zone that receives sufficient rainfall for crops and perennial pasturage independent of irrigation is the upland country at the foot of these high ranges. The Kurdistan plateau is fertile and well watered from the hills, a country of rolling downs, good crops and excellent pasture. In spring the whole landscape is a vivid green, the flora that of an English June in a corn country.

But Mesopotamia enjoys only a thin fringe of fertility. It is usual to think of Irak in the terms of the first chapters of Genesis. It is the cradle of the human race and the grave of its earliest civilizations. The traveller on its deserts and waterways soon forgets the "cradle" legend, though he is reminded every hour of the "grave." Such is the deadness of this arid waste of country.

It is a land of excess. The climate is seldom moderate; I have known a difference of 40° F. between the temperature of day and night. From the end of April to October the heat is barely supportable. The mean monthly maximum temperature during August at Bagdad is 119.5°, but this is a dry heat. In the south of Lower Mesopotamia the



MARSHLAND AND DESERT OF THE "COUNTRY BETWEEN THE RIVERS"

climate becomes moist as well as hot. At Basra the conditions approximate to those of the Persian Gulf. Here a temperature of 110° F. is less bearable than 120° in Bagdad.

The heat of the desert is staggering. The refracted rays from the sand leap up and buffet you. There is an element of combat in it; one feels as if one were being licked by gusts of flame. The heat is fierce, rather than depressing; it does not infect one with the same insidious relaxation of fibre and spirit as the atmosphere of Basra, moist with the exudations of the drying marsh. There the very air seems to sweat. There is no hint of freshness even in the early dawn.

And each variety of heat has its attendant insects, its own peculiar plague, dysentery, fever, skin disease, jaundice, scurvy, colic, eruptions of every kind—the Bagdad boil, for instance, or the Aleppo "date" or the "dog-rot" of the Karun, the legacy of some poisonous fly. In the hot weather

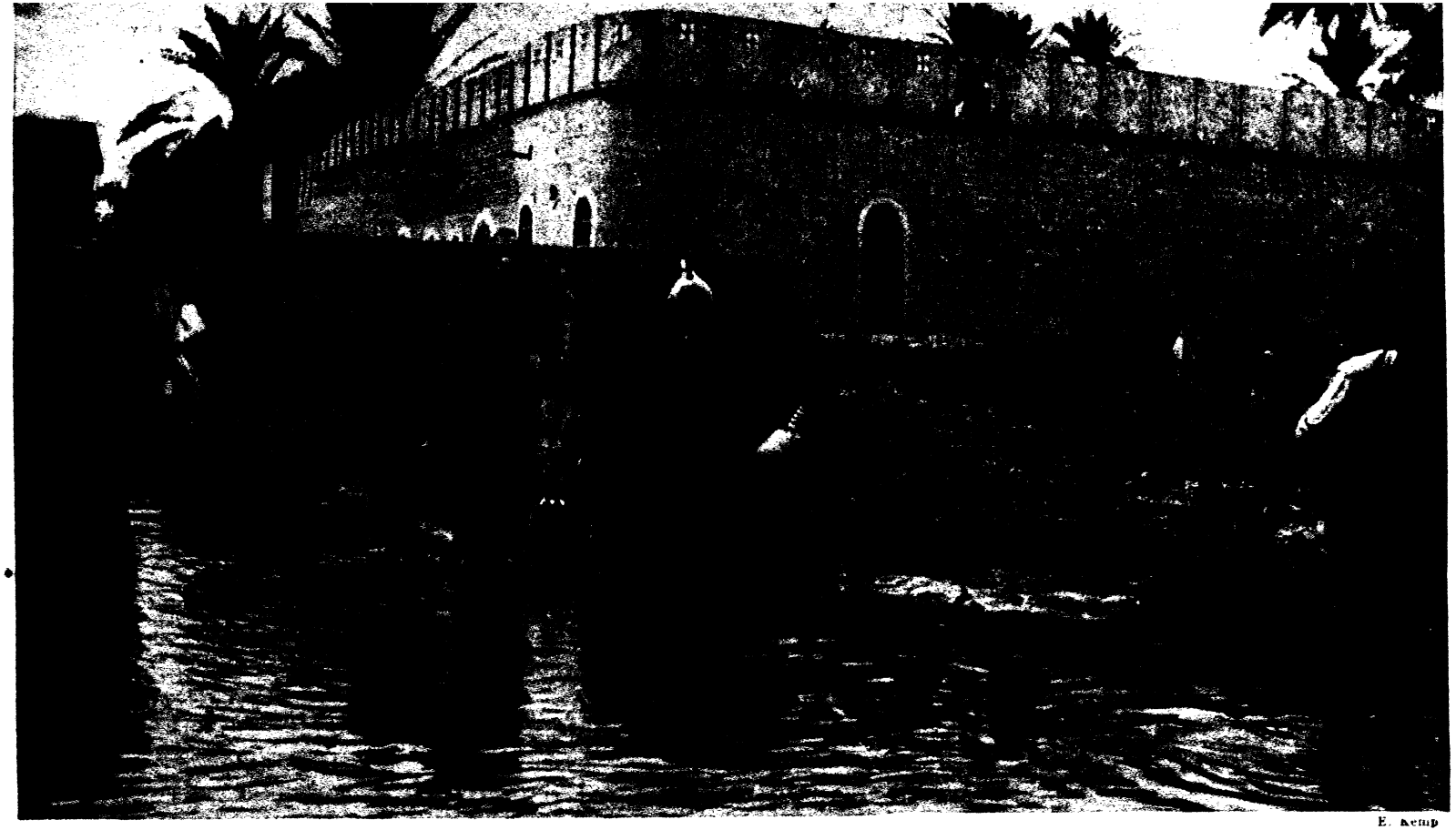
the plague cycles are unbroken and continuous; the plagues overlap one another. But there is one respite. In the veritable dog days the heat becomes so intense that even the flies and mosquitoes wilt and die.

The prevailing wind which sweeps over Irak in the hot weather is the "shamal" from the north-west. It begins with a light breeze at sunrise, increases in velocity during the day and drops at sunset. Though hot and dry the shamal brings some sort of alleviation. It is better than complete stillness, though it bounces off the ground and flings the sand and dust in your face like sparks of fire. The climatic conditions of Mesopotamia must have deteriorated since the days of the Babylonians when this firepit was the hub of the universe. The delta when one has passed beyond the palm limit leaves an effect on the mind of an illimitable prison yard. This is no undulating steppe, no variety in monotony even. One misses the challenge of the desert. The only landmarks are the relics of old mounds and canal embankments which have survived from the days when Mesopotamia was the granary and central trade mart of the world. All the ancient dynasties

Underwood

EXCAVATED RUINS OF ANCIENT BABYLON BY THE EUPHRATES

Babylon was situated on the Euphrates, about 60 miles south of the modern Bagdad. Its ruins are chiefly associated with the temples of the city and cover an area of about 10 square miles. They are in the form of huge mounds, two, or perhaps three, Babylons having been superimposed the one above the other. The Hanging Gardens have been located in the north part



E. Kemp

ARAB WOMEN DRAWING WATER AT HILLA, THE MODERN REPRESENTATIVE OF THE MIGHTY CITY OF NEBUCHADREZZAR

Hilla is situated about 60 miles south of Bagdad on the railway line from Bagdad to Basra, on the site of the southern precincts of the ancient city of Babylon, and is mainly built of bricks from the surrounding ruins. The town, luxuriously embowered in palm groves, is divided into two quarters by the Euphrates, whose fertilising waters are carried by canals to the neighbouring fields. Irrigation is the keynote of all agricultural development in Mesopotamia, and numerous

of Babylonia and Assyria, Sumerian and Semitic, the Romans, Greeks, Parthians, Persians, Medes have been sucked into this insatiable void, which has closed over them like a quicksand.

One of the first sights that is pointed out to the passenger on the river steamer plying between Basra and Bagdad is the Garden of Eden at Kurna. Here the channels of the Tigris and Euphrates meet in the Shat-el-Arab, the joint estuary which opens into the Persian Gulf at Fao, 116 miles to the south. In Biblical times the two rivers and the Karun, which now joins the Shat-el-Arab at Mohammerah, had separate mouths. Ur on the Euphrates, which was one of the chief ports of ancient Babylonia, lies many leagues inland.

The rapid advance of the delta with the alluvial deposits carried down by the rivers and the retreat of the coast-line are phenomena of recent times.

Where the Garden of Eden Was

Since Nearchus, Alexander's admiral, took his fleet from Karachi to the Karun river and explored the head of the Persian Gulf (325 B.C.), the delta has encroached more than 100 miles on the sea. Kurna therefore must have emerged from the waters long after the events described in Genesis. But the local tradition as to the site of the Sumerian paradise is probably not wide of the mark; it is natural that the Arab approaching the sea from the inland desert should associate the first green shade with the seat of bliss.

From the mouth of the Shat-el-Arab at Fao, where the estuary is nearly a mile wide, the palm groves extend on either bank as far north as Kurna. It is a narrow belt of vegetation. Penetrate it anywhere north or south of Basra, and in half a mile or so you will pass out of the shade into the barren sands. Three miles above the Garden of Eden one leaves behind the last outpost of fertility and enters a treeless waste of swamp and desert. One passes scanty patches of cultivation on the river bank and is seldom out of sight of herds of donkeys and cattle and flocks of sheep, tended by nomad herdsmen who dwell in reed huts or black tents.

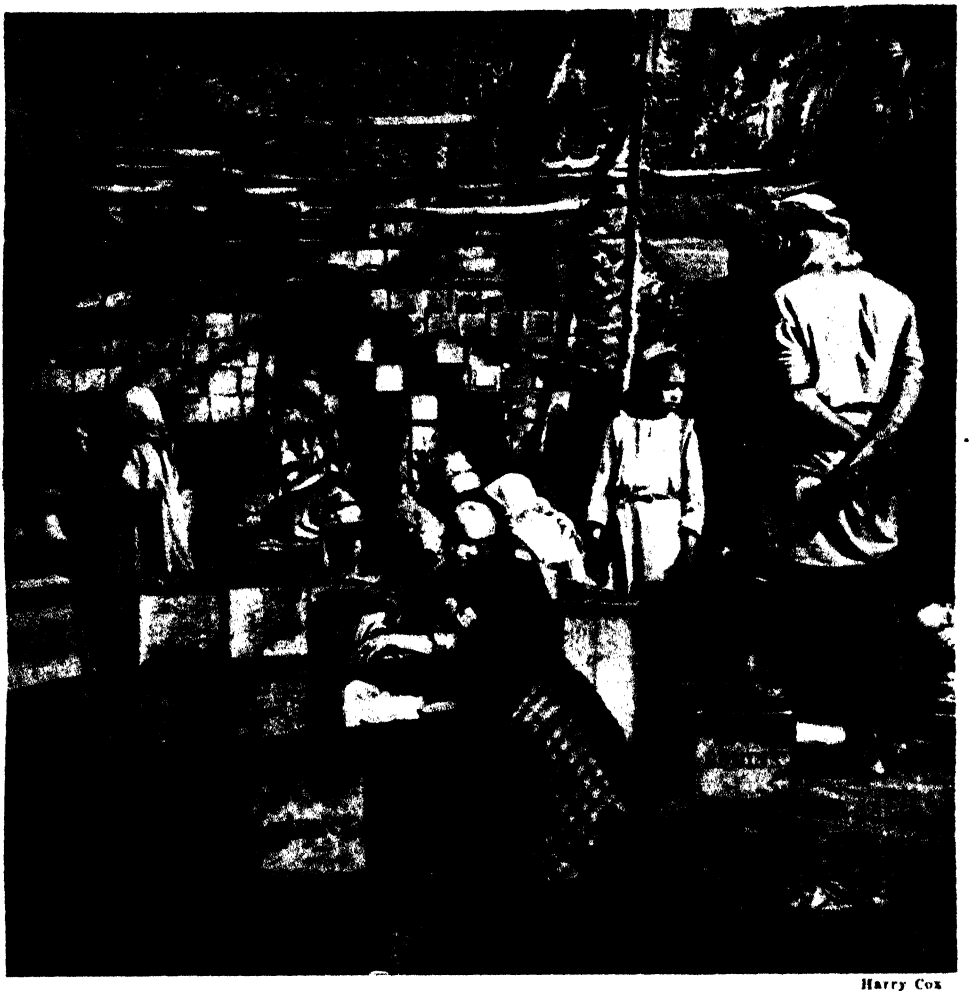
Inland from the river bank the desolation is unalleviated, an interminable plain of flat, baked clay. One looks in vain for the fertility that made Mesopotamia the cradle of the human race and the nursery of the earliest civilizations. Nature, it seems, has withdrawn her bounty. Nor is there any trace on the surface of the land of the races that enjoyed it. What relics they have left behind lie buried under the soil. Only two human monuments are seen between Basra and Bagdad, Ezra's tomb and the Arch of Ctesiphon.

Land of Ancient Verdure

Yet this is Biblical ground. The Tigris is the river Hiddekel of Genesis. The plain is the plain of Shinar. Herodotus tells us that the land between the two rivers once supported a vast number of great cities. Wheat was indigenous in Babylonia. "A grain returned two-hundred-fold to the sower." Ammianus Marcellinus, the historian of Julian's campaign, has described the country between Ctesiphon and the Gulf as a continuous forest of verdure. It was a green, fertile, irrigable country, rich in corn lands 4,000 years before imperial Rome set covetous eyes on it. Egypt alone rivalled Mesopotamia in fertility, and it is difficult to say which was the earlier civilization. The same physical features explain the ancient settlements in both lands.

Early Empires on the Euphrates

But it was on the Euphrates, not the Tigris, that the earliest cities of Babylonia stood. The Euphrates, then as now, was more easily irrigable: its banks were lower, the flow of its stream more equable. The country visible from the lower reaches of the river and in the neighbourhood of the Hammar Lake and Nasrieh is the richest in Mesopotamia and the most pleasing to the eye. Here one enters an area of



Harry Cox

DATE INDUSTRY OF MESOPOTAMIA: PACKING DATES FOR EXPORT

The soil of Mesopotamia is fertile, and agriculture, aided by extensive irrigation, is steadily developing; dates, wheat, barley, cotton, rice and ground nuts form the main products. The chief date-growing district is in the south-east on the fertile lands near the Shat-el Arab. Men, women and children are employed in the date-packing stations, and are here seen packing the fruit for export

gardens and cultivation which gives one an idea of the fertility of the land in ancient times.

These low-lying marshes, or similar ground farther inland, were probably the home of the earliest settlers. The cornfields of the Euphrates must have contributed the greater part of the revenue of Ur. The early Sumerian capitals, Ur, Erech, Larsa, Nippur and Lagash, were all on the western river, the Euphrates.

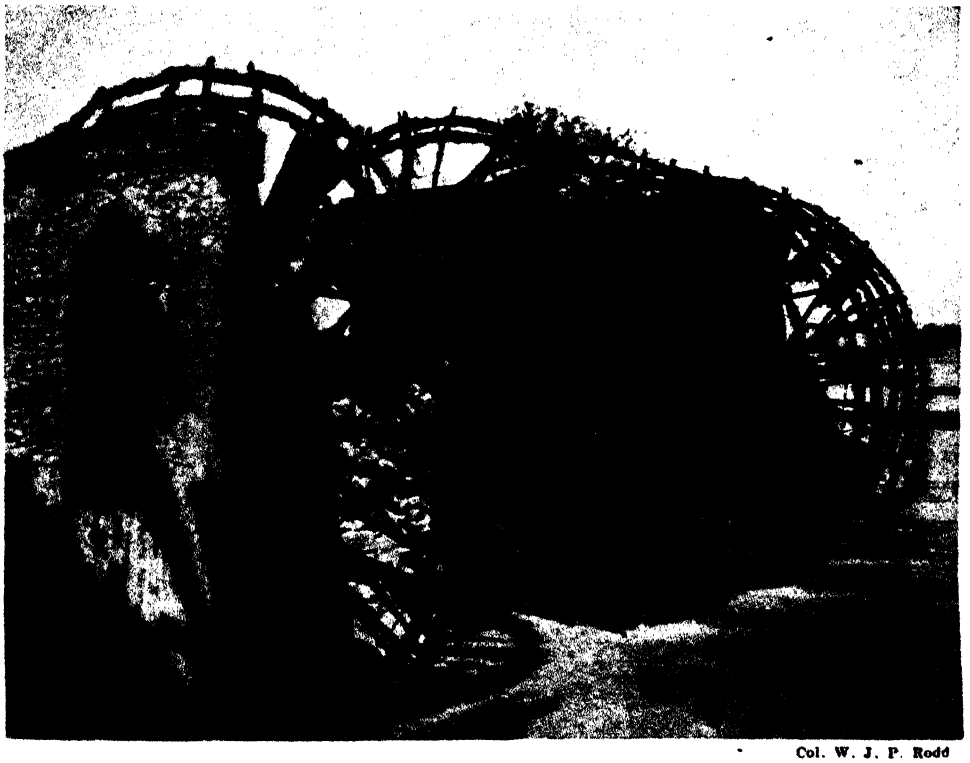
It is believed that the beginning of this civilization dates back to at least 4000 B.C. Babylon was of a later date. All that is left of these cities is heaps of debris, low mounds strewn with bricks and potsherds breaking the monotony of the landscape. Sermons in stones, or in bricks rather, for you will not find an indigenous pebble in the delta, abound in Mesopotamia. On the surface it is the most uninspiring country in Asia, so barren is it of feature or interest. The average traveller, sportsman or soldier hates it, but to the few who can read the records in stone or clay this dead land is intensely living. The small tel, or hill, that looks like a sand-drift or a heap of rubbish is a dead city, or rather a mound of cities. For the Babylonians

built the foundations of one city on the ruins of another, thus raising the site layer by layer through the centuries.

The uninitiated will find nothing inspiring in the excavations of such cities: a number of small quadrangular rooms with the walls fallen in; nowhere any clear outline—the area of the houses indistinguishable from the temple and the street. Some detail may quicken his imagination, the ashes of a hearth, relics of some sacrifice or festival, an oven or inscribed brick or broken lamp, objects which give him no clue to the reconstruction of the past. It might be the ruins of a town ravaged and deserted in the eighteenth century after Christ. But the archaeologist knows the date of the chamber in which he is working. It is part of a temple. The inscribed brick gives him the clue. It was set in the wall, perhaps, when Hammurabi reigned in Babylon 2,100 years B.C. The energy, enterprise and wisdom of the king are commemorated in thousands of tablets that lie strewn about his city.

The citizen of Babylon under Hammurabi was probably better cared for than the Bagdadi under the Ottoman rule of yesterday. It was a paternal, provident government. One gathers from the tablets that the governor of Larsa had to give a more rigid account of his administration to the king than the sultans of Turkey ever demanded of the walis of Mosul or Bagdad. The Babylonian was certainly more prosperous. For the Turk is an irresponsible destroyer - mere appetite without provision. Every landmark that the excavator sees from his tent is an indictment of him and a reproach.

The long low mound on the horizon was a raised embankment that used to carry fertilising water to the fields. In



Col. W. J. P. Rodd

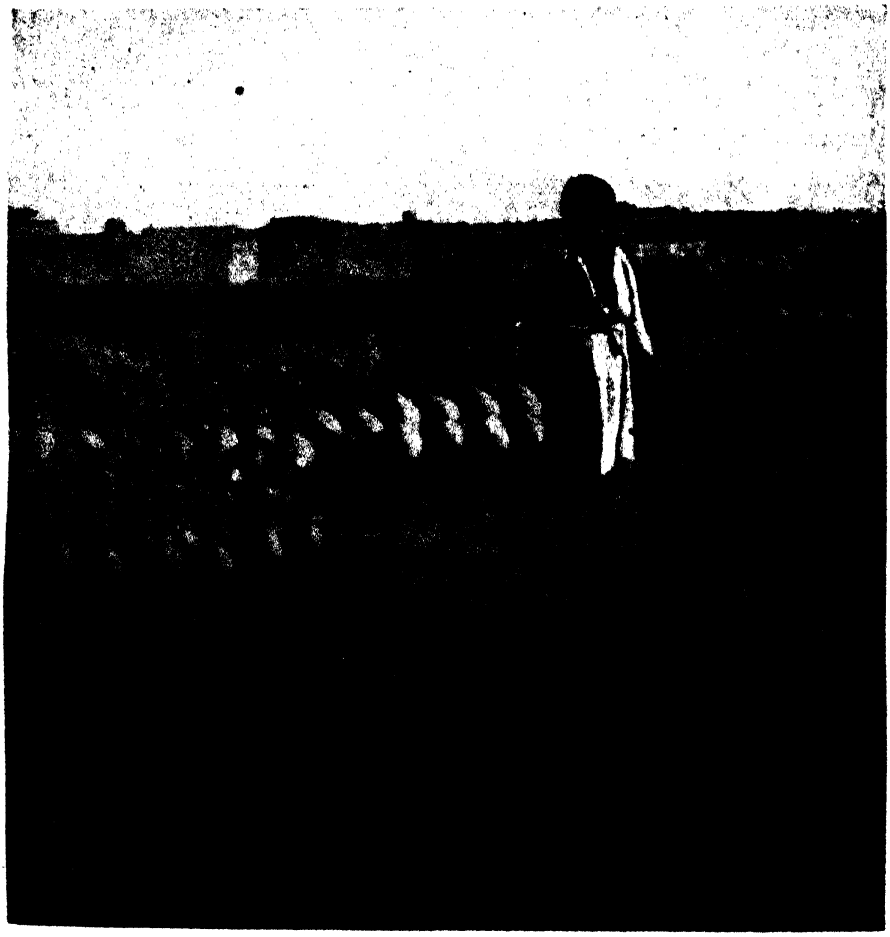
GIANT WATER-WHEELS OF PRIMITIVE CONSTRUCTION AT HIT

Known in ancient times as Is, the town of Hit, situated on the Euphrates, is some 85 miles north-west of Bagdad, and has very interesting historic associations and physical characteristics. Its gardens of mulberries and peaches are far-famed, as are also its salt springs and wells of bitumen. Though of exceedingly rude construction, these colossal wheels effectively raise water from the river

Captain C. M. Fry

KIRKUK ON ITS HILL, AN IMPORTANT TOWN IN THE MOSUL VILAYET

The town of Kirkuk, with a population of 92,000, lies some 150 miles north of Bagdad on the Kissa Chai, here crossed by a many-arched brick bridge. On the left bank is the artificial mound, seen above, about 130 feet high and crowned by the citadel; at its base lies the older part of the town, while on the right bank the more modern quarter is located



Captain C. M Fry

NATIVE POTTER OF KIRKUK AMONG HIS EARTHENWARE

The local manufactures of Mesopotamia are not numerous, earthenware and copper vessels, baskets and cloths being practically the only products of native industry. Almost everywhere in the land the making of pottery is held in high esteem as a time-honoured art, and beautifully shaped, wheel-turned vases and water jars, usually plain but sometimes with a blue glaze, are produced

Biblical times, and earlier, the whole delta was intersected by canals. From time to time as predatory hordes swept over the country these must often have fallen into disrepair, but they were rebuilt by succeeding generations, the irrigation channels were cleared of silt and the flood controlled and distributed until the desert bore fruit again.

The bricks of the ancient canals which one now finds built into the walls of modern towns like Samawa or Hilla bear the inscriptions of the Babylonian kings. "I, Neriglissar, led beneficent and inexhaustible water to the land." And at Babylon Nebuchadrezzar's voice is heard across the ages speaking from the bricks of a protective wall that he built in the Euphrates against the flood. "I, Nebuchadrezzar, raised its foundations on the depth of the water; its top I exalted like the wooded hills."

Irrigation's Lavish Reward

Upon the control of the Euphrates depends the prosperity of Mesopotamia. The first public work that Alexander the Great undertook in Babylonia was the construction of a new head on solid ground for the Hindieh channel, where the river divides into two branches, the Shat-el-Hilla to the east and the Shat-el-Hindieh to the west. A barrage was designed here for the Ottoman government by Sir William Willcocks to provide water for the Hilla branch, which was silting up while the bed of the Hindieh branch was scouring out and being wasted.

The barrage was constructed before the Great War, but owing to the supineness of the Turks the canalisation work connected with it was neglected and the cultivable area was never brought under irrigation. During the British occupation after the capture of Bagdad the engineers got to work on the Euphrates side. In less than three months nearly a hundred canals on the Hilla branch which had fallen into disuse were dug out; 300,000 acres were brought under cultivation, and the summer of 1918 saw the greatest harvest in the memory of man, probably the greatest since the days of Nebuchadrezzar.

The physical features through which Mesopotamia became the cradle of the earliest civilizations were in the end, of course, responsible for its decay. The forefathers of the human race formed in these rich alluvial flats the first human settlement of which we have record. The conditions in the delta were propitious to the growth of an organized society, the development of agriculture and industries and the communal life out of which grew the system of laws on which Hammurabi based his famous code.

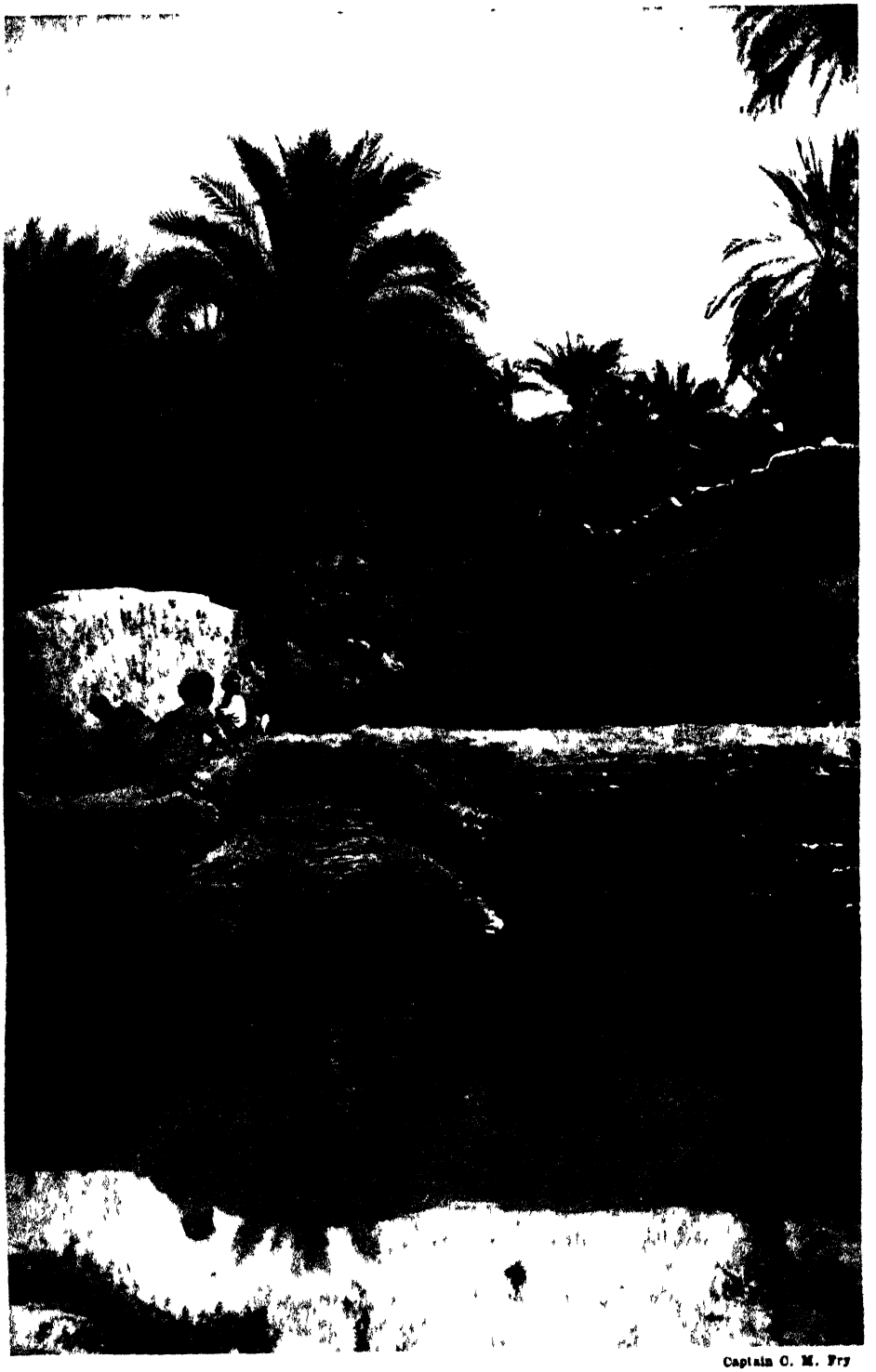
Wonderful Legacy of the Sumerians

The Sumerians were the first to exploit the secrets of science, medicine and astronomy. Theirs was the first written script. They invented the sundial and the division of the day into twelve parts. Herodotus acknowledged the indebtedness of the Greeks to them. If the laws that govern human production were static, if the nations of the earth were subject to a more equable distribution of climatic and economic stress—that is to say, if one paradise were as good as another—the Sumerians might be dwelling on the banks of the Euphrates to-day, an unmixed race.

Cockpit of Western Asia

But the races who cultivated the delta of the two rivers were exposed to envious pressure on the east and west and north; the chronicle of the successive waves of Semitic invasion, the campaigns against Elam, the invasion of the Kassites, the interrelations of Babylonian and Assyrian dynasties and the conquest of Babylon by Assyria would fill volumes, and the troubled history of the first four millenniums brought no settlement or peace. The land that contains the terrestrial paradise has continued to be the cockpit of western Asia until the present day.

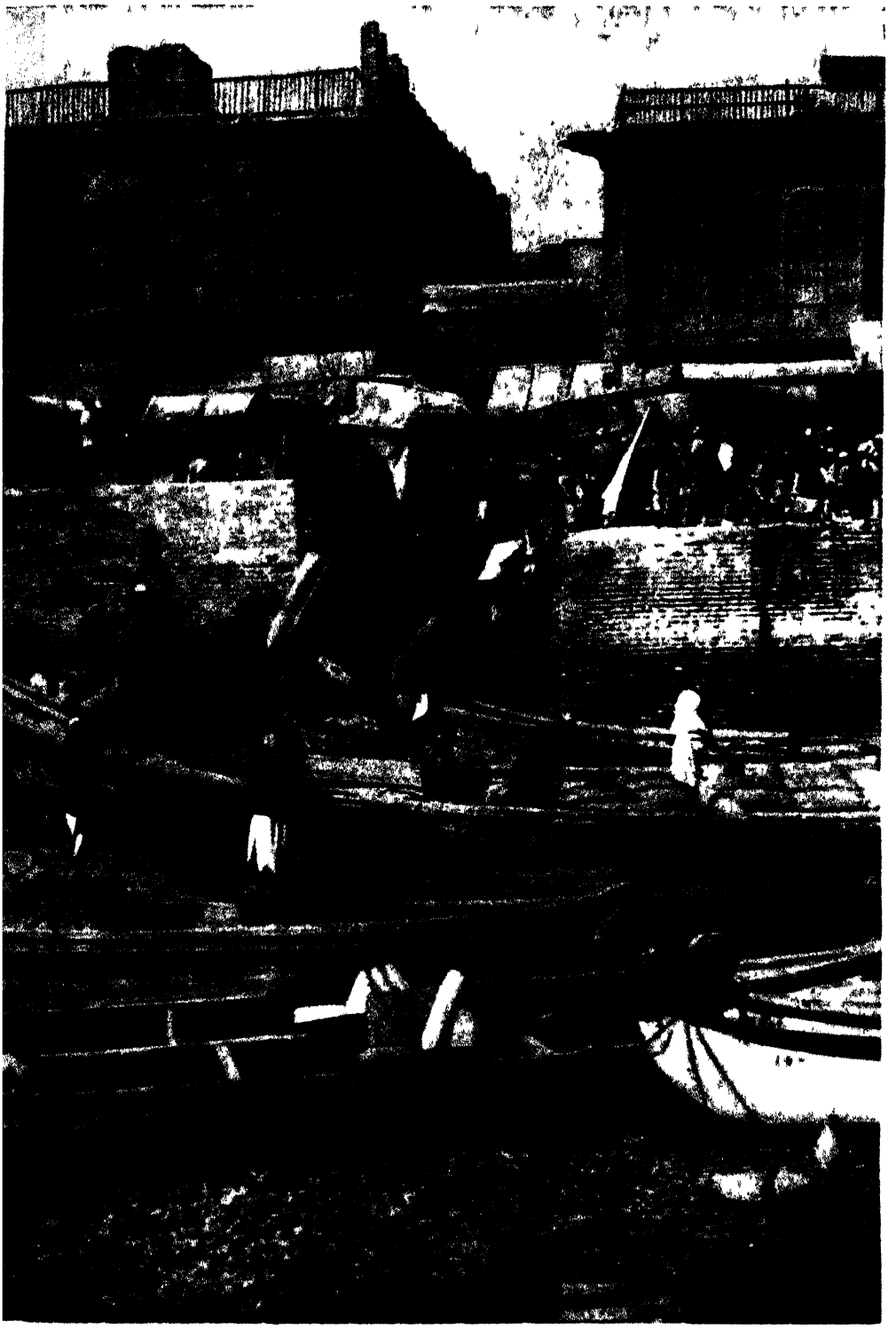
After the disappearance of Assyria, Babylonia was subdued by the Medes, Greeks, Parthians and Persians in turn.



Captain C. M. Fry

PALM GROVES BY A CREEK NEAR THE GARDEN OF EDEN

At Kurna, the Tigris and Euphrates meet in the Shat el-Arab, and here is the reputed site of the Garden of Eden, which is the termination of a narrow belt of palms extending from Fao to Kurna. The Garden is intersected by creeks and irrigation canals, which are crossed by mouldering bridges. A few miles above this green refuge the waste of sand begins



Albert E Cree

UNLOADING GRAIN FROM LIGHTERS ON THE ASHAR CANAL, BASRA

Basra is intersected by many canals which are cleansed twice daily by the ebb and flow of the tide As the streets are, as a rule, uneven and narrow these waterways are the principal means of communication and are usually crowded by boats transhipping cargo from river craft and caravans to ocean vessels. There is a considerable trade in grain grown on the rich alluvial flats

H R Watson

SHIPPING ON THE BUSY WATERWAY OF THE NAHR ASHAR CANAL IN THE PORT OF BASRA

Basra, a city of Lower Mesopotamia, stands on the Shat el Arab, about 60 miles from the Persian Gulf. The town itself is two miles from the river, and is reached by two canals, the Nahr Ashar and the Nahr Khandak. It has always been a place of considerable importance but during the Great War it was transformed from a squalid town of mean houses built of sun dried bricks, into a great port. It is the port of Bagdad, and has direct communication with

Intermittently under the emperors Trajan, Septimus Severus and Julian it formed a province of the Roman Empire. When the hand of Rome grew weak in the East and the Greeks were exhausted, it passed to the Parthians, then to the new Persian dynasty, the Sassanids, the founders of Ctesiphon, who held it until they were overwhelmed by the avalanche of Islam. After the Mahomedan conquest the prosperity of its ancient days never quite returned.

The great arch of Ctesiphon on the Tigris, the capital of the Sassanids, is the only relic of these races that stands above ground. The gigantic shell of a ruin which Townshend's men saw glowing like a lighted shrine, as it caught the earliest rays of the sun, has been the cynosure of many invading armies. Julian's men regarded it with silent anxiety for many weeks before their historic crossing of the Tigris. To both leaders the capture of the throne of the Chosroes was a disastrous victory. But to the Arab hordes who overthrew the Persians (A.D. 637) the splendour of Ctesiphon meant the realization of their dreams.

Site of Four Successive Capitals

The ruins of Babylon on the Euphrates lie 40 miles to the south-east of Ctesiphon and Seleucia, and Bagdad 18 miles to the north by land. The natural site for the metropolis of "the land between the two rivers" is at the point where the area within the embrace of the streams is narrowest. Babylon, Seleucia, Ctesiphon, Bagdad commanded in their turn the great trade routes of western Asia. The streams that gave them life flowed from regions of produce; sea-borne trade was carried to them from the gulf.

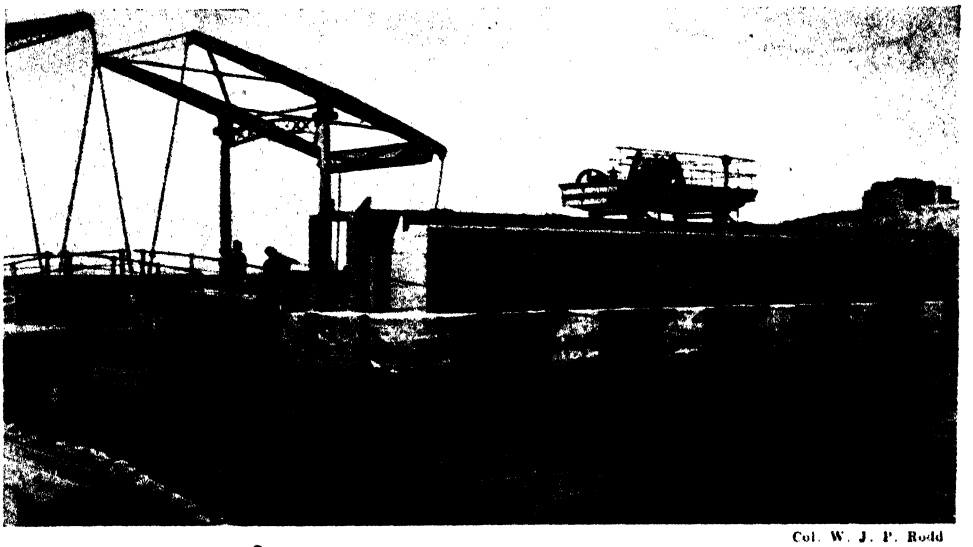
To the west the desert ports, Kufa and Kerbela, or its old-world equivalent, linked up Babylon with the ancient trade routes of Arabia. At Bagdad the Tigris and Euphrates are within 40 miles of converging, while the Diala, which joins the Tigris 20 miles downstream from the city, has always been the main artery of communication with Persia. Along it lay the old Babylon-Ecbatana road. The armies of Darius, Hytaspes, Cyrus and Chosroes passed this way in the ebb and flow of conquest; the Mongols invaded the south by it, the Arabs the north; Haroun Al Raschid was familiar with it; from early Mahomedan days it became the great pilgrim route from Persia to the shrines of Kerbela, Nejef and Kazimain.

Relics of the Early Kings

The Babylon that the excavators have brought to light is the Babylon of the historians, Herodotus, Ctesias, Diodorus Siculus, the new Babylon of the Bible, the captivity and Nebuchadrezzar II., of the last dynasty that reigned from 625 to 538 B.C. Nebuchadrezzar is the king and Marduk the god of whose palaces and temples the uninstructed visitor is most often reminded. But the archaeologists have discovered traces left by the first dynasty of Babylonian kings who were separated from Nebuchadrezzar by twice the lapse of centuries that divide our own time from the Norman conquest. There are relics too which point to a prehistoric Babylon, but it is impossible to excavate down to this depth owing to the rise in the water level.

Babylon Wondrously Built

Herodotus gave the city a perimeter of 60 miles, Ctesias of 50; modern research has reduced the circumference to 12. Otherwise the general descriptions of the historians are accurate. The city walls of Nebuchadrezzar, a triple rampart, the outer and inner walls including the wall of the fosse at the foot, are from 17 to 22 yards thick. Two teams of four horses abreast could pass each other on the outer barrier, and the walls were towered. The city was built with broad, straight streets at right angles, and those that led down to the river passed under the wall through little gates of brass. The two flanks of the wall rested on the Euphrates and were extended on the other side, so that the city formed a triangle through which the river flowed diagonally. But so far



Col. W. J. P. Rodd

HINDIEH BARRAGE THAT CONTROLS THE WATERS OF THE EUPHRATES

Much care has been expended on the control of the Euphrates and on the draining of its swamp lands. At the head of the Hindieh Canal, where the river bifurcates into the Hilla and Hindieh branches, a barrage, of pre-War construction, assures a continual supply of water in the eastern or Hilla branch, the main bed, and prevents that of the Hindieh from wasting itself in the western marshes

no traces of Babylon have been found on the right bank; the excavations are all on the left bank of the stream.

The excavators have been most active in the Kasr, or acropolis, the centre of the city and the most renowned of the eminences of Babylon. They have followed the line of the Kasr roadway, a broad street which leads to the Ishtar Gate, made by Nebuchadrezzar as a processional road for the great god Marduk, to whose temple of E-sagila it leads. The double gate of Ishtar is by far the most striking feature of Babylon that the archaeologists have revealed. The walls stand 40 feet above the foundations and are covered with figures of bulls and dragons in nine horizontal lines in relief.

Many of the stones and bricks are inscribed with the name of the street or building for which they were designed. Nebuchadrezzar has described the nature of his repairs, his motive in building and the material he employed. And he has invoked curses on the head of whosoever shall obliterate the king's name. Thus the archaeologist, thanks to the providential vanity of a line jealous of the records of their name, has been able to identify the sites of Babylon. He will point you out what he is convinced is Belshazzar's banqueting chamber and the vaulted roofs which once supported the hanging gardens.

One of the scanty relics of the Jewish captivity that have survived is the tomb of Ezekiel at Kafel, a shrine revered by Jew and Christian alike. Ezra's tomb, the blue-domed shrine in the palm clump that is pointed out to one a day's journey upstream of Kurna, cannot be the original tomb of the scribe, for the Tigris on whose banks it stood centuries ago has since changed its course. Arab tradition is abundant in legendary sites. At Kufa they will show you the spot where Jonah was cast up by the whale. Ur is the birthplace of Abraham. Birs Nimrud, which Herodotus included in the perimeter of Babylon, is pointed to as the ruins of the Tower of Babel. One can see it from Hilla, a rugged mound dominating the landscape, rising from the debris at its base. Sir Henry Rawlinson discovered from inscriptions on the spot that the ruins were once the famous Tower of the Seven Planets built by Nebuchadrezzar II. (604-568 B.C.) upon the site of an ancient temple.

In Mesopotamia the flood legend is easily credible. The land between the

two rivers must have often been completely submerged. There have been historic deluges. The provident patriarch who saved himself and his family and his flocks and herds in the prototype of the craft familiar to us on the Tigris to-day would naturally consider himself divinely counselled and transmit to posterity the legend of the favour he had received from the gods. It is an older story than Noah. The earliest Babylonian account of the Deluge comes from Erech, the home of Gilgamesh, somewhere between 4000 and 2160 B.C. The tablets recording it were recovered from the library of Ashurbanipal in the ruins of Nineveh.

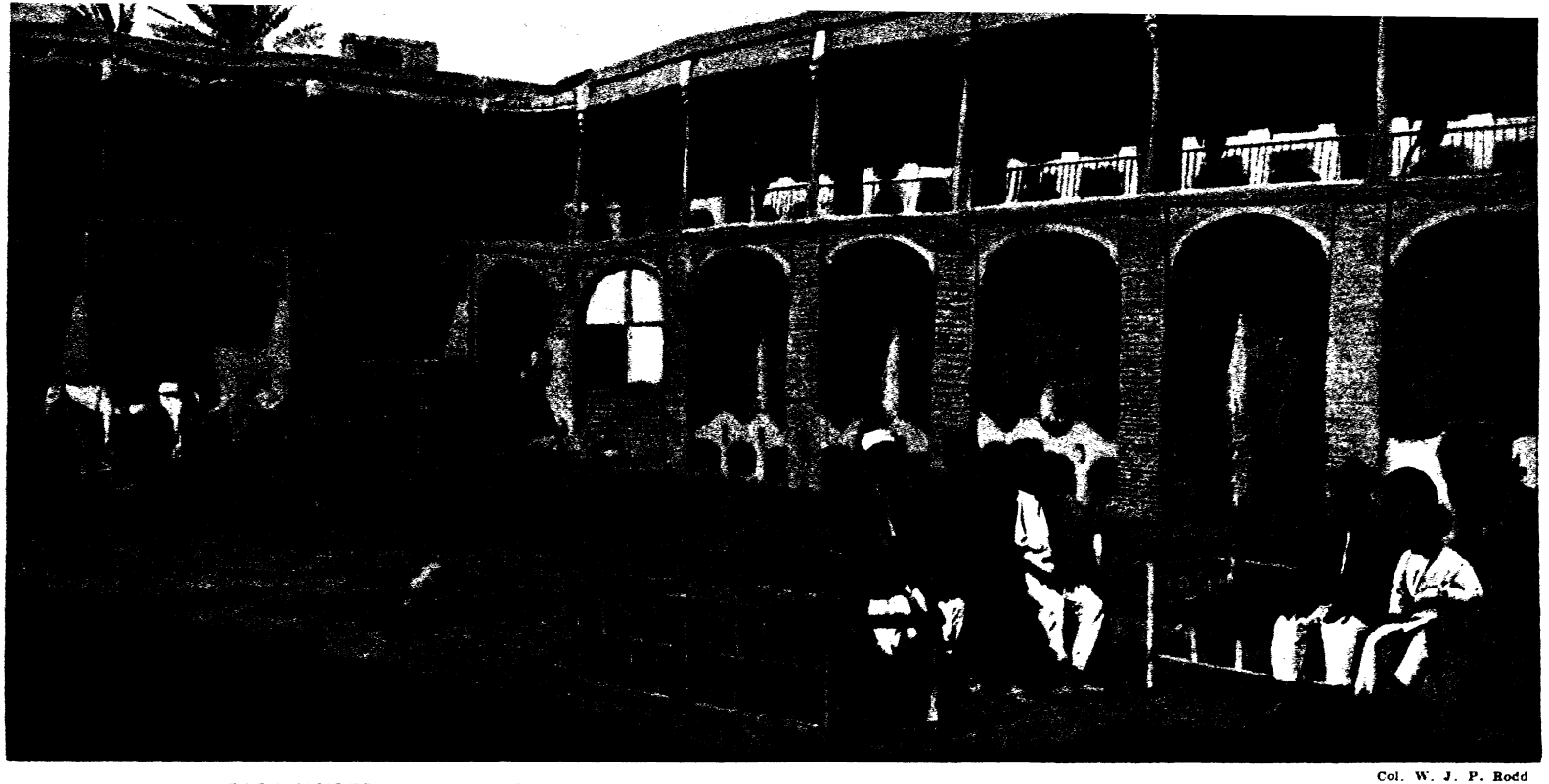
Most of us who know Mesopotamia have tried to reconstruct the scene of Babylon from the picture of modern Bagdad, which is described elsewhere. Probably more of the features and habits of antiquity survive here than on the sites of most buried cities. The chief houses on the river front are built on immensely solid revetments and have their foundations in the water, mostly in the form of bastions—the protective wall of Nebuchadrezzar. Many of them have small gardens and steps running down to the Tigris. The approaches to the river, narrow tortuous alleys, lead in some cases through arches under houses to the steps where the women fill their pitchers, like the hundred streets with the hundred brazen gates on the river front described by Herodotus at Babylon. Here the boatmen still ply for hire and the water-carriers fill their skins which they load on the backs of small white asses.

The "gufas," the round cauldron-shaped coracles, of the Tigris and Euphrates, are the oldest river craft in existence. Herodotus has described them, "round like a buckler and freighted with casks of palm wine." He tells us how they floated down-stream from Armenia, each with a live

Col. W. J. P. Rodd

HOUSES PULLED DOWN IN MOSUL TO WIDEN THE ROAD

Mosul, the capital of the vilayet of the same name, stands on the Tigris, 220 miles north of Bagdad, and was formerly an industrial centre. The streets are narrow and undrained, but steps are being taken to provide good thoroughfares within the walls. The town was famous for its muslin, but little of the textile industry remains, the chief trades being tanning and dyeing



Col. W. J. P. Rodd

CARAVANSERAI IN KERBELA, ONE OF THE HOLY CITIES OF THE SHIAH MAHOMEDANS

Kerbela lies a short distance west of the Euphrates, with which it is connected by a canal, about 60 miles south-west of Bagdad. It contains the tomb of Hussein, the grandson of Mahomet, which is much venerated by the Shiites, who regard the town as a second Mecca and visit it annually in large numbers. The town owes a great deal of its prosperity to these pilgrimages. The caravanserai is an important feature of any Eastern town, where the traveller may go and obtain food and shelter for himself and his animals. The guest-rooms open off the balcony running round the central courtyard

ass on board, and how when they arrived at Babylon the vessels were taken to pieces and the ribs of willow, date palm and pomegranate sold with the merchandise, and the covering of skin carried back on the asses to the merchant's own country. One may see "the two navigators standing upright" and lashing the stream furiously, and the puzzled faces of the passenger sheep, as they are spun across the Tigris revolving giddily to be sold in the most fabled market in the world.

The bazaars of the Mesopotamian towns, such as those at Bagdad, are not what they were. Still the arched and vaulted thoroughfares with their stalls of indigenous silk-stuffs, embroidery and metal-ware are full of interest and charm. The coppersmiths are expert craftsmen. Groups of these Titans, naked to the waist, hammering the white-hot metal at the forge, are memorable sights. In the bazaars of the silversmiths one finds rare filigree work in all the precious metals, engraving in mother-of-pearl, combs and small objects of ivory, wood and tortoiseshell, the products of local industry.

Secret Art of the Bazaars

At Amara and Suk-esh-Sheyukh the Sabaean silversmiths carry on their immemorial trade in silver inlaid with antimony. It is a secret guild, as old as Nebuchadrezzar. In the leather markets one sees acres of the red and yellow shoes affected by the old-fashioned inhabitants, and slippers and yellow top-boots. Little of this trade finds its way overseas. On the Persian side there is a certain amount of land-borne traffic, gums, opium and carpets.

Bagdad is the only town in Mesopotamia which has a population of over 100,000. Basra comes next with 80,000. The enormous sums which were expended on the port during the Great War have become a permanent investment. The town proper, which lies back some two miles from the river, and is reached by two canals, the Nahr Ashar and the Nahr Khandak, was before the War unlighted, unpaved and notoriously insanitary. Its walls and gates have practically disappeared. Basra is now an up-to-date port, but progress has not added to its charm.

Close Competitors in Dirt

Mosul at the other extremity of Mesopotamia is its antithesis, a walled city with eleven gates, entirely treeless, but offering a picturesque outline broken by towers, domes and minarets. On the river side the houses are built into the wall and look on to the river. The streets are narrow, undrained lanes, winding between blank house walls. Mosul has a smell of its own, a blend of tanneries, abattoirs, dye-works and kilns. It also boasts a distinctive disease, akin to "the Bagdad boil," and "the Aleppo date." By the almost general consent of travellers in the Middle East Mosul disputes with Hit the supremacy in dirt.

Kerbela and Nejef, the greatest of the Shiah centres of pilgrimage, lie on the edge of the Syrian desert. Kerbela, which stands back about 20 miles from the Euphrates, and is connected with it by the Husseiniyeh canal, contains the tomb of the martyred Hussein, the son of Ali; Nejef, the tomb of Ali.

Kerbela consists of an old walled town and a new town unwalled. The new town has a broad main street running through it and is comparatively clean, a rare feature in Arab towns. Unfortunately no general view either of it or Nejef can be obtained except from the towers and minarets of the Shiah shrines, which are inaccessible to Europeans.

Nejef on its Bluff

But from the outside Nejef is incomparably more striking. It is the most compact, isolated and impressively medieval desert city I have seen. It stands on a bluff six miles from Kufa on the Euphrates, its river port on the old pilgrim road from Mecca to Bagdad. The golden dome and the minarets of Ali's tomb are visible to pilgrims three marches distant. The faithful are drawn to this magnet from all over the East,

for the religious sentiment of the fervent Shiah clings more to the Ali and Hussein tradition than to the memory of the Prophet himself. Half the population of Nejef and Kerbela live on the profits of sanctity. They are immensely wealthy "cathedral cities," with a fabulous revenue from religious endowments.

It is on agriculture rather than on industries that the prosperity of Mesopotamia depends. The real history of the country is the chronicle of the struggle of the races who have held it with the great rivers. The early Sumerians and Semites, and afterwards the Greeks and Persians, controlled and harnessed them. The Turks failed. Under Ottoman rule the life-giving and fertilising waters have been dissipated.

With the restoration of the desert one may expect a decrease of the nomadic and an increase of the sedentary population. At present the population of Mesopotamia outside the towns is almost equally divided between the Beduin, who are pure nomads, and the settled cultivators and breeders of stock, who are confined more or less to the riverine belts. Between these must be counted the semi-nomads, Arabs and Kurds, who own and cultivate land, but spend part of the year moving with their flocks and herds from one pasture to another according to the season and the conditions of grazing.

As a general rule the Arab frequents the plains and the Kurd the hills, and on debatable ground there is a standing feud between them. The Arabs are the "people of the camel." The Kurds, being a mountain race, keep no camels; their wealth lies in their horses, sheep and goats. The nomads of both races are generally raiders.

If any settled and efficient government could be established in Mesopotamia which offered security enough for the investment of capital, the delta of the Tigris and Euphrates might again become the granary of the world. But the Arab is helpless, incapable of organized enterprise or of becoming prosperous through taking advice.

The worst evil that could befall the country would be the return of the Turk. The territories subject to the Osmanli lie dead under his hand. Mesopotamia has never recovered from the ravages of his ancestor Hulagu. It is the stock example of the historical commonplace that the passage of the Ottoman is followed by a blight as certain in its operations as famine after drought. It was the Turk who, by his misgovernment, converted the cradle of civilization into its grave.

MESOPOTAMIA: GEOGRAPHICAL SUMMARY

Natural Division. A river-created and river-destroyed lowland, with a growing delta. Cf. the Doab of the Jumna-Ganges, the Nile in its trench, the deltas of the Nile and Ganges.

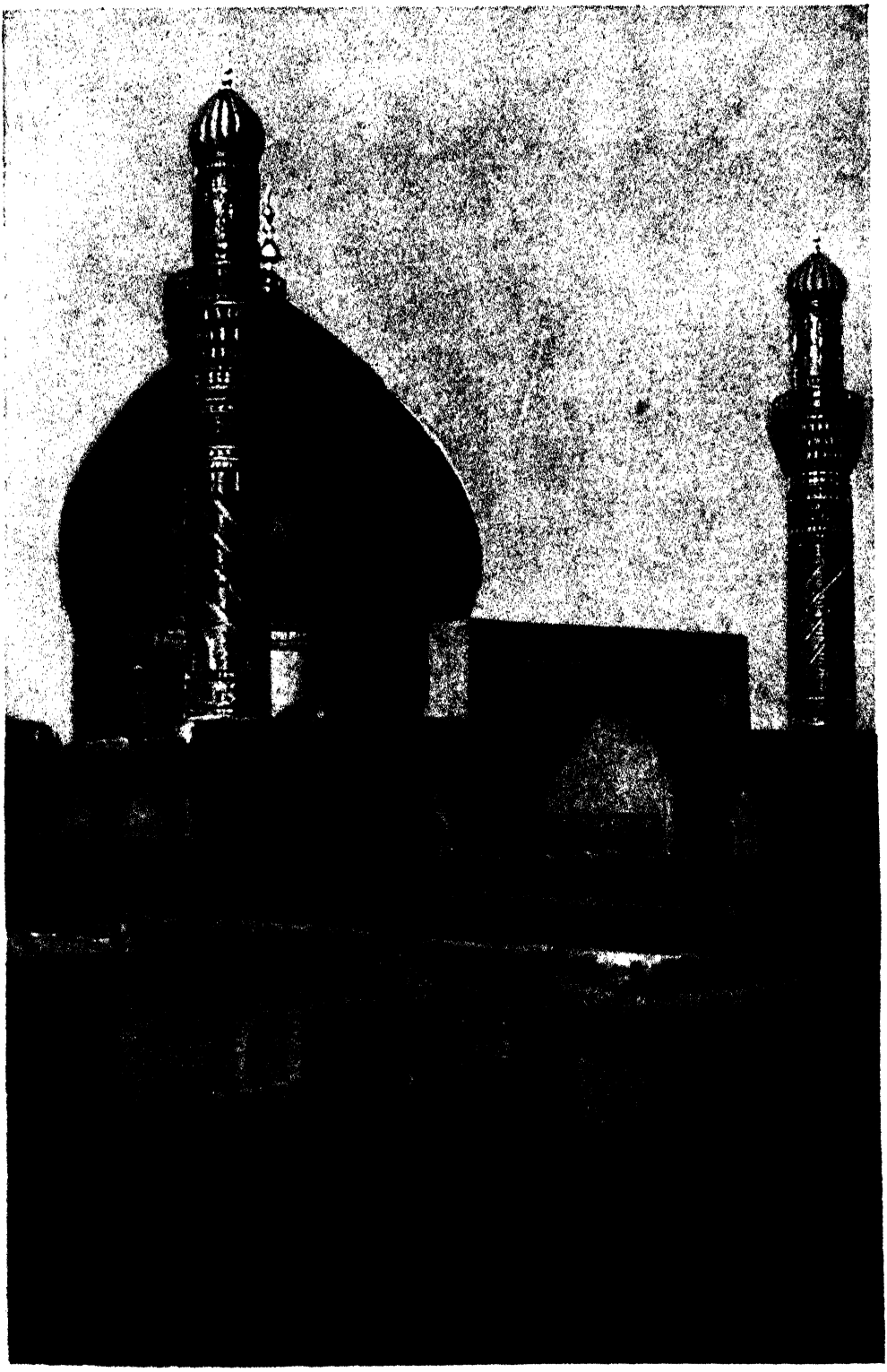
Location. The upper waters of the rivers cross the world-wide strip of hot desert (cf. the Indus and the Lower Nile). The delta leads to a semi-enclosed sea (cf. the Po); it lacks the advantages due to situation on a world steamer route (cf. the Nile delta, the Rhone delta); it has, as yet, no great trade from the river valley behind it (cf. the Indus delta). The natural landway from Constantinople to India (cf. the Berlin-Bagdad railway route and its extensions).

Climate. A desert climate marked by excessive heat and dryness with great extremes and sudden changes of temperature (cf. Cairo and Middle Egypt).

Vegetation. Natural growth along the river margins, desert away from water with steppe (scrub grass-land) beyond, leading to the trees of the foot-hills.

Irrigation. In the world search for new areas where wheat, cotton and other crops of primary importance may be profitably grown attention naturally falls on these lowlands. Discovery has demonstrated the ancient fertility due to water control. Modern experience with the Nile, Indus and Ganges points the way for success, hence the Hindieh barrage and the irrigation schemes.

Outlook. Nature provides the setting for a land flowing with milk and honey; the blight of the Turk obscures the land of promise; the future rests with the growing needs of the rapidly increasing population of the world. Mesopotamia will wait for prosperity until economic pressure makes large scale cultivation of primary crops a payable proposition; capital in labour and money must be expended and will be provided when necessity compels.

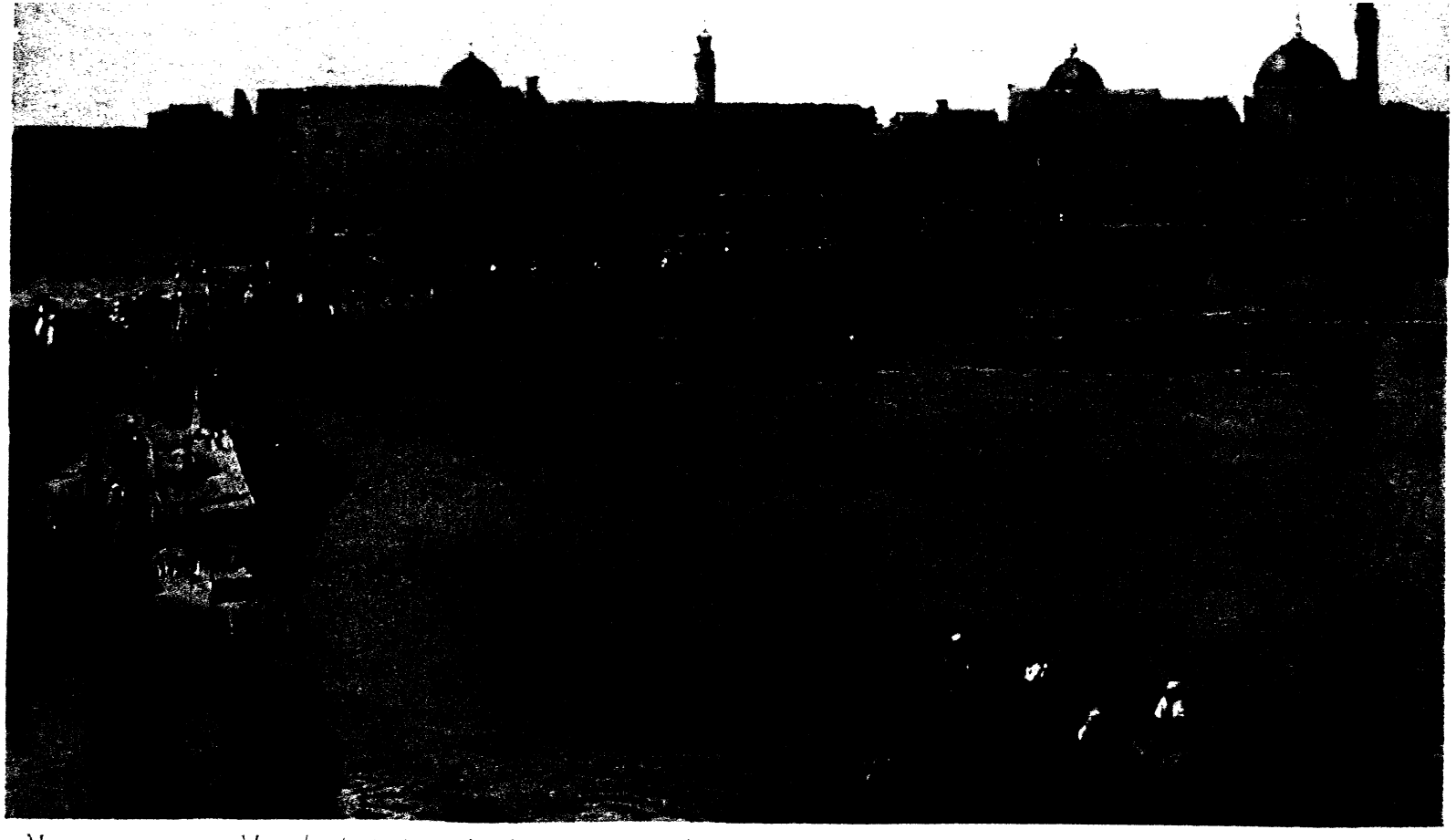


MESOPOTAMIA *Golden domes, and bright minarets whose glazed tiles are a lost art, announce Samarra from afar to the Shiah devotee*

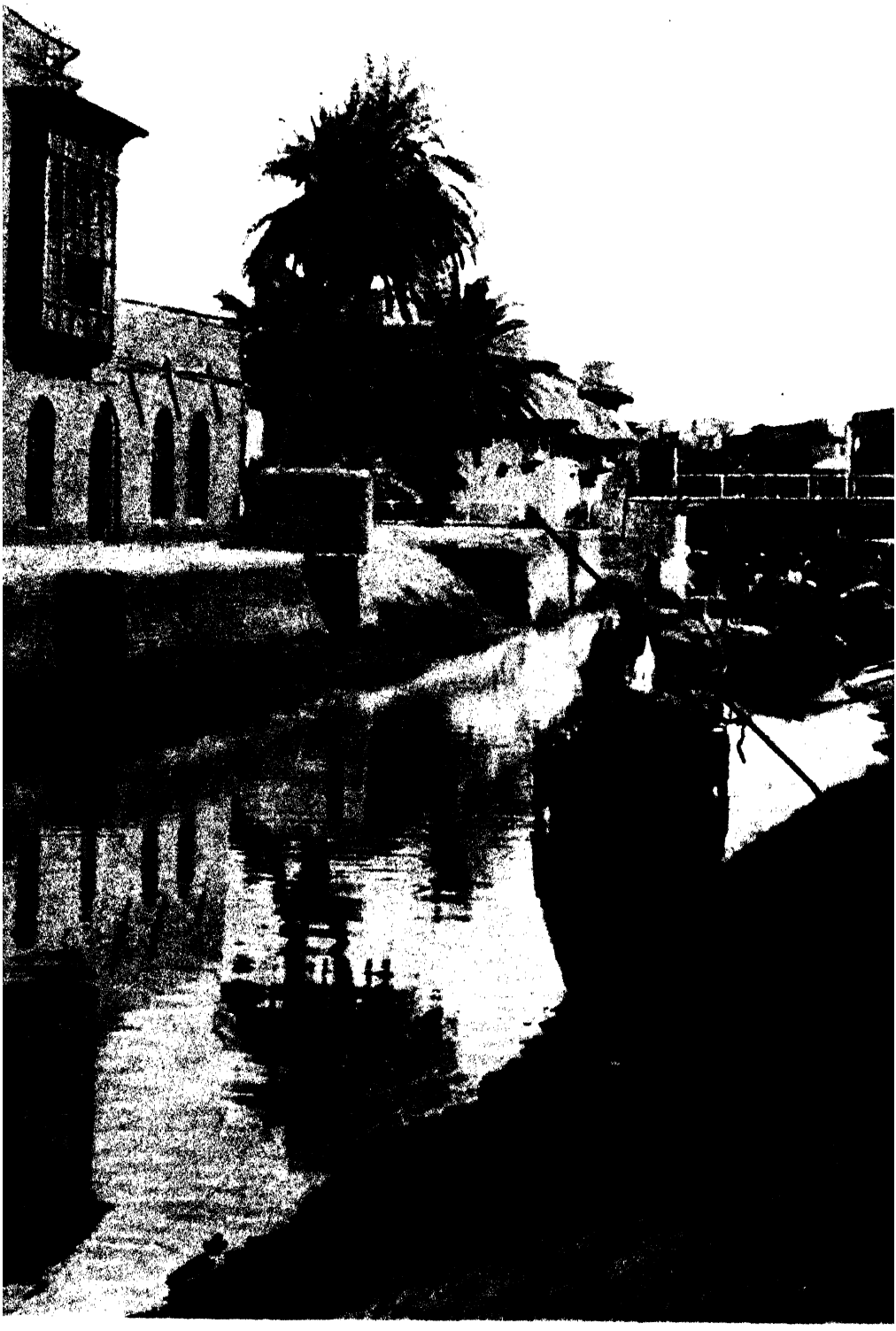
2733

Photos on pages 2732 to 2738 Col W J F Reddi

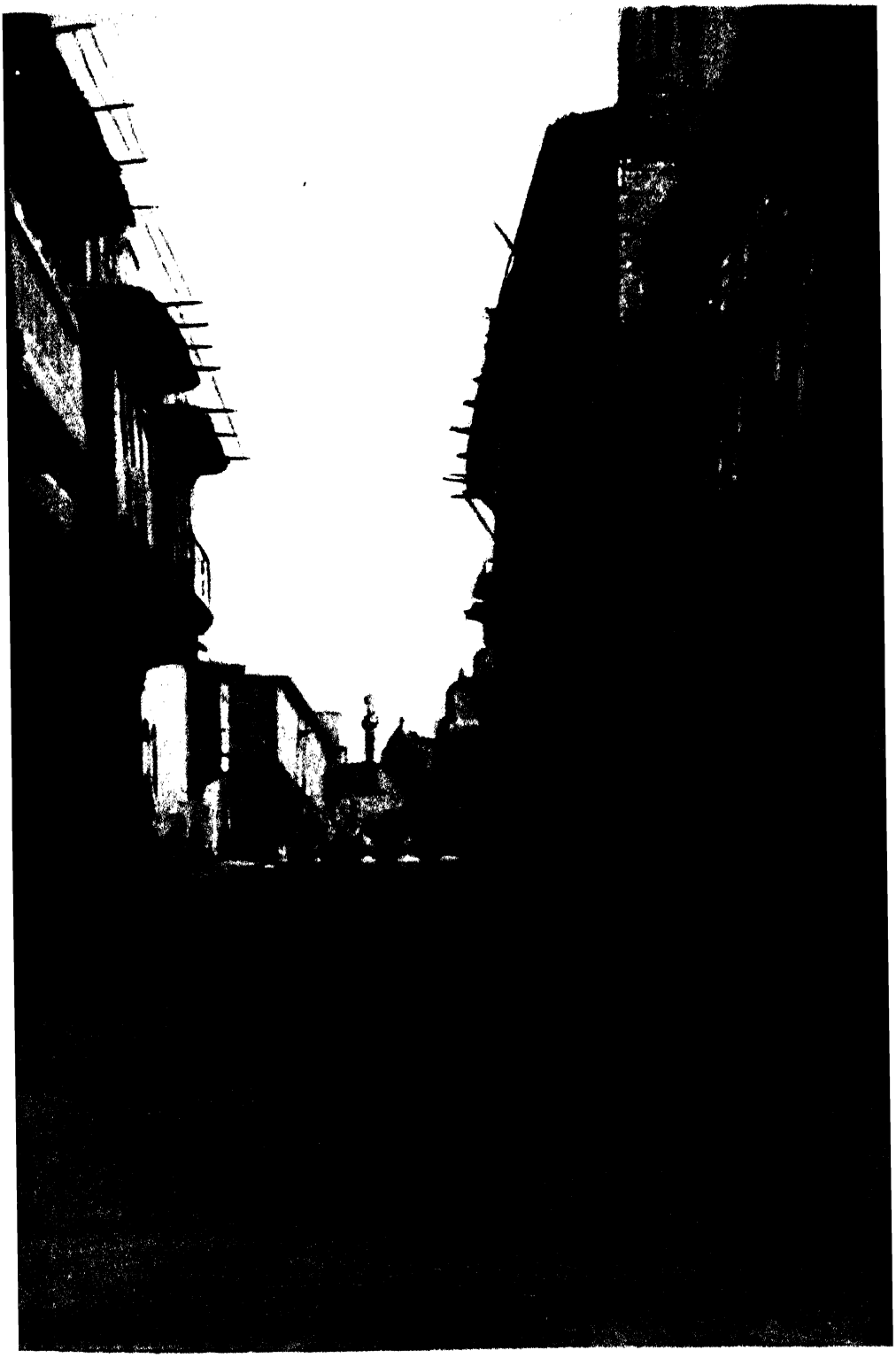
27.34



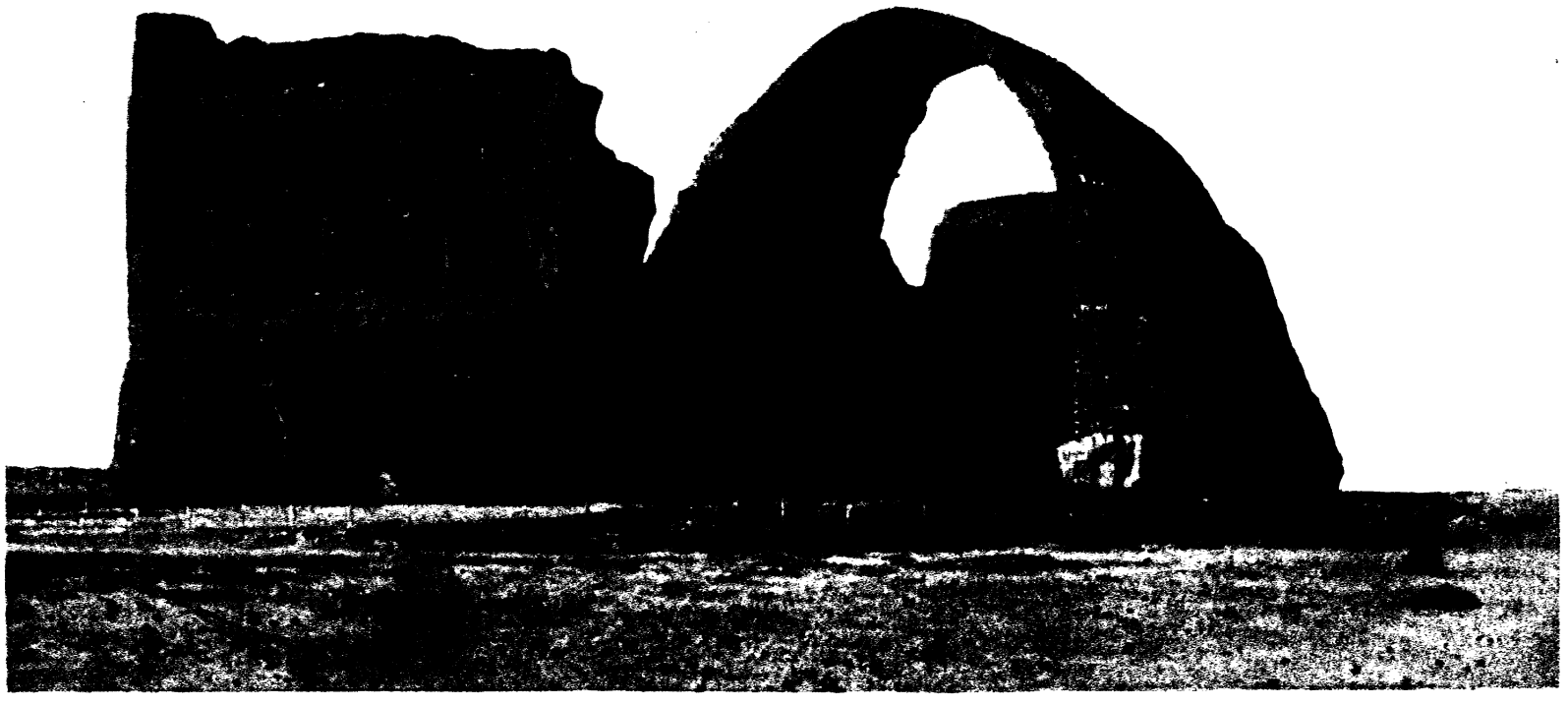
MESOPOTAMIA. *Mosul, its feet in the Tigris, fronts the water with a long screen of houses and coffee-shops, and from beside a roomy caravanserai a bridge of boats leads over to the western bank*



MESOPOTAMIA. *With the river separating it from the east mounds of Nineveh, Mosul spreads about a maze of creeks 220 miles north of Bagdad*

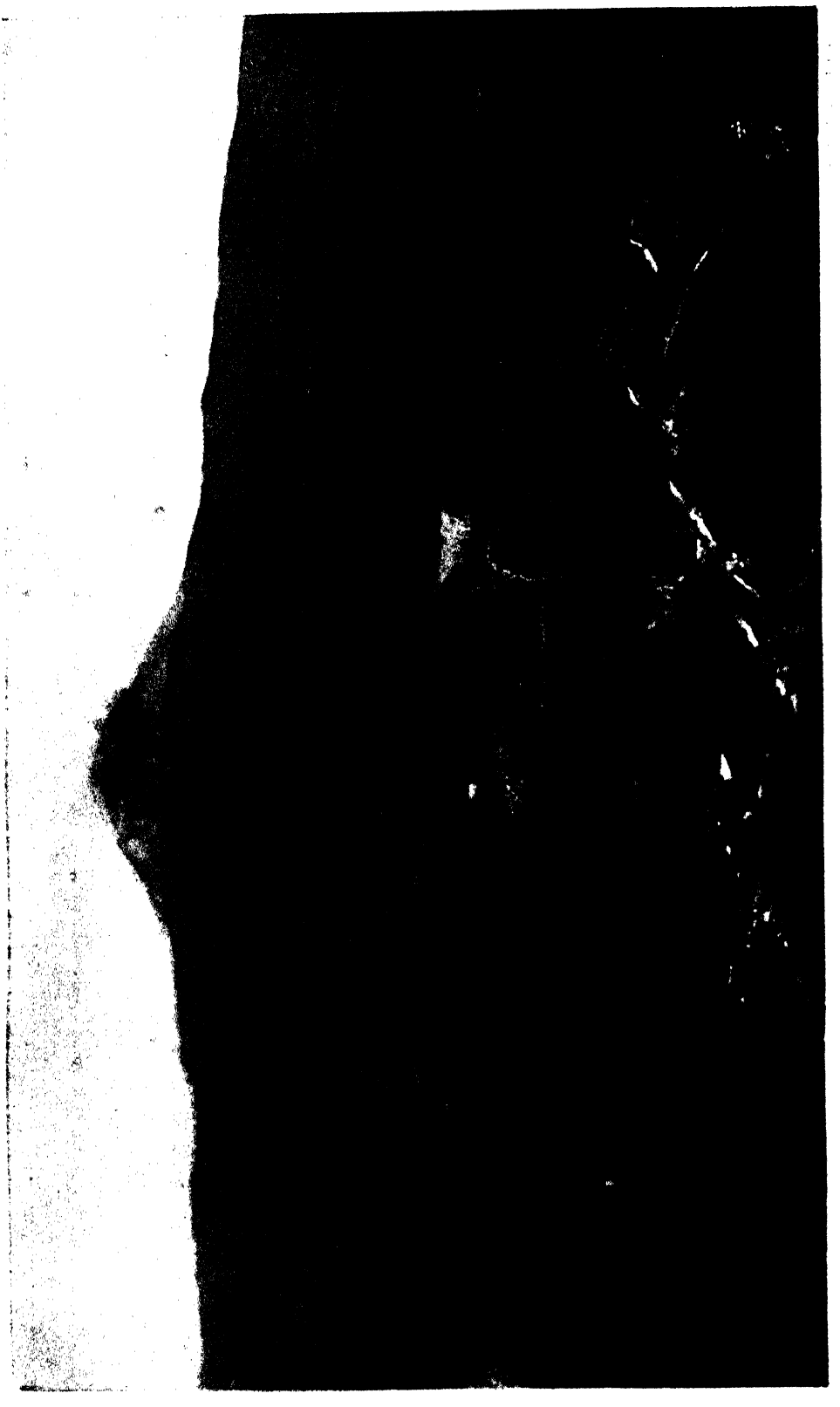


MESOPOTAMIA. *Houses at Kerbela, a holy city of the Shiah sect, have* screened *balconies supported on rough-hewn wooden pillars or "bali"*



MESOPOTAMIA. *Stars of gold on a ceiling of lapis lazuli framed between the fluted vault of the Arch of Ctesiphon. Here Chosroes I, who visited the Sassanian capital in the 6th century, gave audience to his subjects.*

MEXICO. The water-tower and main aqueduct, [illegible] Los Remedios, near the town of Tacuba, [illegible] stand as [illegible] Spanish Conquistadors



MEXICO

The Land of Eternal Spring

by Stephen Graham

Author and World Traveller

THE name Mexico, pronounced Mehico by Mexicans, was originally that of the capital of the Aztec empire ruled over by Montezuma and his forerunners.

Cortés called the country New Spain, but the name Mexico was dear to Indian nationalism, and when, in 1821 as a result of revolution, the Spanish yoke of empire was overthrown the name New Spain was lost. There was a short-lived kingdom of Anahuac and then the name of Mexico returned.

Imitating the northern republic of America, Mexico constituted herself as the "United States of Mexico" with constituent states, "territories" and a federal district. These states have never achieved the distinctiveness of the United States of America.

Mexico used also to possess Texas, Arizona, California and New Mexico, but these were gained by the U.S.A. after the war of 1846-8. The area of Mexico is about 767,000 square miles, but a great deal of the old lost territory is Mexican geographically and ethnologically though now enjoying political and economic affiliation to the U.S.A.

Ruins of Lost Civilizations

This great territory of Mexico has a character entirely its own: among the many Latin-American countries it is highly distinctive. It is almost entirely an exalted tableland. Deserts stretch for hundreds of leagues. It is romantic in its ruins; fantastic in its natural scenery. Ruins of bygone civilizations stare at us from the waste; those of the cave-men and cliff-dwellers in the north, those of the pyramid-builders and blood-altars in the south. In Yucatan one faces the remains of the elaborate Mayan culture. In Oaxaca and Campeche we look at the ruins of majestic prehistoric cities.

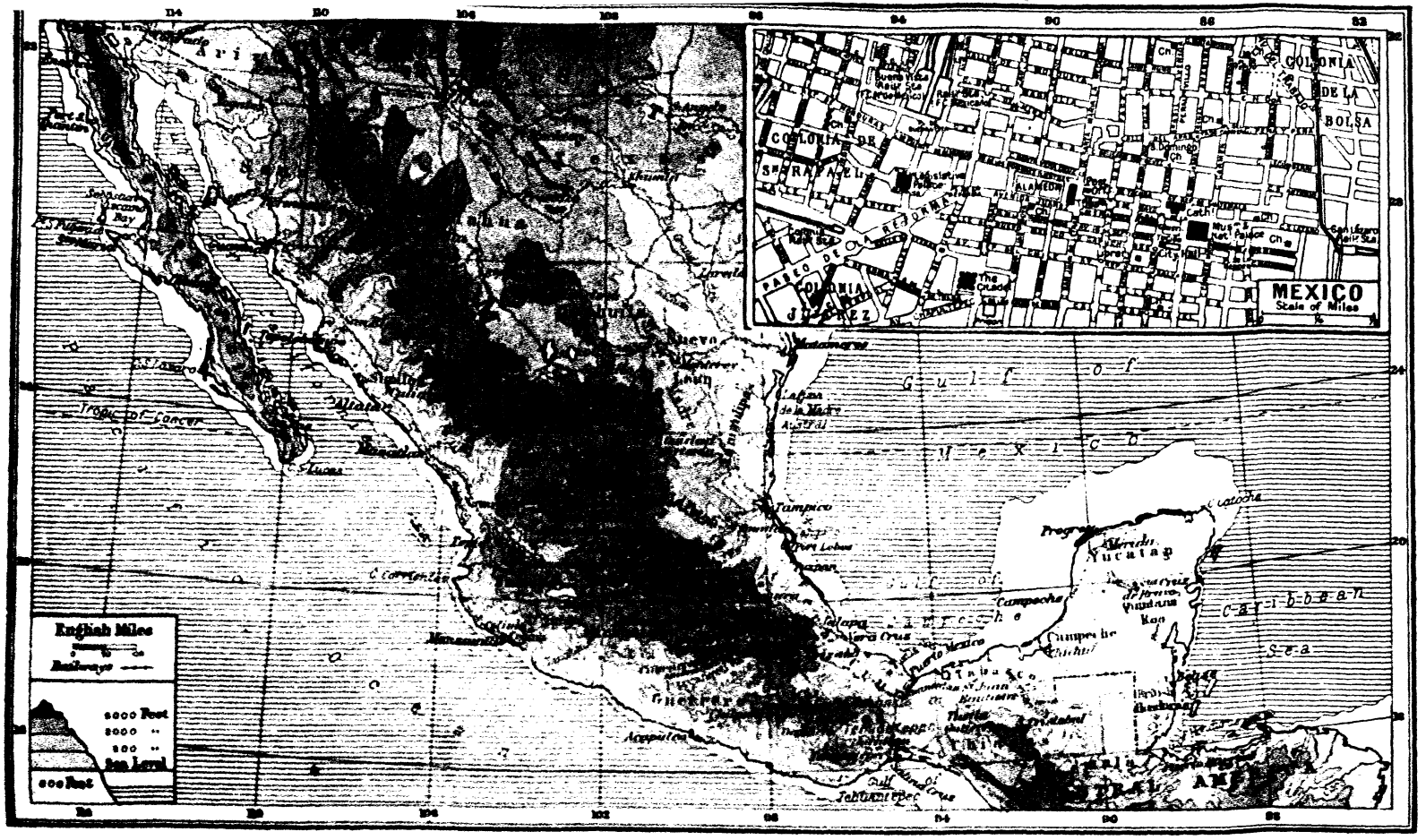
It is a country of strange history and a forgotten past, of great wealth and glamour. The cactus and the eagle are its natural emblems. Its inhabitants are the descendants of wild Indian tribes who numbered millions and of Spaniards who numbered thousands. They are united in one nation by the Spanish language and by the tradition on the part of the Indians of having lived in these lands and fought together for ages before the Spanish conquered them.

Ideal Climate for Mankind

In climate also Mexico is very unlike the rest of America and the rest of the world. Except on the coasts it is dry and temperate. Conditions for the human race are almost ideal. Mexico City is rarely hotter than an English July or colder than an English May.

Lying roughly between latitudes 32° N. and 15° N. Mexico is naturally subject to a subtropical sunshine, but it is narrow enough to enjoy the moderating influence of both Pacific and Atlantic airs. It is broadest in the north. Indeed, its northern frontier, dividing it from the United States, is considerably over a thousand miles, but the coast-lines steadily narrow in as they go southward till on the ridge of the Isthmus of Tehuantepec it is possible to stand and see the Gulf of Mexico on the one hand and the Pacific Ocean on the other. This point on the great divide is called Mt. Zempoaltepec, and here Mexico is only 140 miles across.

The length of Mexico is the length of the one central ridge of mountains which, like a backbone, controls the



MEXICO. WHERE NORTH AMERICA NARROWS DOWN FROM A CONTINENT TO AN ISTHMUS

whole body of the country. It is 1,970 miles long, the northern boundary being the U.S.A., the southern Guatemala and British Honduras. The actual boundaries are political rather than geographical.

Nevertheless, in disputes between the United States of America and the Mexican Republic, it is common to refer to one country or the other as "beyond the Rio Grande," the river which divides Texas from the Mexican states of Chihuahua, Coahuila, Nuevo Leon and Tamaulipas.

The great Mexican tableland is estimated as 1,500 miles in length and 530 miles in breadth at its widest point, and its mean altitude is about 6,000 feet above sea-level. From the level of this plateau rise certain remarkable mountain chains and peaks. The Sierra Madre, a continuation of the Cordilleras of Central America, trend north-westerly from the isthmus of Tehuantepec to Southern Arizona, broadening out in the northern states of the republic.

The approach from the sea coast to the height of the plateau is in general very steep, and again, the approach from the high plains to the mountain heights is also rapid. On a broad, level plateau 7,000 feet above sea-level, the great volcanoes Popocatepetl and Iztaccihuatl lift themselves sheer to 17,520 feet and 16,200 feet above the sea and stand there like gigantic sentinels of the capital. The greatest mountain of Mexico is the majestic Orizaba, 18,240 feet, one of the most beautiful mountains of the world, sacred to the Aztecs and to their deity Quetzalcoatl.

In such a land of mountains one might naturally expect many rivers, but in this Mexico is disappointing. She is notably deficient in rivers. The Rio Grande, 1,800 miles long, flowing from Colorado to the Gulf of Mexico, and often seeming to lose itself in the desert, is the longest river, and despite its fine-

H. E. Powell Jones

MEXICO CATHEDRAL, GREATEST CATHOLIC FANE IN THE NEW WORLD

In the Plaza Constitucion of Mexico City, on the site of the Aztec war-god's temple, stands this cathedral—a stone embodiment of the faith of Cortés, the Catholic conqueror, whose splendid arrogance sought to obliterate the memories of the hideous pagan rites centred in the temple's stone of sacrifice. Begun in 1573, the great church with its 240-foot twin towers was not completed until 1730

H. E. Powell Jones

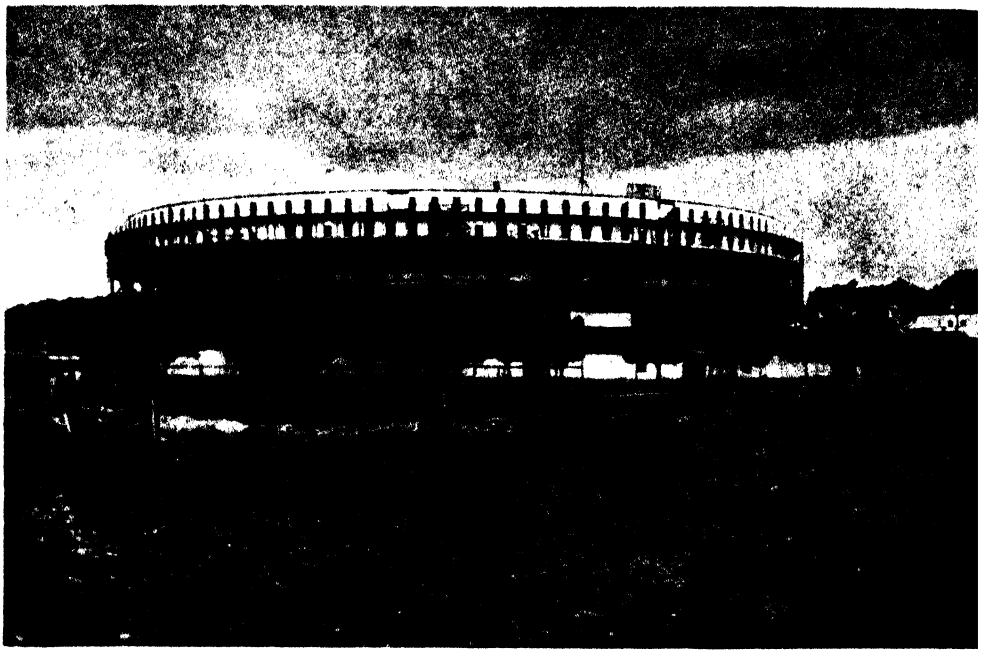
CHAPULTEPEC CASTLE, RESIDENCE OF THE REPUBLIC'S PRESIDENT

About two miles south-west of the metropolis at the end of the Paseo, Mexico City's beautiful driveway, the Castle of Chapultepec crowns a high bluff known as the Hill of the Grasshopper. Completed in 1785, on the site of Montezuma's summer palace, it was later much beautified by Maximilian, who is also responsible for the planning out of the lovely gardens in which it stands

H. E. Powell Jones

BANANA PLANTS FRINGING AN IRRIGATION CANAL IN SINALOA

The Pacific state of Sinaloa is somewhat isolated from the rest of Mexico by the high mountain wall of the Sierra Madre Occidental, the vast mineral wealth of which has made mining the chief occupation of the inhabitants. Agriculture ranks second and thousands of cattle are reared on the pasture-lands, while in the fertile valleys cotton, grain, rubber, tobacco, sugar-cane and bananas are produced



Ewing Galloway

PLAZA DE TOROS, POPULAR RESORT OF THE PEOPLE OF MEXICO CITY

The Bull Ring, or Plaza de Toros, near Chapultepec is a gigantic round building of stone and wood with an immense amphitheatre affording sitting accommodation for thousands of people. A Mexican bull fight, very popular among the lower classes, is conducted in much the same fashion as in Spain; the spectators, however, are seldom satisfied until several horses are killed and the arena is a shambles

Ewing Galloway

MAIN STREET IN TAMPICO, MEXICO'S THRIVING SEAPORT

Since the exploitation of its oil-fields, Tampico has rapidly grown in importance, and has already robbed some of the trade from the old town of Vera Cruz, from which it lies nearly 300 miles to the north. It is situated at the mouth of the Panuco river, a fine waterway with an excellent and deep harbour offering ample accommodation for the largest ships

C. Mabor Hodgess

OVERLOOKING TEHUANTEPEC AND THE RAILWAY BRIDGE WHICH TRAVERSES THE OLD TOWN.

The town of Tehuantepec, on the isthmus of the same name, the narrowest part of Mexico, is a strange, tumble-down, straggling place, chiefly composed of unpretentious one-storeyed buildings. A railway running from Puerto Mexico, on the Gulf of Mexico, passes through the town to Salina Cruz, a short distance away on the Pacific coast, and is responsible for the disappearance of many of the quaint customs and costumes which were in vogue while Tehuantepec was shut off from the outside world. The inhabitants belong to the Zapotec tribe of Indians, a peaceful, enlightened, healthy people, who are chiefly engaged in cotton weaving

sounding name, is but a poor and shallow stream most of the way. The waters of most of the rivers are either lost in the deserts, or descend tumultuously to the sea. As a consequence of this type of river and of the prevalent surrounding desert, irrigation is greatly practised. Indeed, the American-Indian tribes were pioneers in irrigation, and taught the art to their Spanish conquerors. Soils of great fertility are found in many parts of the country, and even the desert can be made to respond in a remarkable way to artificial water-courses.

The south is much more fertile than the north, a fact that accounts for the uneven distribution of the population. Cortés found several millions of people settled in the south, and those pioneers who struck north, Coronado and his band, found but thinly peopled regions.

A Natural Sanatorium

The same grouping is noticeable to-day. The south, by virtue of its soils and their fertility, is greatly suited to human civilization. The climate at the same time is an almost perfect one all over the country, excluding the coastal regions, the "tierras calientes," which are extremely hot and fever-stricken. But these latter regions are narrow and it is only modern commerce, such as the oil business at Vera Cruz and Tampico, which has caused them to be densely populated.

Mexico is an excellent country for those suffering from tuberculosis, or rheumatoid affections, and has been greatly resorted to by victims of these diseases. If there are few sanatoria, it is due to the fact that Mexico is backward in civilization. But the whole plateau could be regarded in the light of a natural sanatorium. Everyone is lightly clad all the year round, except at night, when warmer clothes are necessary. The Europeans and Americans commonly wear linen or silk clothes, or "Palm Beach" suits. Pneumonia, however, especially at high altitudes, is a serious cause of mortality. Colds are especially dangerous in Mexico city, and on medical advice patients generally seek a lower level at the health stations of Cuauhtla and Cuernavaca.

The diurnal variation of temperature is very considerable in most parts of Mexico. Thus, in winter in the capital, the temperature which may have reached 70° F. in the day may drop to 32° in the following night. A drop of twenty or thirty degrees is not uncommon.

Storm-bearing "Northers"

Winter is the dry season; summer the wet. But continuous rain is seldom experienced. The prevalent wind is southerly and accompanies equable, warm weather. Serious disturbance is, however, caused by the "Northers," which sweep across the Gulf of Mexico bringing storms on the coast and chilly weather hundreds of miles inland.

The far south alone is subject to tropical rains, and it is naturally only there that the surface of the land is covered with rank vegetation. Jungle has overgrown the ruins of bygone civilizations. Hidden in the dense scrub of Yucatan and Campeche extraordinary ruins have been found.

Secrets of the Yucatan Jungle

It is thought that from the peninsula of Yucatan to southern Guatemala there may have existed at some time a chain of cities belonging to a great but forgotten empire. Whether the abandonment of these places was due to war or to a great climatic change has not been established. But obviously at the time when they flourished the jungle must have been very considerably less and intercommunication must have been easily possible. Trees innumerable now grow through the floors of their temples and halls. Some history has been preserved in the form of the hieroglyphics on the walls; but little progress has been made in deciphering and interpretation.

Man's kingdom has given way to the vegetable kingdom. Here in the south flourish especially the mahogany and other hardwood trees; also the fig-tree, wild vines and trailing creepers

innumerable. South and east of the isthmus of Tehuantepec is almost uninterrupted jungle. The progress north of the isthmus is a progress towards a completely arid desert. Stately pine-trees clothe the middle slopes of the Sierra Madre as far north as latitude 22, north of which vegetation tends to be almost confined to the cactus and the palm. There is an extensive area of grassland in the central plateau.

Trees Two Thousand Years Old

Among trees, the most characteristic in Mexico is the Ahuehuetl or Mexican cypress, "Taxodium distichum," of which some living specimens are said to be over two thousand years old. The Tree of the Dreadful Night in Mexico City and the great Tree of Tule are both of this species. Characteristic also of the south of Mexico is the bougainvillea, a climbing shrub which flourishes in great profusion, shedding a mantle of crimson on old trees and houses.

The banana palm, which is such a feature of the landscape, is not indigenous to the soil, but was brought by the Spaniards from the Canary Islands. There are five or six varieties in Mexico, of which one may mention the long and yellow "plantain," the short yellow "dominico" and the fat red "morado." The sugar-cane was also imported from the Canaries and is very successfully cultivated.

The Source of Chewing-gum

Some of the best coffee in the world is grown in Mexico, on the slopes of the mountains in that altitude at which it thrives most (1,000 to 3,000 feet above sea-level). It was introduced in the eighteenth century. The Mexican has become a great coffee-drinker. The cacao bean grows wild in the south and is now cultivated extensively. Mexican chocolate has attained some popularity at least as a drink.

Gum is produced plentifully in the southern forests, and thousands of tons are exported annually to the United States of America for the chewing-gum industry. Excellent tobacco is also raised, though the Mexican cigar is inferior to that of Cuba and the Mexican cigarette to the Virginian.

The present inhabitants of Yucatan derive their living almost exclusively from the growing of henequen or sisal hemp. Campeche is noted for the logwood tree and other dye-woods. Chiapas is the home of many rare orchids amongst which is the much-sought citrina. In Tabasco rubber-trees flourish marvellously, and the state possesses vast plantations of them interplanted with coffee and cacao. Fruits of all kinds, from the orange to the alligator pear, are found wild in Mexico and are also cultivated. Strawberries at places like Irapuato are plentiful all the year round. Venders of cheap strawberries swarm on railway platforms in December. Medicinal herbs are raised in great quantities, the Indians having great knowledge of them.

Drink from the Cactus Plant

The strangest vegetable product of Mexico, both wild and cultivated is, however, the cactus. There are several hundred varieties and some, like the organ cactus and the candelabra cactus, are tall and beautiful. One species at least is worshipped, the Echino cactus. The commonest species is the maguey, called sometimes in England the century plant; in Mexico it also takes long to mature. It is cultivated on an enormous scale and is a source of wealth to planters, for from the juice is derived the national drink, pulque. Pulque drinking is said to have ruined two civilizations before the Spaniards came and it is still practised to excess. Mescal and tequila are also cactus drinks. Aguardiente, which is also popular, is a sugar-cane product.

Mexico has been a land of vast estates—large plantations owned by Spanish-Indian aristocracy or by companies, and operated by large numbers of Indian peons. But as a result of successive revolutionary movements it is now in transition. In many districts

C. Mabor Hodgess

WATER FRONT OF VERA CRUZ OPENING ON TO THE BAY OF CAMPECHE

Vera Cruz owes all its importance to its spacious and secure harbour, for the city itself is unhealthy and has few interesting architectural features. Great stone jetties—a section of one is seen in the foreground—extend round the harbour, protecting it from the sea-breakers and allowing large vessels to be safely alongside the wharves in smooth water and to discharge their cargoes in all weathers

H. E. Powell Jones

AT HOME WITH A MEXICAN MAKER OF EARTHENWARE

In the little yard, fenced about with tropical foliage, before his rude adobe hut the Mexican potter may often be seen "thumping his wet clay." His tools are primitive—a wheel, a piece of broken glass for smoothing the rough places and a horse-hair for trimming the edges—but the results are remarkable and many vessels of graceful design are produced, though inferior to the prehistoric Indian ware

the large holdings have been cut up and distributed among the peons. This is causing some decay in the sugar industry, united control over large areas being more efficient than cultivation in small parcels. Moreover, the new petty proprietors are giving up commercial agriculture, cactus and sugar and tobacco production, for grazing and corn-growing. Irrigation is a more complicated matter when applied to small holdings, and is not as effectively used as on the great estates.

Fires of 150 Volcanoes

Agriculturally, Mexico presents great possibilities. Geologically, however, her potential wealth is much greater. In a very remarkable country the rocks are perhaps most remarkable of all. As the continent of North America narrows towards the south we obtain a most spectacular rock concentration as if earth and ocean had made war there. And the fires of a hundred and fifty volcanoes lend colour to the idea.

Geologically the mountains of Mexico belong mostly to the primary or paleozoic age. The primary rocks appear in the west, where they form part of the peninsula of California, and also in the western system of the Sierra Madre and those chains parallel to it, that is to say, those chains orientated north-west to south-east. They appear also in the south-west and form the mountains of the state of Guerrero, the massif or dominant central mass being orientated almost due east and west.

Natural Castles of Porphyry

Between these two systems there exists a connecting chain in the shape of the cliff ranges of the coast of Colima, forming various promontories, and among them Cape Corrientes. This chain is in part composed of primary crystalline rocks, namely, granite, gneiss and crystalline schists.

The crystalline primary rocks of the north-west are in some regions covered with volcanic rock of a later date, some with basalt and lava, others with porphyries. The mountain chains of Bernalejo and of the Escaliera at San Luis Potosí, crowned in places with huge masses of porphyry, are most picturesque, reminding one of castles of the Middle Ages.

The secondary and tertiary strata found in Mexico are a continuation of those in Texas, and it appears that in the secondary and tertiary ages there must have been there an immense depression, having its centre in the Gulf of Mexico. The secondary formations belong mostly to the chalk period, containing great quantities of clay and chalk. The tertiary formations belong to varying periods of the Eocene and Pliocene, and contain sandstones, sands, limestone, etc.

Enormous Mineral Wealth

Mexico has one of the most important centres of volcanic activity in the world, that of the central plateau of Anahuac. One series of volcanoes starts with Popocatepetl near the capital and finishes with the isolated volcano of Tuxtla, near the isthmus of Tehuantepec. Another includes the Jorullo, the peak of Tancitaro and the smoking and steaming volcano of Colima. About this series of volcanoes is a vast volcanic region called "mal pais," the bad lands. Until 1759 the Jorullo region was a rich farming country. But in September of that year there was an extraordinary eruption, and the volcano raised its height by 1,700 feet.

Eighty per cent. of the area of Mexico belongs to the mining industry. It has the greatest production of the world in silver—36 per cent. of the total world production. It is second in its output of oil, fifth in its output of gold, first in its output of opals and other precious stones. But it is also rich in copper, in lead and mercury, in zinc and antimony, in iron and anthracite, in turquoise, emeralds, topaz, jadeite.

The greatest gold-mine is in Mexico State at Real del Oro. The greatest silver-mines are in San Luis Potosí, Chihuahua, Guanajuato, Zacatecas,

H. E. Powell Jones

SELLERS OF NATIVE POTTERY ON THE ROAD TO MARKET

The potter's art is well developed and has many devotees in Mexico, thus perpetuating an artistic Aztec tradition. Many a town has its own distinctive pottery differing from that of other parts in colour and design, and ranging from vessels of the utilitarian type to the finer faience. Cuernavaca, Guadalupe, Aguascalientes and Guadalajara are some important centres of the industry

Ewing Galloway

SUNSHINE AND SHADOW UNDER THE ARCADES OF PROGRESO

Progreso lies on the Gulf of Mexico, 24 miles to the north of Mérida, the busy capital of Yucatan, and possesses almost the entire trade of this maritime state. The arcades, or portales, over the side walks form a distinctive feature of the plazas in Mexican towns. Under them many of the most attractive stores are established and they provide grateful shelter to many itinerant pedlars on hot days

Durango, Sonora. There are important gold-mines in Oaxaca.

The Spaniards in the sixteenth century took over the Indian mines and placer workings, and of course opened up many new workings, but it was left to the nineteenth century and Anglo Saxon enterprise to introduce mining on a large scale. It has been said by one of Mexico's presidents that while Mexico is the richest country in the world her population is among the poorest. This is largely true, but it is because the Mexican has yielded to the foreigner the exploitation of the immense resources of his country and appears in it himself merely as a labourer

Mexico's Need of Security

Various attempts have been made to adjust this inequality of benefit by taxing the foreigner and restricting rights in subsoils. But while this may have helped to fill the state treasury it has not made any appreciable difference in the general poverty of the Mexican people.

There is a vast field for future exploitation in Mexico, but development is retarded by the general insecurity consequent upon civil strife, the proletarian movement and an anti-foreigner sentiment and policy. With security Mexico would be bound to make extraordinary progress in mineral production.

Occupations of the People

It is estimated that half a million people are employed in mining, a figure which greatly exceeds that of all other industrial occupations. The remainder of the population is still largely engaged in agriculture of a primitive kind. Many earn their living in cotton and sugar and cactus plantations. The coffee and tobacco industries employ many thousands, bananas and oranges are extensively cultivated and the collecting of chicle-gum and the cultivation of rubber are notable in the state of Tabasco. Fishing is greatly developed in the coastal regions, especially in the Mexican Gulf. But though game is plentiful in the jungles of the south there is comparatively little trapping or hunting.

One of the greatest industries of Mexico is that of pottery, in which art the Indians excelled before the Conquest. Many of their secrets seem now to have been lost, and in any case the production is generally of a rougher kind than formerly. Puebla, Cholula, Guadalajara and Guanajuato are specially famous for pottery and tile-making. Another strongly developed national manufacture is that of the sombrero, the Mexican hat. And again, there is the manufacture of Mexican saddles, harness and spurs, all of a local type.

Mexico knows as yet very little of manufacture for export. But tobacco factories number about 1,320; cotton mills, 140; and there are 12 oil refineries at Tampico, Port Lobos, Tuxpam, Vera Cruz and Minantitlan. European standards of management obtain at most of these factories, but there is a strong ferment of proletarianism and strikes are very frequent.

Prevalence of the Local Market

Internal commerce in Mexico is on a primitive level. All the towns, even small ones, have large market-places to which the country populations swarm in with panniers of pots on asses and stacks of sombreros, sacks of medicinal herbs and all manner of foods and petty manufactures. There is nothing in daily need which you cannot buy in the market. For the rest, American and German and South American importers make steady progress in the import of their national products and manufactures, giving to certain large cities like Mexico and Vera Cruz the common appearance of Western civilization.

While the Mexicans are not a rich people there has sprung up in the capital a fairly extensive class living in fine villas, dressing ostentatiously and parading in fine cars. These are mostly manufacturers, importers, successful politicians of the day and, one might

Ewing Galloway

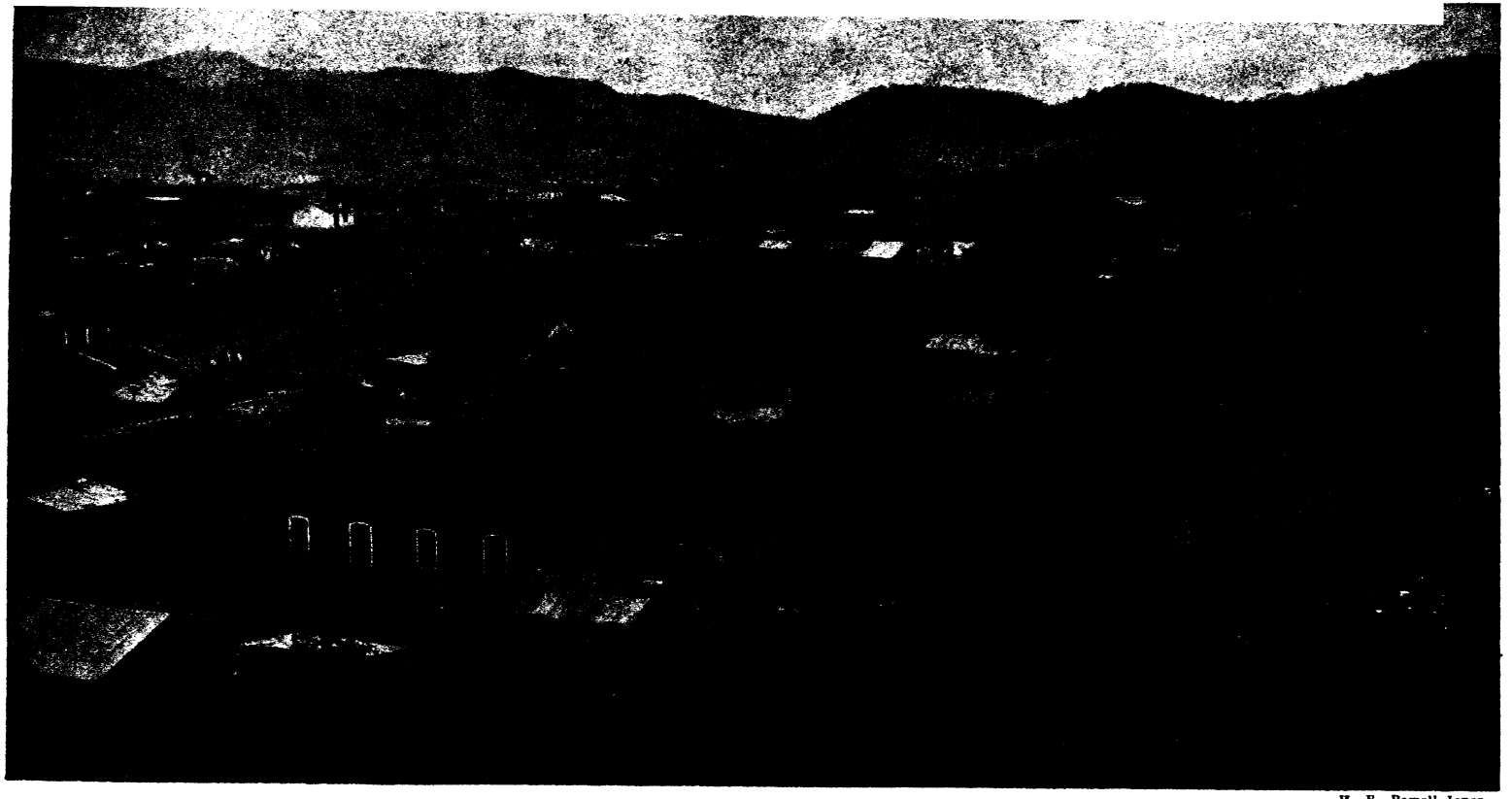
FIRES ON THE AMATLAN OIL-FIELDS IN THE STATE OF VERA CRUZ

The oil-fields of Mexico are among the most important in the world. The chief fields are found in the coast lands off the Gulf of Mexico, where some of the wells have been used by the natives from time immemorial. In 1922, 182,278,067 barrels of petroleum were produced, and in August, 1923, there were 619 wells in the republic with a daily production of 698,000 barrels

Ewing Galloway

FLOWER MARKET ON THE PLAZA MAJOR OF MEXICO CITY

Perhaps the most picturesque of the various street venders in Mexico are the flower-sellers, whose stalls in the plazas even in mid-winter are lavishly adorned with a wealth of lovely blossoms from the tropical valleys, and huge bunches of carnations, violets and roses may be bought delightfully cheap. The ancient Aztecs were passionately fond of flowers; their descendants have inherited the liking



H. E. Powell Jones

ON THE OUTSKIRTS OF SALINA CRUZ, MEXICO'S PROMISING SEAPORT ON THE PACIFIC COAST

Since the railway crossing the isthmus of Tehuantepec from Puerto Mexico to Salina Cruz has been completed, the latter town has undergone a startling transformation. Little more than a straggling Indian village when the line was first begun, it is now a progressive new town, with finely-built houses and many instances of modern convenience and comfort. In the excellent and well-equipped harbour trains run up to the ships' sides, where up-to-date devices economically transfer cargoes to ship or train. Above is seen a section of the lower spurs of the Sierra Madre behind the town

add, popular bull-fighters. Wealth is the only sure indication of social status. Thus the professional people, being poorer than the bourgeois, are lower in status. Neither lawyers, doctors nor teachers are at all highly rewarded for their services.

Mexico is connected by rail with the United States via Laredo, El Paso and Nogales, the three chief frontier towns of the north. Under peaceful conditions there are through carriages from Chicago to Mexico City, but during the many revolutions communication has been frequently interrupted. The commoner approach for Europeans is by steamship to Vera Cruz. This port is conveniently reached by boat from New York, many European passengers choosing to make the voyage in a comfortable liner to New York, thence transferring to another boat bound for Vera Cruz, via Havana. The voyage from New York generally takes eight days, and the fare is about a hundred dollars. But there is also direct communication with Spain, France, Germany and England, which, however, is generally slower and more expensive than transhipment via New York.

Trains Slow and Unsatisfactory

As regards communication with South America this is generally effected by coasting steamers plying from the Pacific ports to Panamá and there transferring to South American liners.

There is cable communication to most parts of the world by the Compañia Telegrafica Mexicana. Wireless is used little. The internal telegraph lines are under government control and are cheap and efficient. Telephone service is to be found in the larger cities.

Thanks to various enterprises of foreign companies Mexico possesses a fairly extensive railway service. Nearly every town of any importance is connected with the capital by rail. The speed of the trains is, however, slow, the carriages afford but little comfort, and, as a result of continued inattention during years of turmoil, rolling stock is in a bad state and most lines relatively unsafe. Accidents used to be rare but are now rather frequent. The railroad routes are in the south-east and south very spectacular, especially the lines from Mexico City to the sea, and well worth traversing for the views alone.

Possibilities of Isthmus Traffic

Places not reached by rail are generally accessible on horseback. Horses and servants and pack-horses are easily and inexpensively hired in most parts. Women, it should be said, are seldom seen on horseback. Carriage driving in the provinces in carriages without springs is an arduous performance. Few roads are suitable for motor-cars. Air services have not yet developed anywhere and aeroplanes are but seldom seen. Nevertheless many regions are admirably suited for exploitation by passenger air-service.

Economically the most important region of transit is the isthmus of Tehuantepec, which has considerable possibilities of inter-oceanic traffic between the port of Salina Cruz on the Pacific side and that of Puerto Mexico on the Atlantic side. A railway connects the two and competes in a small way with the Panamá Canal for freights, but owing to the disorganization of the whole country little progress is made. Internal transport of goods is effected cheaply by rail, but asses and pack-trains are more commonly used.

Substantial, Stone-built Towns

External commerce is chiefly with the United States. The average value of exports is about forty-two millions sterling, of imports about forty-nine millions. Over 90 per cent. of this trade is with the United States.

Of Mexico it may be said that its cities are American, its towns Spanish, its villages Indian. Considering the primitive state of the bulk of the people there is a high level of architecture. It has many fine stone-built cities and towns. Even the houses in the villages are substantial—at least in the south.

In the deserts of the north the somewhat wretched mud or "adobe" built villages predominate.

The towns are mostly of houses built in the Spanish style, with patios, internal gardens and fountains, overlooked by balconies. In the cities the American steel building is springing into being on the sites used previously by Aztecs and Spaniards. Sanitation under American supervision makes progress in the great cities. The Mexicans take great pleasure in public gardens which, in all their towns and cities, are cultivated with rare taste and care. Very healthy conditions prevail both in town and country, due rather to excellence of climate than to hygienic living. For the native population is remarkably dirty and children badly cared for.

The chief cities are Mexico City, Puebla, Guadalajara, Vera Cruz and Tampico. Mexico City, the capital of the country, is built on the ruins of the prehistoric capital. It is pre-eminently suited to be a centre of government and civilization. Undoubtedly it is one of the most remarkable cities of the New World. Here American, Spaniard and Indian have expressed themselves equally.

The central point of the city is the Plaza de la Constitución (Zocalo), the square where rose the blood altar of Huitzilopochtli, a pyramid built of stone intermingled with gold and gems and surmounted by the ponderous "Stone of Sacrifice." This was destroyed by the Spanish soldiers in quest of spoil, and on its site stands a Catholic cathedral and, facing the approaches to the pyramid, the administrative offices. Near by is the ancient exercising ground of the Aztecs, now a thronged Indian market. The Zocalo has also become a terminus for all the trams and buses of the city.

The finest modern building in the capital is the Grand Theatre at the end of the Alameda Gardens, a magnificent structure commenced by Diaz. For the rest, American skyscrapers and modern business buildings mingle with tiled-wall buildings of the Spanish colonial time. There is a high standard of luxury among the rich business people and appalling poverty among the Indians. Bull-fighting represents the greatest popular interest other than business. Of the other cities Puebla is first in interest as a stronghold of Catholicism and the Spanish tradition.

MEXICO: GEOGRAPHICAL SUMMARY

Natural Division. A land of three levels; the larger, the middle plateau, the "tierra templada," more than a mile above sea-level; the plateau edges, the coastal lowlands, the "tierras calientes"; and the high mountains and their slopes, the "tierras frias." With Central America, q.v., a meeting place of continental highlands, the Rockies from the north and the Andes from the south. Anciently for the most part the north-west corner of the former continent of Antillia.

Climate. The climate is due to latitude, shape and elevation. By latitude the climate from north to south passes from the hot dry desert (cf. Sahara) through the region of summer rains (cf. Sudan) to that of constant rains (cf. West African Guinea Lands). By shape the southern narrowing permits modification by oceanic influences. By elevation the range of climate passes inland from hot to temperate, and then to cool highlands.

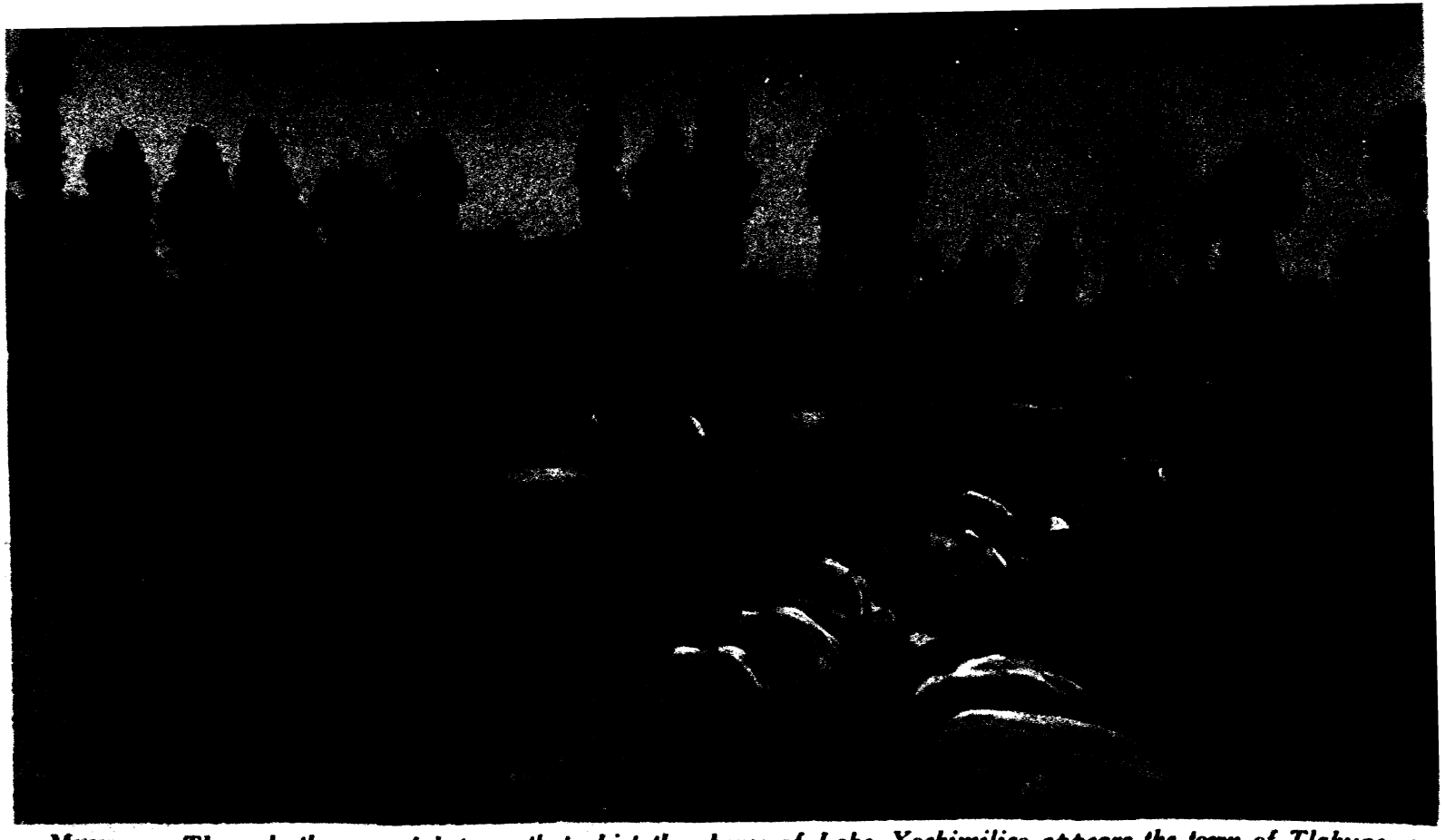
Vegetation. Desert cactus and palm. Small strips of tropical grass-land (cf. Sudan and Orinoco llanos). Jungle forest, logwood in Campeche.

Products. By origin and by relation to volcanic activity highly mineralised, Mexico produces silver (one-third of the world's supply), gold, copper, iron, lead, zinc, coal, salt, petroleum. By climate Mexico is suited to the production of coffee, cacao, oranges, bananas, tobacco, chicle-gum, logwood, rubber and sisal hemp.

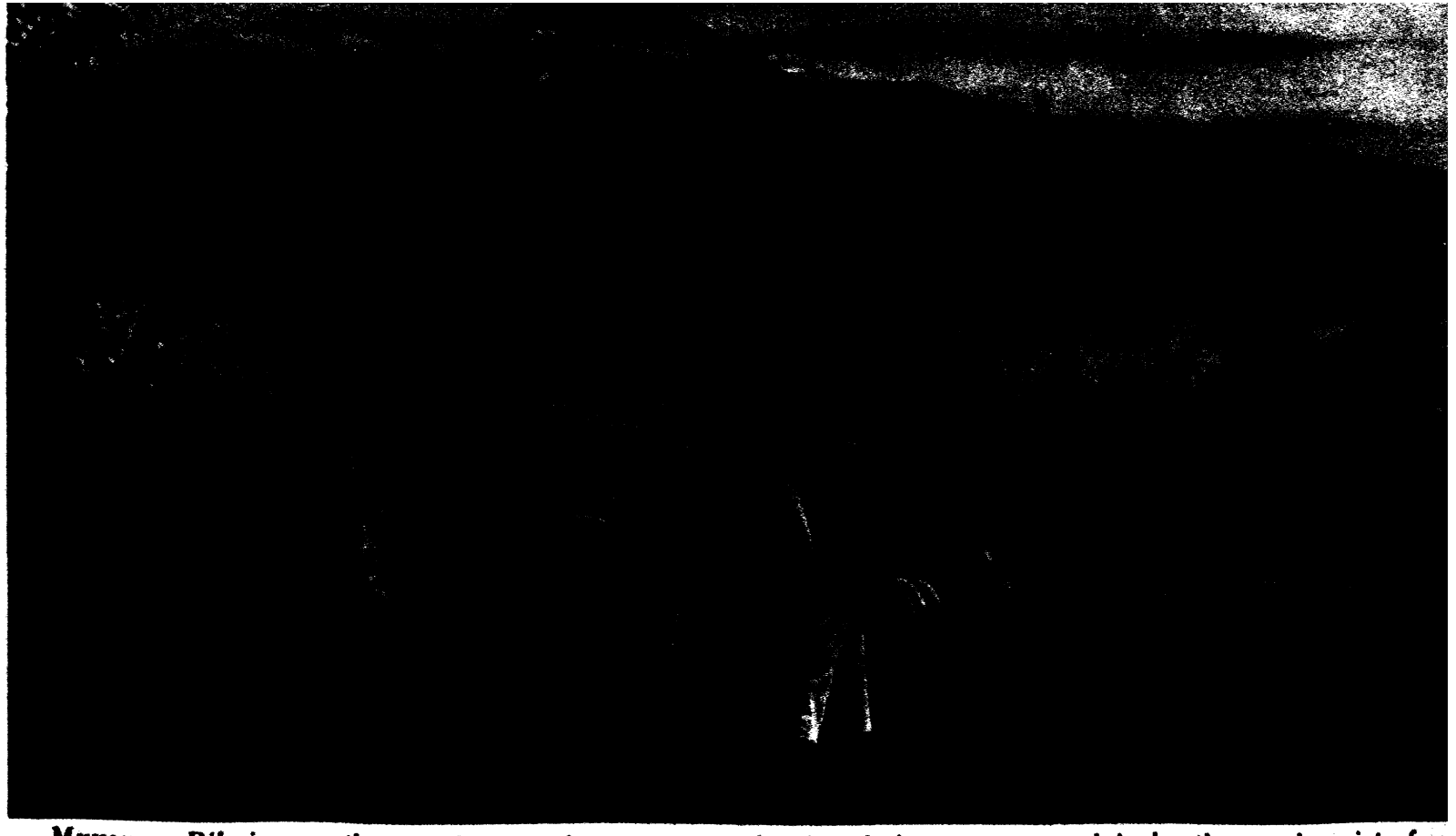
Outlook. Three forces are at work—the ancient traditional civilization, the modern remnants of the grasping Spanish exploitation and the pushful energy of the commercial magnates of the United States. The first two combine to produce unstable economic conditions, reflected in the political situation and the failure to produce from the split-up haciendas the former flow of agricultural products; and the third fails to secure unity of effort and satisfactory organization in the modern exploitation of mineral wealth or products of the soil. Hence an unsettled outlook.

MEXICO. *In the village of Ozumba both the gateway and the church itself exude a depressing atmosphere of decay and neglect*

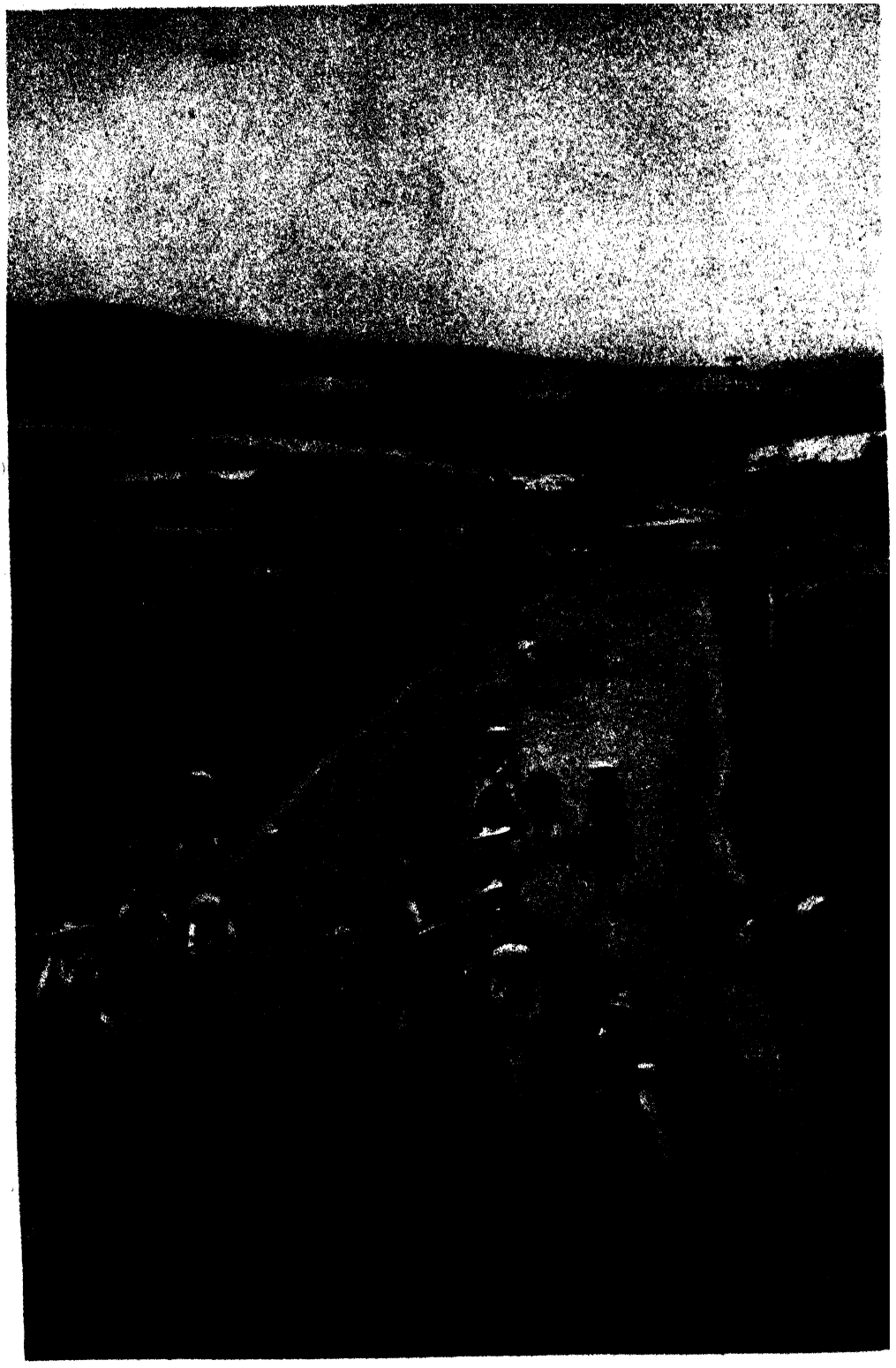
Photographs in pages 2757–2762, H. E. Powell Jones



MEXICO. *Through the graceful trees that skirt the shores of Lake Xochimilico appears the town of Tlahuac. The women bring their washing to the waters, while the men pole for moss to make fish traps*

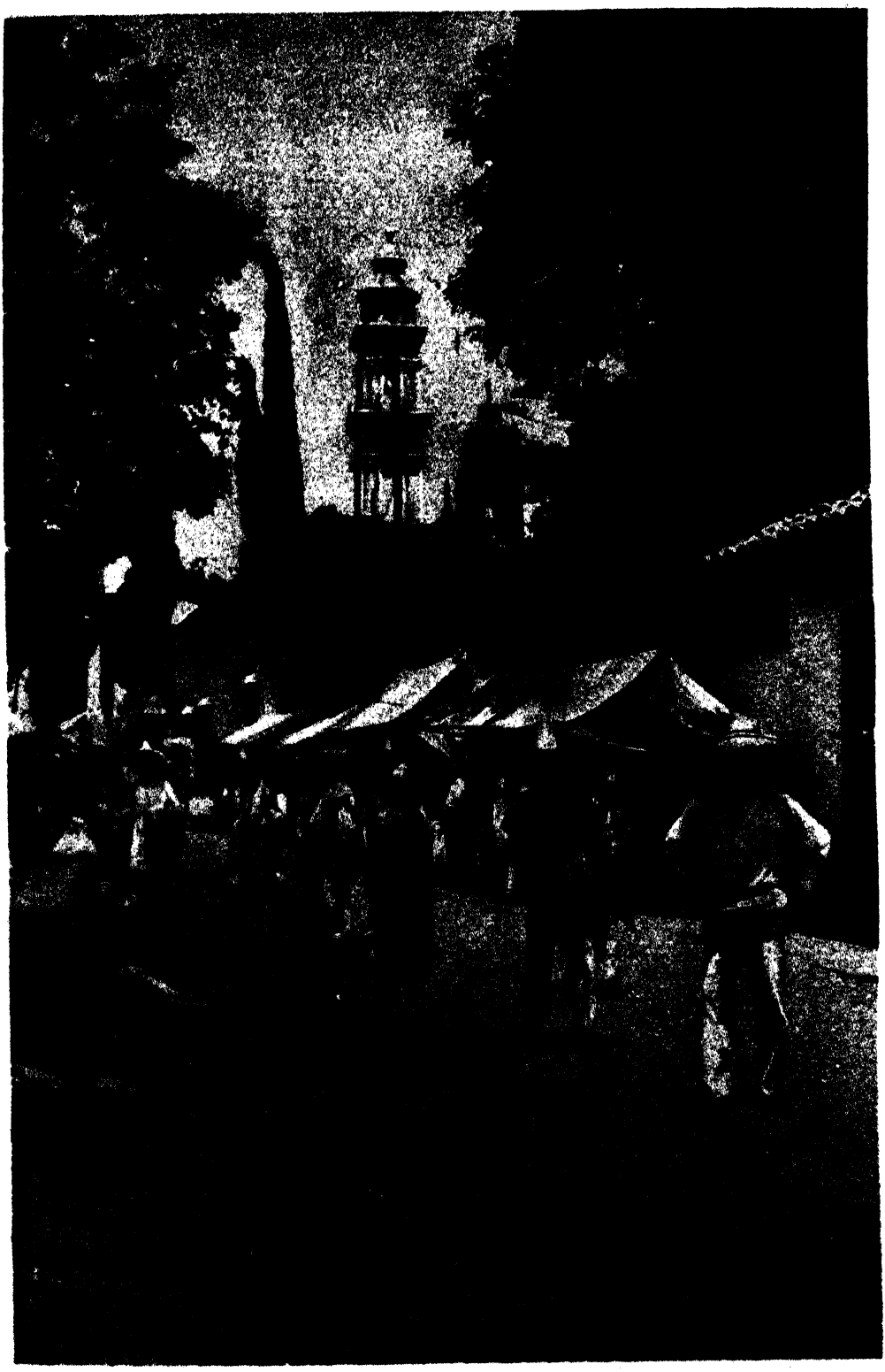


MEXICO. *Pilgrims on the sacred mountain gaze across the city of Amecameca, overlain by the pearly mist of dawn, towards the pointed snow peak of Popocatepetl blushing before the risen sun*



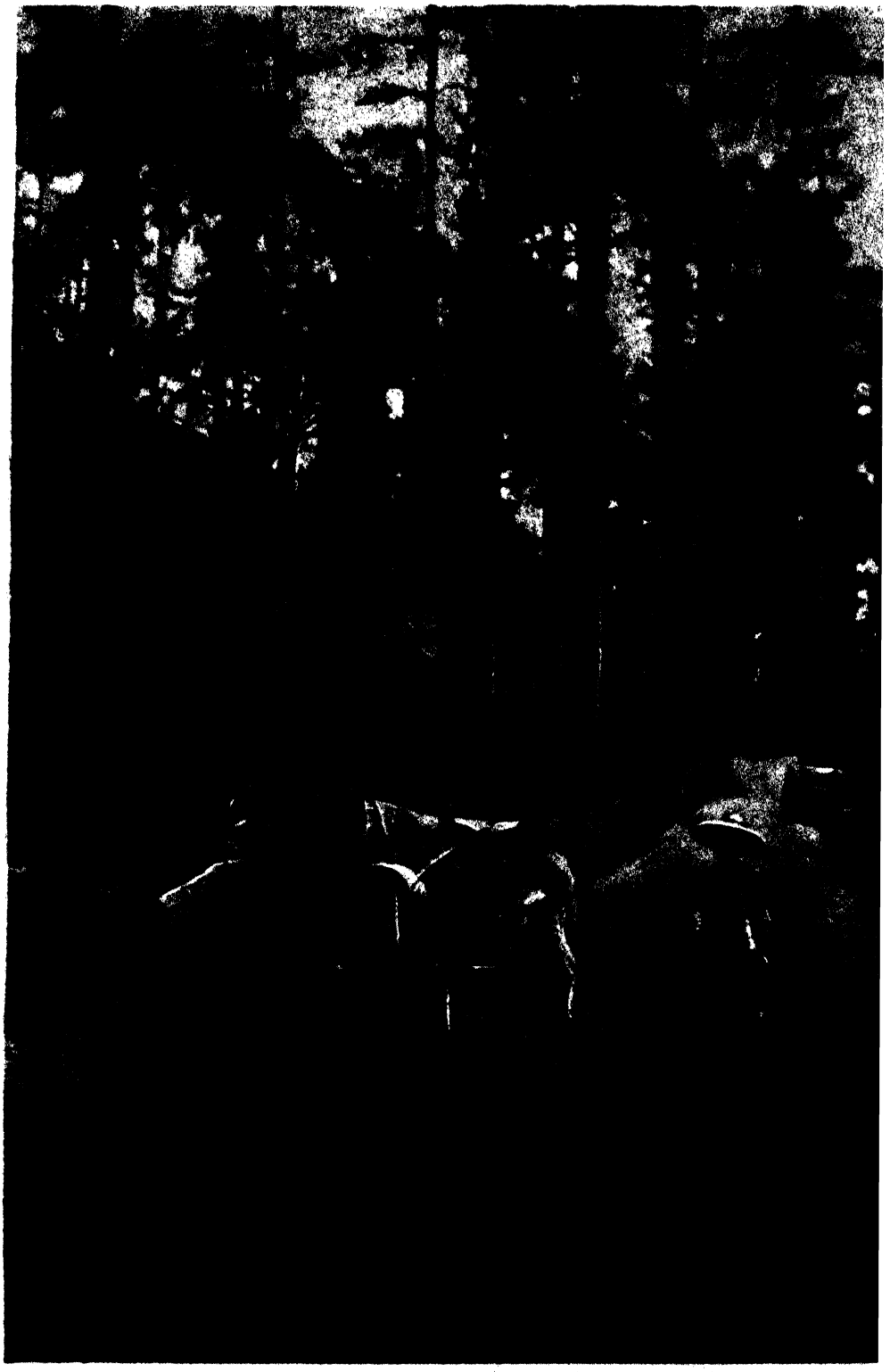
MEXICO. *These blanketed cavaliers with their sombreros are Mexican soldiers outside La Veritá on the road to Mexico City*

2760



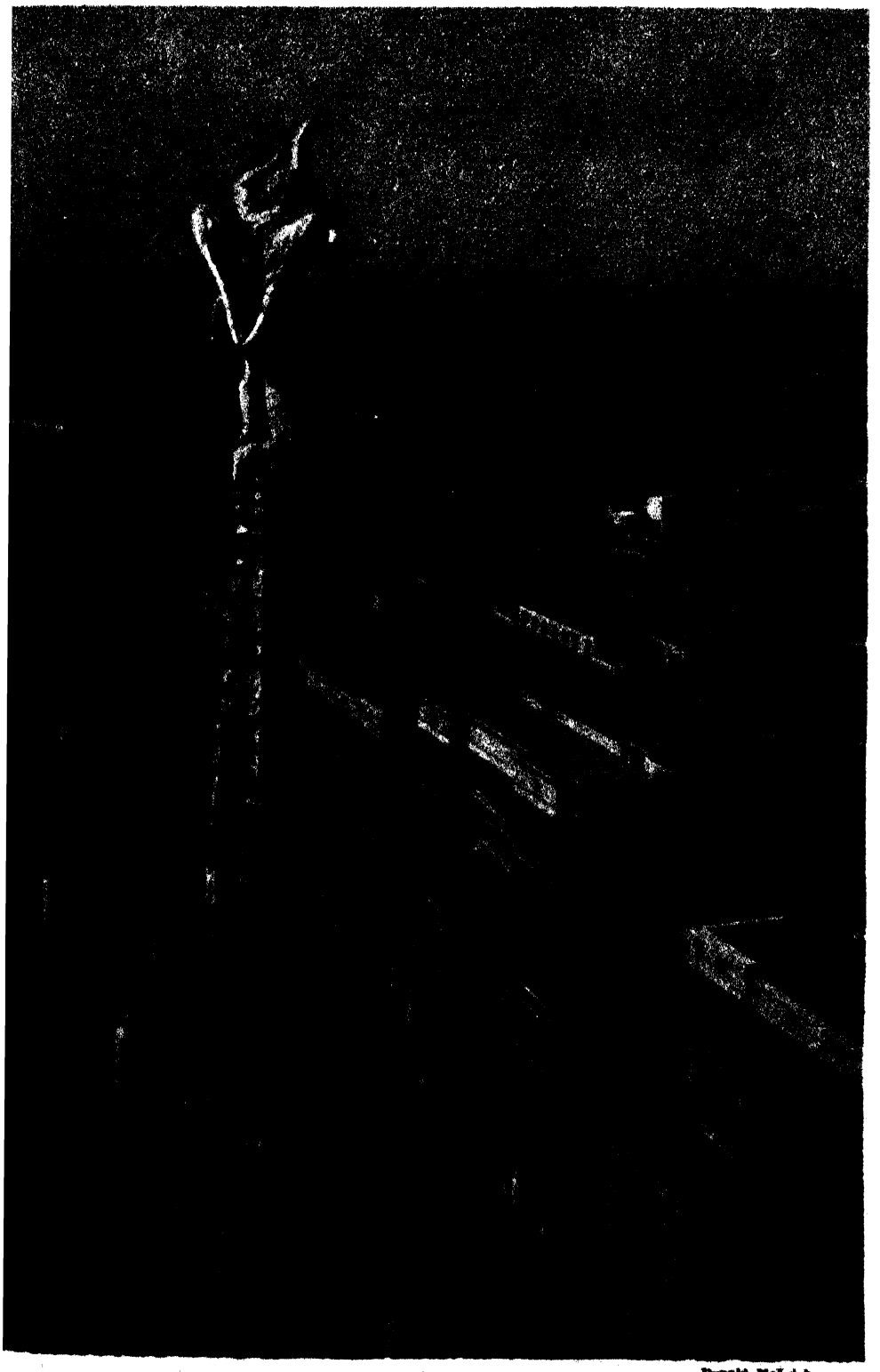
MEXICO. *The main street in San Antone basks under the trees in the sun-flooded valley of Cuernavaca on a fiesta day*

2761



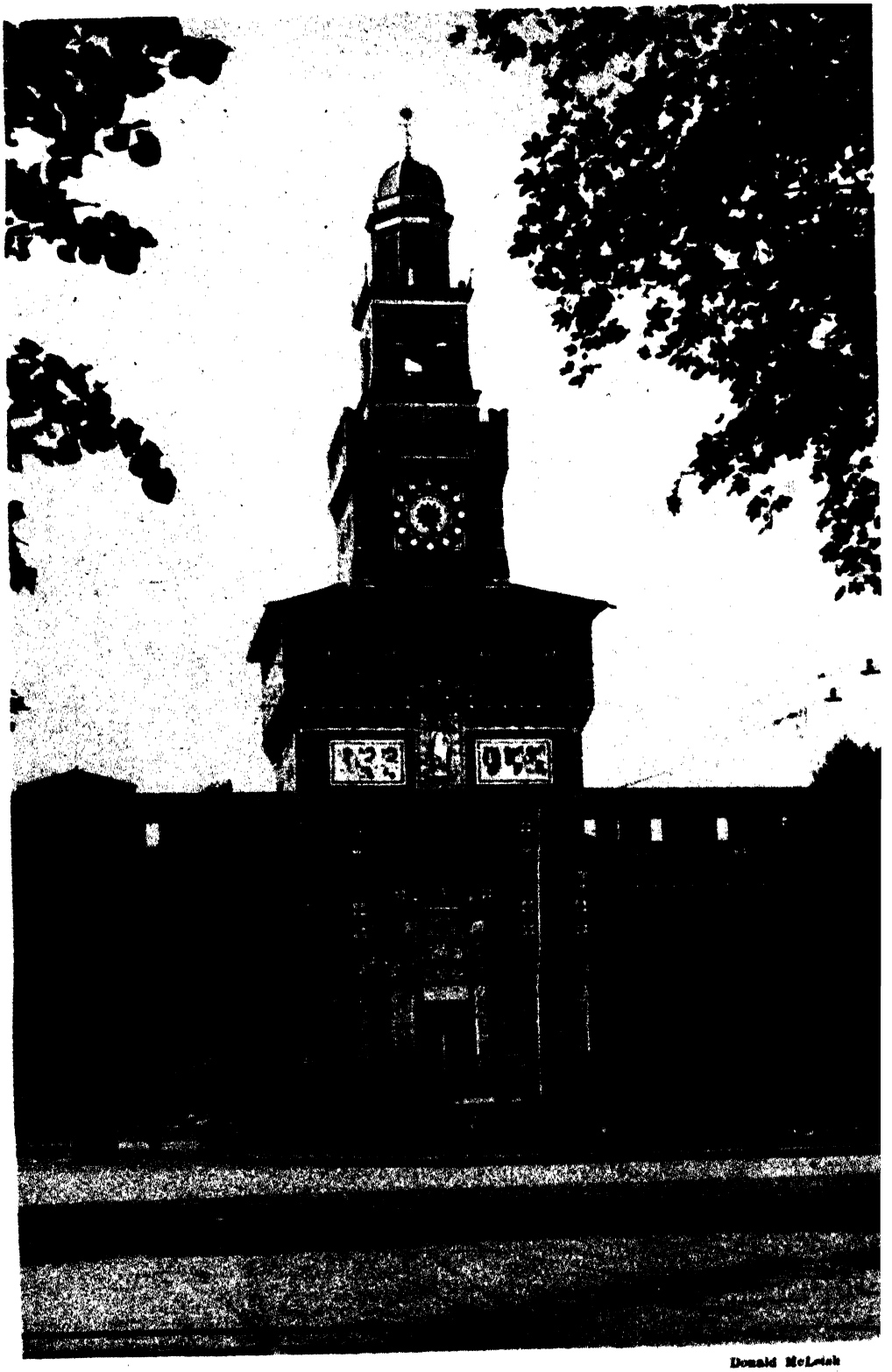
MEXICO. *Firewood is brought down on donkeys from the upland forests of pine and oak, such as that of the El Desierto reserve*

2762



Donald McLeish

MILAN. *Marble statues upon slender pinnacles, perched dizzily above the Victor Emmanuel Gallery, adorn Milan Cathedral*



Donald McLeish

MILAN. *Machicolated and loopholed, the grim Castello Sforzesco no longer threatens musketry, but opens its gates as a museum*

MILAN

Industrial City with Historic Past

by J. A. Smellie

LET the reader who would see Milan first picture to himself the country through which he will pass on his journey from the north. Let him imagine that his train has issued forth from the night-black warrens of Mont Cenis or St. Gotthard; that he has left behind him the ethereal snow-capped heights and gentle smiling valleys of the Alps; that now he is in effect traversing the fertile plain of Lombardy.

Nowhere is there to be found a fairer garden in the world a garden rich in a wealth brought down to it by the alluvium-bearing waters of the Po, Ticino, Olona and Adda. Round him, as far as the eye goes, are laid out, level and orderly and in an almost monotonous alternation, mulberry plantation and vineyard, with here and there an odd cornfield, here and there an olive orchard or, by the water-side perhaps, a lemon grove.

Sun-bathed Plain of Lombardy

A little village comes suddenly up from behind its tall screen of poplar trees into his purview; there is a fleeting impression of close-clustered houses, yellow-walled and red-roofed, topped by the square tower of a fathering church. As suddenly the scene is changed again: another screen of orderly poplars blots out even the retrospect, and again there is the sun-bathed plain with the vineyards and the orchards. Such is the terrain round the capital city of Lombardy.

From the dim days of its origins when it formed the first nucleus of the Gallic settlers in northern Italy, Milan's geographical position has been its greatest asset. In the time of the old Langobards it was a great point of departure, from which traffic-bearing highways coming from the cities and ports of central Italy, and spreading their branches ever northwards, set their directions for the heart of Europe. And for the same reason Milan is to-day the wealthiest manufacturing town of a great industrial country, and a centre of south-east European finance.

A City Founded in Commerce

It was in the Roman period, when the city became a municipium and a military depot, when a definite form was given to its periphery and streets worthy the name were made within its walls, that its trading-fame became more than local. Even the ravaging onslaught of Goth and Hun failed to shake the foundations of its commerce, though in truth this had to lie fallow till the Lombardian League and the activities of Frederick Barbarossa restored the city's prosperity and its renaissance set in.

Government of the city at this epoch was in the hands of the Captains of the People. For this honour there were continual disputes which ended finally in a violent crisis. The competitors were reduced to the Torriani and the Visconti, and in the gigantic struggle the Visconti conquered and Matteo became the overlord of Milan, founding the succession that was eventually to establish the Dukedom.

If the Visconti dukes were tyrants, they also had the weal of their city and the downfall of its rivals ever before them as their aim. Under their rule the character of Milan and the genius of the Milanese began to be reflected in the buildings that arose in the city. The Castello was built, and in 1386 the Fabbrica del Duomo was constituted to

STREET PLAN OF THE BUSY CAPITAL OF LOMBARDY

appoint architects and engage builders who should raise the cathedral that was to be a wonder of the world.

But it was when that soldier of fortune Francesco Sforza, at the head of his band of "condottiere," rode into the city, now so weary of the three years of the Golden Ambrosian Republic that followed the last heirless Visconti, that Milan's golden age began. She now ranked as a peer with the Florence of the magnificent Medicis and the republican Venice of the Doges. Ludovico, "the Moor," and his girl-wife Beatrice d'Este, following in the line of the Sforza dukes, held sway when the city was touching the zenith of its glory. Milan became famous all over the civilized world for its silk-stuffs, and its mulberry-growers were drawing in a harvest of wealth. Its merchants and middlemen were making fortunes in the entrepot trade with France and Savoy.

Art and literature flourished within its walls. Bramante, that prodigious genius of architecture, came from Urbino to crown the cathedral with its octagonal tiburno, and Amadeo from Pavia to raise the lance-like spire above it. Leonardo da Vinci, too, quitted the Florence of Lorenzo il Magnifico to adorn the city with his masterpieces and the court with his wit.

The Castello Sforzesco, a great stronghold built on the site of the Visconti's citadel, was agog with an army of scholars, doctors and humanists. The beautiful Ospedale Maggiore was built as an asylum for the poor and the sick; palaces, such as the Reale and della

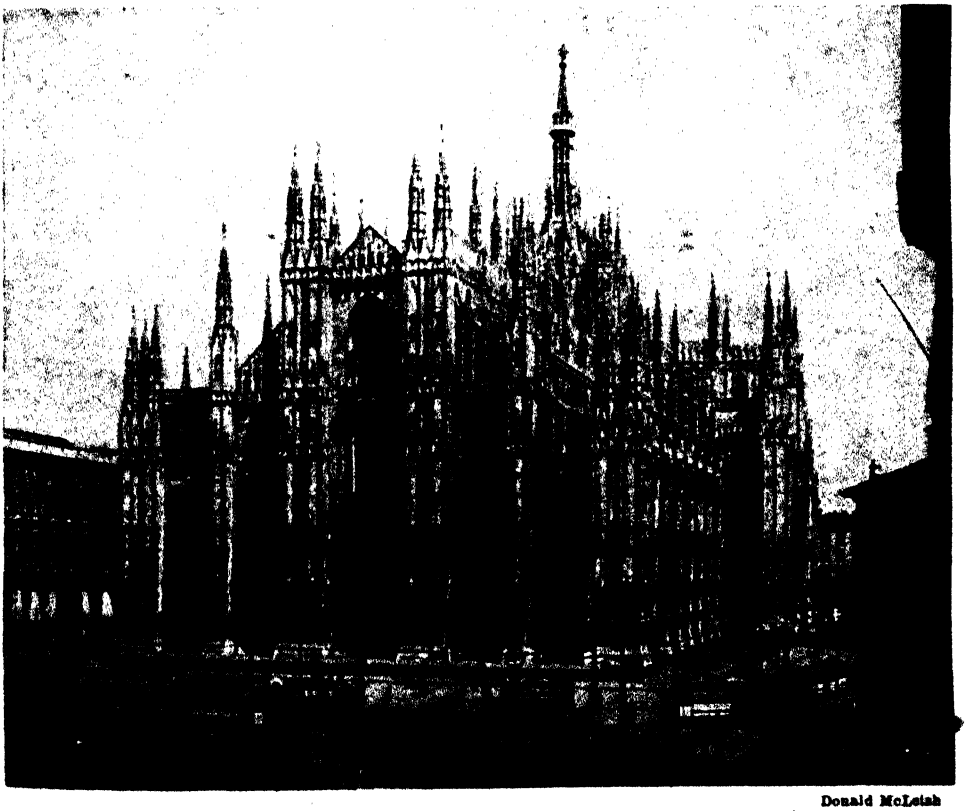
Ragione, rose all over the town, and beautiful churches, like S. Ambrogio and Sta. Maria delle Grazie adorned the streets. Milan had arrived at the climax of her splendour, and had added to her military fame the grace of a fine culture.

The coming of the Sforza was fiery, and their succession rose in brilliance to its zenith, but there is a touch of the fate of all great families in its declension after Ludovico and Francesco II., and in its final weak extinction.

French, Swiss and Spaniard then eyed the city as their spoil; they fought round its walls, even in its very streets, till the once great dukedom had a new renown as a battle-ground of Europe. The final victory of the Spanish did the city no good; grinding taxes were imposed, industry and agriculture were impoverished. Two great plagues fell on it, one in 1576 and the other, which Manzoni has so graphically described in the "Promessi Sposi," in 1630. Finally came the Wars of the Succession and the Hapsburg domination of the city which brought to it the hope, at least, of a condition that might at last improve.

The medieval aspect now left the city definitely. Marie Thérèse and Joseph II. inaugurated their economic, ecclesiastic and industrial reforms, and the second phase of prosperity began, this time to continue without serious interruption until a momentary check came with the revolts and the subsequent "Cisalpine Republic" of 1706.

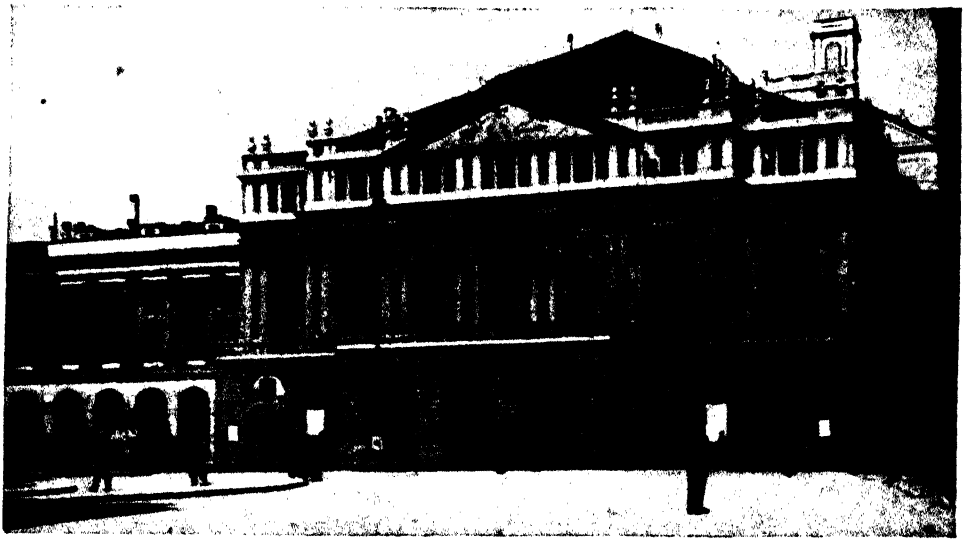
The old houses were pulled down and modern ones rose in their places; the churches and cathedral were restored, and the great Scala Theatre rose, to become the very home of European



Donald McLeish

MILAN'S WHITE-PINNACLED CATHEDRAL, A MARVEL OF THE WORLD

When, under the Visconti, the Fabbrica del Duomo began work on their church in 1386, they had little idea that it was to be completed in the manner which the later builders of the Renaissance evolved. Overlaid with white marble and adorned by 2,000 statues it stands at the very heart of the city, a wonder of Europe and a magnet that draws thousands to see it



Herbert Felton

MAIN ENTRANCE TO THE FAMOUS SCALA OPERA HOUSE

The Teatro alla Scala, standing on the north-west side of the Piazza della Scala, is the largest theatre in Italy, after that of San Carlo at Naples, and was erected in 1778. For many years it has been one of the great European centres of the opera and the ballet and numerous famous works have been performed for the first time on its historic stage. Its season is an annual winter occurrence

Herbert Felton

LOOKING DOWN THE CORSO VITTORIO EMANUELE TO THE CATHEDRAL

Some of the best and largest shops in Milan are found in the Corso Vittorio Emanuele, which, branching off from the north-east side of the cathedral, runs into the Corso Venezia leading to the Giardini Pubblici, one of the finest public parks in Italy In the background can be seen the silhouette of the cathedral, rising high above the heterogeneous buildings of the piazza

Herbert Felton

WHERE THE ROME ROAD ENTERS MILAN: THE MEDIEVAL PORTA ROMANA

From the Piazza del Duomo, in the heart of Milan, the tramway line runs due south down the Via Carlo Alberto, and then turns south-east into the Corso di Porta Romana. At the extremity of this long straight thoroughfare stands the Porta Romana, a fine old gateway that was built into the structure of the medieval walls guarding the city of the Visconti and the Sforza dukes

Herbert Felton

VIA TOMMASO GROSSI, SHOWING THE CUPOLA OF THE GREAT ARCADE

The Via Grossi runs from the Via Santa Margherita to the Galleria Vittorio Emanuele, the octagonal centre of which is seen in the background. The arcade connects the Piazza del Duomo with the Piazza della Scala. It is considered to be the best building of its type in Europe and contains the most fashionable cafés and the most expensive shops of the city

Herbert Felton

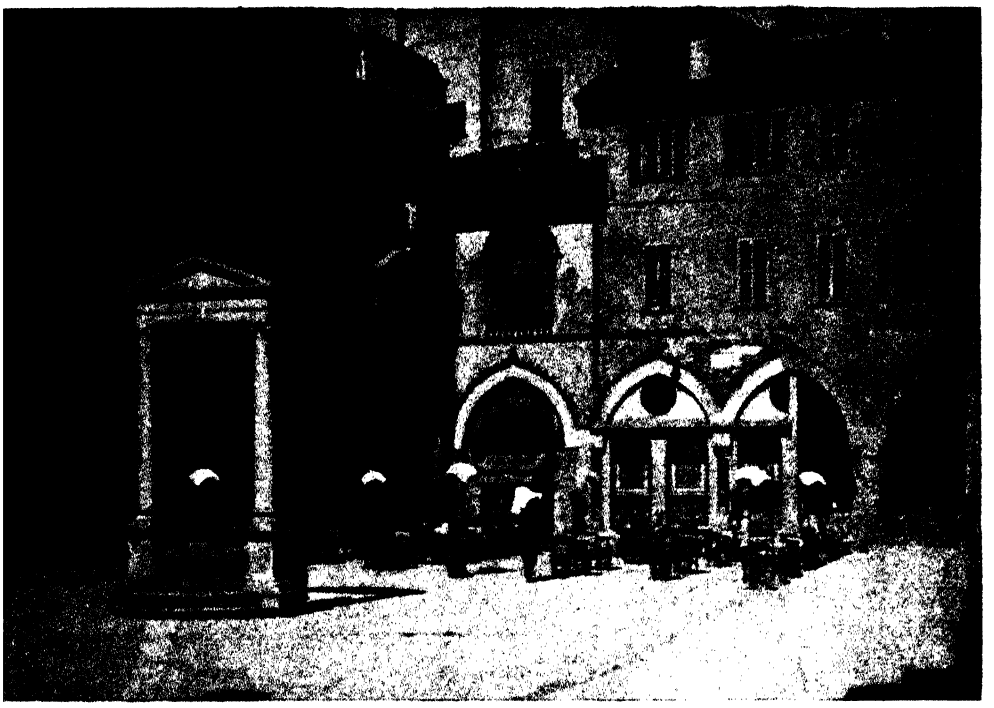
NAPOLEON'S CONTRIBUTION TO THE CITY OF MILAN

This richly sculptured arch, built of white marble, stands on the north-west side of the Parco Nuovo. It is known as the Arco della Pace, and was designed by the famous Cagnola for Napoleon I. The conqueror of the city originally intended it for the adornment of the Foro Bonaparte, a wide and well planned thoroughfare that is to-day one of the main arteries of communication in Milan

music, in the Piazza della Scala. Milan was once more a flourishing commercial city, and once more her walls sheltered a great culture. From then until 1859 when she took her place along with the other cities and states, as a part of reunited Italy, her progress was unchecked, for the Napoleonic disturbances brought no harm to her and only added the great Arco della Pace, in the Parco Nuovo, and the large Arena to her architectural beauties.

In the Milan of to-day, as when Galeazzo Maria Sforza's white-liveried troopers were swaggering through the streets, the hub of the city is the Duomo, the cathedral, and to-day as then it is one of the sights of Europe. Fantastically sculptured flying buttresses rise from the summit of the outer ramparts to support the milky walls of its nave and transept, and its hundreds of statues look down on a very modern piazza that echoes to the whistles of trams and the din of noisy traffic.

Built while the city's history was undergoing a crystallisation, it fittingly embodies the transition in its architecture; the Lombard beginnings show themselves in the Gothic arches that are crowned by the Renaissance details in the Sforza superstructures.



Herbert Felton

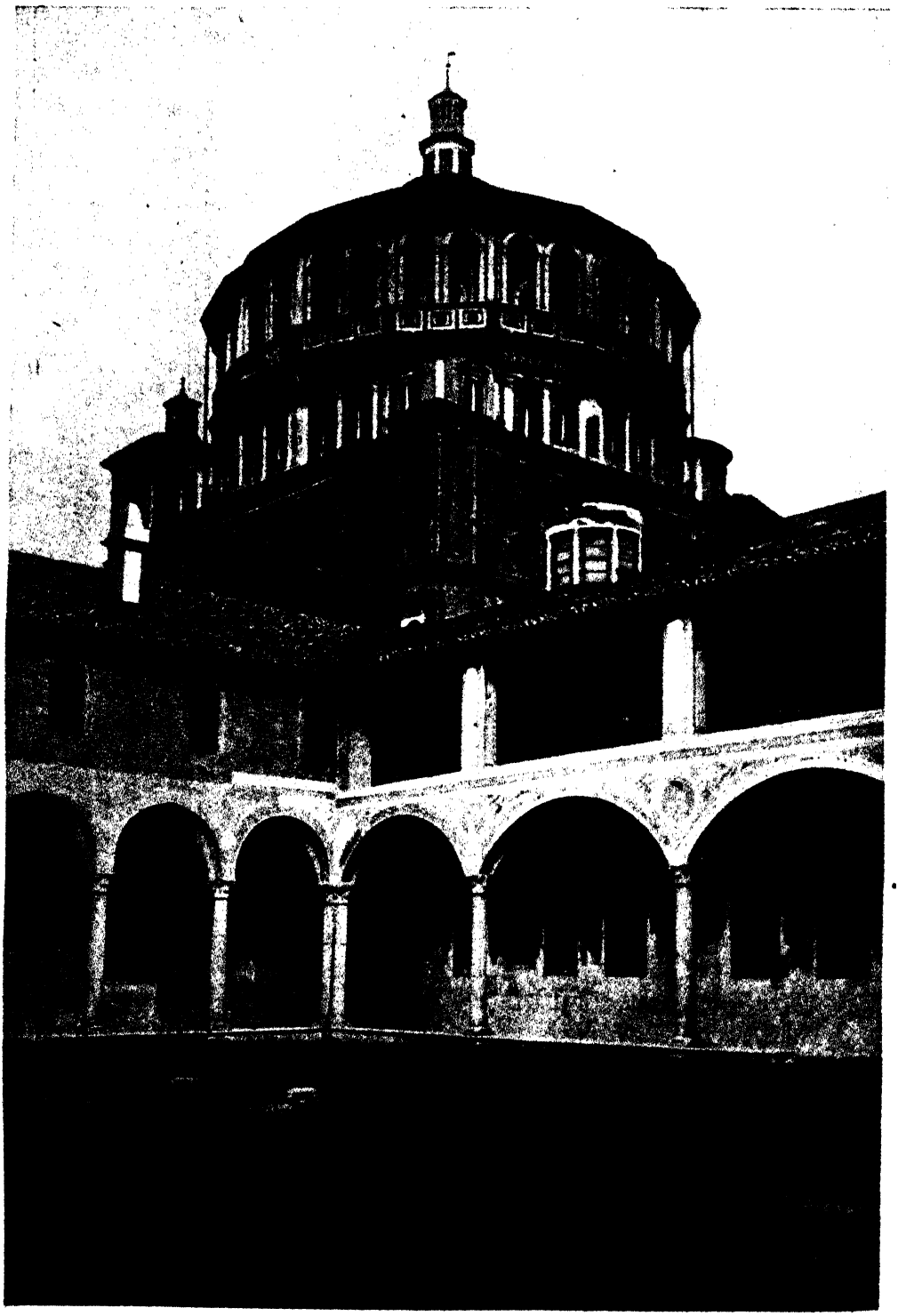
PIAZZA DEI MERCANTI, THE HUB OF OLD MILAN

Since the middle of the nineteenth century marked improvements have been made in Milan, which, entailing the sacrifice of several notable buildings, greatly changed the ancient appearance of the city. But there are still countless treasures of the old city that remain to grace the new, and the Piazza dei Mercanti, which lies west of the Piazza del Duomo, has some ancient buildings of great interest

Herbert Felton

ONE OF MILAN'S HIGHWAYS OF WATER-BORNE TRAFFIC: THE GRAND CANAL

Milan stands on the small but navigable river Olona, which is connected with the river Ticino and Lake Maggiore by the Naviglio Grande, or Grand Canal. This canal, the most important of several which Milan utilises for traffic and irrigation purposes, encircles part of the interior of the city; this section of it, flanked by the Via Fatebenefratelli, lies west of the Piazza Cavour



Ewing Galloway

SANTA MARIA DELLE GRAZIE, A FINE OLD ABBEY CHURCH

Tradition has it that a Sforza duke was murdered within the walls of this old church, which was founded in the middle of the fifteenth century. The beautiful choir and fine dome are the work of the famous Bramante, as are the small central cloisters in the old adjoining monastery, where the room that was once a refectory contains Leonardo da Vinci's "Last Supper"

Herbert Felton

SAN SATIRO, A PRICELESS RELIC OF THE GOLDEN AGE OF MILAN

Milan began to assume the graces of fine architecture and high culture after her warrior dukes had made her position unassailable. Commercial supremacy followed and with it a greater interest in art. This little church of San Satiro was founded in the ninth century, but re-erected by Bramante about 1480. The belfry and cupola-crowned building at the end of the left transept belong to the original

LOOKING IN A SOUTH-EASTERLY DIRECTION OVER THE HOUSES OF MILAN FROM THE CATHEDRAL ROOF

Herbert Felton

Milan, the chief city of Lombardy and capital of its province, lies on the banks of the river Olona. Among the large cities of Italy it ranks second, and it is the chief financial centre and the wealthiest commercial manufacturing town in the whole kingdom. This view, taken from the roof of the cathedral, shows the first court of the archiepiscopal palace in the foreground. It is framed by a handsome double colonnade and contains marble statues of Moses and Aaron. The palace, originally [illegible] formerly the cemetery of the cathedral

It is splendid in its massive strength by day, but at night when the incongruities of the modern piazza are obscured, the white marble takes on a mantle of faery, and the shades of the great figures of the romance-laden epoch that saw its moulding seem to flit among its chequered shadows. To see it then is itself an inspiration, and it leaves a memory that will not die.

Round it in a heterogeneous mixture are the great shops of the modern city, the magnificent head offices of the great Italian banks, such as the Banca di Sconto, and the thronged fashionable cafés, though a further reminiscence of other days comes to the traveller when his eye lights on the slender terra-cotta campanile of the church of S. Gotthard, a part of the great Palazzo Reale which was a former residence of the dukes.

Artistic Treasures of the City

Here, too, in the Piazza del Duomo is the entrance to the Galleria Vittorio Emanuele, a nineteenth century building whose shop-lined arcades lead to the Piazza della Scala and the Teatro alla Scala, still a centre of musical culture as it was when Italian opera was in embryo. Another fine building in the Piazza della Scala is the office of the Banca Commerciale Italiana.

The city is dowered with artistic treasures—after Filarete and Michelozzo it became the centre of the Lombard school, so famous for its disciple Cristoforo Solari—and the great Brera Palace houses one of the finest collections in Europe, with canvases of Raphael and Paolo Veronese as its crowning boast. Other notable collections are lodged in the Accademia di Belle Arte and the Galleria d'Arte Moderna.

There are churches all over the town: S. Ambrogio and Sta. Maria delle Grazie, where a Sforza duke was murdered, have already been mentioned, but S. Vicenzo, an ancient basilica, and S. Lorenzo, the victim of two fires and many restorers, both rich in history, deserve some reference.

A walk to the Parco Nuovo, Milan's Hyde Park, where the exquisites take the air of a morning in their Fiats and Bugattis and where, on Sundays, the black-shirted Fascisti parade, brings us to the walls of the Castel Sforzesco. Its stern red towers and battlemented walls are in marked contrast with the shimmering marble of the Duomo, but it suggests, more than any other legacy of theirs, the spirit of its fiery captains.

Series of Magnificent Thoroughfares

Now it houses a museum of Roman and medieval antiquities, and its old-time drilling grounds are laid out in gardens. From its walls to the Arco della Pace runs a wide, straight avenue, and here the park ends. We emerge on an elegant modern quarter where wide boulevards are the rule and the great villas of the wealthy Milanese stand surrounded with large gardens.

Modern Milan is a city of magnificent thoroughfares. From the Parco Nuovo the wide Foro Bonaparte runs down to the Piazza dei Mercanti, there to join the Via Dante, which brings us again into the heart of the city. The Corso Vittorio Emanuele, another modern thoroughfare, runs from the Piazza del Duomo in a north-easterly direction to the Corso Venezia.

Fatherly Municipal Authorities

A progressive municipal authority directs the planning of any extensions of the city as well as administering her water and tramway services. The town government also has charge of the supply of electricity, largely obtained from hydraulic power at the great Valtellina works. Much is being done, too, by the authorities to improve housing conditions in the closely packed industrial quarter of the town which, owing to the extremes of heat and cold to which the district is subject, tends to be somewhat unhealthy at times.

Public health has always occupied the serious attention of the authorities, and apart from the ancient Ospedale Maggiore, splendidly equipped hospitals

like the Ciceri and the Garbagnate sanatorium—the latter fourteen miles out of town—have been built for the public service.

Milan's industrial development since the beginning of this century has been most remarkable, and she now takes a leading place among the great commercial centres of the world. Machine-making occupies thousands of operatives, and there are countless allied industries such as boiler-making, motor-building and bridge construction for which the town is also celebrated.

Textiles and Automobiles

In the manufacture of textiles her greatest interest lies in the making of silk fabrics, for which she is universally known; but the weaving of cotton grows daily in importance, and wool is now spun and woven in considerable quantities. Domestic industries, such as the making of furniture, the printing of furnishing fabrics, the decorative working of leather and the manufacture of electrical fittings bulk large in importance. Automobiles, such as the well known Bianchi, are made in the district; and their subsidiary and allied trades are represented by the making of tyres—the Pirelli Company is the largest employer in this industry—and electric cables.

Tramways Efficiently Organized

As to internal and external communications the city is thoroughly well equipped. The morning aspect of the Piazza del Duomo would suggest an over-emphasis of the importance of the municipal tramway department, but in other parts of the city this means of transport resolves itself into a most efficient and well-organized system, giving easy and rapid access to the different urban and suburban areas.

The tramways form one of Milan's most valuable and profitable undertakings, and municipal statisticians have computed that each of the city's 722,000 inhabitants uses the service 330 times each year. Canals, used for transport and irrigation, abound round the city. By this means connexion is made with the river Po, and with Lake Como, through the river Adda, and by the Canale Grande, through the navigable waters of the Olona, with Lake Maggiore and the Ticino. The work of connecting the city with the east coast at Venice by canal is well under way, and the new port which is being constructed will be equipped with facilities capable of dealing with a large trade.

Railway communication from the exterior is by the Ferrovie dello Stato whose main Turin-Venice line passes through the Central Station, from which also the traveller en route for Bologna and Rome would leave. Lines running to Genoa and the towns of its surrounding district depart from the Stazione Ticinese, and there is a light railway that runs to Como, the lake-side town where many of the more fortunate Milanese find refuge from the heat of the city in summer.

Milan in Summer and Winter

The city, and indeed the whole Plain of Lombardy, is subject to the most extreme weather conditions. In winter the cold is intense, and on an average there are ten days each year on which snow covers the ground; while in summer the temperature may rise as high as 100° F. Milan in a heat wave is a disagreeable experience for the inhabitants, but for the visitor from the north it is undiluted misery, and he is well advised to plan his visit for the more temperate and equable periods such as spring or autumn, or indeed winter, for at this last period there is an additional attraction in the fact that the social life of Italy's commercial capital is then in full swing.

The Milan of to-day has risen to great heights and looks forward to an established position in the future—established because her prospect is based on the firmness of her commercial foundations and not, as before, on the hazard of military supremacy.

MONGOLIA

Barren Haunt of Nomad Tribes

by Douglas Carruthers

Author of "Unknown Mongolia"

THE Mongolian plateau occupies a vast area of inner or upper Asia, forming a desert hinterland to fertile and populous China on the one hand, and on the other to the cold, sparsely populated, but scarcely less fertile regions of Siberia.

It is almost entirely high steppe, barren and inhospitable, too hot in summer and too cold in winter, unattractive for the most part to any but herdsmen. Mountain walls surround it, and add to the seclusion already created by its baneful climate, its natural poverty, and consequently its meagre population.

Thus Mongolia is side-tracked between Soviet Russia and China, and its only claim to distinction is that it is the home of the Mongols, the residue of a race which once conquered half Asia and terrorised Europe. The separateness of Mongolia is still further accentuated in that it has retained in great part its traditional independence. Although paying tribute to Peking, the suzerainty is only nominal, for the Mongol chieftains still overrule their clansmen as in the days of Jenghiz.

Birthplace of World Unrest

Although of little account to-day, this wild land has profoundly influenced the history of the world. Its wind-swept plateaux have bred unrest from time immemorial. Here wandered the Huns, who eventually overran Europe. Here were the Mongol hordes who succeeded in founding a dynasty in China, who created an empire in India and who by virtue of immense conquests in Asia were able, for a time, to speak in dominating accents to Europe.

The boundaries of our region are somewhat difficult to outline, for being a nomads' land, tribal limits play a larger part than does nature; also purely social lines of demarcation are liable to shift. For instance, on the south and east the virile Chinese encroach on every available acre on every possible occasion; while on the north the Russian advances or retreats according to his latest whim.

Boundaries Ill-defined

On the west the deserts of Zungaria and Turkistan allow no natural boundary, but the limits are roughly represented by the westward outposts of the Mongol tribes. On the south the Chinese province of Kansu and Chih-li march with Inner Mongolia, as the southern portion is called. Peking itself is within 200 miles of this point of the Mongolian frontier. North-eastwards the boundary of Inner Mongolia stretches to the confines of Manchuria, near Manchouli, then turning due west it runs for nearly 2,000 miles along the so-called international boundary separating China from Russian Siberia.

This frontier shows up well on the map, but it would be difficult to follow in nature. No great physical features define it. It follows small, insignificant mountain ranges, such as the Sayanski, the Little Altai and the Saur groups; it cuts across rivers—the Kerulen, the Selenga, the great Yenisei and the Black Irtish. Across the frontier to the north lies Siberia.

On the west Mongolia merges into the outlying Chinese dependency of Sin-Kiang, or the New Dominion, which includes Turkistan and Zungaria. The

BLEAK STEPPES AND BURNING DESERTS THAT SEPARATE RUSSIA FROM CHINA

frontier is man-made, runs across nameless steppes, and is not influenced by physical features. Although roughly describing the Mongol limits westwards, the Mongols overlap the Kirghiz tribes and the Turks extend into Mongolia.

The frontier used to follow the watershed of the Great Altai, a fine natural boundary, then south-east across the western Gobi, until it reached the Hwang-ho in the vicinity of Lanchowfu. But the Mongol frontier was later pushed 500 miles westward, as far as the frontier town of Chuguchak, so as to include the strategic points—the Upper Irtish valley and the Zungarian Gate, the only two feasible lines of communication, by river or rail, between Siberia and Western China.

D. Carruthers

WONDERFUL LAKELAND OF THE MONGOL-SIBERIAN FRONTIER

This is Toji Kul at the sources of the great Yenisei river; with its wide expanse of clear still waters, its grassy banks and forested islands, its broken shore-line of quiet bays and bold promontories, backed by wooded hills, it is of exceptional beauty. Park-like country surrounds the lake, but is only peopled by scattered encampments of the Uriankhai, who regard Toji Kul as being sacred

European maps retain this new demarcation of Mongolia, but Chinese officials still administer the region as part of Sin-Kiang, and in no way allow it the privileges enjoyed by autonomous Mongolia.

This area contains about a million and a half square miles, as much as British India. It is 650 miles across from Siberia at Kiakhta to the Great Wall at Kalgan, while from west to east it extends for 1,250 miles from Hami, the last oasis in Chinese Turkistan, to Manchouli in Manchuria.

The name Gobi, which means desert, is written large across the whole of this expanse, and indeed the whole of the central portion is arid, rolling steppe, situated at an average altitude of 3,000 feet above sea-level. One climbs on to this tableland by passing over the border ranges which rise as a wall, though not a high one, and enclose the central plateau. This applies to the whole circuit except on the west, where the high plains drop imperceptibly to the low sand wastes of Turkistan or the harder steppes of Zungaria. The tableland itself is, moreover, relieved by subsidiary mountain ranges, which rise to altitudes varying from 5,000 feet to 15,000 feet above sea-level.

These highlands are Mongolia's most important physical feature, for not only do they govern the life history of the inhabitants, supplying, as they do, the best grazing for great flocks and herds, as well as fuel and water and shelter in winter, but they also present a most welcome relief to the eye from the endless yellow plains. These mountain groups are distributed over the plateau, but predominate in the north and especially in the north-west. In fact, the whole of the north-western corner of the region is mountainous, and holds the principal clans of the last of the Mongols.

Generally speaking, Mongolia can be divided into three zones, each with its own particular aspect. In the north is a land of exceptional beauty, a hill country of forests and lakes and rivers. Across the centre lies the monotonous prairie belt—the Mongolia of popular imagination—vast expanses broken only by the tent-villages of the nomads and

the slow-moving caravans. On the south is Inner Mongolia, also a barren region, but relieved by highlands and approaching China in some characteristics.

The hydrography of Mongolia is peculiar. Some of its waters flow to the Arctic Ocean, some to the Pacific; the rest find themselves trapped in self-contained basins, while the greater part of the central plateau, which is actually the lower altitude, is waterless in that no streams flow above ground.

Of ocean-going rivers, the Kerulen source of the great Amur rises in the far north-east, in the neighbourhood of Urga; the Orkhon and Selenga, feeders nomad centres. Of a different aspect are the desert basins in the Gobi, where a little brackish water collects in the spring and perhaps disappears during summer's heat. One lake-bed receives a perennial supply from the snow-clad Tibetan border ranges, namely, Gashiun Nor and Sokho Nor.

It will be judged then that Mongolia is not a waste land, although a great deal of it is unfit for permanent settlement. Although its indigenous inhabitants are shepherds pure and simple, their moribund existence is largely the result of their own ineptness. Where the Chinese colonists have intruded,

Col. P. T. Etherton

CHINESE VILLAGE OF MONGOLIA ON THE BORDERS OF TURKISTAN

Irregularly built, open-fronted shops line the pothole-pitted main street of this village in Mongolia. Projecting from the shops are signboards denoting the business of the proprietor. On the right are baskets attached to poles, of some vegetable and fruit hawkers. In the summer these streets are deep in suffocating dust, while in the winter the inhabitants flounder in a slough of foul mud

of Lake Baikal and thus Mongolian sources of the great Yenisei, have their sources between Urga and Uliassutai; while the Uriankhai sources of the same great waterway—the Bei Kem and Khua Kem—rise in a mountain-girt basin between the Sayanski and Tanhuola ranges. The Irtish rises on the western flanks of the Great Altai.

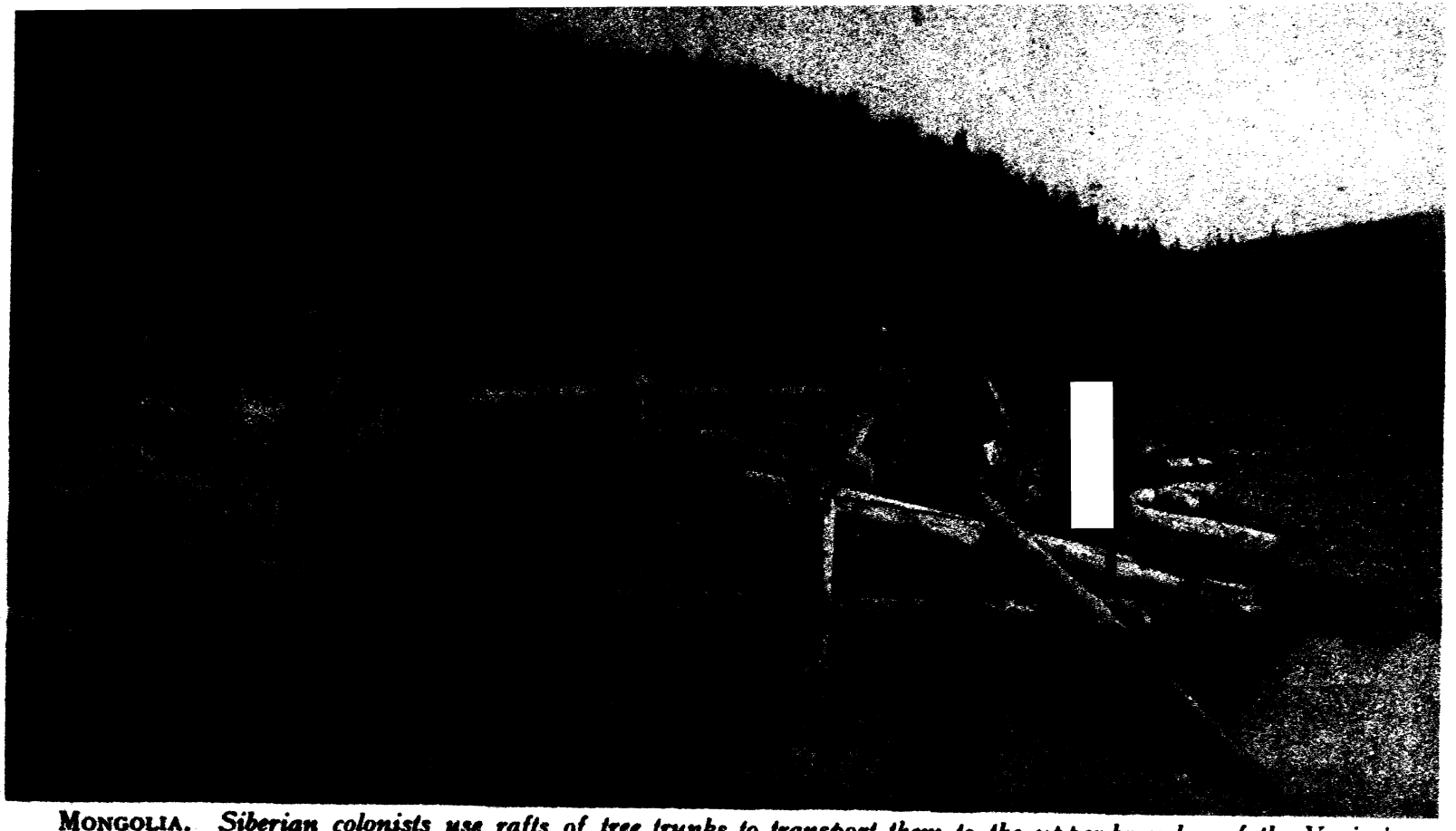
These Mongolian sources of the great Siberian waterways have more than 2,000 miles to flow before reaching the sea. The self-imprisoned waters form such lakes as Ubsa Nor, Kirghiz Nor, the Kobdo lakes and Lake Koso Gol; these are generally great

agriculture takes the place of nomadism, the soil proves to be of more value than for mere grazing purposes. It is the same where the Siberians have advanced on the north; ranches have sprung up where formerly only herdsmen seemed able to make a living, and a poor one at that. Permanent villages have taken the place of temporary encampments. In other words Mongolia is a region in transition, a country with a future.

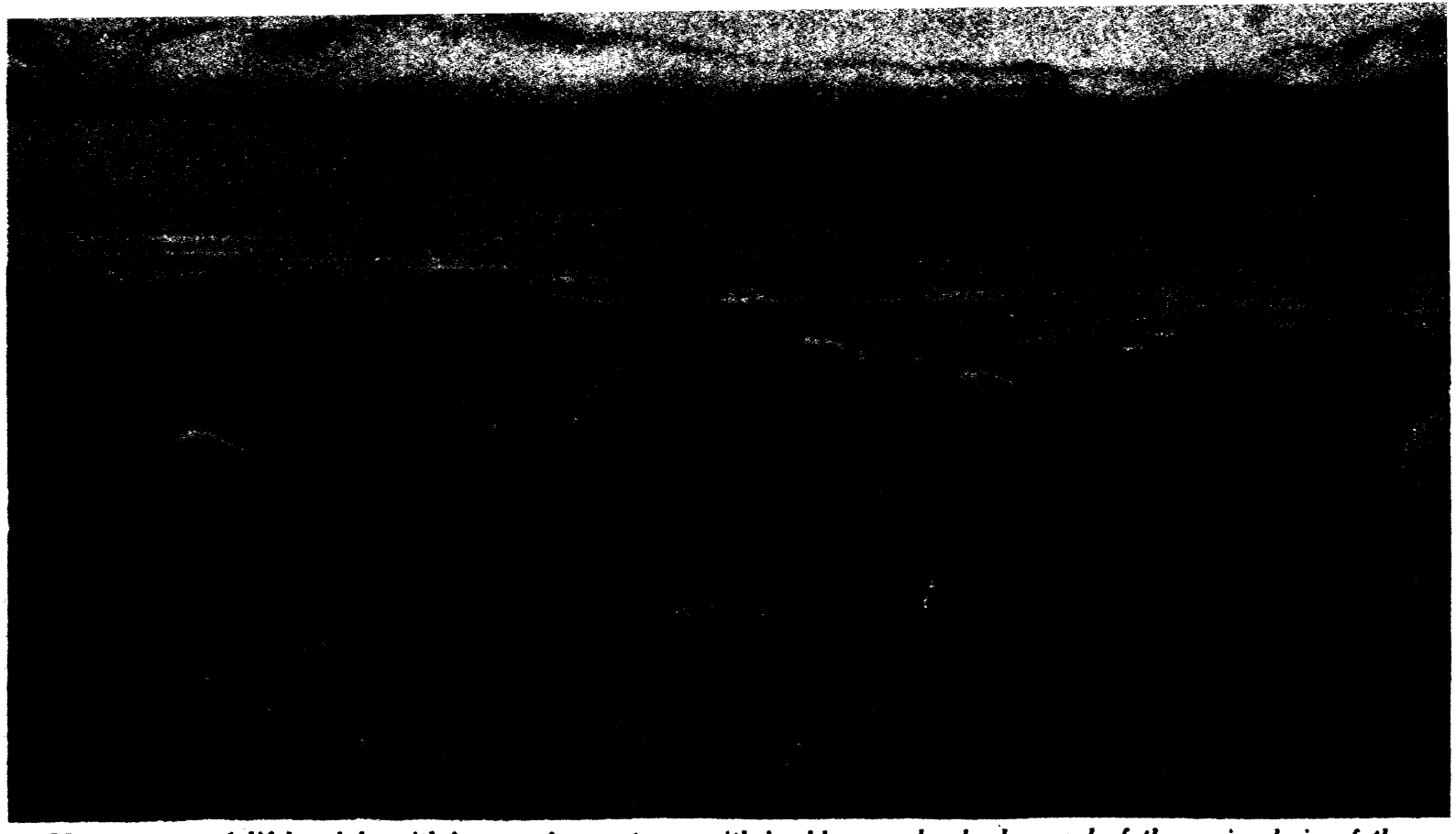
There is little doubt that long ago, at a date anterior to the Mongol eruption in the thirteenth century, Mongolia was a much more fertile region than it became later; then followed an arid period

MONGOLIA. *Great herds of reindeer roam on the fringes of the Siberian forests at the foot of the bleak Mongolian uplands*

Photos by Douglas Carruthers

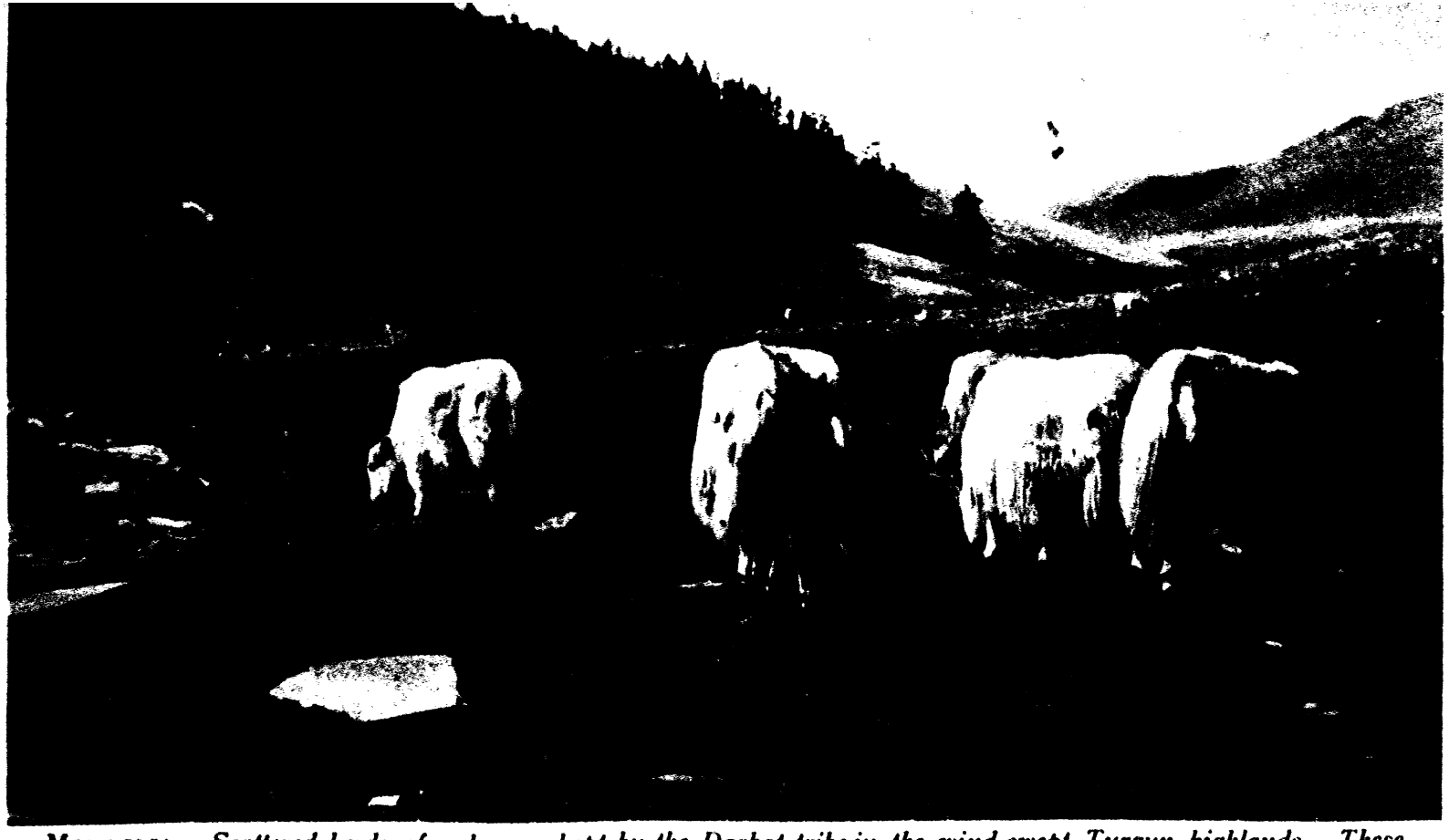


MONGOLIA. *Siberian colonists use rafts of tree trunks to transport them to the upper branches of the Yenisei. The boundless forests of firs and spruce make travel by land almost impossible*

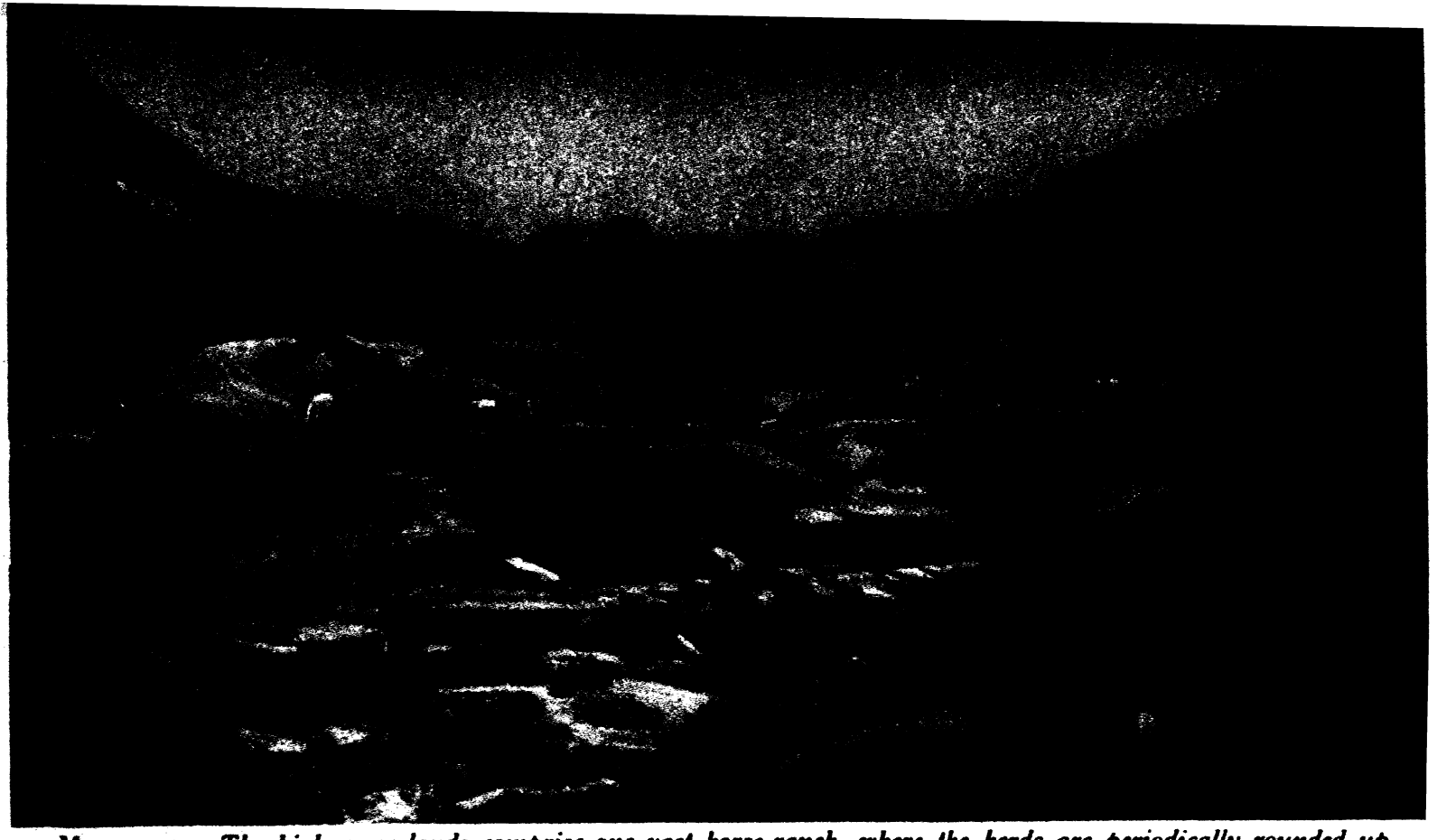


MONGOLIA. *A lifeless lake with barren shores strewn with boulders, and a background of the main chain of the Great Altai, make a melancholy landscape around the shrunken lake of Dolmo Nor*

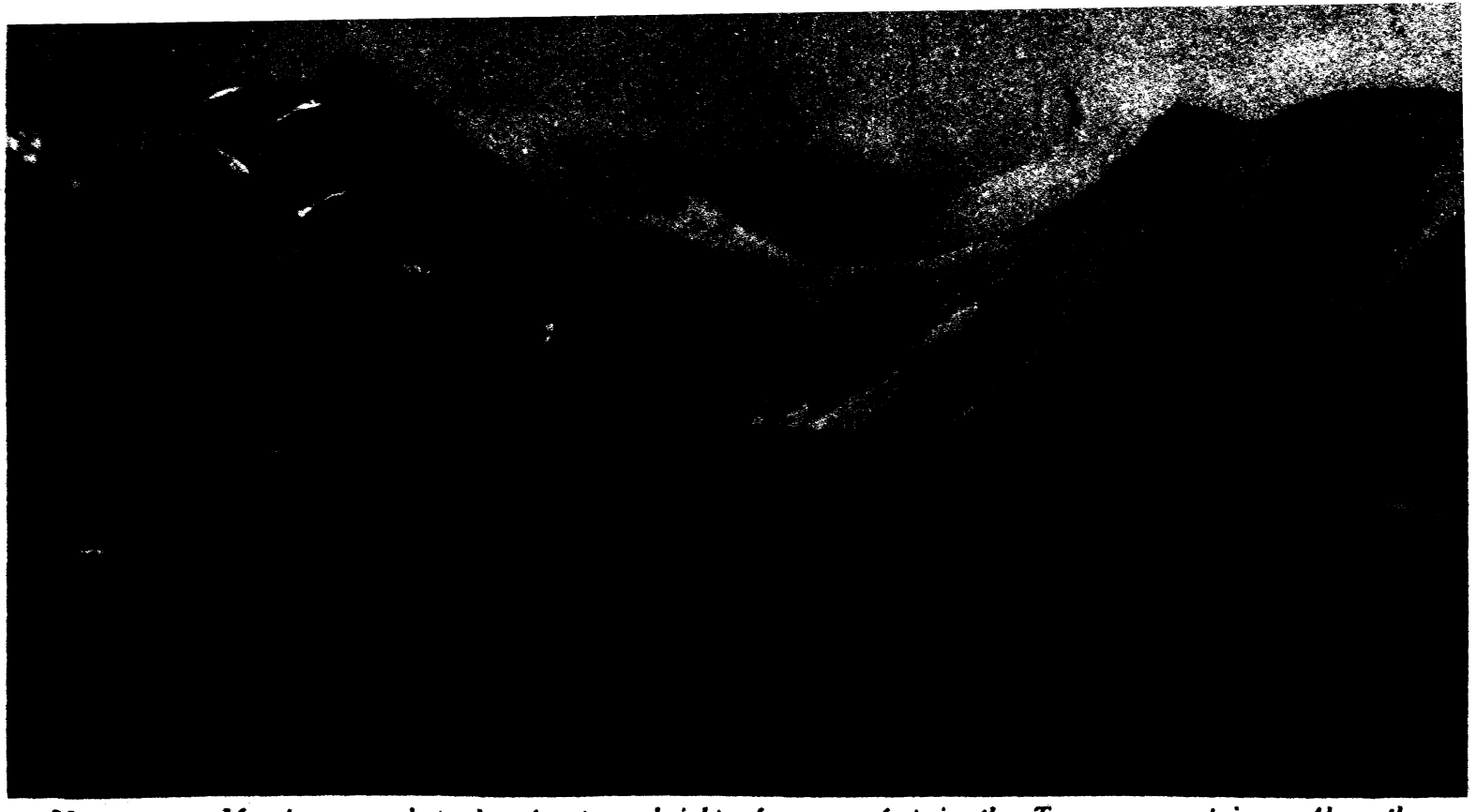
MONGOLIA. *Dolmo Nor lies at an altitude of 7,000 feet and is one of the sources of the Kobdo river. It is a desolate locality, save during the summer when the Kirei tribe camps on its long, lone shore*



MONGOLIA. *Scattered herds of yaks are kept by the Darkat tribe in the wind-swept Turgun highlands. These long-haired beasts only exist in a few places outside the highest portions of Tibet*



MONGOLIA. *The high grass-lands comprise one vast horse-ranch, where the herds are periodically rounded up and the best animals driven down to the bazaars of Kalgan and other Chinese towns*



MONGOLIA. *Massive, rugged peaks rise to a height of* 10,000 *feet in the Turgun mountains. Above the pastures in the sheltered valleys are tablelands desolated by the destroying progress of glaciers*

Nomad Mongols are here loading their two-humped Bactrian, or Asiatic, camels which bear huge loads as they move from camp to camp

MONGOLIA. *The Uriankhai live in the north-west of Mongolia with their herds of reindeer which serve them even for riding*

which, no doubt, had its bearing on the Mongol migration — the inhabitants having outstripped their means of subsistence were forced to migrate. But now, as is the case with other regions which form that great desert belt across the whole of the Old World from Morocco to Egypt, through Arabia, Persia and Turkistan to Mongolia, the change for the better is taking place, the desert is bending to the will of man—the waste is becoming fruitful.

Such a wide area, covering, as it does, fourteen degrees of latitude, supports a very wide range of flora. Northern Mongolia is Siberian in aspect. Dense forests of larch, spruce, pine and birch clothe the mountains, and the valleys are luxuriant with grass and wild flowers. Swampy forest and thousands of lakes are a feature of the border ranges. Farther south the forests dwindle, covering only the northern slopes of the hills. This region in transition between dense forest and the actual Gobi may be described as idyllic, a country of "rolling grass and open timber with a hint of hills behind." Larch is the characteristic tree, and grows to a great size. The main Gobi is absolutely treeless, but wherever hills rise to an altitude of 6,000 feet or 3,000 feet above the plain, trees are sure to be found on the northern slopes.

Where there is forest there is permanent pasture and cultivation; elsewhere the pasture is less certain, shifting according to seasons and failing in bad years, the cause of the migratory habits of the inhabitants. The main Gobi itself is not without vegetation in the shape of desert scrub, and it is pretty well covered in spring with a long grass which, although scanty, is very nutritious, especially for camels. One of the Chinese names for the region is "The Land of High Grass."

The fauna appears to be even more varied than the flora. Most striking of all is that remnant of the glacial epoch, the reindeer, left stranded in the Uriankhai country, where the tribes subsist almost entirely on their reindeer herds—food, clothing and transport all

D. Carruthers

SKIN-CLAD MONGOLIAN HORSEMEN ON THEIR BLEAK PLATEAU HOME

On the high Mongolian plateau in the north-west the country has an average altitude of 6,000 feet. Grass is the only vegetation which affords fine summer pasturage, but is under snow for eight months in the year. This region is the true home of the great wild sheep, the Ovis ammon, the head of which weighs a hundredweight. A head is being loaded on to a pony in the photograph

D. Carruthers

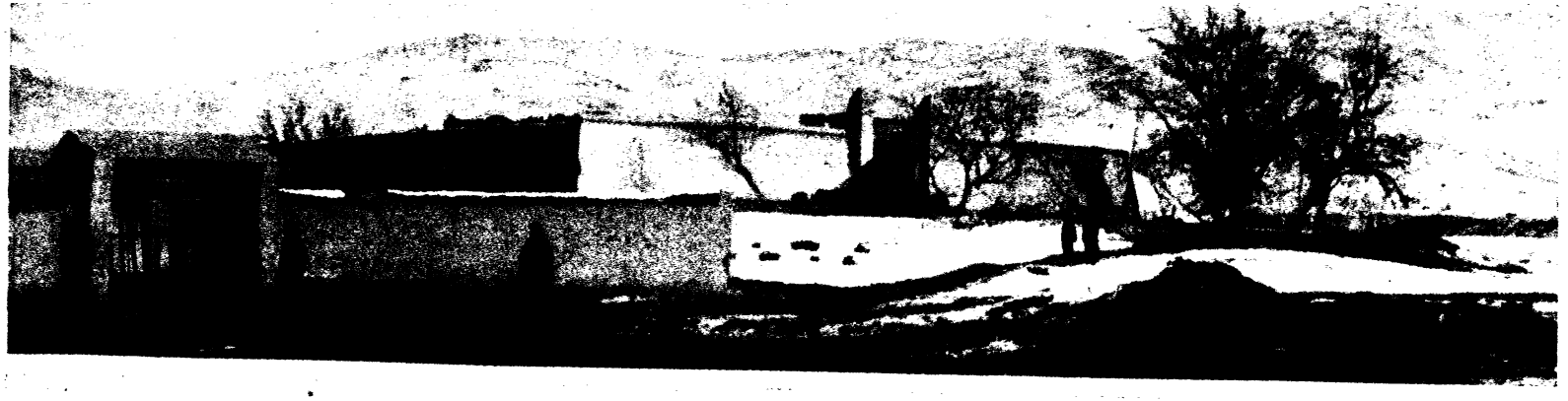
MAJESTIC EXPANSE UPON THE UPPER WATERS OF THE YENISEI IN NORTHERN MONGOLIA

The Mongolian source of the mighty Yenisei is in a wonderful region of vast forests studded with hundreds of lakes in a mountain-girt basin. This river is one of the great Arctic waterways and flows across Siberia before its entrance into the Arctic Ocean. The steep, rugged bank on the left shows that the river is on its passage through the declivities of the Mongolian plateau. Rapids bar upstream navigation at some points, but canoes and rafts can negotiate the downstream journey. The Yenisei is about 3,000 miles in length, but navigation is restricted to the summer months as it is ice-bound in winter

Col. P. T. Etherton

ROAD LEADING TO THE MAIN GATE OF CHUGUCHAK ON THE RUSSO-MONGOLIAN FRONTIER

Chuguchak is a Chinese town lying immediately south of the Tarbagatai mountains on the frontier between Mongolia and the Russian province of Semipalatinsk, and by virtue of its position is of considerable political importance. The inhabitants of towns in Outer Mongolia are, as a rule, the Chinese officials and immigrants, lamas and "shabinars" or vassals of the living Buddha of Urga. The latter number about 100,000 in Outer Mongolia. There is very little trade with Russia from the town, as for the most part that is carried on from Kobdo



Col. P. T Etherton

SHARA SUME AMID THE SNOW OF THE ALTAI MOUNTAINS AND LAMAS AT THE MONASTERY AT WONG

Shara Sumé is a fortified post and the seat of the governor of the Altai district, high up among the wild Altai mountains. The Chinese built this stronghold with much secrecy in order to strengthen their hold on Western Mongolia. Only about four Europeans have ever penetrated so far into the heart of this inaccessible region. Wong is a village clustered round a monastery on the borders of Northern Turkistan. The mud huts of the lamas lie round the monastery, the various buildings of which have the usual roofs with curved eaves. Outside the walls is a caravan of lamas and Mongols muffled against the frightful cold

coming from them. There is also the yak in the Turgun highlands near the Siberian frontier; their nearest neighbours are in Tibet—1,000 miles away.

The sub-Arctic character of northern Mongolia is also shown by the existence of wapiti, elk, roe deer, musk deer, beavers and other fur-bearing animals. The great stags are so numerous that the artificial breeding of them in enclosures is a lucrative business with Russian traders, for their horns in velvet fetch a large sum in Peking bazaars. The Yenisei forests are famed for their sables. These are all Siberian forms overlapping into Mongolia. The great wild sheep, wild horses, gazelles, are typical Mongolian fauna. The big-horned sheep, the true Ovis ammon, has its home in the Kobdo region, and its varieties are to be found on nearly every range throughout the northern half of Mongolia. These giant sheep, as big as a donkey, are among the finest trophies the big-game hunter can obtain.

A Nation of Herdsmen

Other central Asian forms extending into Mongolia are the ibex, the snow leopard and the marmot, while one strange animal, the saiga—of the Russian and Siberian steppes—is found on the Zungarian plains.

The Mongols are a nation of herdsmen whose lives are centred on camels and horses and sheep. The primary occupation of the inhabitants of Mongolia is pastoral. The bulky, two-humped Bactrian camels are the finest in Asia; they form the goods-train of the deserts, supply the felt covering for the tent-towns and thrive in cold, bleak uplands.

Of scarcely secondary importance is the horse, for the Mongol is practically unable to walk, so used is he to a life on horseback. Since the days immemorial Mongolia has been the horse-supply of China; until quite recently the emperors had their own horse ranches out in the Gobi, while the Russians have made attempts to improve the type with a view to tapping the immense supply as remounts for the border Cossack regiments. The main occupation therefore of the Mongol is the simple life of the cattle and horse rancher, with flocks instead of money and tents in place of towns. But that does not mean that there is no other wealth to be tapped. There are fine fisheries at the sources of the ocean-going rivers, there is doubtless great mineral wealth still hidden in the northern districts, just as there is in the Russian Altai across the border.

Tea the Unit of Exchange

There are also agricultural possibilities. Ranching in the north would correspond in some degree to ranching in Alberta, and there is sufficient prospect in the more arid regions to tempt the sagacious, but tenacious, Chinese farmers to settle wherever they can claim a foothold. The Chinese also supply the commercial element, as no Mongol ever kept a shop.

The Chinese trader is evident in every settlement and every encampment, his sole competitor being a few Russian travelling merchants. The main means of barter and exchange is brick tea, the Mongol giving hi. hides or wool and his horseflesh in exchange for this, his staple drink.

Mongolia's Three Towns

A million and a half square miles and three towns: such is Mongolia. Northern Mongolia is cut off from China and handy for the Russian. Urga, the capital, lies on the main line of communication, which must some day become a railway, a short cut to Peking from Irkutsk.

The only other two settlements which can be called towns also lie in the north-west—Uliassutai, a small trading centre 400 miles to the west of Urga and Kobdo under the Altai mountains. It may be asked whether Mongolia in the days of her greatness did not possess more cities and greater ones. The answer is that Mongols were always nomadic, and their greatest centres were immense encampments of tents. We know, it is true, of certain ruined cities, such as

Karakorum, the ancient capital of the Mongols, and there are indications of very early settlements in the heart of the Gobi at Khara Khota, now in ruins.

The greater part of the total population—between two and three millions—lives in tents. The tents themselves are rather superior structures of lattice work covered with felt, a more permanent abode than the Arab "house of hair" for they need to be moved less often. The encampments, some of them very large, move about according to the season and the pasture. In summer they go up to the highest and best pastures; in winter they retreat to certain sheltered localities, which have become fixed winter quarters and are becoming trading and religious centres. Thus there are certain named localities scattered over Mongolia, which consist of a few shops and a "kurin" or monastery, with a small settled population, which is augmented at certain seasons by a large gathering of the tribes. These localities, in winter, present a veritable town of tents.

A vast region with so few settlements does not need many lines of communication. As a matter of fact, Mongolia is all road; you ride in a straight line to your destination, or your camel caravan follows the easiest gradient, from one camping place to the next. When the first envoys were sent from the courts of Europe to the great Mongol Khans, they rode straight across country from Europe to Karakorum.

The earliest and most historic of Aryan trade routes, the silk route, skirted Mongolia on the south and ran direct from Peking to Kashgar. But with the coming of the Russian, trade began to flow north from Peking to Urga and out to Siberia at Kiakhta. This has now become a permanent route, and it has a regular postal service. Eventually a railway must follow the same line, for from Urga westwards the frontier is a mountainous one for a distance of 1,000 miles until the valley of the Irtish is reached.

Here, and also at the Zungarian Gate where the Siberian steppes are linked with the plains of Zungaria and eventually the Gobi, are strategic points which are likely at some future date to be used for through communications across the heart of Asia.

Mongolia is a region of very definite character, a strong environment which has reacted on its inhabitants to a marked degree.

The reason for Mongol degeneracy is not far to seek. Lamaism is at the root of it. Religion succeeded where the Great Wall of China failed, for until the introduction of its peaceful tenets even the Great Wall was not a sure protection.

But now the Mongol lions are as lambs. Every herdsman's tent gives a lama to the monasteries, every lama drains the resources of the home; the indolent life of the monastery is repeated in the life of the people as a whole, and inertia becomes their chief characteristic. One thing alone is likely to keep Mongolia intact, and that is the necessity of having a buffer-state, or neutral zone, between Russia and China.

MONGOLIA: GEOGRAPHICAL SUMMARY

Natural Division. Inner Asian plateau, a land of indeterminate margins containing a basin of internal drainage. (Cf. L. Chad basin in the Sudan.)

Climate and Vegetation. Continental climate of great extremes. The Gobi (= desert) is the eastern part of the old world belt of deserts. On the colder northern side fertile valleys, mixed woodland and grassland are followed by forests. (Cf. the Barbary States along the Sahara.)

Occupations. Herding with nomadic conditions, tent-life, etc., is the traditional occupation. (Cf the Sahara, Arabia.) Intrusive social groups from the warmer south-east are tillers of the ground and from the north-west are ranchers; both areas contain permanent settlements. Hunting, fishing. Trading mainly by Chinese.

Outlook. With considerable, yet almost completely unexploited, natural resources; without close contact with the rest of the world; burdened by an economically parasitic priesthood the Mongol is inert and will retain his land merely because neither agressive neighbour will permit absorption by the other.

MONTEVIDEO

The Coastal Capital of Uruguay

by J. A. Hammerton

Author of "The Argentine Through English Eyes and A Summer in Uruguay"

SEPARATED by no more than 120 miles of water from Buenos Aires, Montevideo is as different from that great city in climate, character and appearance as it well could be. And yet in speaking of this capital of the Uruguayan republic, so strongly individual in character and withal one of the pleasantest places in South America, it is difficult not to adopt Buenos Aires as the standard of comparison.

In the minds of most Europeans who have given no special study to South American topography, there is still some confusion as to which of these two cities is the capital of Argentina. They are both on the river Plate, and that is probably the reason for this confusion. But the salty estuary of the Plate at Montevideo is well over 100 miles wide, whereas at Buenos Aires it is a mere 30 miles across.

The great stream of emigration swept past Montevideo and on to Buenos Aires for many good reasons, turning the Argentine city into a veritable cosmopolis and leaving to Montevideo the pleasantly provincial sort of atmosphere that is but one of its many charms.

A Picture from the Water

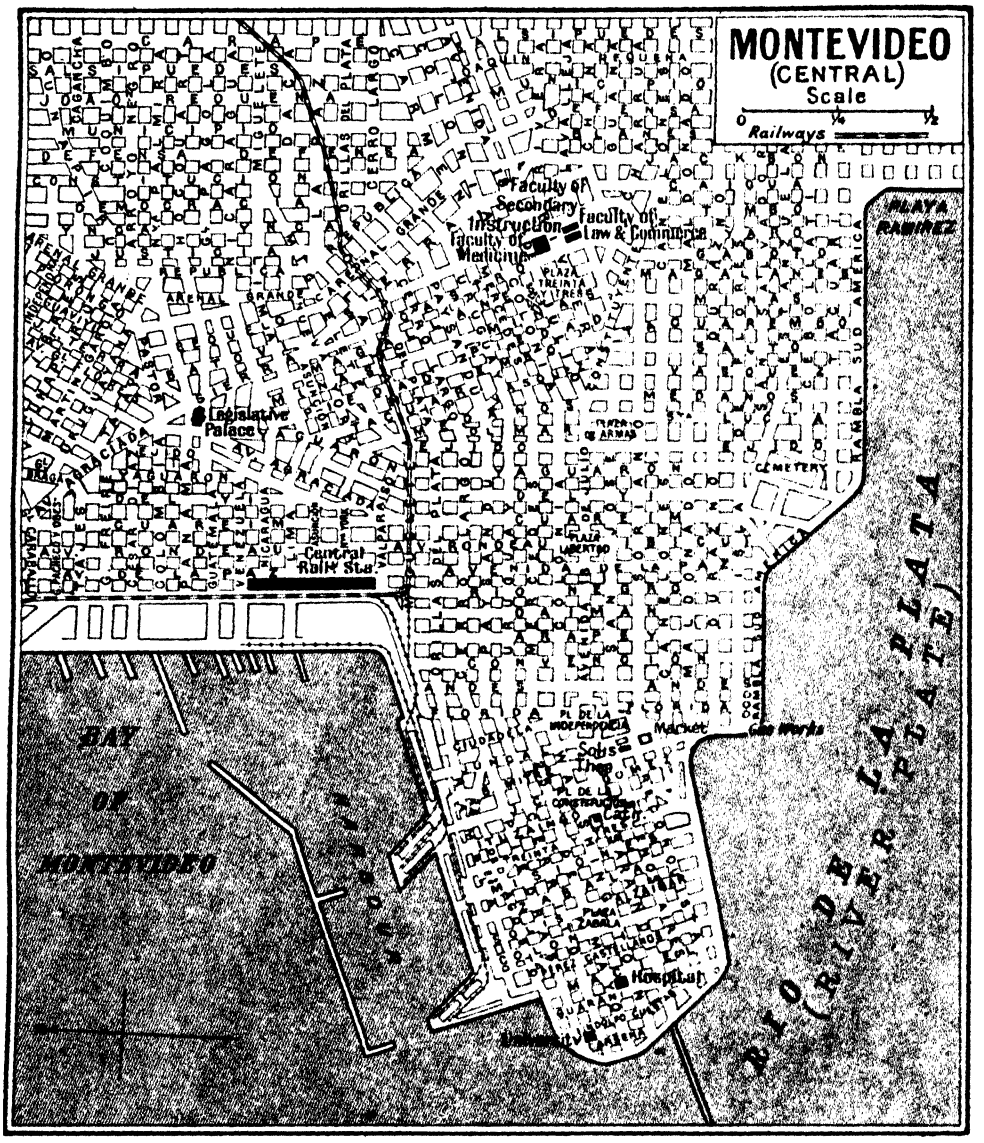
Whether approached by day or night, Montevideo presents a most engaging picture from the water. It covers a little lumpy peninsula that projects from the northern bank of the river Plate estuary, where the mighty river mingles its tawny flood with the sea. Thence the town has rambled inland and along the coast, seaward to a promontory where lie the suburbs of Ramírez and Pocitos and upstream round a more spacious bay to the fort-crowned bluff of the Cerro, and beyond.

After dark this inhabited figure-of-three springs to life with a profusion of electric lamps that cast their reflections across the water to mingle with those of the buoys in the harbour; motor-launches with their red and green lights swarm among the blazing outlines of anchored liners; and the lighthouse on the brow of the Cerro throws its ordered succession of beams into the dark immensity of the great river. At such a time the scene is one of pure loveliness; and Montevideo belies its surface charms less than most capitals of Latin America.

Lessons Learnt from Revolution

The foundation of the town dates from 1726, when Don Mauricio Zabala, Governor of Buenos Aires, established a settlement there to check the expansion of Portuguese Brazil, the original inhabitants being drawn mainly from Andalusia and the Canary Islands. By this means the territory now represented by Uruguay was kept essentially Spanish in character, although geographically one would assume the river Plate to be the inevitable boundary between the two races in their colonising effort. Indeed, down to 1825 Uruguay was regarded as a province of Brazil.

Montevideo has had a stormy history from its infancy until our own day. Its name was long a byword for party strife, and at a time of crisis in 1912 I remember asking the late José Rodó, Uruguay's most eminent author, if there was danger of a rising. He said: "No matter how angry the political passions may seem there will be no rising, as both Reds and Whites are now aware that revolutions do not pay." It had taken them about a hundred years to learn that lesson.



CENTRAL MONTEVIDEO SPREADING INLAND FROM ITS PENINSULA

In 1807 the town was captured by the British, and subsequently relinquished after their failure at Buenos Aires; then in 1814 the Buenos Airians, who had secured their freedom from the mother-country four years earlier, sent an army across the river, under General Alvear and Admiral Brown, to expel the Spanish government adherents from Montevideo. But the town did not long remain an Argentine possession, and after the three years war between Brazil and Argentine it became, in 1828, the capital of the independent republic of Uruguay. The long struggles between Argentina and Brazil for the possession of Uruguay effectively destroyed the commercial preeminence which the repeal of the Cadiz monopoly in 1778 had given to Montevideo.

Nor had the city seen the last of Argentine pretensions. Under the dictatorship of the infamous Rosas in Buenos Aires, General Oribe was sent

to besiege the city, which held out heroically under General Paz from 1843 to 1852. And in the long run it was Brazil to whom Montevideo owed the beginnings of her new prosperity.

In 1864 the Brazilians chose to interfere in Uruguayan affairs, blockaded the harbour of Montevideo and occupied the city. But in Brazil's subsequent war with Paraguay, Uruguay was made the base of operations, from which fact the Montevideans were not slow to profit. The numerous subsequent "revolutions" which punctuated the history of Montevideo did singularly little harm to the steady upbringing of the pleasantest residential city on the eastern side of South America. It became usual towards the end of the revolutionary period for the combatants to fight outside the city so that no avoidable damage might be done to a town of which both parties were proud.

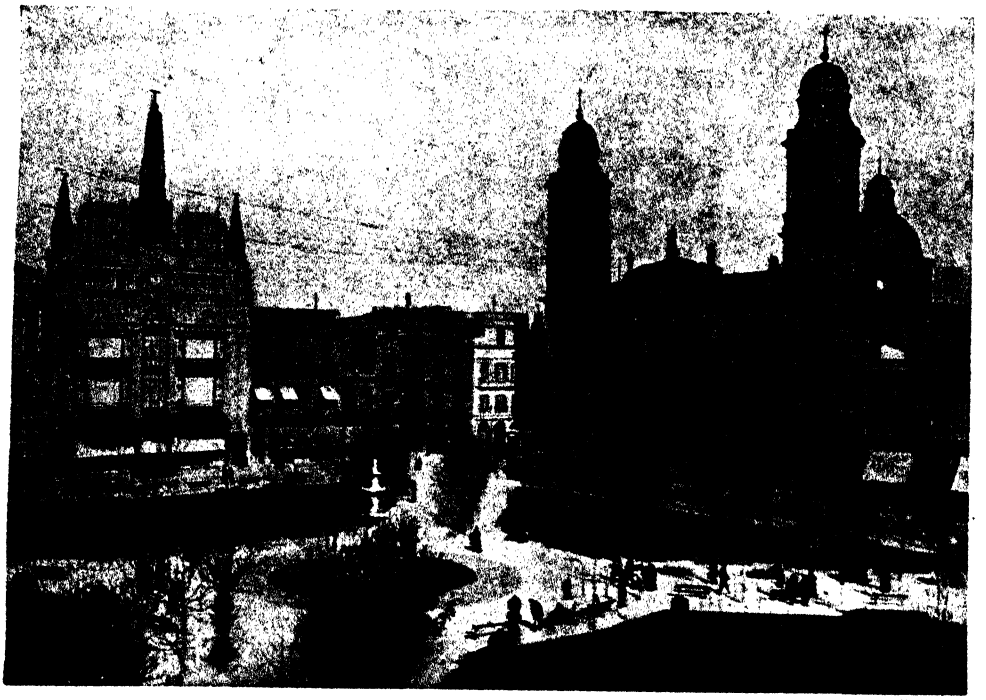
Originally the settlers built upon the tongue of land already mentioned, so that the old town is a peninsula and in many of its transverse streets you may look to water at either end. It is to this fact that Montevideo owes its temperate climate, which forms such a welcome change from the sultry heat of Buenos Aires in summer-time. There is hardly a day of the year when cool breezes do not come up from the sea and blow freshly through the streets, sweeping away dust and smells; indeed, it seems far more entitled to the name of "Good Airs" than its elder sister across the river. The mean temperature is 62° F. as against 64° for Buenos Aires.

But this original peninsular site has proved far too small to contain Montevideo's present population of close upon 400,000; and so the city has spread inland and around the bay in many long and handsome avenues leading on to fine suburbs on the outskirts. And yet, although now in reality on the fringe, this older part is still considered the centre and contains the most crowded streets and popular shopping quarters. This is no doubt due to the proximity of the harbour; but the pivot of social life must eventually shift farther inland as the population grows. Here, where the streets are still of the

E. N. A.

ESPLANADE AT POCITOS, POPULAR SUBURB OF MONTEVIDEO

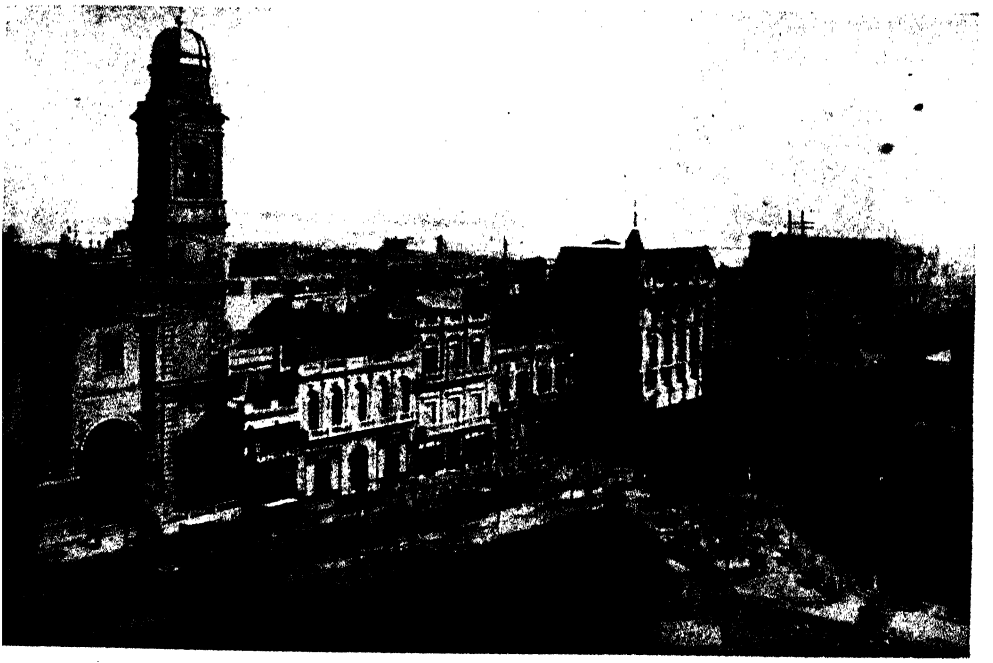
Montevideo's seaside suburbs of Pocitos and Ramirez are favourite summer resorts, for even in the height of the hot season the sun's power is tempered by refreshing breezes from the sea. At certain times of the year this fine sweep of sea front at Pocitos is gay with throngs of visitors from the fashionable world of Buenos Aires and from many Uruguayan towns



R. N. A.

MONTEVIDEO: THE CATHEDRAL AND THE PLAZA DE LA CONSTITUCION

The cathedral in Montevideo faces the Plaza de la Constitución and has two square towers 133 feet high, and these, with the large dome behind, rise high above the surrounding buildings. The church was consecrated in 1804, and became a cathedral in 1860. The present façade was completed in 1905. The plaza is one of the main centres of the city with clubs, hotels, business and newspaper offices



R. N. A.

PLAZA DE LA CONSTITUCION AND THE BAY OF MONTEVIDEO

On the left is the cathedral, and at the corner of the plaza is the Calle Ituzaingo, which leads down to the harbour. Across the bay is the industrial town of Cerro, above which is the conical hill known as the "Cerro." On the top of this hill is a Spanish fort, used sometimes as a prison for political offenders, within which is a lighthouse whose beam is visible 25 miles out at sea

E. N. A.

MODERN STREET IN URUGUAY'S ATTRACTIVE CAPITAL

Montevideo is frequently referred to as one of the most beautiful residential cities in the world, and has many imposing buildings and wide, well-ordered streets, which greatly enhance the city's modern aspect. The street known as 18 de Julio is distinguished by its splendid shops, conspicuous among which are the number of druggists, looked upon as social clubs by the Montevidean idlers

E. N. A.

CALLE MISIONES, A NARROW STREET TRAVERSING THE OLD TOWN

In the closely-built old town the streets are, on the whole, considerably narrower than the generously planned thoroughfares in the newer portions of Montevideo. The Calle Misiones is a business street running from the Calle 25 de Agosto to the bank of the river Plate. The Calle 25 de Agosto, on the left of the photograph, was named after the date of Uruguay's independence, August 25, 1825

A. K. Dawson

PLAYA RAMIREZ AND PART OF THE SEA FRONT FROM THE PARQUE URBANO

Facing the Rio de la Plata at the eastern extremity of the long marine promenade called the Rambla Sud America are the beach and terrace known as Ramirez. The promenade stretches along the bank of the river Plate for a distance of about one and a half miles. On the front facing the Terraza Ramirez is the huge Park Hotel, which is one of the best hotels in the city. The Parque Urbano and the Paseo del Prado are the two suburban parks, and the former has been left to a certain extent in its natural state and stretches eastwards from Ramirez along a promontory

narrow, colonial type, in a curious mixture of the commercial and the domestic, are to be found the Bolsa de Comercio, copied from the Bordeaux Exchange, the big banking houses, the shipping offices, the warehouses of importers, the fashionable shops and the dwellings of many business men. For although the superior attractions of suburbs like Pocitos have made themselves felt, the pleasant old custom of the merchant living above his premises has not yet entirely passed away. So, too, the doctor and the lawyer prefer to live right in the heart of their district.

In the centre of this Ciudad Vieja—Old Town—is the Plaza Constitución, with the handsome though modest cathedral or "mother church," La Matriz, which gives an alternative name to the square. The historic House of Representatives, an unimpressive affair on the opposite side, where I have sampled Uruguayan oratory, has been replaced by a fine new legislative palace about a mile and a half away to the north-east, at the junction of the Avenidas Agraciada and Sierra—a symptom of the shifting centre of social gravity.

English Club and Church

In the Plaza Matriz is the attractive home of the Uruguay Club, with the smaller quarters of the English Club facing it on the other side of the square. A turn to the left down the Calle Treinta y Tres, which forms the western or riverward side of the plaza, will bring one down to the water's edge where the English Church stands on a rocky eminence in a low and squalid dockside quarter. A neat little building of basilica type, it has been there for half a century and more, but its surroundings have degenerated and the houses it dominates are of bad repute, sought only by the scum blown in from the seven seas.

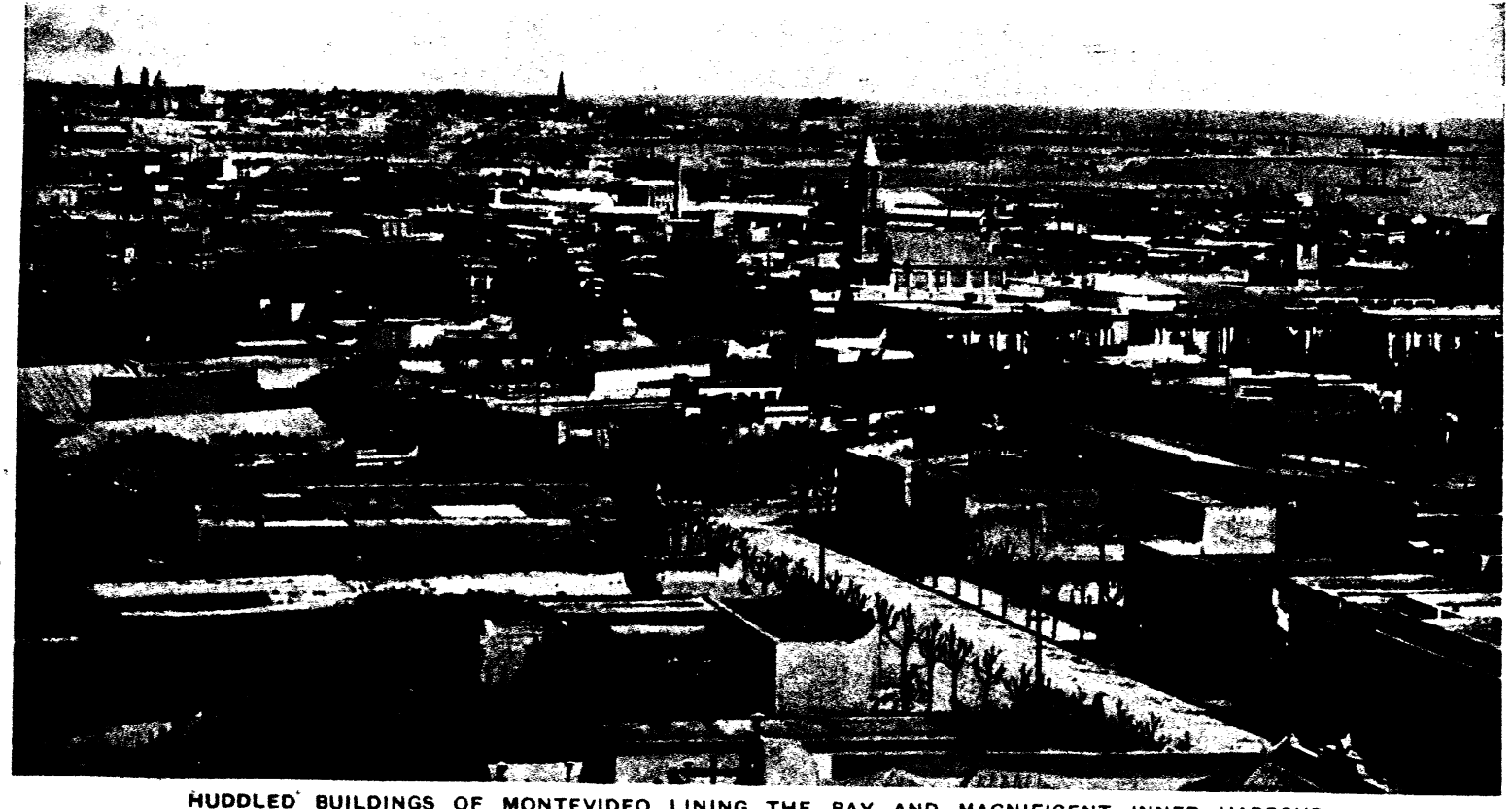
The traveller who wishes to quit the Old Town will find himself, perhaps, in the Calle Sarandí which bisects the peninsula, running from its tip through the Plaza Constitución to the Plaza Independencia. Thence the magnificent Avenida 18 de Julio will take him on his way. But by this time one notable point of difference between Montevideo and Buenos Aires will have struck him: the houses, though rarely rising higher than two storeys, have a far greater air of solidity about them due to the more general use of building stone instead of stucco or cement. The Plaza Independencia, for instance, although most of the structures recently surrounding it are certainly bound to disappear, including the Government House, shows every promise of becoming one of the finest public squares in the world.

Safety-valve of the Café

Its shady arcades and its broad pavements, over which the cafés spill their animated complement of tables and chairs, form a scene that is essentially Parisian, heightened by the long vista of the Avenida 18 de Julio with its theatres and more cafés. Indeed it seems to me that, in outward appearance at least, Montevideo might more aptly be described as the Paris of South America than Buenos Aires. Here is the nucleus of the city's life, here rage those burning political discussions which once found their vent in revolution and to-day exhaust themselves in leading articles.

A Stroll through the Plazas

The Avenida 18 de Julio is the finest street in Montevideo. It runs inland from Independencia to the Parque Central, passing first on its way through the beautiful Plaza Libertad, or Cagancha, and then skirting the Plaza de Armas on its right. These plazas are the feature of the town, as in most South American capitals, others of note besides those already mentioned being Zabala, Rincón, Flores, Frutos and Treinta y Tres. The last we pass on our way down the Avenida from the Plaza de Armas towards a group of buildings devoted to university faculties of medicine, law and so on.



HUDDLED BUILDINGS OF MONTEVIDEO LINING THE BAY AND MAGNIFICENT INNER HARBOUR

On the left of the photograph, in the distance, are the towers and dome of the cathedral, and in the centre on the horizon is the university. These two buildings are situated in that part of the city which stands on a tongue of land thrust out into the bay. Occupying a large part of the foreground is the National Asylum, with a spire at one end and a cupola-topped tower at the other. The broad bay on which the city stands commands the estuary of the river Plate. The harbour is a handsome one with splendid docks and breakwaters; by the side of the harbour is the central railway station

The university itself is off the Calle Lindolfo Cuestas at the tip of the peninsula.

These university buildings are distinctly beautiful, and in them centres a vigorous educational life. Perhaps in no other South American city is more attention paid to education, a fact which is exemplified by the number of Uruguayans holding positions of importance in journalism and the learned professions throughout Argentina. And another symptom is the literary and dramatic prestige enjoyed by Montevideo, of which the outward and visible sign is the number of theatres in proportion to the population. In particular the Solis, the Politeama and the Urquiza, theatres graced by the productions of many native dramatists, are commodious and well-built.

Pleasant Suburbs for Workers

At the corner where the Faculty of Medicine stands, the Avenida Sierra branches to the left to join Agraciada about a mile away; or the traveller in search of other fine avenues might have chosen Constituyente which forks with 18 de Julio at the Plaza de Armas. But to reach the boulevard Artigas, which rivals the finest in the city, we must go farther inland; after running northward for several miles it turns a right angle and cuts almost to the bay.

All round Montevideo are its suburbs, such as Paso Molino and La Unión, and city workers even have their residences as far afield as that delightful inland town of Villa Colón, where plentiful small streams and avenues of great trees make a perfect setting for a home. Round the base of the conical Cerro is another suburb, mainly industrial. But the playas, or waterside resorts, are where Montevideans flock when in holiday mood. Of these Ramírez and Pocitos are on a promontory southward, and Capurro half-way towards the Cerro on the opposite side.

Each has its various carnivals and "noches de moda," and thither on such occasions the crowd streams out in trams to sit on the promenade or wander up and down to the strains of a band. At each there is a line of bathing boxes and a pier or a promenade, all decked out with the South American prodigality of electric lights, but of the three Pocitos is the most fashionable; Ramírez is a sort of Blackpool in little.

Pleasure Parks of Montevideo

On the outskirts of the town, too, and not in its centre as in older cities of slower growth, are its parks. Finest of all is the Paseo del Prado out towards Capurro beyond Paseo Molino, where the inhabitants picnic under the trees or go in boating parties on the Miguelete. Then there is the Parque Urbano beyond Ramírez with its swan-shaped pleasure boats, while at Villa Dolores near Pocitos is a Zoo which in its appointments does high credit to the humanity of Uruguayans as compared with their Argentine neighbours.

For those desirous of enjoying these suburban pleasures without risking their necks and their pockets in one of the maniac-driven motors that ply for hire, there is a cheap tramway system which is efficient but not without defects. It is so constructed that the routes converge fan-wise from the surrounding districts and meet in the bottle-neck of the peninsula. The result is that whereas some of the outlying parts are scantily served, the older and narrower streets are burdened with a dreadful superfluity of half-empty trams which make day and night hideous by the clangour of their bells up to two o'clock in the morning.

A Station Without Trains

It is not so with the trains. The fine Central Railway Station in the Avenida de La Paz, adorned with statues of Watt and Stephenson, is as often empty as not, for the railway system of Uruguay is far from developed. Of more importance to Montevideo are the services of river steamers which make connexion with the Argentine railways at Buenos Aires or ply up the Paraná, Uruguay and Paraguay rivers. Another public service

worthy of mention is the water supply, brought from the Santa Lucia river 32 miles away, with a reservoir at Piedras.

Many lines of ocean-going steamers make regular calls, and Montevideo benefits in this respect from its nearness to Buenos Aires, for ships stop either on their way up the river or else to transfer passengers booked thither to the river steamers. Manufactures are few and likely to remain so owing to the absence of coal, and exports consist mainly of live-stock or tinned meat and meat extracts—the Great War has made a familiar name of Fray Bentos, a great Uruguayan packing centre; while wool, hides, corn, tobacco, sealskins, fruit and vegetables are other items

Ambitions of the Montevidean

As for general impressions the city seems almost too big for its inhabitants. There is not enough life to give animation to the fine, long avenues, except from the Plaza Zabala westwards for a mile or so beyond the Plaza Independencia. Nowhere is there the same bustle, suggestive of great commercial interests, as one finds in Buenos Aires. But it is a friendly town, with a comfortable sense of hospitality about its smaller houses that is lacking in the palatial residences over the water. The Montevidean ambition seems to favour a safe berth in a government office rather than to court the fevered successes of commercial life.

Reminders of Mother Spain

Though Montevideo is not so cosmopolitan as Buenos Aires, in one fashionable respect it outdoes its rival. There is nothing of the extraordinary dulness that besets the Argentine city after dark. Until a late hour of the night the central plazas retain an air of brightness, with knots of gossipers at the corners of the streets and mothers with their children sitting on the benches to enjoy the fresh evening breeze.

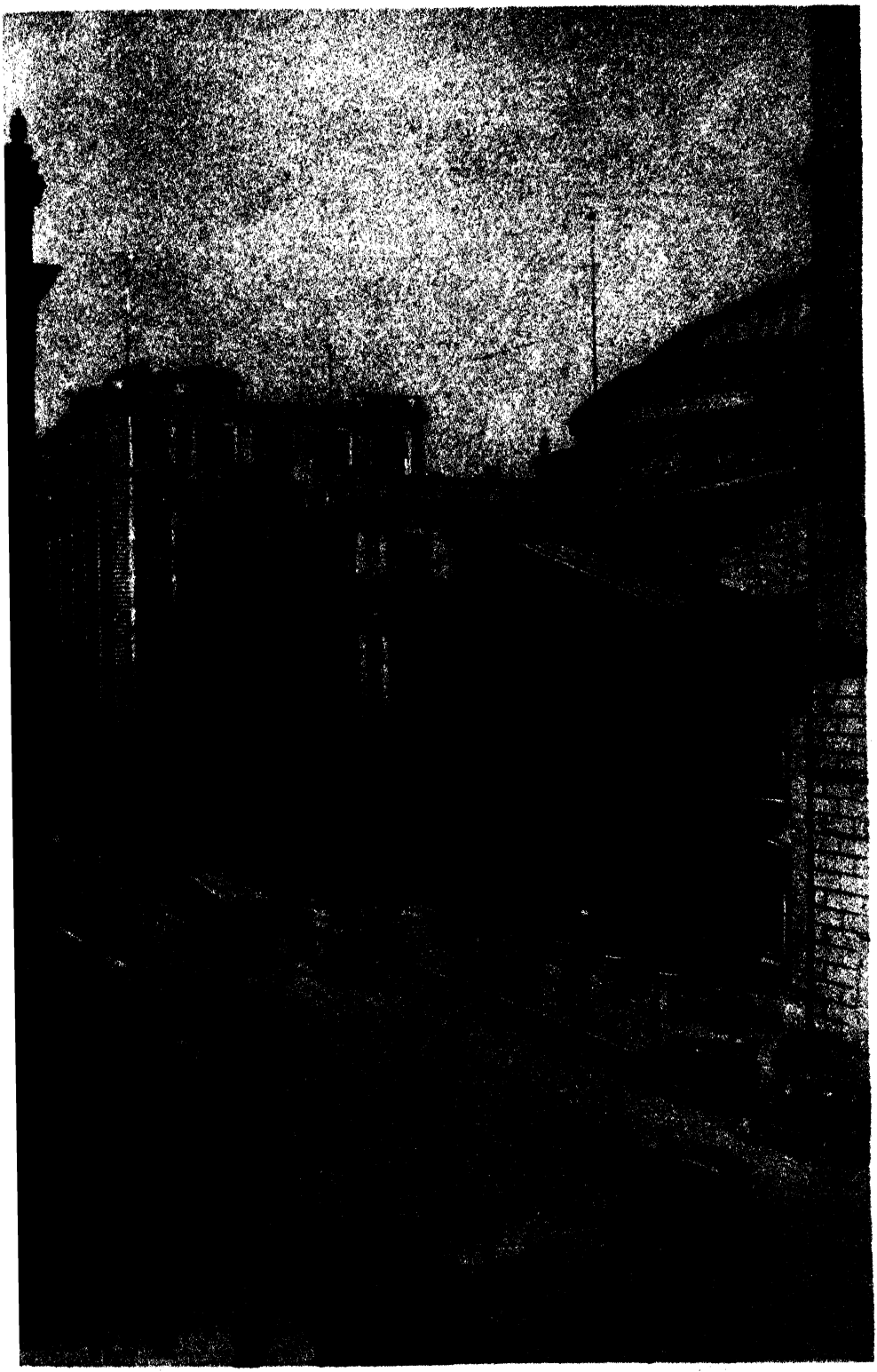
This state of affairs is almost certainly to be attributed to the respect in which the Uruguayan holds his womankind. This, and his comparative kindness to animals, sets him apart at once from the Argentine—and here we may marvel what a difference a mere river can mark between two peoples who both owe their origin to Spain. For another thing, the habit of shopkeepers living over their premises does away with the need for early closing and helps to keep the streets animated.

As a whole the appearance of the people is essentially Spanish. Foreign residents there are, especially Italians, but in nothing like the numbers that flock to Buenos Aires. And this national bias is reflected in their social life and customs. It is a charming sight to witness all the elaborate ritual of an old Andalusian courtship transferred to the shores of South America. Almost every evening lovers may be seen on the pavement talking to girls through the barred windows of their houses; but even before this stage is reached permission must have been obtained from the girl's parents, and a night set apart for a formal visit in the presence of her family without the lovers ever having exchanged a word.

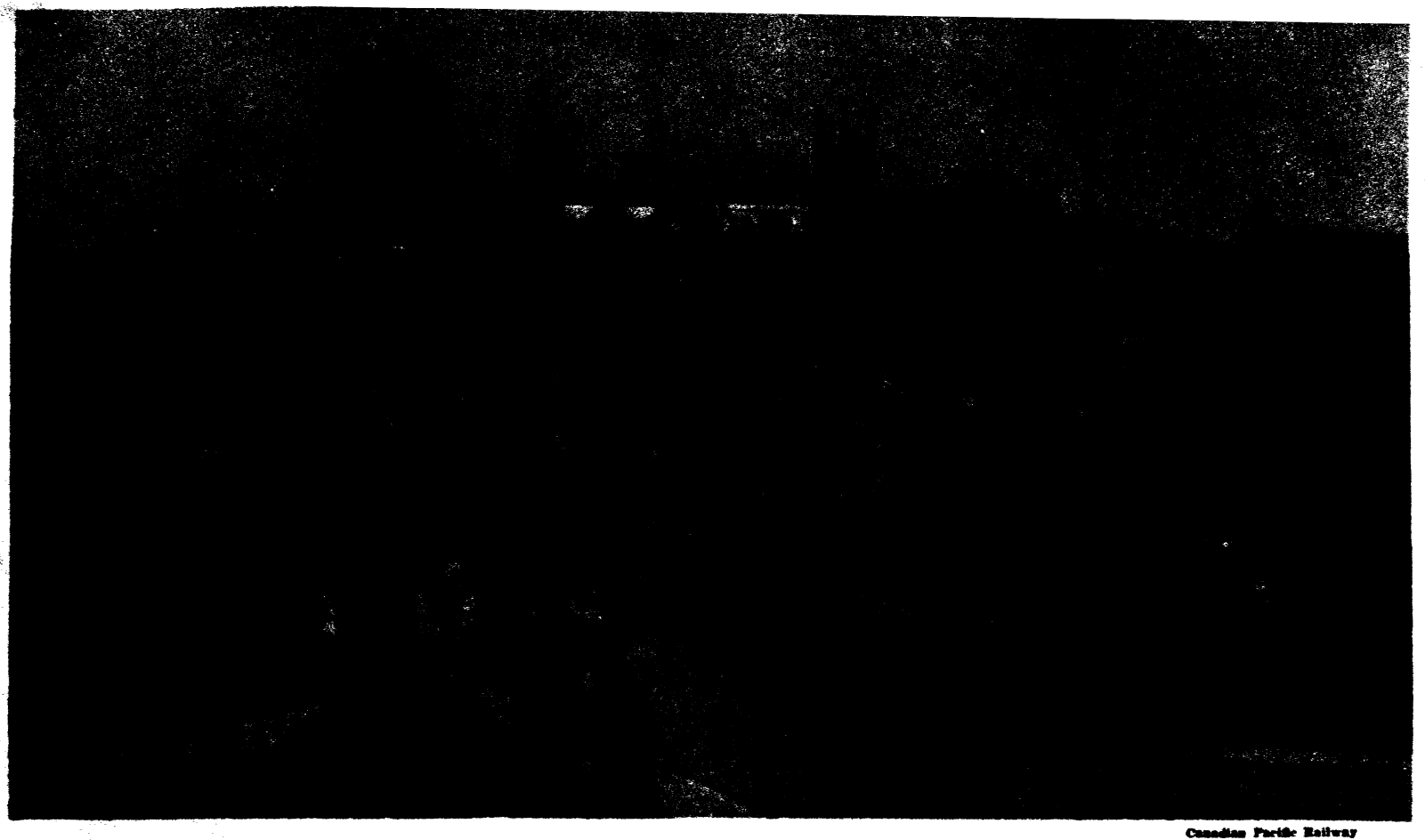
Signs of Unassertive Progress

A further trait which may or may not commend the Montevidean is his lack of self-assertion. "We are all asleep here," he will tell you; it is far from true. His way of dealing with public contracts may not endear him to the foreign contractor, but his institutions and his civic buildings alike show a spirit of progress. No Buenos Airian would ever be found in a mood so depreciatory as to make a similar admission.

Montevideo may not have the venerable charm that age has lent to Lima; it may lack the stamp of commercial success and the superabundant energy of Buenos Aires, or the superb natural position that sets Rio de Janeiro by itself; but these facts and impressions of people, setting and climate will enable the reader to understand why it may be called the pleasantest city of South America.

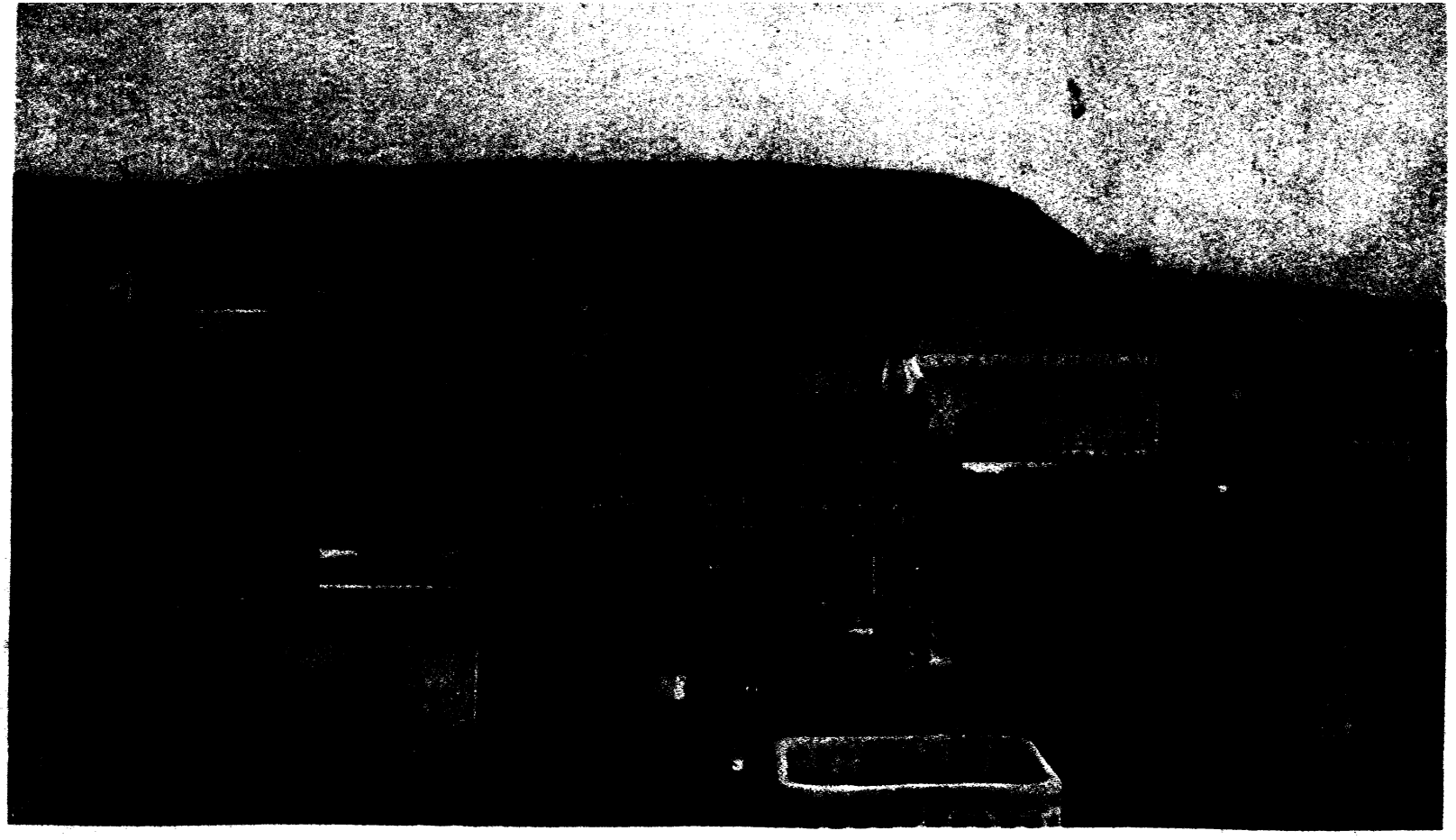


MONTREAL. *In the Place d'Armes stands the Bank of Montreal with its Corinthian portico and dome, 72 feet in diameter*

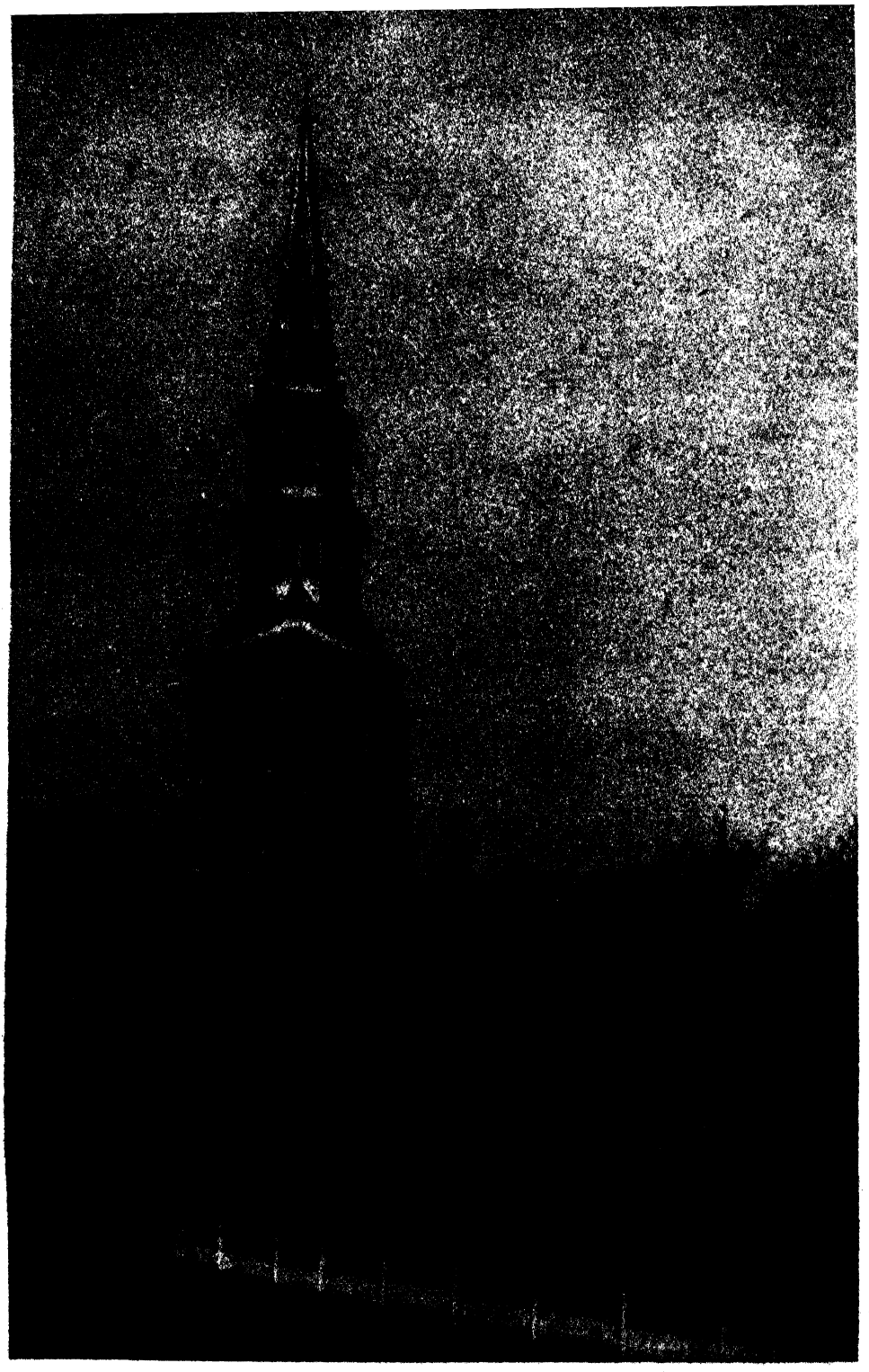


Canadian Pacific Railway

MONTREAL. *Just below Dominion Square in Windsor Street is the castle-like Windsor Street Station, the largest railway terminus in Canada. To the right, facing the square, is S. George's Church*



MONTREAL. *From Windsor Street Station one can see the buildings of the great McGill University, following the right shoulder of Mount Royal. Founded in* 1821, *it is one of the finest in all America*



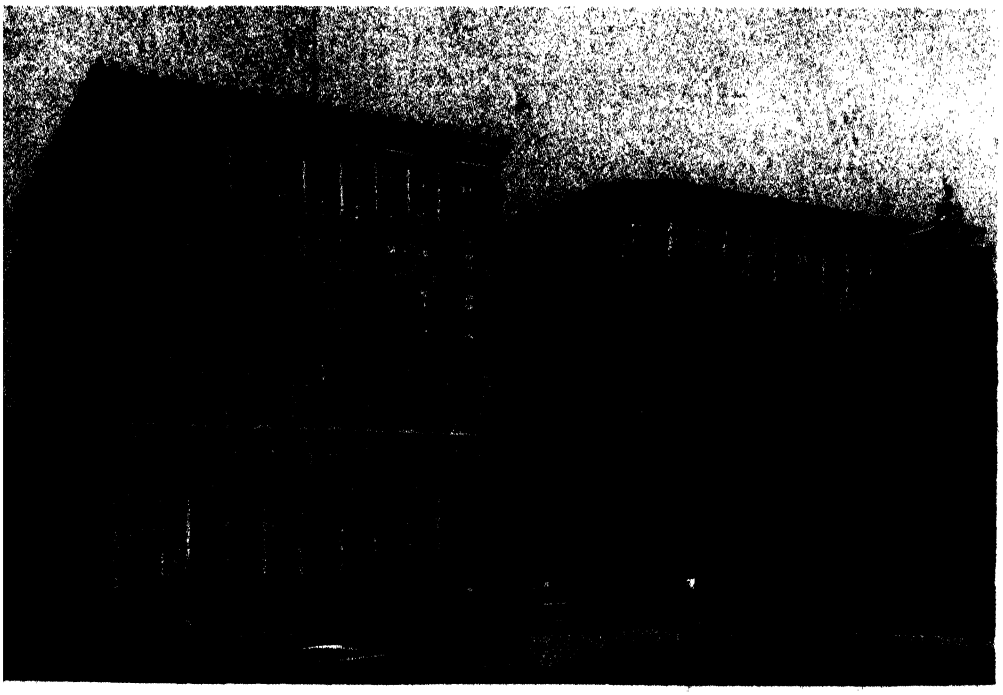
MONTREAL. *The Grey Nunnery, a hospital and asylum for orphans and the aged founded in* 1738, *stands in Dorchester Street*

2808

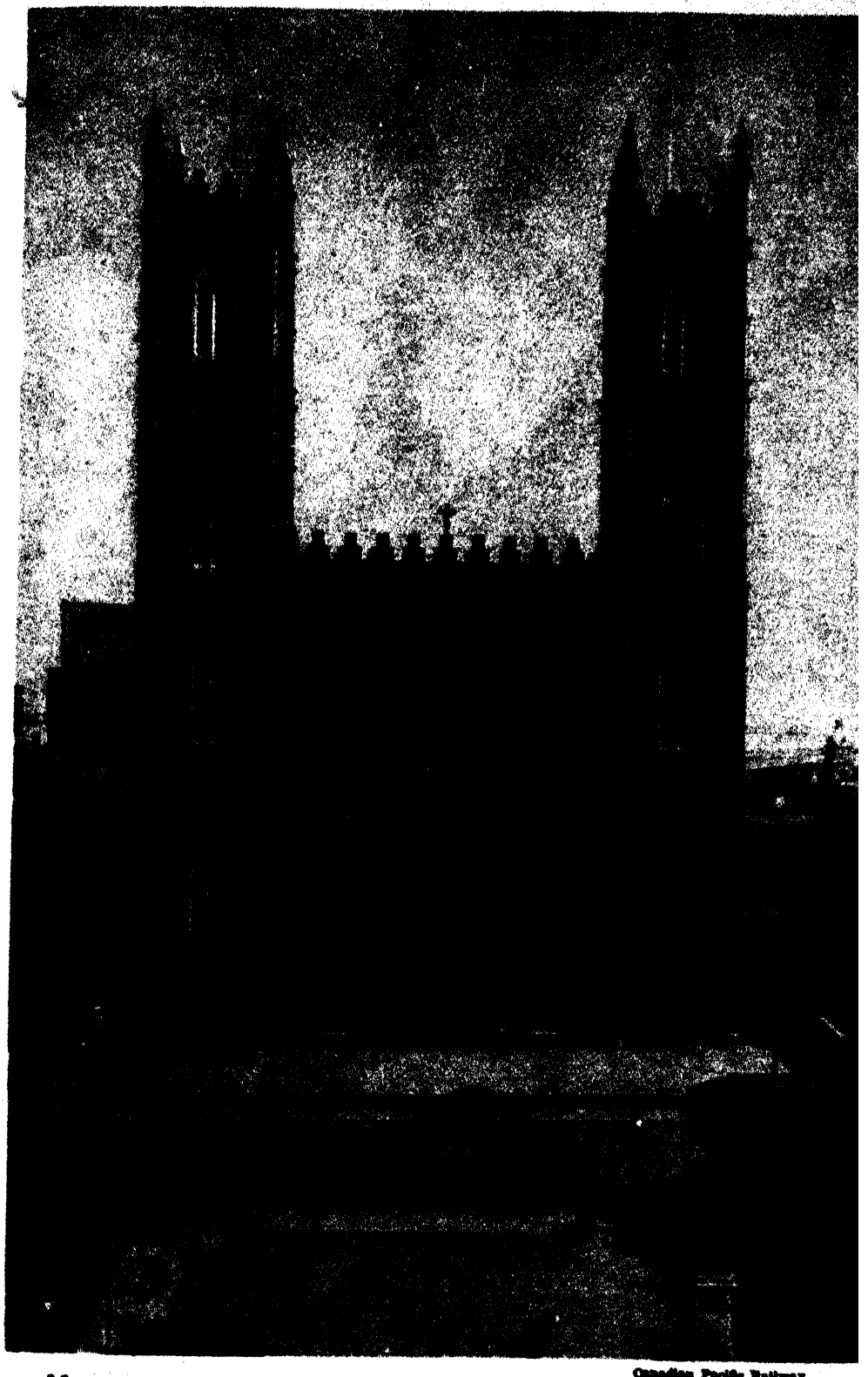
MONTREAL. *S. James's Church, in St. Catherine Street, has two square towers of unequal height, surrounded by lanterns and spires*
2809

Canadian National Railways

Statues of the Apostles look down upon the Corinthian pillars of S. James's Cathedral, a smaller reproduction of S. Peter's, Rome

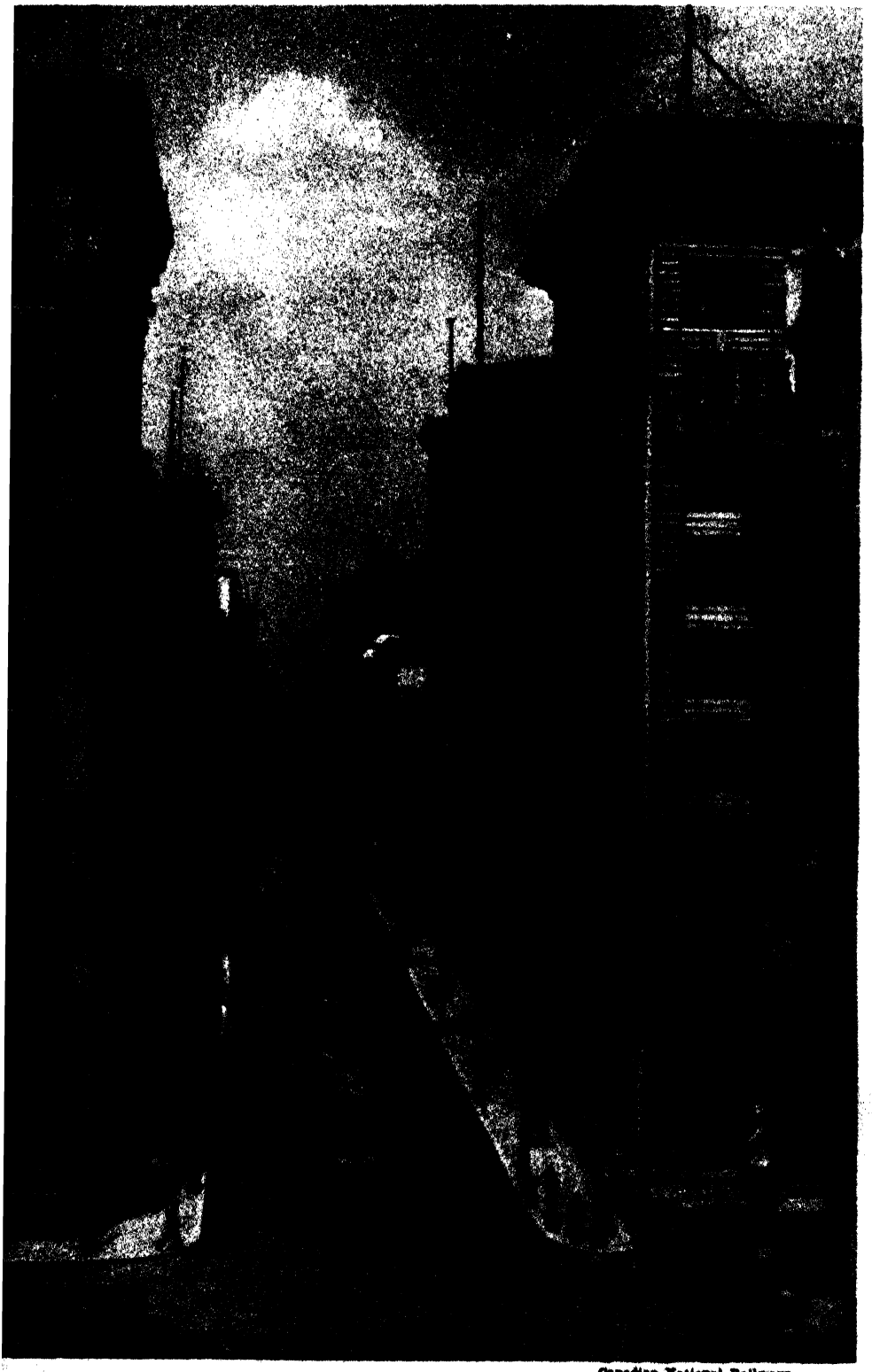


MONTREAL. *Amid the tall business houses in Phillips Square rises the statue of King Edward VII., facing St. Catherine Street*



Canadian Pacific Railway

MONTREAL. *On the east side of the Place d'Armes stands the Gothic church of Notre Dame with two towers 227 feet high*



Canadian National Railways

MONTREAL. *St. James Street, one of the main shopping thoroughfares, runs south from the Court House parallel to the St. Lawrence*

MONTREAL

Canada's Commercial Metropolis

by Beckles Willson

Author of "The Romance of Canada"

"VILLE MARIE"—how full of pious simplicity was the name bestowed by the Sieur de Maisonneuve and his little band of saintly visionaries to the stockaded settlement they founded in 1642 on the island of Mont Réal!

"It is only," declared Père Barthélémy Vimont, "a tiny seed, but I have faith that it will some day produce a great tree, yielding wondrous fruit." Nearly three centuries have rolled by, and the stockaded settlement thus founded has become the largest and richest city and the commercial metropolis of the Dominion of Canada, with a population of 620,000 souls. It occupies the heart of a fertile plain nearly the size of England. It is at the head of navigation for ocean-going ships on Canada's greatest river; nearer Liverpool by 300 miles than is New York, it is the terminus of the entire river, lake and canal navigation between it and the Far West, and it is the headquarters of more than one of the greatest railways in the world.

A Microcosm of the Dominion

In respect of races, Montreal is a microcosm of the Dominion. It contains English, French, Scots, Irish and Jews, in addition to Italians and other nationalities. But the original French preponderate, being more than half the population, and three-quarters are Roman Catholics. In view of the origin of Montreal is not this significant?

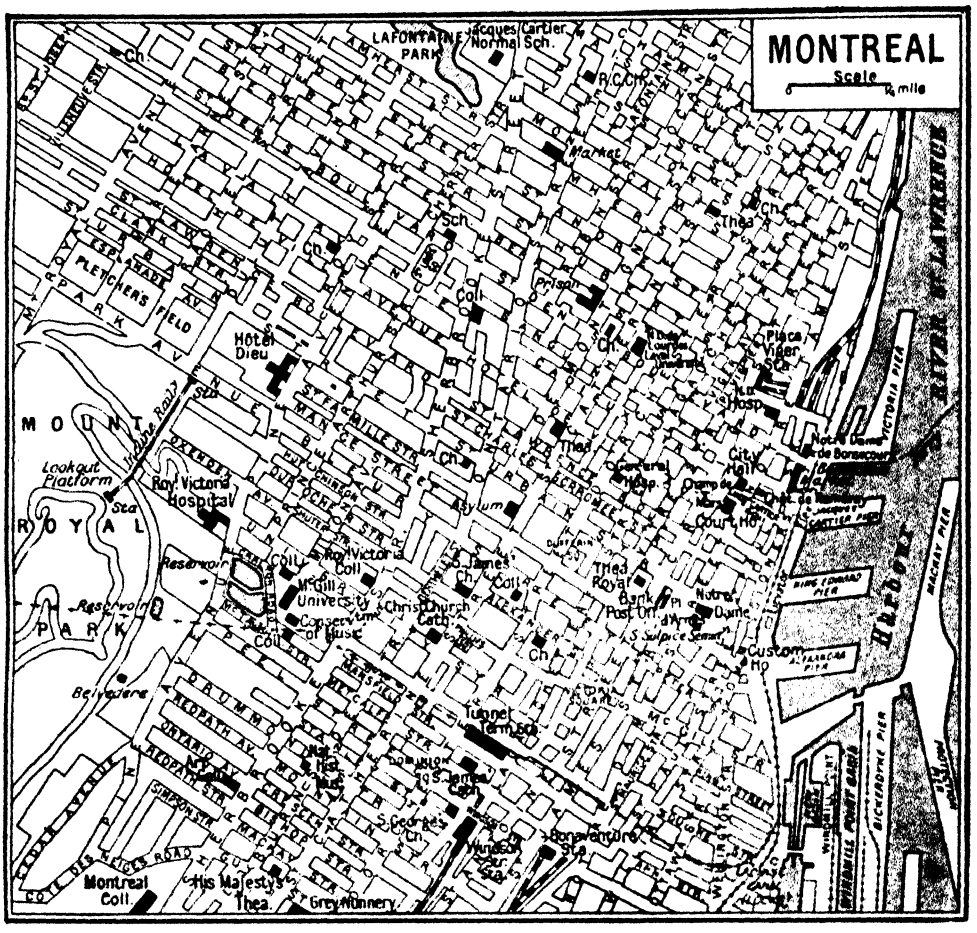
For in this prosperous and teeming grey city, with its elaborate "sky-scrapers," its lofty elevators, its busy wharves and railway stations, its palatial mansions, its crowded streets, one trait still looms larger even than all its commerce, more aggressive than its towering mountain, and that trait is Montreal's religion. Church, chapel, convent, college, seminary, nunnery, everywhere meet the overpeering eye. At all hours of the day priests and nuns, friars and missionaries, Jesuits, Dominicans, Franciscans, Redemptorists pervade the city's busiest ways.

City of Countless Churches

The Roman Catholic church is at once the most conservative and the most aggressive factor in the life of Montreal. In spite of a century and a half of British Protestant dominion, and an Anglo-Saxon activity and enterprise which has made it one of the wealthiest cities in the British Empire, it has never lost its religious character, and the number of its ecclesiastical edifices is so great that Mark Twain once declared he could not throw a stone anywhere in Montreal without breaking a church window.

In the ancient Place d'Armes stands a statue of Montreal's founder, Maisonneuve, and from this very spot still radiate the chief monuments of the city's historical, religious and commercial life, although fashion and display have departed, as they have in New York and London, to the newer and more westerly quarters of the town. On one side of the little square I have named the mighty Gothic church of Notre Dame upreears its bulk, one of the largest ecclesiastic edifices out of Europe, capable of containing 12,000 worshippers; on the other side stands the Bank of Montreal, the largest bank in the Empire overseas, while within a stone's throw are the Court House, the City Hall, the General Post Office, the Seminary of

Copyrighted in U.S.A., 1923, by The Amalgamated Press (1922) Limited.



MONTREAL SLOPING FROM THE "MOUNT" TO THE ST. LAWRENCE

S. Sulpice and, last but not least, that survivor of the old regime, the Château de Ramezay, now a museum.

The island upon which the city is built is triangular in shape, being formed by two of the branches of the Ottawa at its confluence with the St. Lawrence. It has a length of 30 miles, thus affording what other growing cities frequently lack—plenty of room for expansion. Montreal spreads itself upon a series of sloping terraces up to the base of Mount Royal, which it is no doubt destined to encircle. The three chief thoroughfares—St. James, St. Catherine and Sherbrooke streets—run parallel with the river. Most of the public buildings and the finest private buildings are of a local grey limestone, which lends a special character to Montreal architecture and distinguishes its appearance so sharply from that, for example, of Toronto.

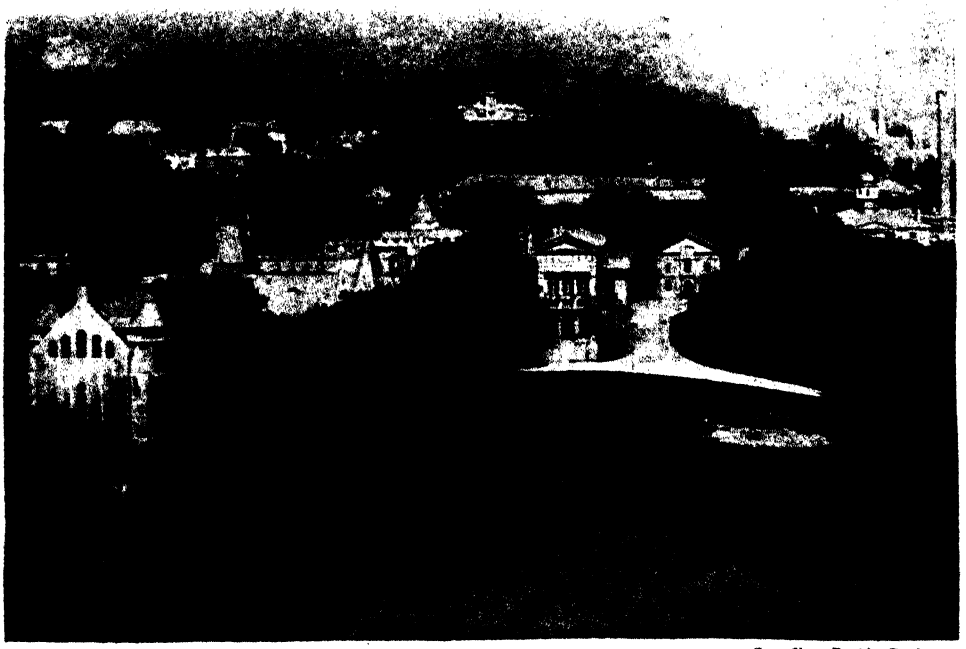
After the impression of its size and religious character two things strike the visitor. The first is the narrowness of the streets in the business quarter, accentuated by the great height of the buildings, which together with the prevalent grey of the masonry produces a rather sombre effect. The other is the age and dilapidation of so many of the dwelling-houses in the side streets. Though built of red brick, these have no picturesque quality whatever, and in the lower part of the city too many of the thoroughfares are dingy and untidy. Occasionally they are of wood, which tends to emphasise their defects.

A large proportion of the houses have curious outside staircases, built for two or three storeys against the street fronts.

But the change which is coming over the newer parts of Montreal will doubtless in time extend to the older. Not only are splendid residences going up on the slopes of Mount Royal, many of them looking like impregnable stone castles, but even the rows of modest brick villas are taking on a modern character which brings them into line with those of the cities of Ontario and the United States. And in the lower and French part of the city, following upon repeated conflagrations, the extensive harbour improvements, the completion of the great piers, docks and elevators, have worked their influence over whole districts.

One wonders how long such notable vestiges of the old times can continue to withstand the pressure put upon them. The old Hôtel Dieu, founded by the holy Mademoiselle Mance, has long since been converted into warehouses, and the nuns carry on the work in a new building at the foot of the mountain. But the Château de Ramezay and Bonsecours church and market still remain. A great improvement is such a square as the Place Viger, which is the most popular pleasaunce of the French quarter, and where in summer a band plays. A beautiful turreted hotel, erected by the Canadian Pacific Railway, gives a medieval distinction to the vicinity. Bonsecours Market is crowded on market days by French Canadian "habitants" who have brought in their produce for sale, and are also busy bargaining for clothing and nick-nacks.

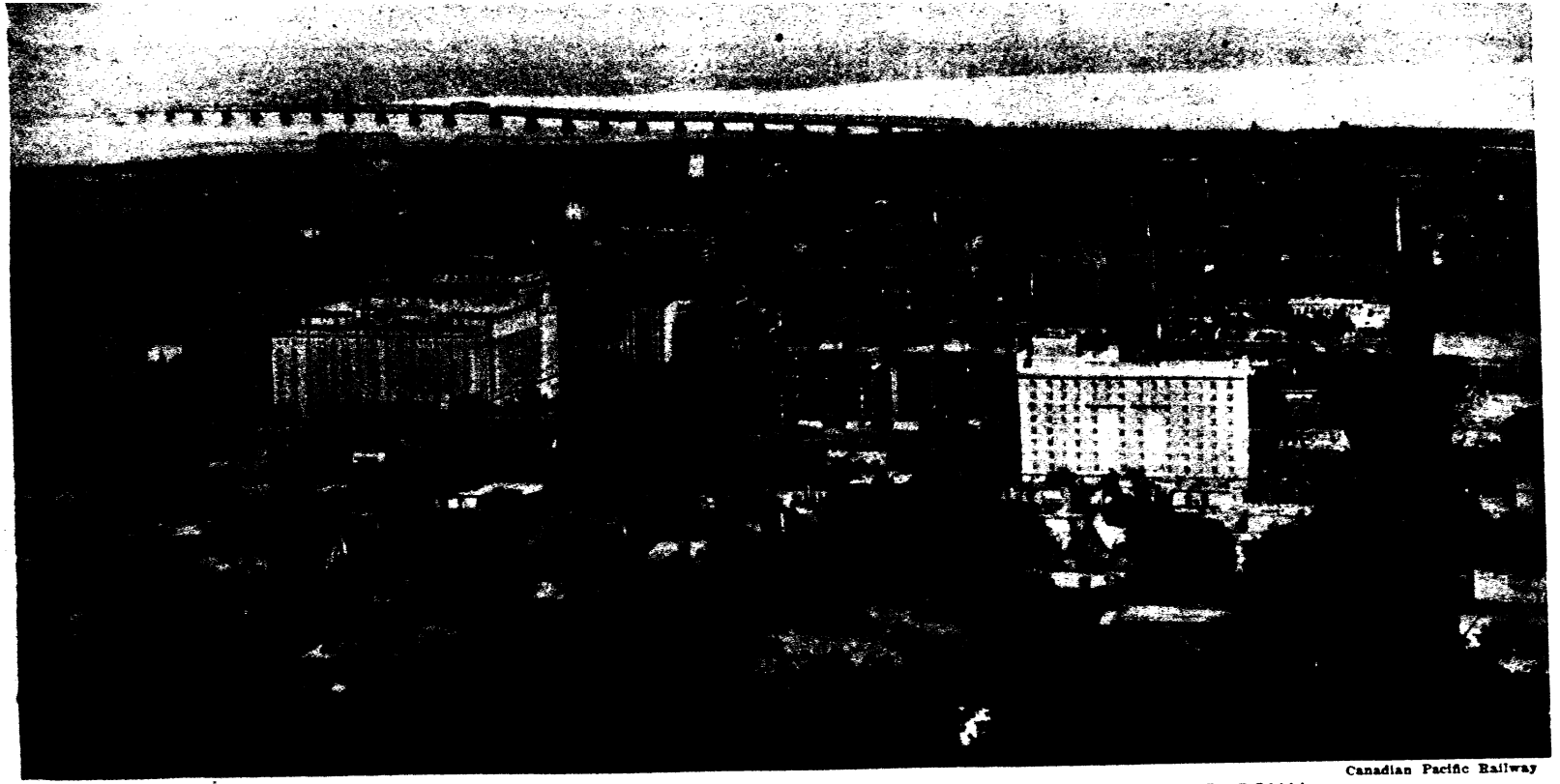
The harbour of Montreal offers the busy spectacle of wharves and shipping of a city which can boast annual commerce of over £75,000,000. An



Canadian Pacific Railway

McGILL UNIVERSITY, THE PRIDE OF MONTREAL

One of the leading universities in Canada is the McGill University of Montreal, comprising several large buildings set in beautifully ordered grounds. Founded as the McGill College in 1821 with the bequest of James McGill, it has since been richly endowed by many wealthy Scots Canadians; it includes the four faculties of Arts, Law, Medicine and Applied Science, with about 1,200 students



Canadian Pacific Railway

FAMOUS VIEW OF THE CITY OF MONTREAL FROM THE CREST OF MOUNT ROYAL

Rising to the height of 770 feet above the river, Mount Royal, or Montreal's "Mountain," as it is called by English-speaking Canadians, commands a superb panorama of the city and its environs. In the foreground the blocks of houses are almost obliterated by the dense foliage; farther away tower massive and lofty limestone structures with storey piled on storey; here and there a dome or spire rises in dignity, and beyond the St. Lawrence, whose nearly two miles of rapidly-flowing water are spanned by the majestic Victoria Bridge of the Grand Trunk Railway, the softly undulating land stretches away to the far distant mountains

idea of the commerce ot the port may be gathered from the fact that although its harbour is bound by ice for four months out of the twelve, it is the seventh port of the world, and handles one-third of the total trade of the whole Dominion.

The new docks built by the Dominion Government are amongst the finest in the world. There is accommodation for over one hundred vessels. The "transit sheds," as they are called, are enormous two-storeyed structures for the storage of freight handled by the Government Merchant Marine, the White Star, Canadian Pacific and other trans-atlantic lines. There are twenty different steamship companies, and the total tonnage is 6,537,000, nearly all British and Canadian. As illustrating the growth of the port, it may be mentioned that between 1911 and 1924 the traffic increased by 350 per cent.

Thirty Miles of Water Front

At the opening of the twentieth century, the St. Lawrence was so deficient in dock accommodation that many vessels could not make a landing, and others requiring to be dry-docked for repairs were forced to steam a thousand miles away. All this is now altered. In addition to four large piers for ocean steamers, the new floating dock, the Duke of Connaught, built in England and towed to Montreal in 1912, has a capacity for ships of 25,000 tons, which greatly exceeds the tonnage of any vessel which has yet reached port. The total water front extends for 30 miles, including two miles of bulkhead quays for inland vessels. The whole of the enclosed area is in track connexion with all the railways entering the city.

The affairs of the port of Montreal are controlled by a board of commissioners, composed of Dominion representatives, the shipping interests and the city corporation. The process of deepening the channel is in the hands of the Dominion government. The grain elevators of the port are so stupendous as almost to dwarf the great church of Notre Dame. One has a capacity of 2,600,000 bushels and its fellow can store nearly as much. The "conveyer galleries," as they are called, aggregate eight miles in length and 1,000,000 bushels of wheat a day can be handled.

Leaving the river and traversing the streets and squares of the city we ascend Mount Royal. An inclined railway carries the visitor up to the lookout platform. Although only 770 feet high, it commands an extent and variety of urban view to which neither Montmartre in Paris nor the Mons Janiculum of Rome can pretend.

The University of McGill

The Mount Royal Park extends over 400 acres and is the rural resort of Montrealers, both in summer and winter. On the lower eastern slope of the mountain is the splendidly equipped Royal Victoria Hospital, the gift of the two munificent Scottish-Canadian peers, Lords Mountstephen and Strathcona. Beyond and below are the numerous buildings which form the impressive university of McGill.

This famous seat of learning is notable for the completeness of its scientific equipment, especially in engineering and medicine, and for its inclusion of a residential college for women students, the Royal Victoria College, and a conservatorium of music. A mile or so distant in the French quarter is the French and Roman Catholic equivalent to McGill, known alternatively as the Université de Montréal or Laval University, founded in 1852 and comprising the faculties of law, medicine, the arts and, more especially, theology. It is attended by over 5,000 students. The instruction is, of course, exclusively in French, save in the faculty of theology, where Latin prevails.

Effect of Two Great Buildings

Montreal's social and spectacular centre must to-day be sought in the spacious Dominion Square, a change due perhaps to the simple westerly tendency noticeable in nearly all great

cities, but which has been enormously accelerated by two diverse factors, the building of the Canadian Pacific Railway terminus known as the Windsor Street Station and the completion of the great Cathedral of S. James.

A Copy of Rome's S. Peter's

This latter is a reproduction on a reduced scale of S. Peter's at Rome—and indeed is generally, but erroneously, spoken of locally as S. Peter's—but although on a more advantageous site is far less interesting, architecturally, than the church of Notre Dame, noticed above. Its dome is 250 feet high, and the lofty Corinthian portico is certainly beautiful and effective. The Protestants, or rather the Anglican branch of that religious body, also have hereabouts their cathedral, that of Christ Church, built in the decorated Gothic style, with a tall spire.

To attempt to enumerate all the churches, convents, nunneries and religious retreats in Montreal, many of them of great size and solidly built, is fortunately not necessary here. It is sufficient if their prevalence is pointed out as a distinguishing feature of the city A generation or so ago they had few if any architectural rivals, but now powerful and even wealthier secular interests are at work to effect the transformation of Montreal.

Munificence in Art

Besides the ornate castellated terminus of one railway company, there is the Tunnel Terminal station of another, the Canadian National Railways, which, piercing Mount Royal itself, has found an outlet close to S. James's Cathedral. Another close neighbour of the cathedrals is the Sun Life Assurance Company's building, and everywhere the old skyline is being modified by similar structures.

In some of the new buildings, however, such as those flanking the original McGill University building, height is not sought so much as elegance. This is particularly noticeable in the new Art Gallery in Sherbrooke Street, which is built of marble with a portico of monolithic Ionic columns, and in some of the lordly private mansions near by.

But it is not in its buildings alone that the taste and munificence of Montrealers are exhibited. The art and literary collections in private hands rival those in many of the wealthiest American cities, and examples of the Old Masters as well as the modern schools of painting, valued at millions of dollars, are to be found housed within a stone's throw of the palatial Ritz-Carlton Hotel.

The Older Montreal

Yet all this, it must be remembered, is the new and secular Montreal, the Montreal bent upon exploiting its unrivalled situation to the uttermost, of rivalling Chicago commercially and aesthetically emulating Boston. For the old, reverent, conservative Montreal, whose spirit, although overlaid by this ostentatious façade of wealth, is still alive and potent, one must turn back to the little low and rambling building, the Château Ramezay, the former residence of Montreal's governors, now kept as a museum of the Old Order.

The climate of Montreal is usually very hot in summer and very cold in winter, the mean temperature for five months in the year being below freezing-point. And yet, owing to the way in which all dwelling-houses are heated and the suitable clothing of the people, the cold is so little inconvenient that winter is undoubtedly the pleasantest season of the year. The city is famous for its winter sports, which include skating, ski-ing, tobogganing, sleighing, snow-shoeing, ice-hockey and curling.

For winter zest, sparkle and gaiety, Montreal to-day eclipses even the St. Petersburg of the Romanoffs, and fashionable Sherbrooke Street or the roads of Mount Royal Park, with their procession of sleighs, sumptuous or quaint, drawn by brightly garnished horses jingling their silver bells, are invested with a mid-winter charm and elegance not to be seen elsewhere.

MOSCOW

Russia's Holy City Under Tsar & Soviet

by Sir Philip Gibbs

Author of "The Middle of the Road"

TO write of Moscow now is to describe a city in which many aspects of its old life, famous in history, have suffered recent death.

It was the holy city of Russia in which the Tsars were crowned, and where they held their court with the greatest magnificence. There is no longer a Tsar or a court, and magnificence has fled from Moscow, where poverty reigns instead.

To this city in the spring-time came the nobles, officials and rich merchants from St. Petersburg, or Petrograd, or Leningrad—the name of the late capital has changed rapidly since the Great War—to lead a life of ease and luxury with their elegant womenfolk.

Those people are either dead or in exile, and their haunts of pleasure are for the most part closed. The Hermitage restaurant, for instance, was one of the most sumptuous and expensive places in Europe. When I went to the Hermitage after the Great War, in time of famine, it was a soup kitchen, in which American relief workers were feeding under-nourished children.

From one Melodrama to Another

Since the Revolution there is no longer a ceaseless tide of smart carriages taking rich ladies and their cavaliers to the fine shops in the Kuznetzki Most or the Lubyanka, the Bond Street and Piccadilly of Moscow before Communism.

There was not a shop open when I was there in the last days of Lenin's rule, when all private trading was forbidden, and although they are now allowed to trade again, their custom is poor and their stocks are small. As long as the Soviet regime endures it seems certain that the old air of splendour in these streets will not come back. So Moscow has changed, and yet it still remains the most astonishing, the most fantastic, the most dream-like city in Europe, crowded with life which is like a scene in melodrama.

Vision from an Oriental Tale

From a ridge to the south-west of the city, called Sparrow Hill, one now sees Moscow outspread, unchanged in its general picture, though so many houses were burnt and rebuilt after that day of history. Under a blue sky—deeply blue in the shimmering heat of summer, pale blue above winter snow—it rises from the plain like some vision of an Oriental tale. It is a city within a city, enclosed by a double line of high fantastic walls with fan-shaped battlements. Above them, in all directions, are tall, thin towers like minarets crowned by pear-shaped domes glittering in a golden way, so that the sun's rays flash from them.

There are four hundred and fifty churches in Moscow, and the greater number of them have those golden cupolas, large and small, above tall white shafts, so that in some places they are thickly clustered and take one's eyes skyward with a sense of wonder. Between them are white palaces and old white-washed houses, and in the centre of all the inner fortress city of the Kremlin, flanked by enormous walls with those curious fan-shaped battlements, entered by narrow gates, with stone stairways leading to the ramparts, and within a huddle of churches, palaces, barracks, offices and bell towers, all crowned by those glittering domes again.

The whole city covers twenty-seven and a half square miles, through which

MAP OF THE REINSTATED CAPITAL OF RUSSIA

winds the River Moskva; and for a thousand years of tragic and bloody history the heart of Russia has dwelt here in "Little Mother Moscow," as it is called by the Russian peasants, who love it in spite of its cruelties, its terrors, its bloodstained stones.

The outer city is called the White City, and is enclosed by a wide girdle of broad boulevards lined by trees and intersected by wide streets which radiate from the Kremlin. In the old days these were the quarters where the aristocracy lived in great mansions, and in which, after the Revolution, the poorest classes of Moscow were given house-room, except for certain buildings that were reserved for Soviet offices. At the entrance to the inner city, through a narrow gateway, where at night a lantern burns, all men doff their hats and caps, as even the Tsar himself was bound to do. In a little chamber to the right of the gateway is the shrine of the Iberian Virgin, a picture venerated by all Orthodox Russians of the old faith, and believed by them to have miraculous powers. The Virgin's head is enveloped in a net of pearls.

Immediately opposite, cut in large letters on a high wall, is an inscription made by the Communist rulers of Russia: "Religion is opium for the people."

It is the assertion of a godless creed at the very entrance to the heart of Russia, where all the Tsars and all the peasants who passed murmured prayers

through the centuries. That writing on the wall seemed to have little effect on the minds or customs of the people when I was there, for all day long, every time I passed, as I did many times, I saw groups of poor people standing by the little shrine with its lighted candles, and every droshky driver or peasant who passed doffed his fur cap, in defiance of Soviet orders and with inherited and traditional reverence which had not yet been killed.

Through this gate the way leads to the famous Krasnaya or Red Square, a great open space, villainously paved with cobble stones, in which there are deep ruts and holes, under the high walls of the Kremlin. On the opposite side is a row of shops, called the Trading Rows, and beyond, where the ground dips downhill towards the river, is the cathedral of S. Basil, which is certainly the most extraordinary, fantastic and amazing adventure in stone ever attempted by an architect of perverted imagination.

It was begun in the reign of Ivan the Terrible to commemorate the capture of Kazan and its Tartar hordes in 1554, and its dark little chapels on two storeys are surmounted by a dozen cupolas and spires painted in many different

F. A. Mackenzie

SOVIET SYMBOLISM ADORNS MOSCOW ARCHITECTURE

Red Russia utilises her commandeered establishments according to her needs, and decorates them externally with loud inscriptions relating to proletarian dictatorship and world revolution. Formerly the Club of the Nobility, now the House of the Workers, this building is near the theatre square. The notice declares that the "Dictatorship of the Workers is the Salvation of the World"

P. A. Mackenzie

BOLSHEVIST MILITARY FUNERAL IN THE STREETS OF MOSCOW

A military funeral is usually attended with all honours. Here the cortège, with banners, brass band, and troops with rifles and fixed bayonets, is seen passing through the Kuznetzki Most. This erstwhile Bond Street of Moscow runs from the Petrovka to the Bolshaya Lubyanka and was once the city's most animated and fashionable business thoroughfare; it is now a mere ghost of its former self

colours and formed into astonishing shapes. Some of the spires are twisted and coloured like the old-fashioned sugar sticks, others are covered with painted scales and others are serrated.

The cupolas are like the turbans of the Sultan's Mamelukes or Circassian bodyguards, in medieval times, with striped colours and bulb-like shapes, and above all this queer conglomeration are massive gilded crosses.

The Red Square, in which this church stands, reeks with history and old blood and recent tragedy. In the time of the first Tsars, of whom the cruellest was Ivan the Terrible, it was the place of public execution. Patriots, heroes, martyrs, were hanged in batches below the Kremlin walls, to the beat of drum sounding above the roar of angry mobs and the wailing of the victims. Here the Ukases of the Tsars were proclaimed to the people, who groaned beneath their ancient tyrannies. There were burnings, floggings and many murders below these walls.

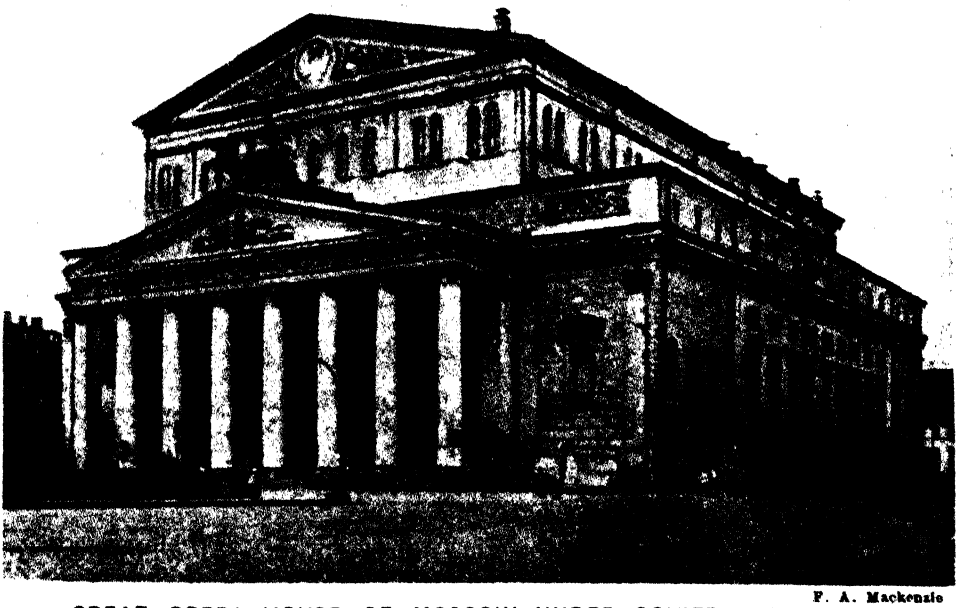
Across these very cobble stones rode Napoleon and his generals to stable their horses in the church of S. Basil, while their men searched for food and loot in deserted houses, from which presently came a smell of burning.

Round the corner, within the walls of the Kremlin, rises above this square the tallest tower of all the towers, known as Ivan Veliky, or "Big John," and it was from the parapet below its pear-shaped dome that Napoleon stood with a few of his followers and looked down upon a burning Moscow, and saw in the heart of its flames and in the dark cloud of smoke creeping across the sky the message of his own doom.

In that Red Square recent history has added to the ghosts. The last of the Romanoffs—the Emperor Nicholas—with his weak good nature, his deep love of Russia, his mystical faith, his sense of impending tragedy, stood here to proclaim his share in the Great War, to call to the loyalty of his people, to demand their service and sacrifice. There were great parades of the Imperial troops, glittering generals, magnificent cavalry, until revolution followed war, and the Red Square was the gathering place of terror, while from all parts of Moscow came the sounds of tumult and of civil war, with a sweep of bullets and a roar of guns.

Here I saw another kind of military parade under new dictators as Trotsky reviewed his Red Army on the anniversary of the Soviet Republic. It was in the winter, with a light fall of snow on the ground and a cold wind blowing, and the Red soldiers wore their long overcoats with the spiked cap, which makes them look like Assyrian warriors.

Within the Kremlin Lenin, the new dictator, lay ill—dying they said; but when Trotsky came out in his motor car a crowd of hungry and haggard people cheered, though it was hard to see at that time what benefit had come to them by the overthrow of the old regime, except an equality of misery. Not even that, indeed, for the kommissars and Soviet officials and the officers of the Red Army were better fed and better clothed than the "proletariat" governed by their new form of autocracy and tyranny. Outside the Kremlin walls on an open bank above the Red Square were the graves of men who had died in the service of the Communist faith, among whom was one Englishman.



F. A. Mackenzie

GREAT OPERA HOUSE OF MOSCOW UNDER SOVIET PATRONAGE

The Bolshoi Theatre, formerly the Great Imperial Theatre, was rebuilt after a fire in 1854, and holds 4,000 people. Since the Empire's fall it has witnessed many strange scenes. Here annual sessions of the All-Russian Congress of Soviets have been held and magnificent operas presented to peasant audiences; the encouragement of dramatic art being a bright spot in the Communists' record

WINTRY WEATHER IN ONE OF THE LARGE SQUARES OF MOSCOW, CAPITAL OF SOVIET RUSSIA

The Lubyanskaya Ploshchad or Square lies to the east of the Vladimir Gate—the archway seen in the right central background—which gives access to the north end of the Nikolskaya, one of the chief streets of the inner city leading on to the Red Square. To the right of the gate the Teatralni Proyezd runs down to the Theatre Square, which is dominated by the Opera House seen in page 2823. In its general aspect the city of Moscow has little changed since the Tsarist days, but to the visitor who can look below the surface the pathos of daily life is indescribably tragic

Now there is a new grave. It is that of Lenin himself, the leader of the Red revolution, the acknowledged head of the Soviet State, and in his strange, uncanny, ruthless way a man of genius, who seems to have put a spell on the Russian people, and who had the courage to acknowledge the failure of his own ideals, to revoke many of the communistic laws and to grant some of the old liberties of private trading and private property before his death.

He was a realist and a humorist as well as a terrorist and dictator. Perhaps the world has never seen such a queer combination of qualities in any human being, and perhaps no man has caused more misery and violence by a challenge to civilization and a call to world revolution.

Through the Red Square, and across the seven bridges of Moscow, and between the inner and outer cities, the life of Moscow passes, and one sees every type of Russian character and race. Russian peasants trudge past with their hand drawn sledges or their wheeled carts; the old moujik in his ragged caftan, his sheepskin coat and bast slippers; his wife and daughters with shawls over their heads, embroidered bodices, wide petticoats and boots of brightly coloured leather. Greeks and Turks go by, and the red fez of Islam is seen in the streets. There are Circassian women in their national dress with pearl stitched bodices, and tall fellows, in astrakhan cloaks reaching to the tabs of their black boots, who are Cossacks of the Don.

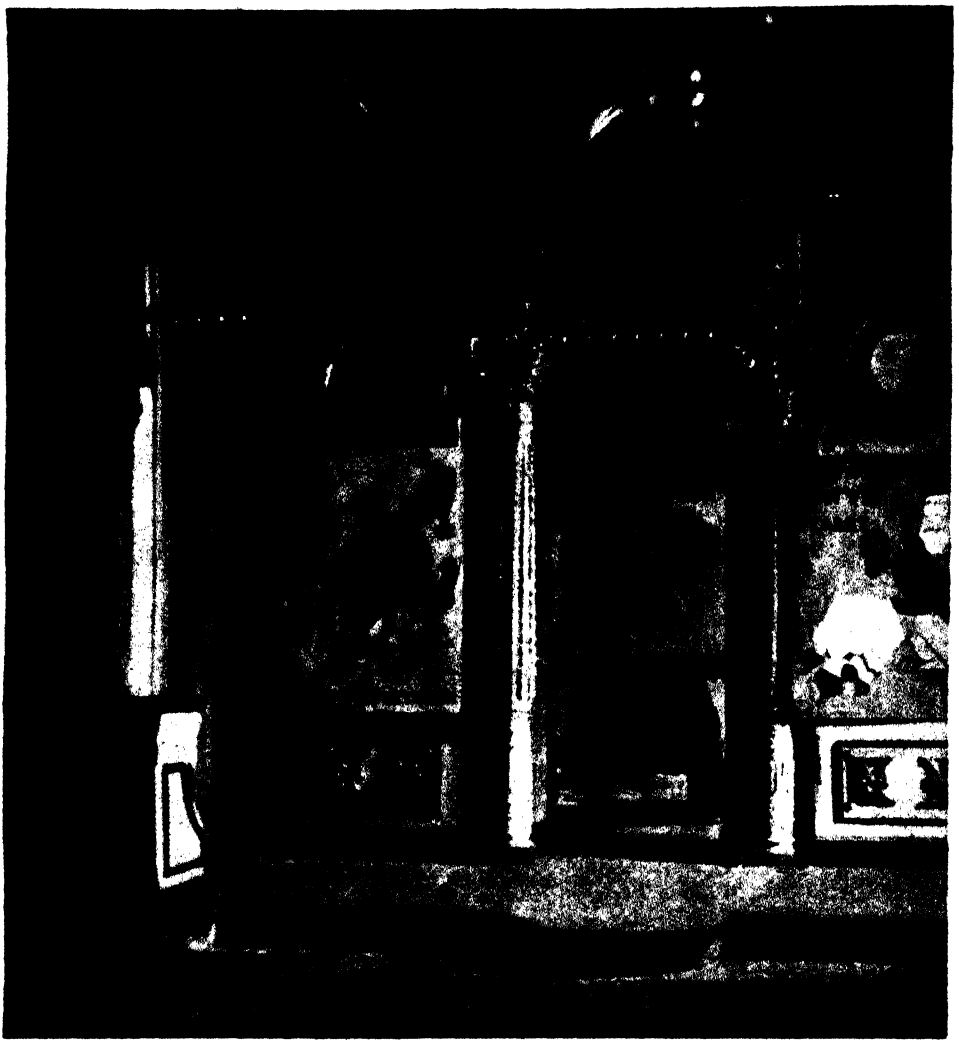
Florence Farmborough

NOVO DEVITCHI CONVENT FROM THE OUTSKIRTS OF MOSCOW

Golden domes and cupolas figure prominently in every view of Moscow. Those above belong to a congeries of buildings comprised in the Novo Devitchi Convent, lying south-west of the university clinics. Founded in 1524, it has great historical interest and within its towered and battlemented wall are a cathedral, several churches, a bell tower and many graves of eminent Russians

The typical crowds of Moscow are to be found in the markets at midday. During the strictest time of the communistic regime the markets were closed and no private trading was allowed under severe penalties of imprisonment, which crowded the gaols.

But when Lenin established the new economic laws, which permitted private trading again under certain restrictions, and replaced the rationing system by money wages, the markets were reopened and the country folk brought in their produce, while the townsfolk displayed old stocks or household goods which they had hidden in the cellars or



F. A. Mackenzie

ATHEISM MAKES ITS HOME IN A MOSCOW SANCTUARY

The Church of S. Pimen, in the vicinity of the Triumphal Gate, having been turned into a club, the sacred icons and gorgeous decorations which adorned the altar were removed and in their places Bolshevist placards abusing the priests were put. Above, on the left, is seen a placard representing a priest in the form of a huge spider, swollen with the life blood of his deluded victims

had been allowed to keep in the time of revolution and requisitions.

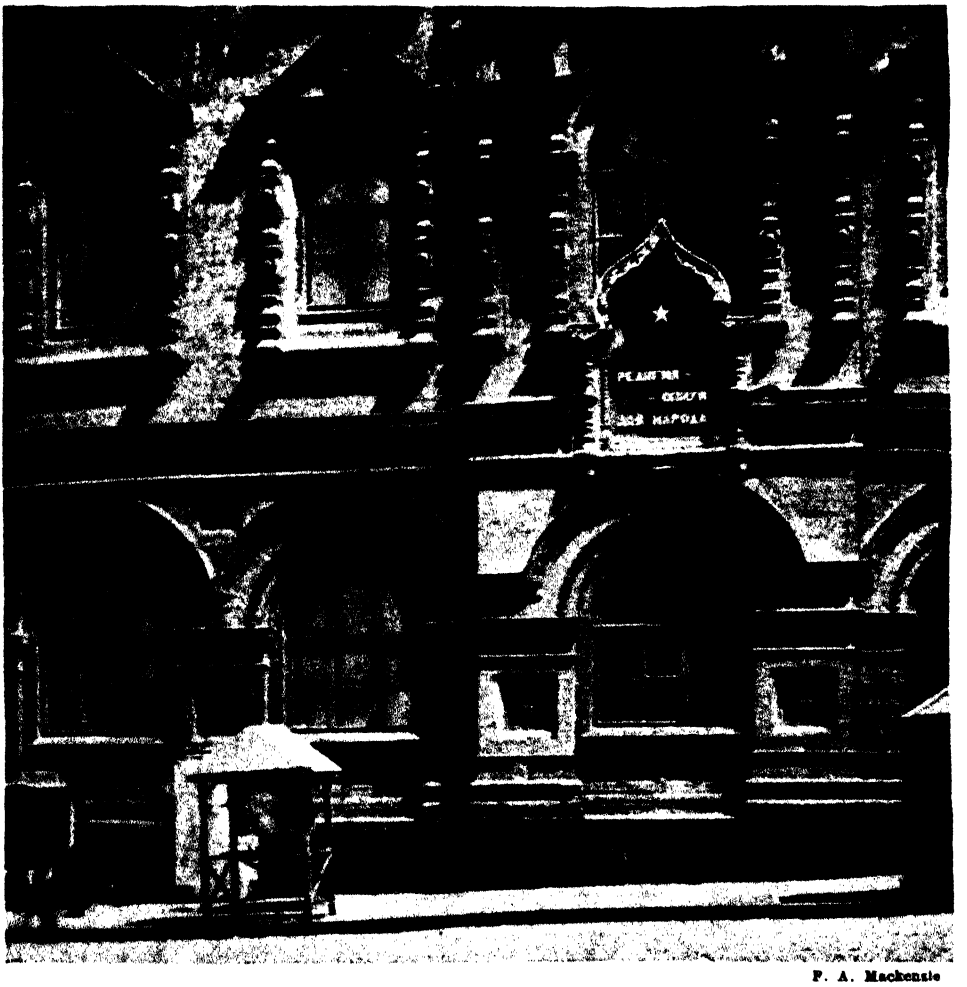
Between the rows of wooden booths where there was this display of food stuffs, bits of furniture, Oriental rugs, ironmongery, boots, underclothing and most of the things one may see in Petticoat Lane, London, on a Sunday morning, stood lines of men and women who at a glance could be seen to belong to the old aristocracy or middle class. Their clothes were threadbare, but of different cut to that of the peasants. Here and there indeed some of the younger women looked almost smart, because of the way they wore their black dresses and neatly trimmed hats, however shabby.

Some of them looked ill and all of them frightened, for they were not quite sure of the liberty of those new economic laws which allowed them to traffic publicly. They held out fur capes, embroidered slippers, trinkets of all kinds, knitted vests, silk scarves, gilt candlesticks, all kinds of odds and

ends which had once belonged to a life of comfort and beauty so utterly destroyed by revolution.

The great Sunday market is in the Sukharev Square, and the character of the Russian people is best studied there when all the booths are crowded with buyers and barterers. As in all of the Oriental countries—and at the end of a single day in Moscow one is convinced of its Asiatic character—the merchant asks twice what he expects to receive, and the buyer offers half of what he expects to give, before the bargain is struck after prolonged disputation. On the whole, in spite of the misery caused by the Revolution and the breakdown of industry, I could not say that these crowds in the markets had a hangdog or despairing look, except where the last lines of the "intellectuals" stood on the kerbstones, with their poor remnants. The peasants at least had a sturdy, cheerful look and were probably better fed than any other class in Russia, because they held the only source of wealth which lay in the kind earth that was theirs.

To all tourists in Moscow before the Great War the most memorable scene of splendour was an opera night at the Great Imperial Theatre when the



F. A. Mackenzie

THE RED FLAG AT WAR WITH CHRISTIANITY

The devotional habits of the masses of the Russian people have not been deeply affected by the Soviet regime, although many ferocious attacks on religion have been instigated by Red leaders. Close to the Iberian Chapel, built in 1669 and one of the most sacred shrines in Russia, this quotation from Karl Marx is emblazoned in large letters on a wall: "Religion is opium for the people"

emperor and empress and the imperial court were present. Under the Soviet Republic it remained as one of the last sanctuaries of light, warmth and beauty in a city of darkness and poverty, for the Soviet leaders and officials encouraged dramatic art, maintained the ballet and gave distinguished recognition to all actors, dancers and musicians, provided they became loyal servants of the Soviet state and system.

Price Paid for the Gift of Art

Tickets for the opera were given to trade unions, university students and school children, and these at least were exchanged for good measure, though other tickets for food and clothes were often worth no more than waste paper, because of the scarcity of food and the lack of clothing.

In the imperial box, where the royal family had sat so often, glittering with orders and jewels, there were long-haired men in red shirts and short-haired women in cheap blouses leaning over the velvet balustrade, above which the imperial eagles were hidden under the red flag. In the world of art, anyhow, Communism had brought a great gift to the common folk, though at a tragic price of blood and tears.

A Use for Pious Legacies

Next to the Great Imperial Theatre in interest and reputation is the Moscow Art Theatre, which, all through the time of famine and direst poverty, upheld its great tradition of artistic production, brilliant acting and original genius.

In the old days Moscow was a great treasure house of pictures, jewels and precious works. In the Historical Museum and Imperial Rumyantzov Museum and other art galleries they had magnificent collections of early paintings, manuscripts, printed books, costumes and antiquities. As far as I could discover those treasures still remain untouched, although many of the galleries, like those in the Kremlin, were no longer open to the public.

But it is probable that the greatest wealth in the form of precious stones has gone from Moscow for ever and from the buildings which they adorned. In all the great churches of Moscow, like the Cathedral of the Assumption in the Kremlin, and the great Church of the Saviour outside the Kremlin, commemorating the victories of 1812, the holy icons or pictures were plastered with every kind of precious jewel, some as big as eggs, and encased in gold or encrusted with pearls and diamonds and rubies and sapphires, as the gifts of emperors and empresses, princes and princesses, and the rich aristocracy, who were generally as pious as some of them were cruel.

Fantastic City of Ghosts

The temptation of so much wealth could not be resisted by the desperate and poverty-stricken rulers of the Kremlin, and they laid hands on this ecclesiastical wealth. If it went to buy grain for the famine-stricken millions of the Volga, as they alleged, the loss of all those gleaming stones can hardly be begrudged. I for one have no proof to the contrary, though doubts creep in.

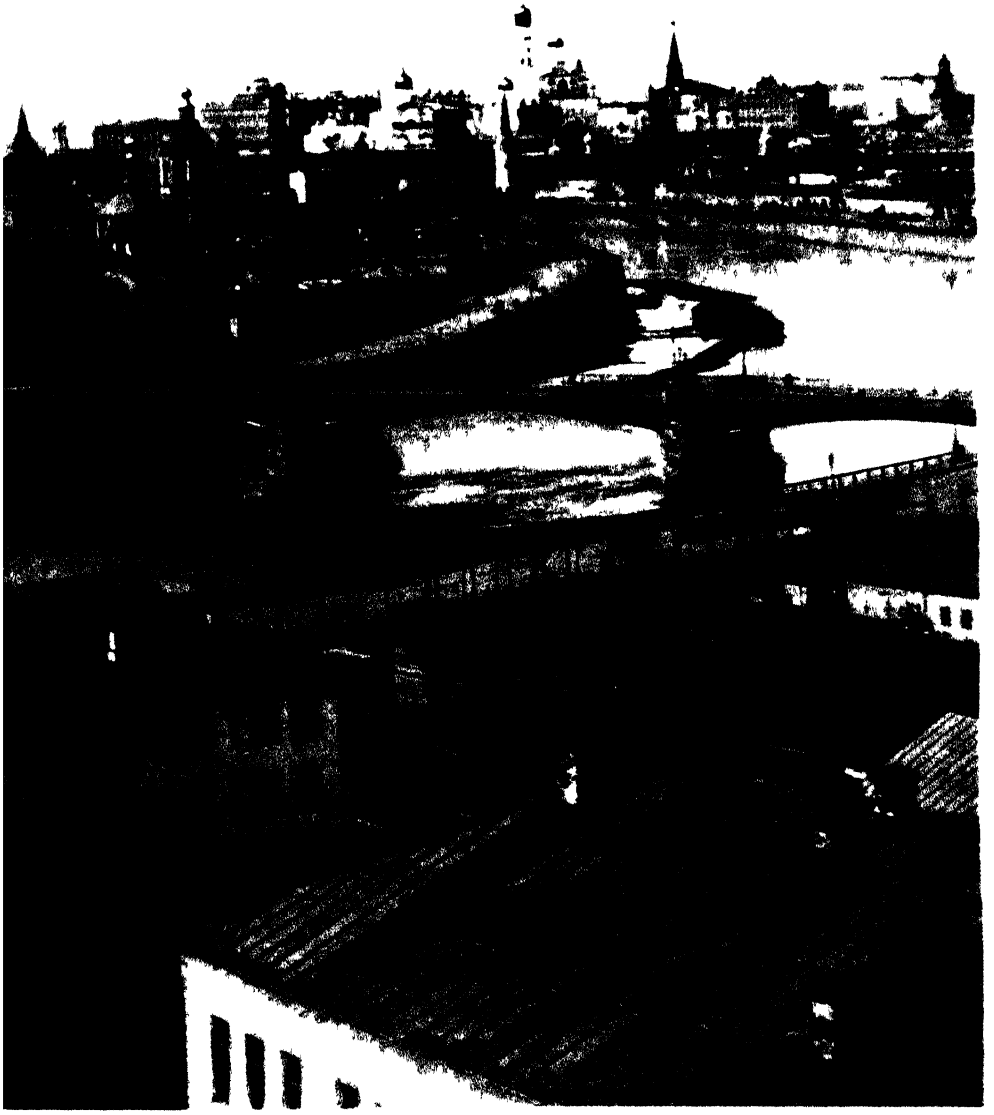
It will be seen that the Russian Revolution has left such a mark on Moscow that people who knew it before will hardly recognize its present ways of life. Most of the great mansions have been stripped, although I was billeted in one which had been preserved in its old state of magnificence and slept on a truckle bed in a gilded salon filled with statuary and handsome furniture, with pictures by Corot and other great masters still hanging undisturbed on the stately walls.

But the general view of Moscow remains unchanged, and by day and night I wandered through it with a sense of enchantment, because of its fantastic beauty, and with many a thrill of adventure, because of old and recent history which makes this city ghost-haunted to all who remember the drama of its life.

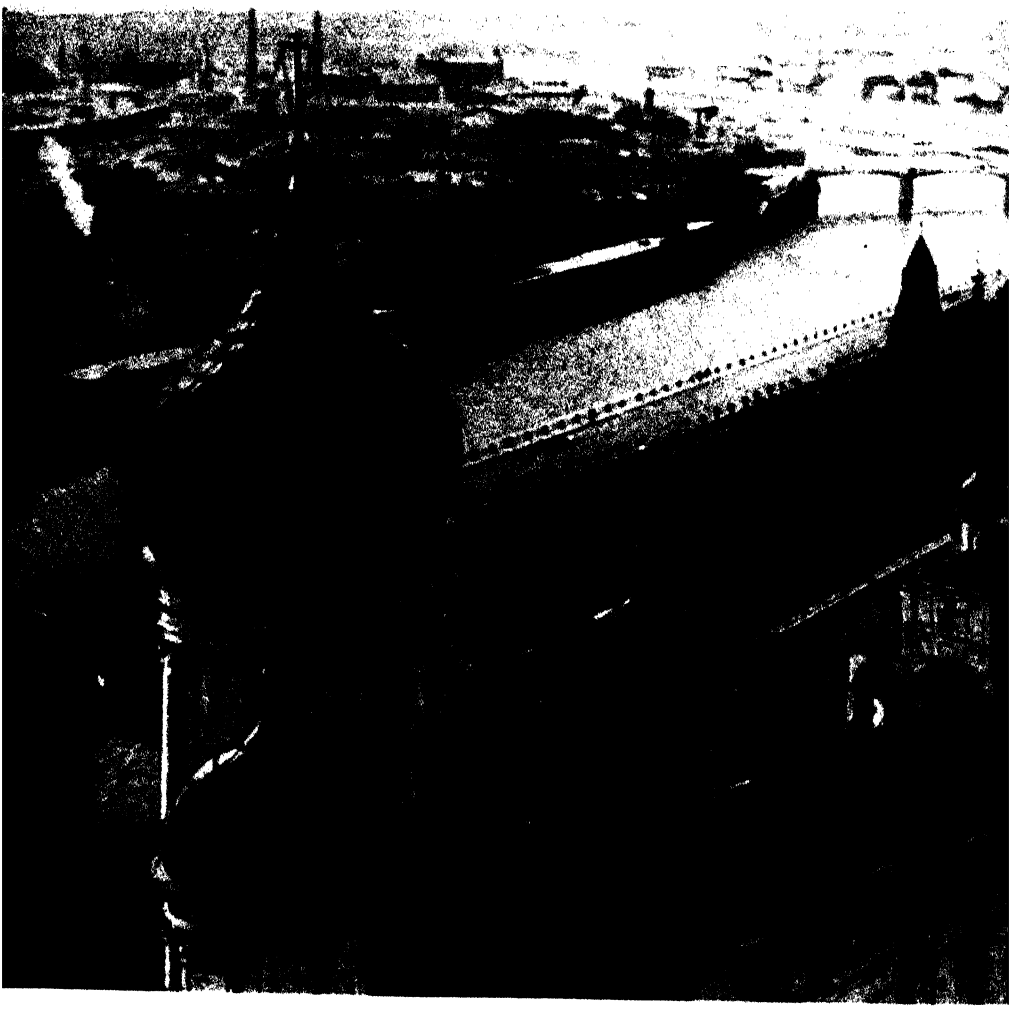
28279

Moscow. *By the side of the frozen Moskva the Kremlin, most celebrated spot in every Russian, dominates the whole city. Chapels, palaces and two cathedrals lie within the walls of the enclosed [illegible]*

Moscow. *At the south-east end of the Krasnaya or Red Square is the Cathedral of S. Basil with its fantastic domes of rainbow hue*



Moscow Kremlin and adjacent areas, the old portion of the city
to the north of the river, and the small section of the new Moscow



Moscow. *From the huge bell-tower of Ivan Veliky one looks over the gilded cupolas within the encircling walls of the Kremlin.*

the distance, by the banks of the Moskwa, rise the domes of Church of the Redeemer with its walls sheathed in marble

28.34

28335

NAPLES *On the western shore of Naples' magnificent bay the white buildings of the city cover a splendid amphitheatre of hills, and the smoking cone of Vesuvius towers over the eastern suburbs*

NAPLES. *The sculptured Porta Capuana, flanked by two round towers, is one of the finest Renaissance gateways in Europe.*

NAPLES

Beauty & Squalor of the "Siren City"

by George Sampson

Educationist and Man of Letters

LOOKED at from the cape of Posilipo, Naples is revealed as a great sweep of dense habitations, begirt with hills and closely embraced by a sea of incredible blue. Within an inner curve of this great bow rises a mountain, low, solitary, symmetrical. It seems cunningly placed, yes, and cunningly shaped, with its low, gradual, fertile slopes upon which the villages gleam white. Surely this mountain is part of the beauty! But over the cloven summit a light cloud streams impalpably away, yet never passes, and never will pass, for it comes from the heart of Vesuvius.

Naples stands upon threatened and unquiet ground. At one end is Vesuvius with its terrible history; at the other the smoking soil of the Phlegrean Fields. The wooded height of Posilipo, beautiful in itself and beautiful for what it reveals, is a mass of volcanic rock, and out at sea lies little Ischia, rent and ravaged by earthquake. Naples itself has suffered little; but some day the world may tremble at a disaster more terrible than that which whelmed Messina.

Place of Bewildering Noise

No fear of an unknown future distresses the Neapolitan. He is a child of the sun, impulsive, gay, content with little. His city, which looks so fair from the sea, is less fair when we plunge into its narrow, teeming streets, like deep ravines cut into cliffs of towering habitations. It is a huge, tortuous, bewildering place, one of the noisiest on earth, and silent, it would seem, at no hour of day or night. In Naples we seem to have left Europe behind. When the hot days come, the people forsake their rooms and live in the streets, cooking over little stoves with a spark or two of charcoal, and performing the most intimate toilet operations upon their young in the full blaze of day.

Milk Direct to the Customer

There a small boy, with the engaging confidence of a puppy, runs up to a tourist, and stroking his arm, begs irresistibly to be allowed to look at his camera. Even within a hotel of indubitable respectability, a raven-haired chambermaid suddenly shatters the conventions by impulsively stroking the arm of a fair-haired visitor and exclaiming, "Lei ha i belli capelli."

In the morning and evening the milkman pays his calls. He wheels no "pram," he drives no "float." No boy distributes cans or hygienic bottles. The Neapolitan milkman comes round with his herd of goats, and milks them into vessels let down by strings from the windows of the upper floors.

In the hotel region a few cows with their attendant calves may be seen. Once the goats used to mount the stairs and be milked at the doors; but even Naples at last found some disagreeable inconvenience in that, and "Nanny" now functions in the streets.

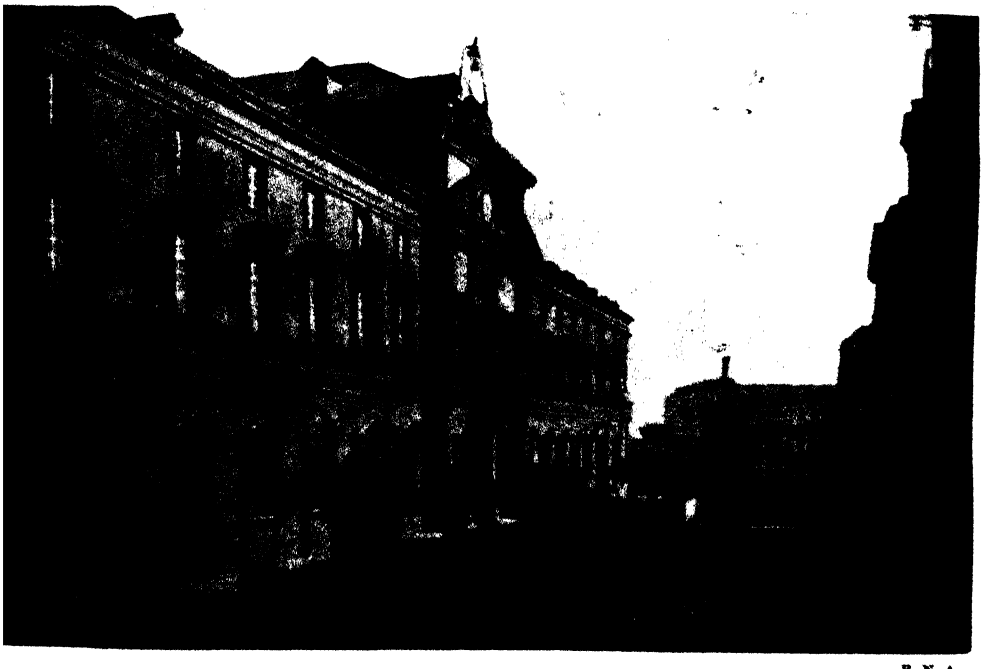
The history of Naples is perhaps more dreadful than that of any other Italian city—sordidly and secretly dreadful. We need not dwell on the earliest days. Perhaps they were happy, for they have little history that we know. Some seven centuries before the Christian era a band of Greek settlers founded the city that was to become famous as Cumae, north of Cape Miseno. From Cumae subsidiary colonies were formed on the adjacent bays of Pozzuoli and Naples, the latter being named

NAPLES
Scale
1 mile
COMMERCIAL HARBOUR
MILITARY HARBOUR
BAY OF NAPLES
Castello dell'Ovo
Castel Nuovo
Royal Palace
Town Hall
Harbour Master's Office
Quarantine Sta
Central Sta
Museo Nazionale
Aquarium
Villa Nazionale
Riviera di Chiaia
Via Caracciolo
Via Partenope
Via Cristoforo Colombo
Via Nuova Marina
Via Amedeo
Rione
Piazza Municipio
Piazza Carlo III
Piazza Nazionale
Piazza Garibaldi
Piazza Cavour
Piazza Dante
Piazza Mercato
Piazza del Plebiscito
Piazza Trieste e Trento
Piazza Vittoria
Piazza Sannazaro
Piazza Amedeo
Piazza Carmine
Piazza Borsa
Piazza Bovio
Piazza Museo
Piazza Cavalleggeri
Piazza Quattro Giornate
Piazza Montesanto
Piazza Dante
Piazza Cavour
Piazza Garibaldi
Piazza Nazionale
Piazza Carlo III
Piazza Municipio
Piazza Vittoria
Piazza Sannazaro
Piazza Amedeo
Piazza Carmine
Piazza Borsa
Piazza Bovio
Piazza Museo
Piazza Cavalleggeri
Piazza Quattro Giornate
Piazza Montesanto
Piazza Mercato
Piazza del Plebiscito
Piazza Trieste e Trento

Ewing Galloway

LOOKING UP THE STRADA DEL DUOMO FROM THE STRADA NUOVA

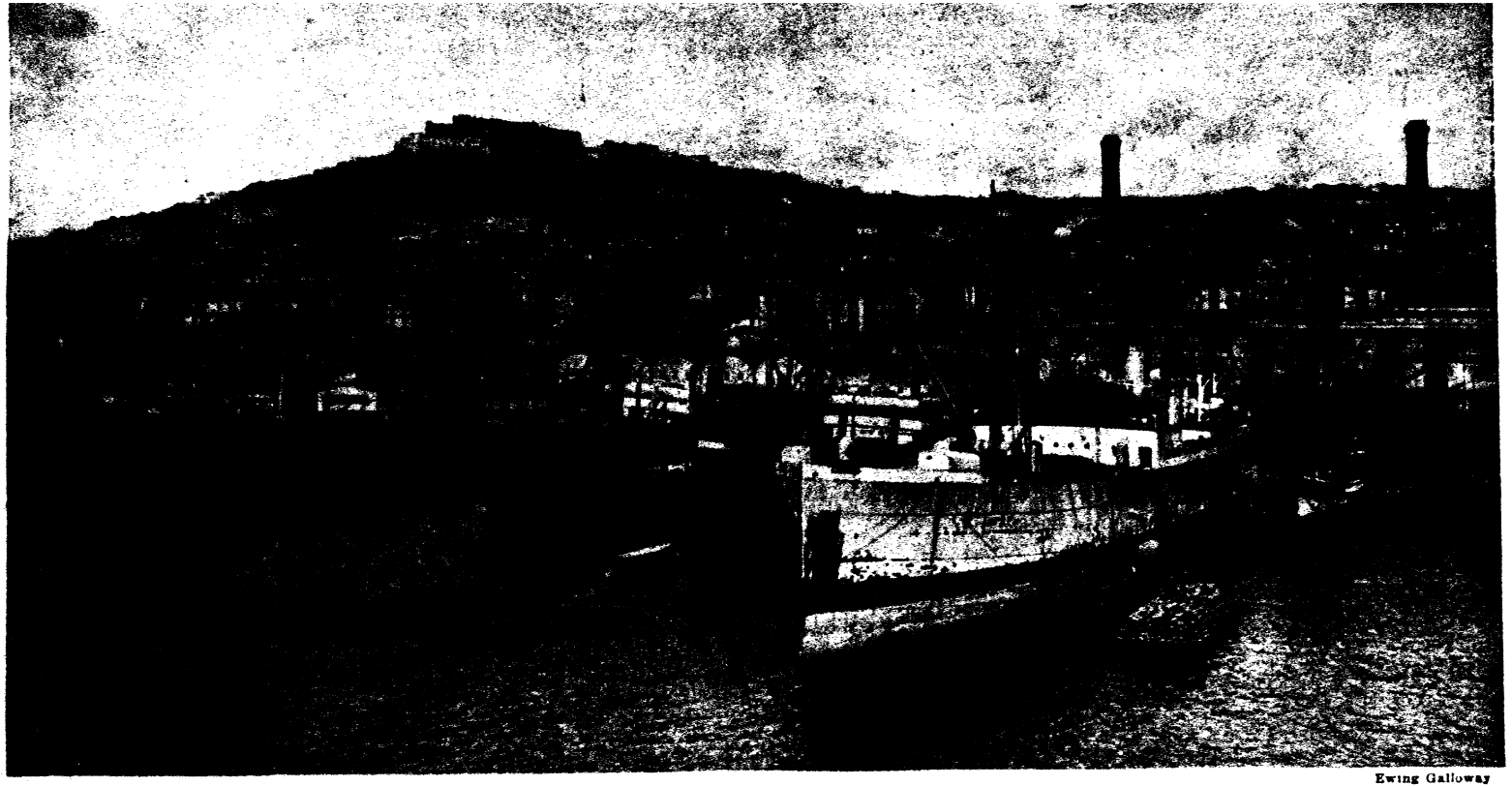
The Strada del Duomo extends from the Strada Nuova to the Strada Foria and in it, beyond the Strada dei Tribunali, stands the cathedral. This church was built in 1272-1323 and is in the French-Gothic style with high towers and pointed arches. It has undergone frequent restorations and contains the tombs of Charles of Anjou and Pope Innocent IV. as well as the blood of S. Januarius



E. N. A.

NATIONAL MUSEUM AT THE NORTHERN END OF THE VIA ROMA

To the west of the Piazza Cavour rises the National Museum, erected in 1586 as a barracks, used in the seventeenth century as a university and turned into a museum in the eighteenth. It contains one of the finest collections in the world and includes the Pompeian antiquities, bronzes from Herculaneum and the Farnese collection. In the west wing is a gallery of the great Italian masters



Ewing Galloway

SHIPPING BY THE QUAYSIDE WITH THE TOWN OF NAPLES RECEDING TO THE WOODED HEIGHTS

Naples has been so lauded for its beauty that the commercial side of this great city has been overlooked. Stately liners and weather-beaten tramps crowd the fine harbour and gaunt chimneys disfigure the appearance of the town, which manufactures textiles and perfumes. Naples has an almost Eastern appearance owing to the flat roofs of the houses. On the left of the photograph is the Castel Sant' Elmo behind the monastery of San Martino. It was built in 1343 with mighty walls and the fosses hewn in the solid tuffstone rock. The fort is now used as a military prison

its back on the ancient castle of the Angevins and faces the semicircle formed by San Francesco di Paolo.

There at intervals along the front of the palace stand eight statues, representing eight centuries of Neapolitan monarchy. The first statue is Robert the Norman, the second is Frederick the German, the third is Charles the Angevin, the fourth is Alfonso the Spaniard, the fifth is Charles the Holy Roman Emperor, the sixth is Charles the Bourbon, the seventh is Joachim Murat, Napoleon's cavalry leader, and the eighth is Victor Emmanuel, first king of Italy. That is to say, from the twelfth to the nineteenth century Naples was ruled by foreign sovereigns, some of whom were the vilest of their kind.

Naples' Melancholy Story

Its history under the Spanish viceroys is a melancholy story of absentee landlordism and rack-renting. The various revolutions led by Neapolitan patriots met the usual fate at the hands of entrenched tyranny, but judgement could not be delayed for ever, and the atrocities of "Bomba," Ferdinand II., exposed by Gladstone to the execration of a comparatively civilized world, and the ludicrous futility of "Bombino," his son, at last brought the kingdom to an end in 1861, when Garibaldi annexed it to Italy.

The least pleasing incident to Englishmen in the story of Naples is one associated with the great name of Nelson. Everybody knows about the romantic passion of that great sailor for the frail and lovely Lady Hamilton, wife of the ambassador to the court of Ferdinand I. That court, the real ruler of which was Ferdinand's Austrian wife, the dissolute Maria Carolina, was naturally the most violent foe of all liberal and revolutionary doctrines, and no one was more indignantly aristocratic than the former domestic servant who was now wife of an ambassador and bosom friend of a queen.

During the victorious progress of the French through Italy the court fled to Palermo under Nelson's protection and Naples fell to Championnet's forces. The Neapolitan Liberals welcomed the invaders as the apostles of political liberty, and southern Italy became the Parthenopean Republic. But the French soon made themselves unpopular, and, moreover, were wanted nearer home. The new republic, with its sincere and high-minded leaders, could not defend itself, and made terms with Cardinal Ruffo, leader of Ferdinand's forces, and Captain Foote, who commanded the Seahorse off Naples.

Another Side of Nelson

But suddenly Nelson arrived, acting as agent for the absent court, annulled the armistice and demanded the unconditional surrender of the leaders. Four of them were executed. One, the Admiral Caracciolo, was seized, taken on board Nelson's ship, tried by a court-martial of his enemies, sentenced to death, and hanged from the yard-arm of the Minerva. His body, ignominiously cast into the sea, was washed up on shore some time after. Apologists for Nelson try hard to find mitigating explanations and even justification; but surely the most ardent hater of democracy must feel a faint distaste for the indecent zeal with which the hero of the Nile made himself hangman to the dirtiest little court in Europe.

Sixty Years After

It is wrong to say with the apologists, Let us forget Naples and think only of Trafalgar. Let us remember Naples in 1799 as a warning; but let us remember Marsala in 1860, when Marryat and Winnington-Ingram, on the Intrepid and Argus, passively, if not actively, made possible the landing of the Thousand. Garibaldi, at least, never concealed his gratitude.

Naples, with its population of 772,000, is the first city of Italy, ranking just before Milan with its 722,000. Everywhere there is life. Naples has a great museum, but it is not itself a museum. Let us consider its outward features.

What strikes the visitor is, first, the enormous size of the city, and next the absence of any definite, undoubted centre. Naples has many squares, but Plebiscito, Municipio, Borsa, Dante, Mercato and Garibaldi all seem to be sporadic open spaces, crowded and noisy like the rest of the city, but not centres of life. Surely there is no city of its size so lacking in a localised "West End." The "West End" of Naples breaks out in patches all over its vast area, and is everywhere neighboured by shabbiness and squalor. In Naples, what corresponds to London's Piccadilly and Shaftesbury Avenue, Park Lane and the Seven Dials, are not merely neighbours but mixed up together. Actually the most vital centres of life are centres of poverty rather than of wealth.

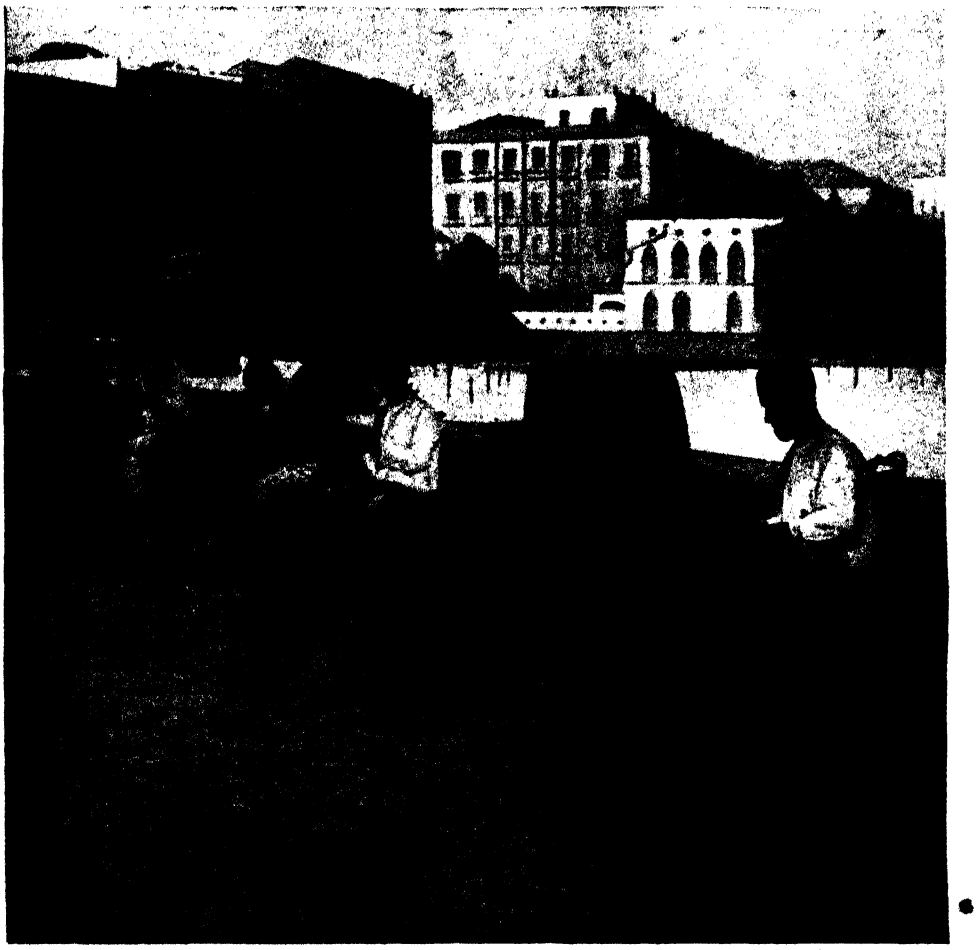
To feel the pulse of the city you must go among the crowds that surge about the Porta Capuana, the Porta Nolana and the Toretta. Here, indeed, is Naples—the Naples that revolted with Masaniello, adored him, deserted him, kicked his body about the streets and then lamented him, all in the space of a few days. A fascinating city, but dreadful. It is the one great Italian city through whose darker regions the visitor feels unwilling to walk alone at night. It is the city of dreadful animals, of people to whom pity seems incomprehensible; though happily the R.S.P.C.A. is doing something to prevent the public ill-treatment of horses and donkeys. It is also the city of the Camorra, that mysterious, intangible body, the power of which is denied, derided, doubted and dreaded.

Of this, as of the even more intangible Mafia of Sicily, the foreigner cannot speak and need not try to, for the activities of neither will ever touch him. It is worth noting, however, that the Camorra is, politically, a Bourbonism of the gutter, and in its combination of politics with crime, looks back to an evil past. It helped to do some of Bomba's

Ewing Galloway

COPPERSMITHS AT WORK IN THE STREETS OF NAPLES

The narrow, squalid side-streets of the medieval city afford vivid, interesting studies of the humbler life of Naples, for careless indifference to publicity stamps the Neapolitan poorer class. Men and women may be seen working before their doors, and coppersmiths, shoemakers, barbers ply their trades regardless of the public gaze; to the true-born Southerner there is nothing like "open air"



Ewing Galloway

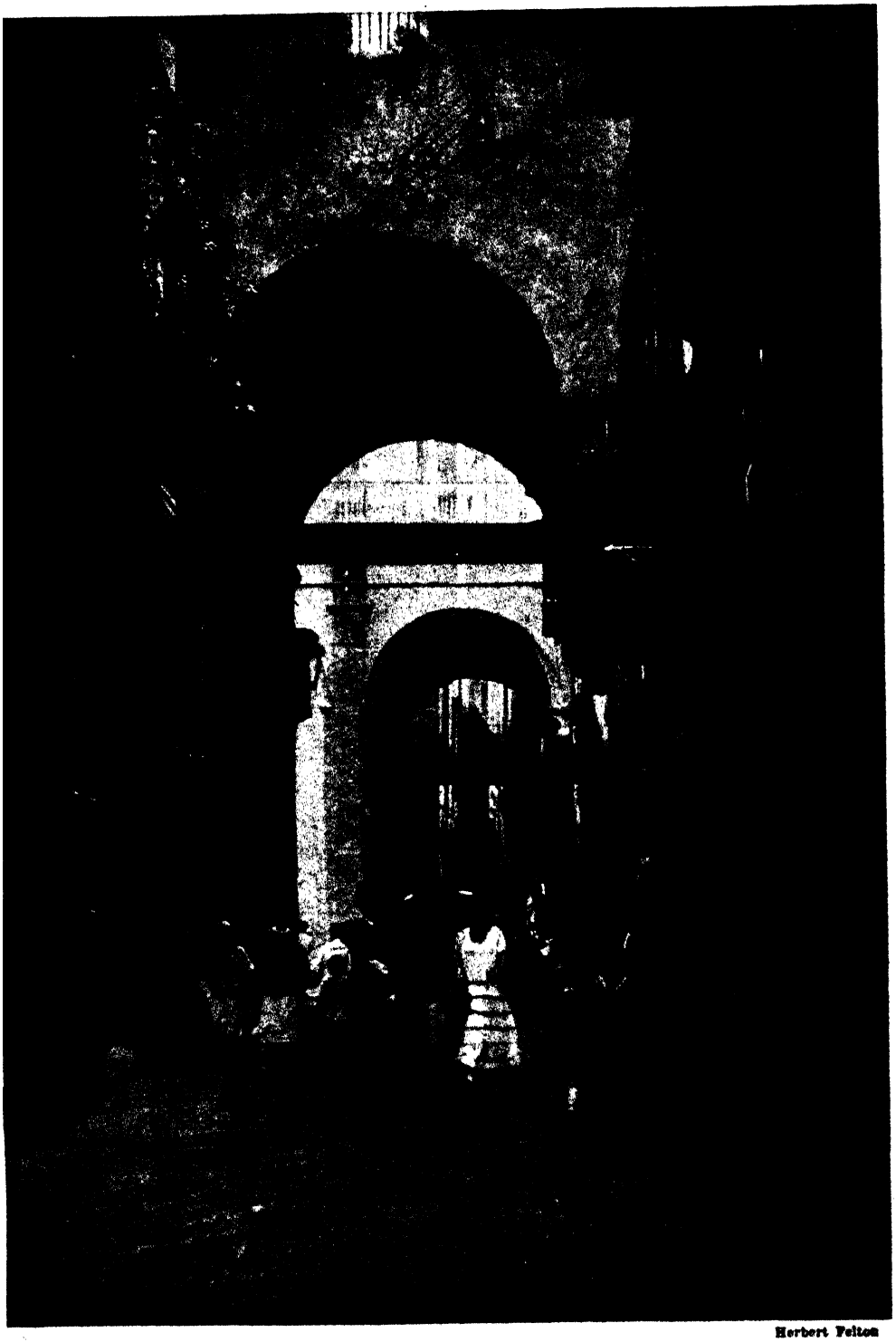
FISHERMEN MAKING FISH-TRAPS ON THE WATER FRONT AT NAPLES

Naples has both a naval and a commercial harbour, protected by moles and breakwaters and provided with basins and dry docks. The fishermen, when they are not out in their boats, sit on the harbour walls and make their traps of rattan and twine from an age-old pattern. The harbour is almost as much renowned for its disgusting smell as the bay is famous for its beauty

dirtiest work. It resisted Garibaldi, and it is still the enemy of sweetness and light in the whole of social life.

But let us turn to something brighter. Let us go to the Piazza del Plebiscito and take a seat at one of the cafés. Here if anywhere is the public centre of Naples. We face the Royal Palace with its statues of the dynasties. Behind us is the semicircle of San Francesco di Paolo. To the left, just round the corner from the palace, is the little Piazza S. Ferdinando, with the great San Carlo theatre on one side and on the other the Galleria Umberto I. with its cupola, one of those lofty glass-roofed streets of shops, of which Genoa and Milan possess better examples. To the left of San Ferdinando we see the beginning of the most important street in Naples, the Via Roma, formerly called from its Spanish builder the Via Toledo, and still generally known as such. The Toledo in Naples is as narrow as the Corso in Rome. It runs, with a scarcely perceptible curve, from the Royal Palace direct to the Capodimonte palace on its hill a mile and a half away.

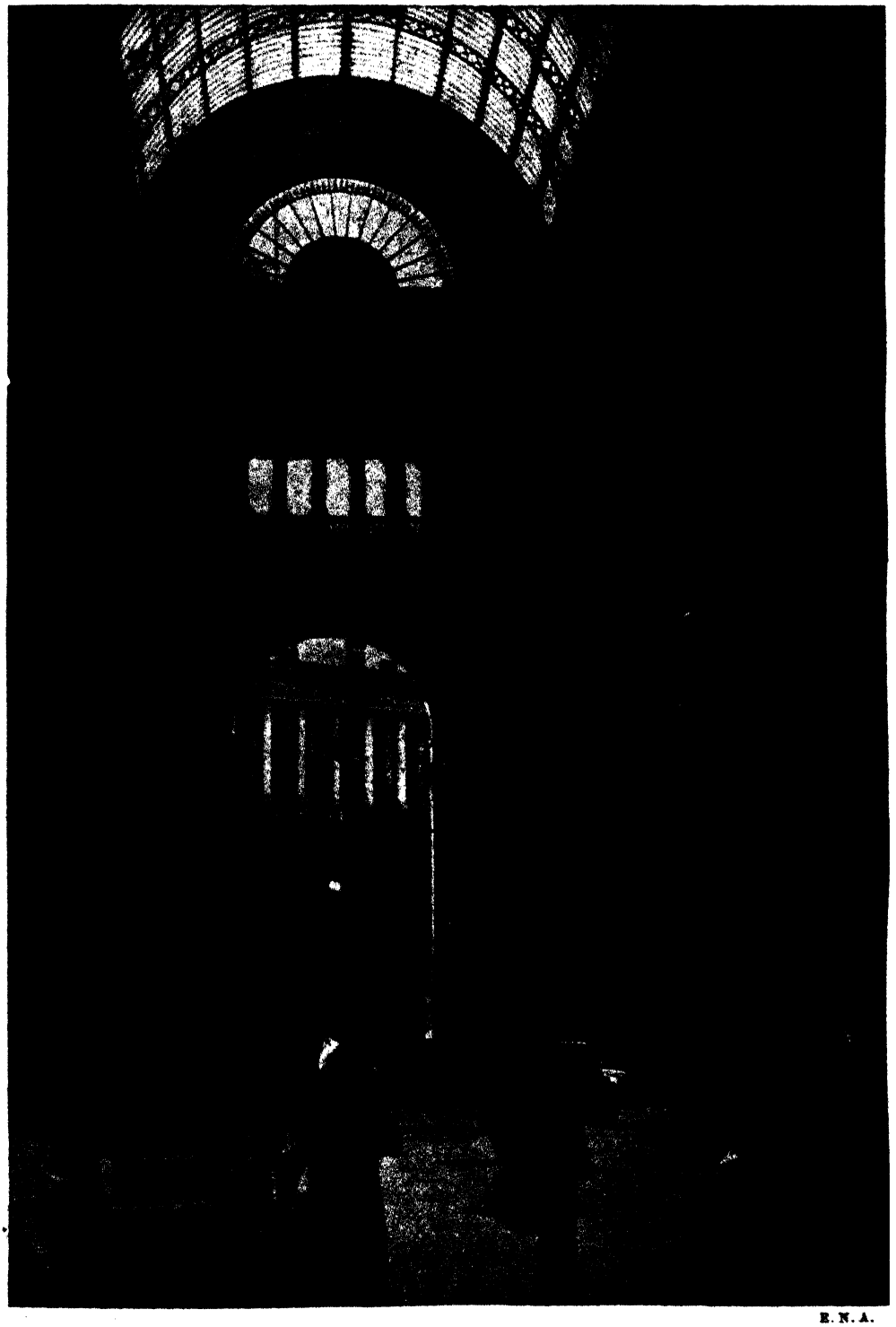
The crowds in this narrow thoroughfare pass belief, but up it we must go, riding or walking, for half-way along is the National Museum, one of the greatest museums of Europe. You notice that



Herbert Felton

ONE OF NAPLES' NARROW STREETS BENEATH HIGH ARCHES

In the commercial quarter of the city, on the eastern ridge, are the alleys of the medieval town. The Strada Santa Lucia is a centre of the noisy, dirty life of the poorer classes, but there are no definite borders between the quarters of the rich and poor as these well dressed passers-by suggest. Since the cholera epidemic of 1884 much has been done to improve the densely populated slums



E. N. A.

GALLERIA UMBERTO PRIMO, A FINE ARCADE NEAR THE VIA ROMA

This arcade was built in 1887-90 and is in the form of a Latin cross. The shorter nave is 135 yards in length and has its main entrance in the Strada San Carlo; the longer nave, stretching from the Via Roma to the Strada Municipio, is 160 yards long. Above the intersection a dome rises to a height of 185 feet. The interior of the arcade is decorated with sculptures, gilding and stucco

all wear a charm against the evil eye. Even the towering harness of the horses bears its horn of protection. From the Toledo deep ravines branch out between lofty dwellings—the narrowest of streets, festooned with the eternal washing, and past the wit of man to number. Above them rise the hill on which stand the museum, formerly the monastery, of San Martino, the Castel Sant' Elmo and the new Vomero residential quarter, where it must be pleasant to live. A kindly funicular will presently take us up, but first let us return to our table in the Plebiscito.

From the Café Table

Away to the left behind us runs another of the characteristic streets of Naples, the Chiaia, which begins tortuously, breaks into a flight of steps leading up to Santa Caterina, and after some adventures emerges as a broad road along the sea front, till it buries itself in the " Grotto " or tunnel under Posilipo. But between the Riviera di Chiaia and the sea lies a long, narrow park or garden called the Villa Nazionale, containing another of the sights of Naples, the Aquarium. Bounding the park on the seaward side is the broad Via Caracciolo, the great parade of Naples, where everybody drives and meets everybody else. Thus the Via Caracciolo, the Villa Nazionale and the Riviera di Chiaia together form a splendid esplanade or sea-front.

Towns Clustered Round Vesuvius

At one end of this superb sweep of open space rises the glorious wooded promontory of Posilipo; at the other is the height of Pizzofalcone with the Santa Lucia hotels round its base, and, just off shore, the Castel dell' Ovo, where Dr. Martino Fusco was supposed to have found the lost books of Livy. In the near distance rises Vesuvius, and gathered on the shore about its base are Portici and Resina, with Herculaneum buried in tufa beneath them, Torre del Greco, Torre Annunziata and Castellamare. Beyond stretches the peninsula of Sorrento, with Capri lying close by. It is, as we have said, a superb and glorious sweep of splendour in the light of the southern sun.

But there is another Naples. The great curve of coast does not run from Posilipo to Vesuvius without a check. The height of Pizzofalcone, Santa Lucia and the Castel dell' Ovo make a little promontory that breaks the curve in two. Coming along the esplanade from Posilipo to Santa Lucia, we see a splendid city on the sea. We round the cape and suddenly we are at a great port. We are so accustomed to thinking of Naples as a spectacle that we forget its status as a seaport, the house of call for liners going to or from the East.

From Naples you may take a great liner to Egypt or India. But what you should certainly do is to take one of the miniature liners, handsomely and comfortably appointed, that will carry you in a night-passage of twelve hours to Palermo, best of gateways into Sicily.

Naples as a Port of Call

The great harbour of Naples presents to the landsman's eye the usual tangle of breakwaters, lighthouses, masts, funnels and cranes, together with boats large and small that get in each other's way, and threaten their occupants with inevitable death, from which, however, it appears that they can be saved by the greatest possible quantity of vociferation from all concerned and unconcerned, especially the latter.

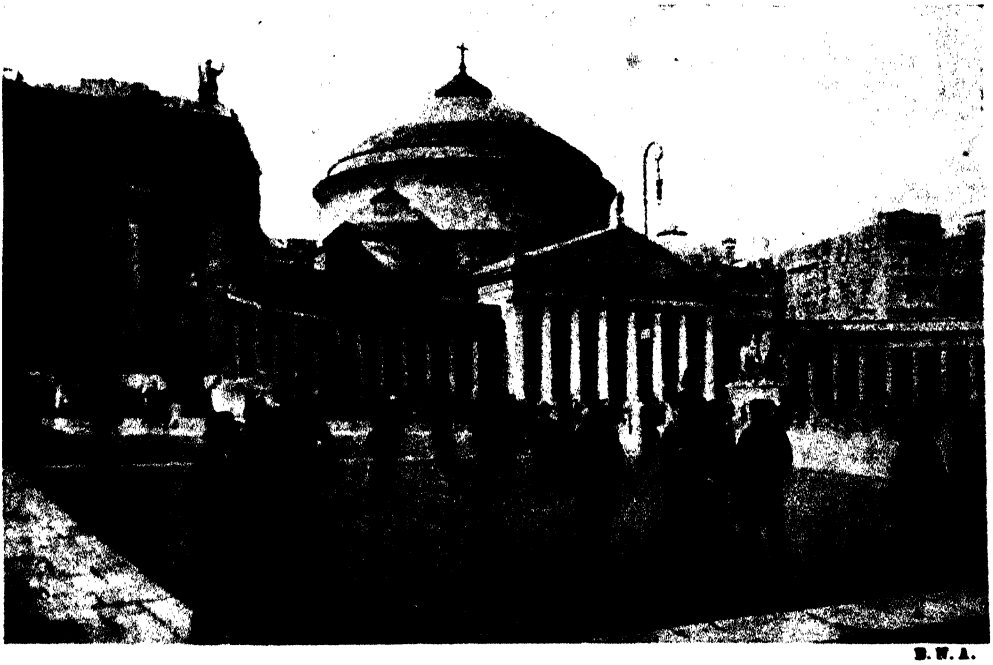
But let us approach the port from the landward side. To do this we will go back to our old table in the Plebiscito.

Here again are the Royal Palace and the little square of San Ferdinando. This time we pass by the Via Roma and the entrance to the Galleria, and go round the San Carlo theatre. Suddenly we are face to face with another of the great sights of Naples, the Castel Nuovo, founded by the Angevin kings, with its sinister round towers and the decorated arch of later years between them. Passing the castle we reach the great open space called the Piazza Municipio.

Ewing Galloway

IN THE RIONE AMEDEO, AN ATTRACTIVE QUARTER OF NAPLES

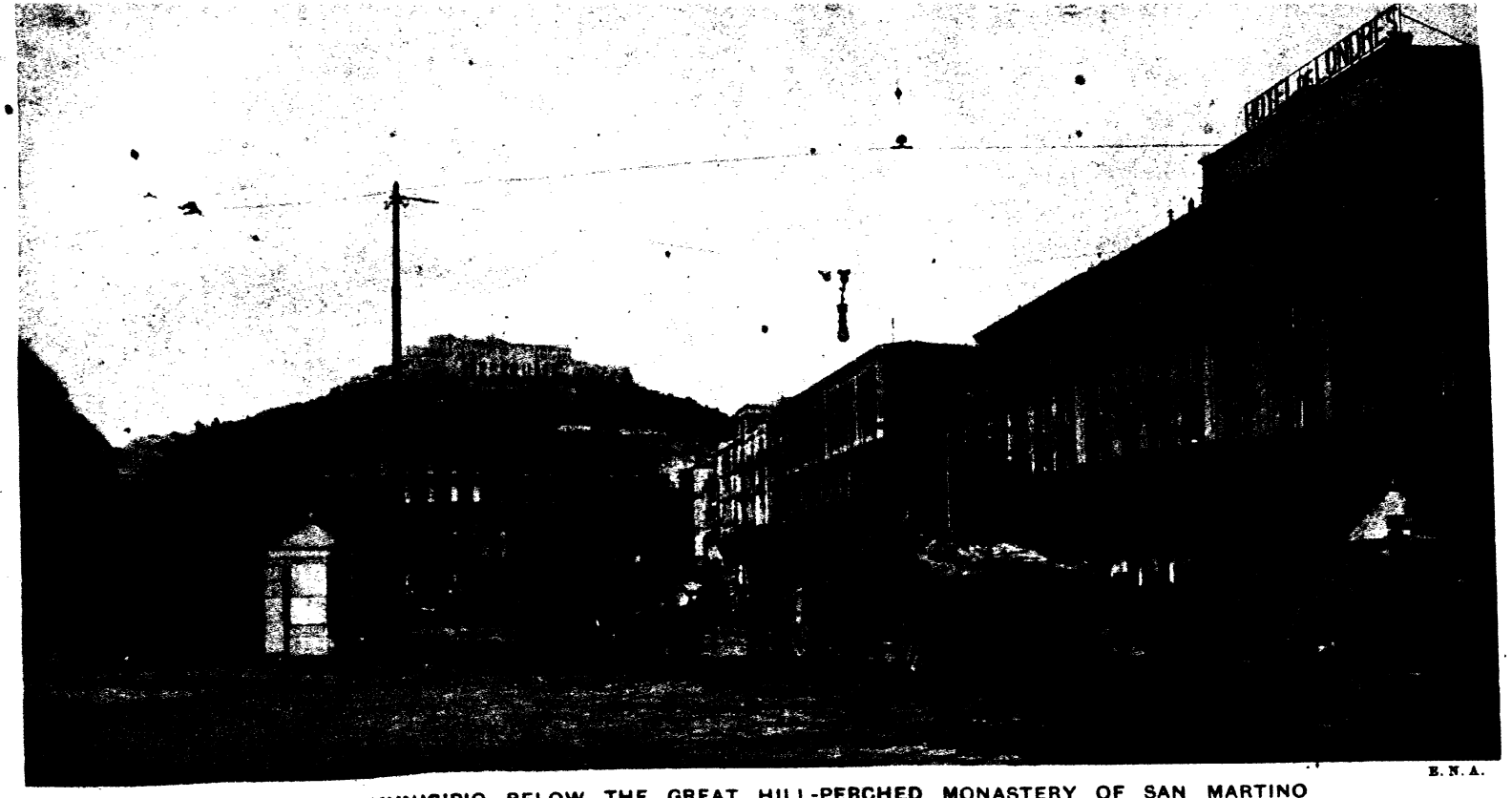
One of the most splendidly situated cities in the world, Naples lies at the base and on the slopes of the hills which rise from the western shores of the beautiful bay of Naples. The lover of the picturesque will find endless interest and delight in the varying scenery, the changing life of the streets and, as here in the western outskirts, the attractive, tree-embowered, terraced architecture



B. W. A.

MAGNIFICENT SANCTUARY FACING THE PIAZZA DEL PLEBISCITO

This large building is the church of San Francesco di Paola, erected in 1817-31 by Ferdinand I. and designed by P. Bianchi in imitation of the Pantheon at Rome. Its massive dome and almost semi-circular colonnades, flanking a vestibule supported by Ionic columns, give it a very imposing appearance. Facing it on the opposite side of the piazza rises the Royal Palace



E. N. A.

PIAZZA DEL MUNICIPIO BELOW THE GREAT HILL-PERCHED MONASTERY OF SAN MARTINO

At the commencement of the Molo Angioino lies the Piazza del Municipio in which is an equestrian statue of Victor Emmanuel II. designed by Franceschi. At the end of the Piazza stands the Municipio or town hall, erected in 1819-25. Immediately adjoining the Municipio is the church of Giacomo degli Spagnuoli, built by Don Pedro de Toledo in 1540. The suppressed Carthusian monastery of San Martino forms part of the fortress of Sant' Elmo and was begun in 1325, but was completely rebuilt in the seventeenth century. The interior of the church has fine marbles and magnificent paintings, and certain rooms have been turned into a museum

In the distance at one end of this oblong piazza rises the hill of Sant' Elmo. At the other rises the apparatus of the port. From the middle goes the street through which your cab bumps you over a paving of lava slabs, apparently put down in the days of Pompeii and not touched since, until it bumps you into the station a mile away.

To reach the port, however, you do not touch this street, but go to the end of the piazza, and presently you find yourself in the Strada Nuova, with warehouses, trains and lorries on one side, and on the other a rookery of ravine-like streets. The Strada Nuova follows the line of the port and brings you at last to the Church of the Carmine and the Piazza del Mercato, of bloody memory. Not far away is the station for Vesuvius, and here you will find a cab that will bump you through the Porta Nolana to the cathedral with its chapel of S. Januarius. Thence you should let yourself be bumped to the more important church of Santa Chiara.

Work of Architectural Assassins

On the whole, however, Naples is disappointing in its interiors. If you are very assiduous you will, of course, visit every one of the six hundred churches; but if, as is probable, you confine yourself to a few of the important, you must be prepared to find that the beauties are details that must be sought for.

In the eighteenth century a passion for "elegance" seized upon many people in Italy, and they hired architectural assassins who went about killing beautiful ancient churches and turning their dead bodies into stage settings for the first act of Puccini's "Tosca." The evil these villains wrought upon the magnificent Arabo-Norman cathedral of Palermo is enough to draw shouts of execration from lovers of great architecture. Thank goodness, they left Monreale alone.

Nearly every important church in Naples has been spoiled by sham arches and "Corner House" marbles stuck on to the main fabric. To get a glimpse of the original beauty you must, as a rule, retire to crypts and cloisters, for the vulgarians naturally would not plaster their precious "make-up" over parts that did not show. Nevertheless, there are many beauties that the patient may find among the fripperies of the Neapolitan churches. The one-time ecclesiastical building that must not be missed is San Martino up on the hill by the castle, not only because it is now a museum (a very poor one), and has beautiful cloisters, but because its belvedere gives a wonderful view over the city and its environs.

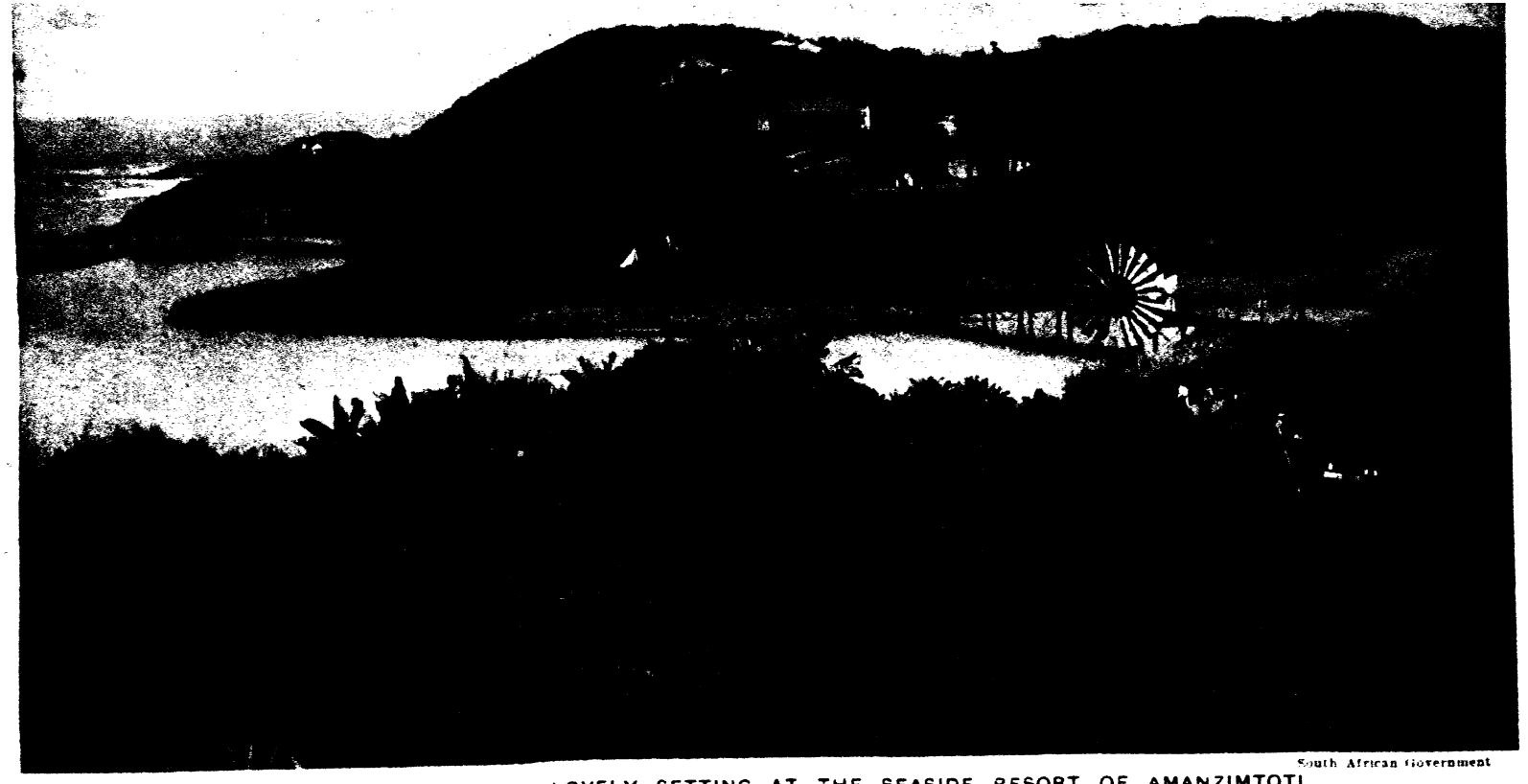
Despair of One-Day Tourists

The two main interiors of Naples are the Aquarium and the Museum. The former is small, delightful and of the first importance scientifically. The Museum is the despair of those who try to "do" a city in a day. The various collections are housed in a huge building, and almost everything in it is important. There are masses of treasure trove from Pompeii and Herculaneum; there are such world-famous things as the Farnese Bull, the Farnese Hercules and Juno, the Venus Callipyge, the Capuan Venus, the Narcissus, the Dancing Faun and the great battle mosaic; there are portrait busts, bronzes, vases, gems and coins. There is an enormous library, and when you have exhausted these and yourself, there are twenty-four rooms of important pictures awaiting inspection.

The Man who saw Naples

And beckoning the visitor outside the city are the Phlegrean Fields, Vesuvius, Pompeii, Sorrento, Capri, and across the peninsula Amalfi, Sorrento and the glorious temples at Paestum. The famous proverb must surely have originated with some desperate tourist who, trying to do Naples in a day, was found gasping with his latest breath: "See Naples—and die."

Well, at least half the injunction is important. Die we must, whether we will or not; therefore, while it is still in our power, let us "see Naples."



South African Government

COOL BUNGALOWS IN A LOVELY SETTING AT THE SEASIDE RESORT OF AMANZIMTOTI

Amanzimtoti, a native word, meaning "sweet waters," is a beautiful little seaside resort about 18 miles south of Durban. The railway line from Durban to Port Shepstone runs along the coast, crossing several salt water lagoons. Trees and grass grow right down to the margin of the shore, and the soil above the sand is very rich, being well adapted for the cultivation of sugar. At Umbogintwini, three miles north of Amanzimtoti, is a great explosive factory where some fifteen hundred hands are employed. The scenery along this stretch of coast, which is studded with villages similar to Amanzimtoti, is beautiful though lacking in grandeur

NATAL

The Garden of South Africa

by Evans Lewin

Author of "A Geography of Africa"

OF all the countries of Africa, south of the Zambezi, there is none that has a greater claim to be regarded as the garden of the continent than Natal.

This comparatively small province of the Union of South Africa, with an area of 35,284 square miles, or a little larger than Ireland, occupies only about one-thirteenth of the Union, but it contains a greater variety of scenery, more striking panoramas, a greater wealth of tropical beauties, a denser population and natives of finer physique than any other province. Natal may be regarded as a walled garden open on one side to the sea but shut off from the rest of the continent by mountain barriers through which access is only obtained by generally difficult passes.

This configuration gives to Natal a character peculiarly its own, a strong and charming individuality which makes it a geographical unit in a sense that cannot be claimed by any other province of the Union. Only in the north and in the extreme south does it merge naturally into the surrounding territories.

Mighty Drakensberg Rampart

Right along the western frontier runs a mighty rampart of mountains—the clear-cut and awe-inspiring escarpment of the high plateau of the interior—which ends abruptly in great chasms and solid walls of rock overlooking the broken and tumbled country lying between it and the Indian Ocean. This rampart, called the Drakensberg Mountains, is the dominating feature of this part of South Africa.

Fundamentally the country rests upon a huge mass of granite, flanked by granite-like rocks. When the waters of the ocean flowed over this primeval floor great deposits of sandstone, many hundreds of feet thick, were formed. These old sandstone formations are devoid of fossils. Subsequently violent earthquakes and volcanic action heaved up huge masses and hurled them in many directions and at different angles, and molten matter was thrown up as basalt in the rents and upon the sandstone and granitic base.

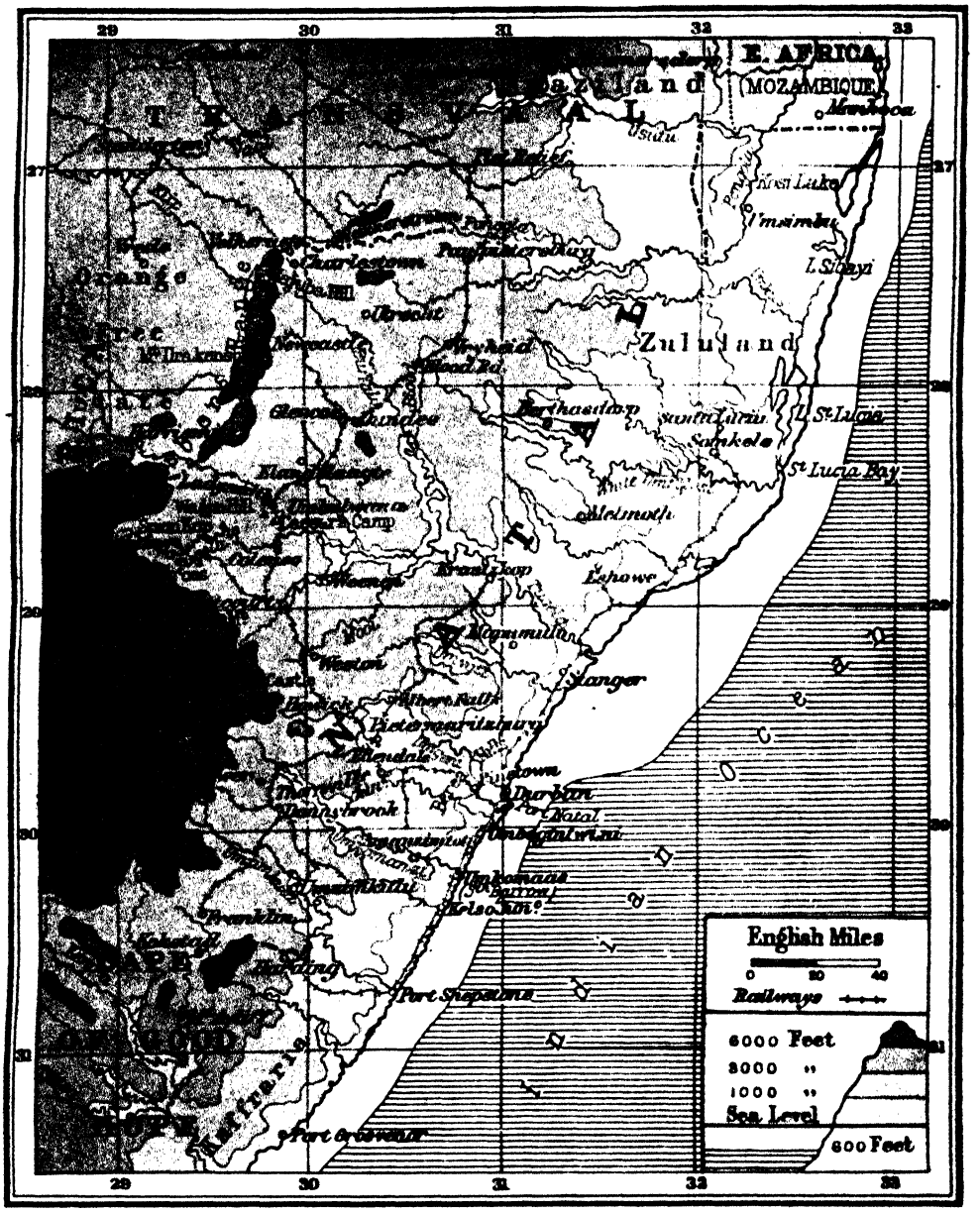
Vulcan's Awesome Work

Then followed the thick layer of claystone porphyry, or boulder clay, containing rocks and stones and stretching in a broken series from Swaziland, through Natal and into the Cape Province as far as Kimberley—a remarkable conglomerate formation frequently with a topmost layer of new sandstone and coal formation, containing fossils. Vast upheavals and displacements have thrown these great masses into picturesque confusion, so that geologically Natal is one of the most interesting countries in Africa.

In the railway journey from the great port of Durban, one advances by a series of zigzags through the contorted country to the high plateau of the interior.

The railway itself follows largely the natural avenues of advance, though much has been done of late years to lessen the steep gradient and to avoid the constant twistings and turnings of the earlier route. Passing from the rich coastal plains around Durban, the line rises quickly and steeply towards the interior, and in a distance of less than ten miles is already at an elevation of over 600 feet above the ocean.

At Pinetown, only seventeen miles from Durban, the height is 1,100 feet,

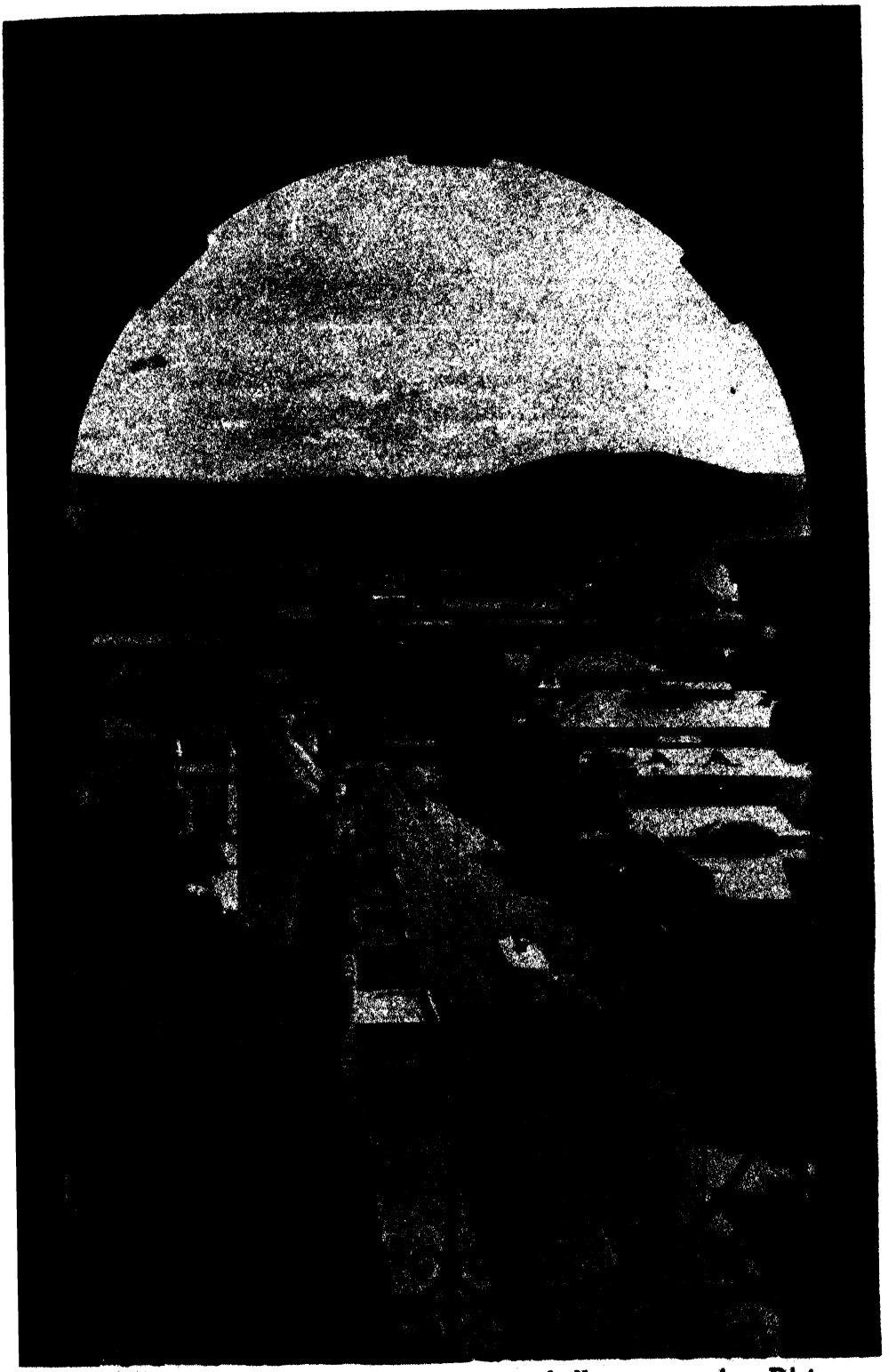


NATAL SHUT OFF FROM AFRICA BY THE DRAKENSBERG MOUNTAINS

and at Thornville Junction, 3,006 feet, the highest point on the way to Pietermaritzburg is reached.

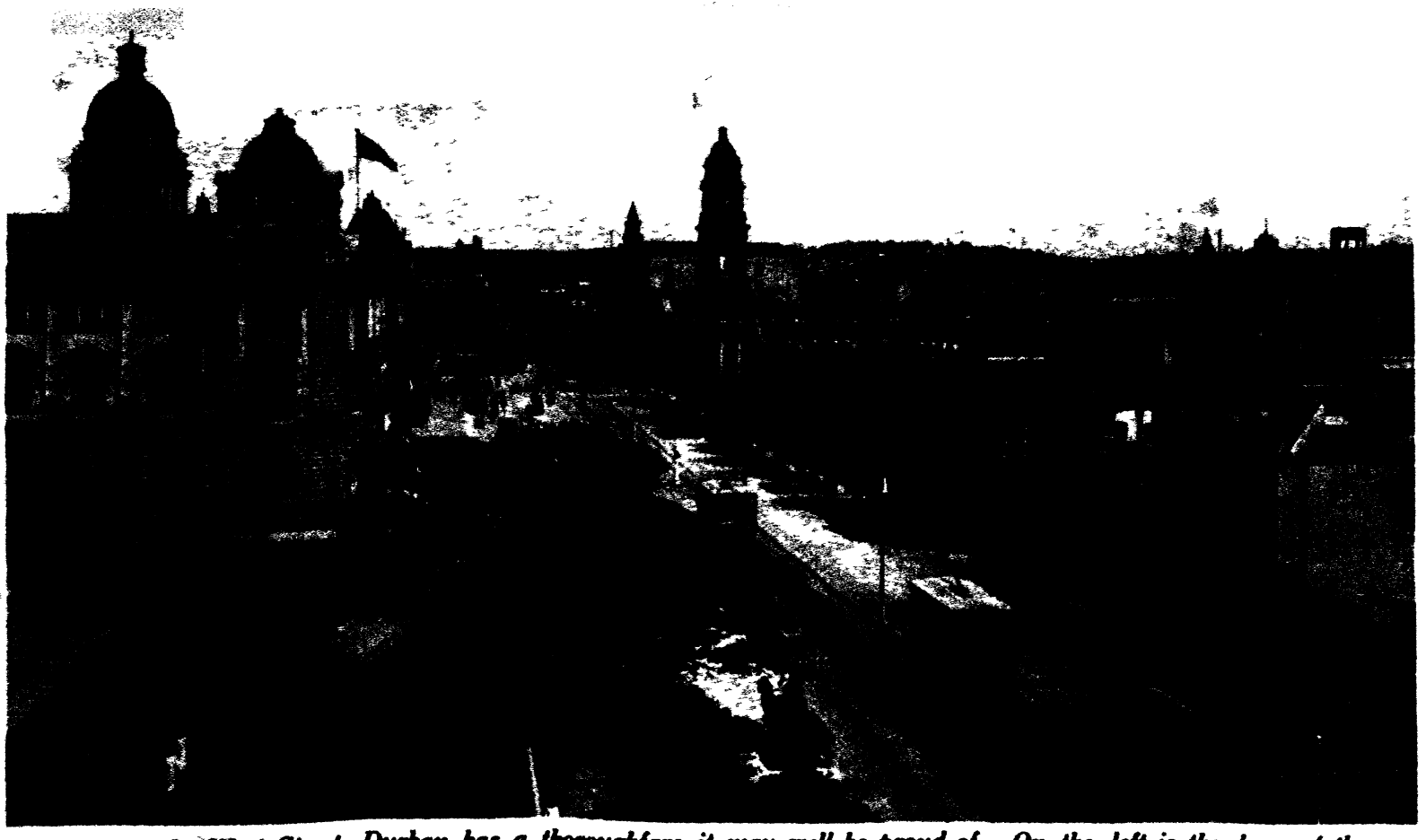
Pietermaritzburg, the beautifully-situated capital, is surrounded by mountains and forms a fascinating introduction to the true Natal of the interior. Beyond lies Howick, with its celebrated falls dashing over a precipice on the Umgeni river, 360 feet in height, and the Karkloof Falls not far away. Beyond one enters into the district made famous during the Boer War and passes successively through Estcourt and Colenso, where is a bridge across the turbulent Tugela river, to Ladysmith, the junction on the line to the Orange Free State.

Around this town are the hills occupied by Briton and Boer during the investment—Umbulwana, Wagon Hill, Cæsar's Camp and Observation Hill, with Spion Kop prominent some distance away.

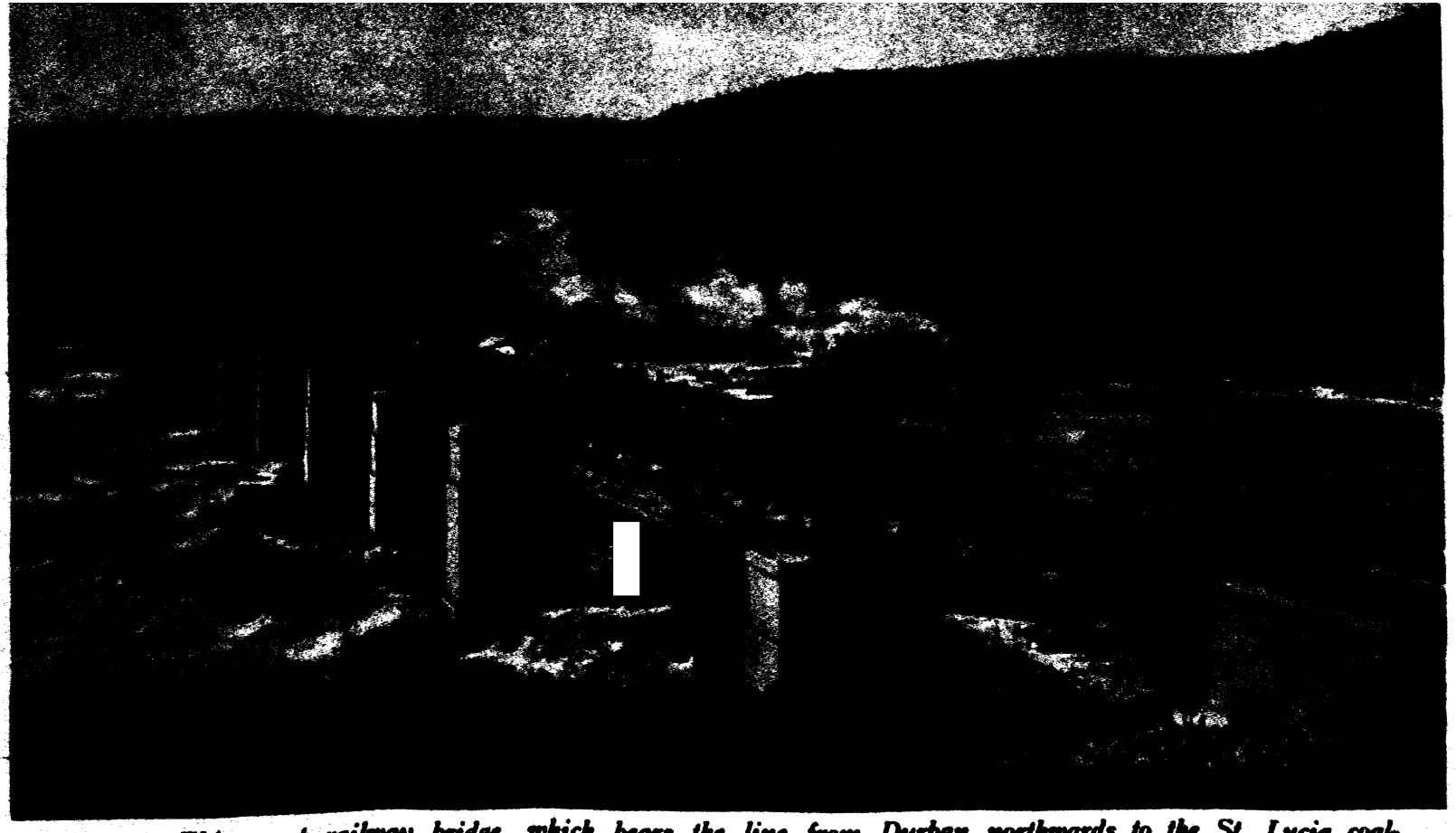


NATAL. *From the tower above the town-hall one can view Pietermaritzburg spread out within its great amphitheatre of hills*

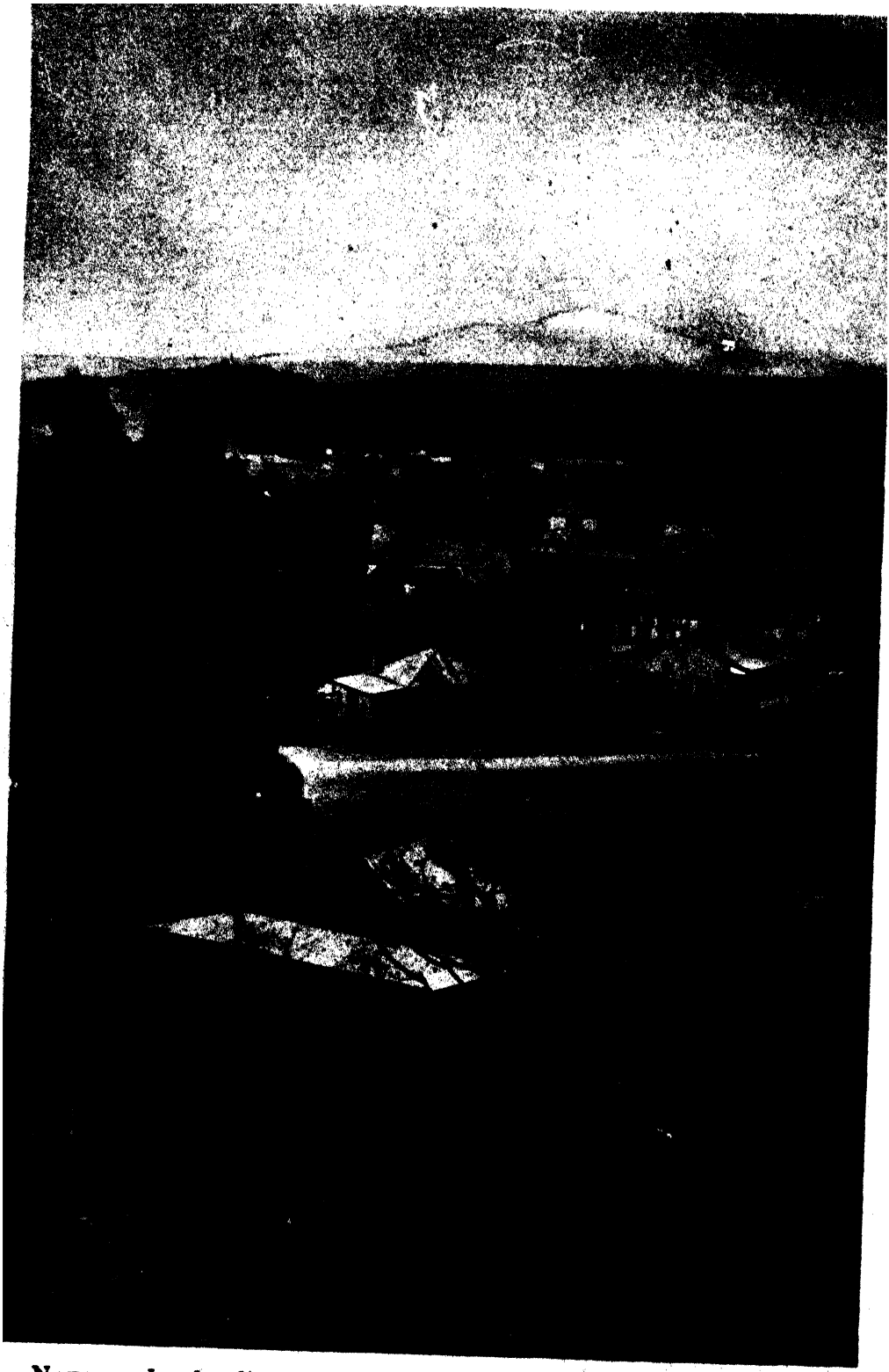
Photos, except in pages 2853 and 2858, South African Government



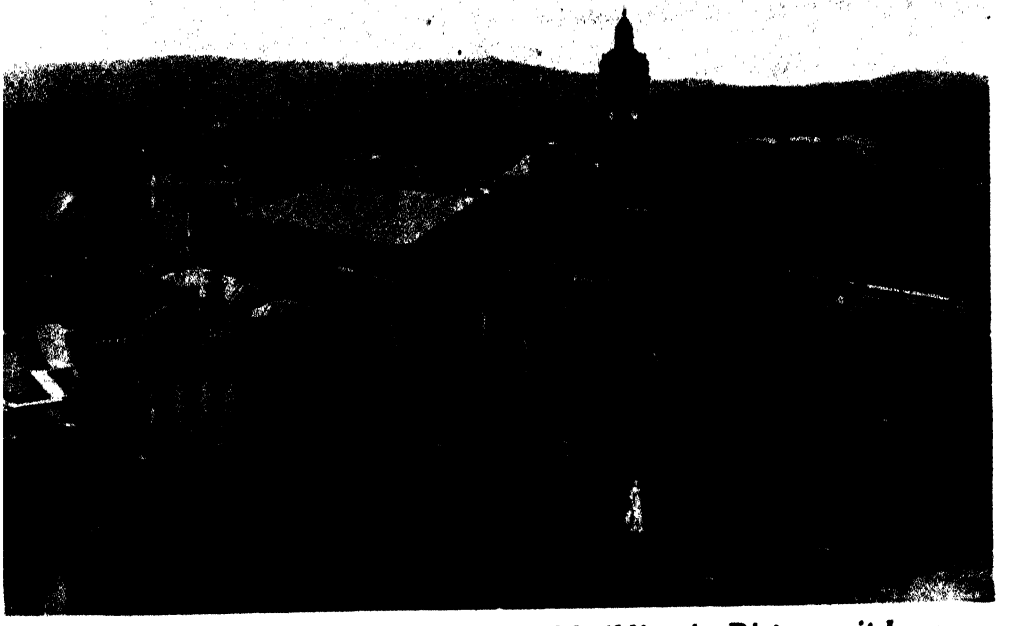
NATAL. *In West Street, Durban has a thoroughfare it may well be proud of. On the left is the dome of the town-hall, on the right the Post Office clock-tower, and beyond the hills of Berea*



NATAL. *This great railway bridge, which bears the line from Durban northwards to the St. Lucia coal-field, spans the impetuous flood of the Tugela River near its outlet into the Indian Ocean*



NATAL. *In the distance we see Wagon Hill and the flat crest of Lombard's Kop beyond, whence the Boers bombarded Ladysmith*



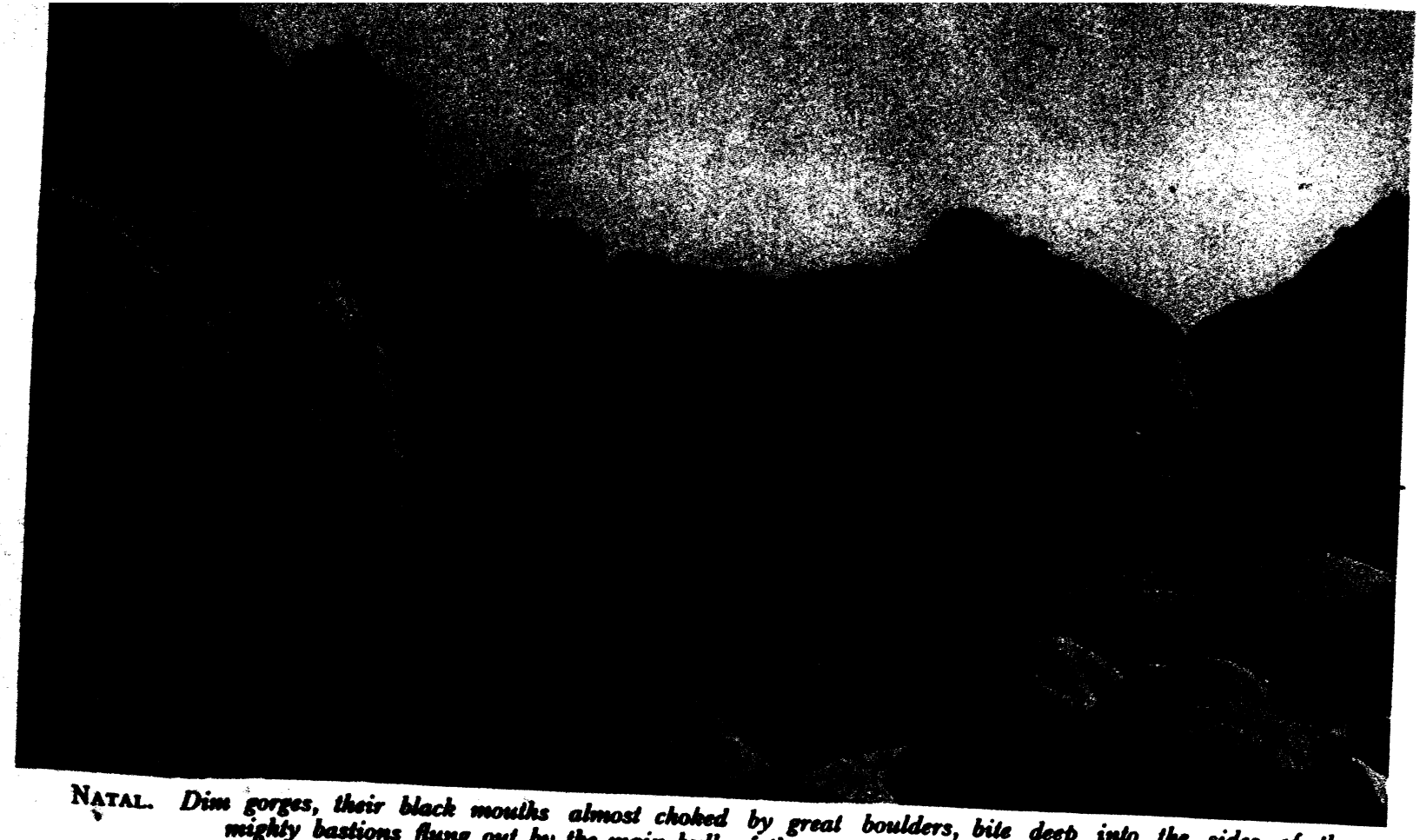
Before the splendid Provincial Council building in Pietermaritzburg there has been erected a white marble statue of Queen Victoria

NATAL. *Ocean Beach is Durban's chief attraction and a swimming-bath, gardens and esplanade have replaced the sand dunes*

NATAL. *Not far from the little mission station of Edendale are the beautiful Gordon Falls that break the course of the Umsindusi River.*
2856

Here the rushing water plunges over rocks and rapids, then makes a final leap down a terraced scarp in a dazzling array of sparkling cascades
2857

2860



NATAL. *Dim gorges, their black mouths almost choked by great boulders, bite deep into the sides of the mighty bastions flung out by the main bulk of the awesome Drakensberg Mountains*

The summit of Spion Kop is nearly 5,000 feet above the sea, and about 1,000 feet above the level of the surrounding country. Hence one passes through Elandslaagte, at the beginning of the "black" coal country of Natal, Glencoe and Dundee, to Newcastle and Charlestown, at a height of 5,386 feet, before which lies Majuba Hill. Beyond is the Transvaal.

The chief feature that will be noticed in this journey is the great number of hills and mountains that crown the tumbled country. The Drakensberg pushes forward enormous bastions as supports of the main range. One of these, known as the Giant's Castle, doubtless owing to its castellated lines, looks down from a height of 11,000 feet over the surrounding country. Another called Mont aux Sources marks the point whence the range decreases in size as it runs northwards towards the Transvaal.

Shallow and Turbulent Streams

The last mountain is the meeting-place of Natal, the Orange Free State and Basutoland, where the Tugela river plunges over a nearly perpendicular fall, of over 1,800 feet, down the concave face of the mountain, and rushes through a narrow cañon of wonderful beauty and grandeur.

The rivers of Natal, having their sources in the Drakensberg, are too rapid and shallow to be of any use for navigation. The largest, the Tugela, after its tempestuous fall from the escarpment, rushes over numerous cascades and chafes in narrow rocky channels before reaching the sea about 200 miles from its source. It drains fully a quarter of the province. The Umzimkulu, draining the southern regions, enters the sea at Port Shepstone, a small harbour connected with Durban by the coastal railway, which is continued into Zululand.

In the north is the Pongola, forming the boundary between Zululand and the Transvaal, and the White Umfolosi, the principal stream of Zululand, falling into St. Lucia Bay; and in the centre are the Blood river, the Umvoti and the Umgeni, the latter with the celebrated Howick Falls. All these rivers are extremely picturesque and some of them frequently become turbulent rapids after heavy rains.

Easy Journeys to the Highlands

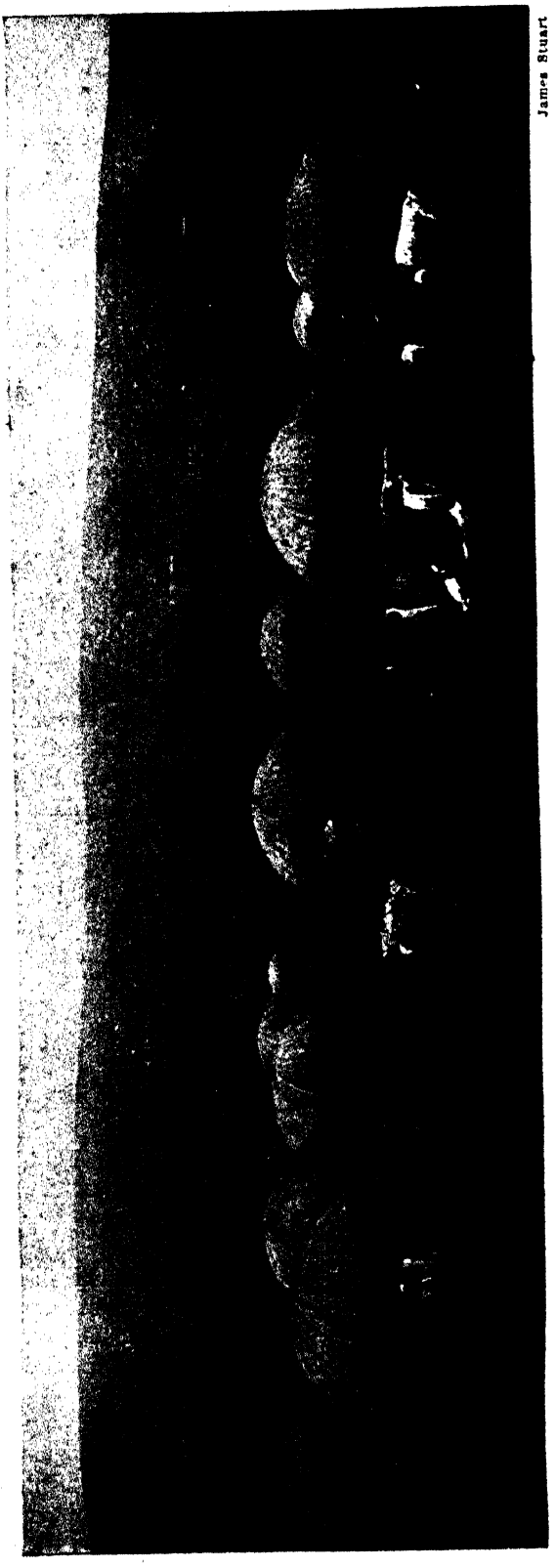
The surface of Natal rises in a distance of one hundred miles from the level of the sea to a height of two and a quarter miles above it. There is thus abundant scope for variety of climate, but on the whole, owing to proximity to the tropics, the climate is subtropical and continental. Warm, low-lying valleys and plains alternate with breezy highlands, and the humid and warm winds of the coastal flats are changed into the drier temperature of the uplands.

In Zululand, which forms the north-eastern portion of Natal, the higher country is healthy, but the coastal regions are subject to malaria. Throughout the province generally, however, the climate is healthy and well suited for Europeans, who benefit by the easy journeys to the more bracing highlands during the summer heat. For the Indian and Asiatic peoples who live in many parts of Natal the climate could not be bettered. There are numerous recognized health resorts in the country, such as Howick, 3,439 feet, and Estcourt, 3,833 feet, which are noted for their invigorating and delightful climate. In the summer when the heat in enclosed valleys might be oppressive, it is frequently tempered by heavy and sudden thunderstorms, when the lightning is extremely brilliant.

Durban's Lovely Surroundings

With a warm climate even in the winter it is natural that the vegetation should be of a semi-tropical character. For this reason Natal offers a profusion of delightful plants and flowers.

No more beautiful surroundings can be imagined than the immediate neighbourhood of Durban and other coastal towns, with their profusion of trained and wild semi-tropical flora. In the



James Stuart

AT HOME WITH THE NATIVES OF ZULULAND IN THE HILL AND PLATEAU REGION BEHIND THE COASTAL PLAINS

The inhabitants of Zululand, which was annexed to Natal in 1897, are mainly Zulus of Bantu stock. Many of them are engaged in agriculture and own large numbers of cattle, sheep and goats; here a kraal, or group of huts built round a cattle enclosure, is seen, the moment depicted being that following the midday milking

higher country the vegetation is more distinctly South African, but owing to the generally abundant rainfall over large districts, averaging from 38 to 40 inches in the year, there is a greater permanence of verdure than is general in most parts of South Africa.

The country, however, is not heavily timbered. There are large areas in which, partly owing to disforestation, trees are very scanty, or only of the stunted variety classed as scrub.

There are, however, certain heavy timber forests containing hardwoods, but chiefly yellow wood, Podocarpus, which, though harder than pine, is used wherever imported pine cannot be obtained. The indigenous trees along the coasts do not reach any great height, averaging from 30 to 60 feet, but they are generally bright with flowers and are a very pleasing feature of the landscape. But in the upland forests in the kloofs of the mountains and more especially on the southern slopes catching the rains from the Indian Ocean, they are of a larger and more valuable kind, and form a natural protection to the soil as well as affording shelter to game.

Natal is essentially a plantation country. The sugar industry alone supplies the whole of South Africa with this commodity, and very large quantities are exported to the markets of Europe. The area of profitable cultivation

extends from Port Shepstone on the south coast northwards into Zululand where, owing to a more abundant rainfall, the conditions are excellent for its production. In Natal proper the best lands for sugar are already occupied, but in Zululand there is still scope for extension.

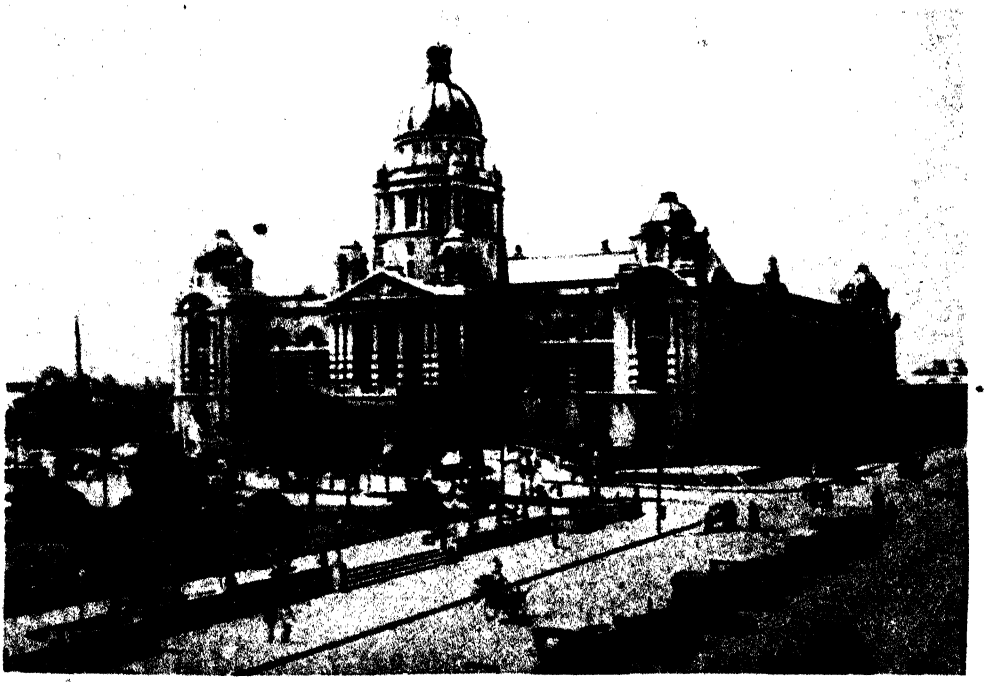
In addition to sugar, tea is cultivated, though on an ever-decreasing scale owing to the restrictions imposed on Indian immigration, and the consequent difficulty of obtaining cheap and efficient labour.

Another plantation industry is the growing of black wattle, Acacia mollissima, for its bark. This industry has shown an enormous increase, and there are nearly 300,000 acres planted with these trees. The annual value of the exports of bark and extract is nearly £1,000,000.

While Natal is mainly an agricultural country there are considerable mineral riches in the north-west of the colony, where over an area of 2,000 square miles there are numerous collieries. The principal workings are in the districts of Dundee, Newcastle, Utrecht and Vryheid, and coal also exists in Zululand.

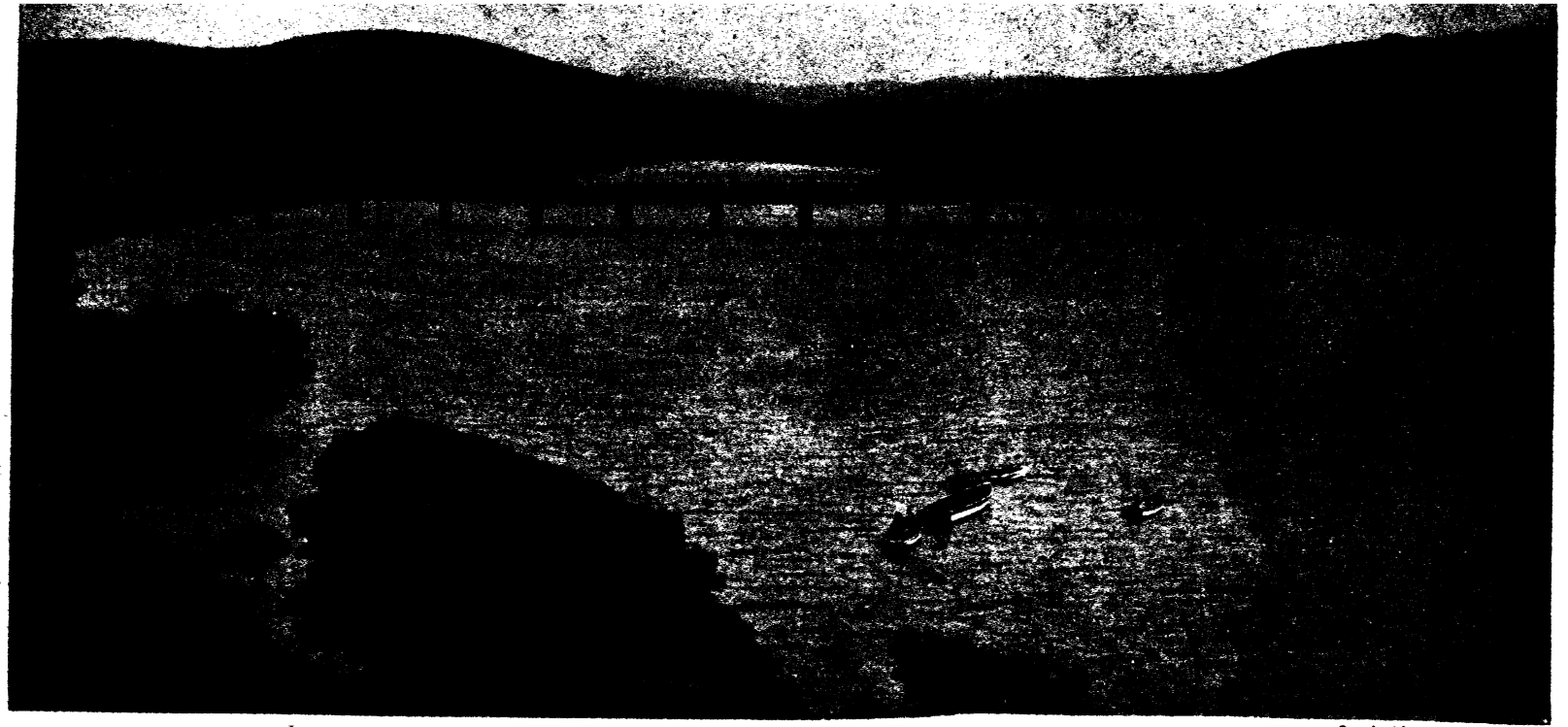
The Natal coal is an important asset as it can be railed easily to the coast on the down gradients of the main railway. Apart from coal the minerals of Natal are not important. Although gold occurs in many places there are no extensive fields, while in the case of copper, practically speaking, only samples have been obtained.

For a small country, Natal is admirably provided with railways. The absence of navigable waterways and good roads, and the necessity of obtaining direct communication with the Transvaal, rendered the construction of a line to the north-western borders an economic necessity if Durban were to benefit in the increasing wealth of the then South African Republic. With its improved surface, it forms, with the exception of the railway in Portuguese



TOWN-HALL AND MUNICIPAL BUILDINGS IN DURBAN

Durban, Natal's commercial capital, lies on the northern shore of a small, almost land-locked bay, and is connected by rail with Pietermaritzburg and the Transvaal. It is an interesting town, wonderfully improved since it was first laid out by the Dutch in 1834, and contains a handsome town-hall, with municipal offices, opened in 1910, a public library, museum, race-course and delightful parks



South African Government

ROLLING DOWNS ABOVE THE BANKS OF THE UMKOMANZI RIVER NEAR ITS ESTUARY

The village of Lower Umkomaas lies on the Umkomanzi about 31 miles south of Durban. Half a mile above its outlet into the Indian Ocean the river is crossed by a viaduct of fifteen spans, each of which measures 55 feet. There is good fishing and boating on the river, on the south bank of which stands the little township of South Barrow. An attempt was made at one time to convert the mouth of the river, which is navigable by small boats for a distance of eight miles, into a harbour, but the works have been converted into a marine parade and a safe bathing-place provided

territory from Lourenço Marques to Johannesburg, the best and most direct means of access to the riches of the Witwatersrand. The main line passes through Pietermaritzburg and Ladysmith on its way to the frontier, which is distant about 300 miles from the port.

In addition to this railway there is a line running westwards from Ladysmith to Harrismith in the Orange Free State and continued thence to Kroonstad, about 215 miles from the junction; and a coastal line from Port Shepstone to the neighbourhood of St. Lucia Bay in Zululand. The latter railway passes through the chief sugar districts.

There are also several branch lines serving the colliery districts as well as a railway running southwards from Pietermaritzburg and across the borders of the Cape Province to Franklin, which was built in order to avoid the danger of cattle from Natal taking East Coast fever with them when trekking into Kaffraria. Beyond the northern frontiers of Natal is the native state of Swaziland, a country about the size of Wales, under the direct control of the Colonial Office. It is an admirable ranching country, and is also believed to be highly mineralised.

A Country of Vivid Colours

It is impossible to visit Natal without being struck by the wealth of colour seen on every hand. The garden province of South Africa is essentially a country of colour. Apart from the bright and attractive colours of the trees and flowers, already alluded to, and the striking beauty of morning and evening skies with their indefinable charm of the interplay of light and shade upon the mountains, the glow of evening and the deep impressiveness of the tropical night, there is a wealth of colour to be seen on every hand, supplied by the people themselves.

In the towns the rickshaw, drawn by Zulus often fantastically arrayed—fortunately not in European clothing as is so frequently the case in other towns in Africa—with horns and dancing feathers on their heads, has been adopted as a means of conveyance, and takes the place of the London taxi. The streets of Durban are frequently a kaleidoscopic mass of moving colour, and form a delightful contrast to anything that can be seen in any European city.

More Indians than Europeans

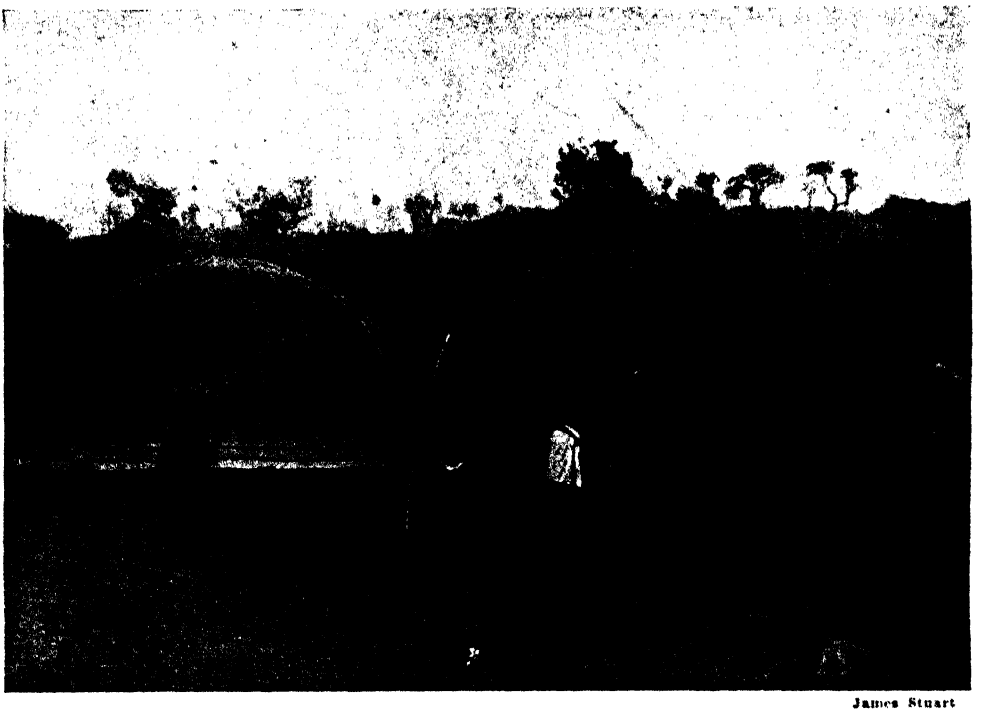
The large Indian population, originally imported to work on the sugar plantations, though now nearly half of the Indians of Natal have been born in the country, adds a touch of the East to an essentially African scene. These people number over 140,000 and are a larger community than the Europeans. They are engaged on the plantations and in agricultural work, but there are also a large number of small traders and even some substantial merchants, as well as numerous Indians employed on the railways and in businesses as clerks, and in other responsible positions.

The trade of Natal is concerned chiefly with the products grown on the farms and plantations and the export of coal, both from the Transvaal and from Natal itself. This trade converges at Durban, which is the only considerable port visited by ocean liners and large steamships, its situation being admirable for commerce with all parts of the Indian Ocean, the east coast of Africa, India and Australia.

Very large quantities of coal are exported for bunkering, and also for cargo to Mauritius, Egypt, Singapore and more especially India, where South African coal is in great demand. The presence of this prime factor of industrial expansion is of much importance for the future of Natal.

Manufactures of Foodstuffs

Manufacturing enterprise up to the present has been confined chiefly to food products, such as biscuits, confectionery and jams, and similar articles; soap, candles, matches and boots and shoes; articles for which there is a local demand that can now be satisfied by the local manufacturers.



James Stuart

TYPE OF HUT MOST COMMONLY OCCUPIED BY NATIVES IN NATAL

The framework of the native hut lasts much longer than the covering grass. Consequently when the owner finds it necessary, for sanitary or other reasons, to vacate the site, he frequently, with the assistance of his neighbours, carries the framework bodily to the new destination. The white man's mode of living and contact with civilized life have but little influence on the natives' social customs

James Stuart

MAT-COVERED ZULU KRAAL IN THE NATAL "THORN COUNTRY"

In the "thorn country" the abundance of common wood permits of the fences encompassing the native villages and cattle-enclosures being constructed of wood instead of stone; the outer fence serves as a protection against predatory animals. The natives are singularly expert in providing for their own limited needs and comforts, and the huts are covered with watertight mats, the handiwork of the women

From Glencoe to Paulpietersburg and from Newcastle to Utrecht, covering the great coal area, there are ample opportunities for industrial enterprise. Many waterfalls are waiting to be harnessed. Within 20 miles of Pietermaritzburg are three large ones, and those at Howick are already being utilised for electric energy. With this abundant supply of water-power the railways of Natal are being electrified.

Durban, the largest city of Natal, is beautifully situated on Port Natal, a large land-locked harbour entered by a narrow channel between the Point and the Bluff, forming the only important anchorage between East London and Delagoa Bay. The obstructions caused by the bar at the entrance to the harbour have been removed, and the port is open to large steamships which lie alongside the wharfs erected on the right-hand side of the harbour. The inner basin covers an area of eight square miles, and the depth of water near the wharfs is from 23 to 34 feet.

The situation of the city along the curving shores of the harbour, with its beautiful tree-planted esplanade, is particularly pleasing, especially when viewed in conjunction with the surrounding hills, known as the Berea, whose slopes are covered with charming villas and gardens.

The principal public building in the city is the Town-Hall and Municipal Buildings, erected in 1910 and surmounted by a dome 157 feet in height. This building contains a hall capable of holding some 3,000 people, and it is the centre of the municipal, social and literary life of the inhabitants. There is a fine library and a small museum and art gallery in the same building—eloquent testimonies to the general culture of a European population of 57,000. The coloured population of Durban numbers 89,000, including about 25,000 Asiatics. Beyond the harbour is the Ocean Beach, which has been converted into a pleasant seaside resort, with special bathing-places made safe from sharks; it forms one of the principal attractions of South Africa.

Pietermaritzburg, the capital of Natal, is a quiet residential city lying within easy reach of much of the finest scenery of Natal. As it is surrounded by mountains it is a very attractive centre, and the climate generally is very healthy. There is a fine town-hall and numerous government buildings.

For a small provincial capital, with a European population of only 18,000, Pietermaritzburg is well supplied with the amenities of social and literary life, including a good museum, library and Botanic Gardens.

Elsewhere in Natal there are numerous small towns, but in a country with so small a white population these do not possess any special architectural features, though they are frequently distinguished by beauty of situation.

NATAL: GEOGRAPHICAL SUMMARY

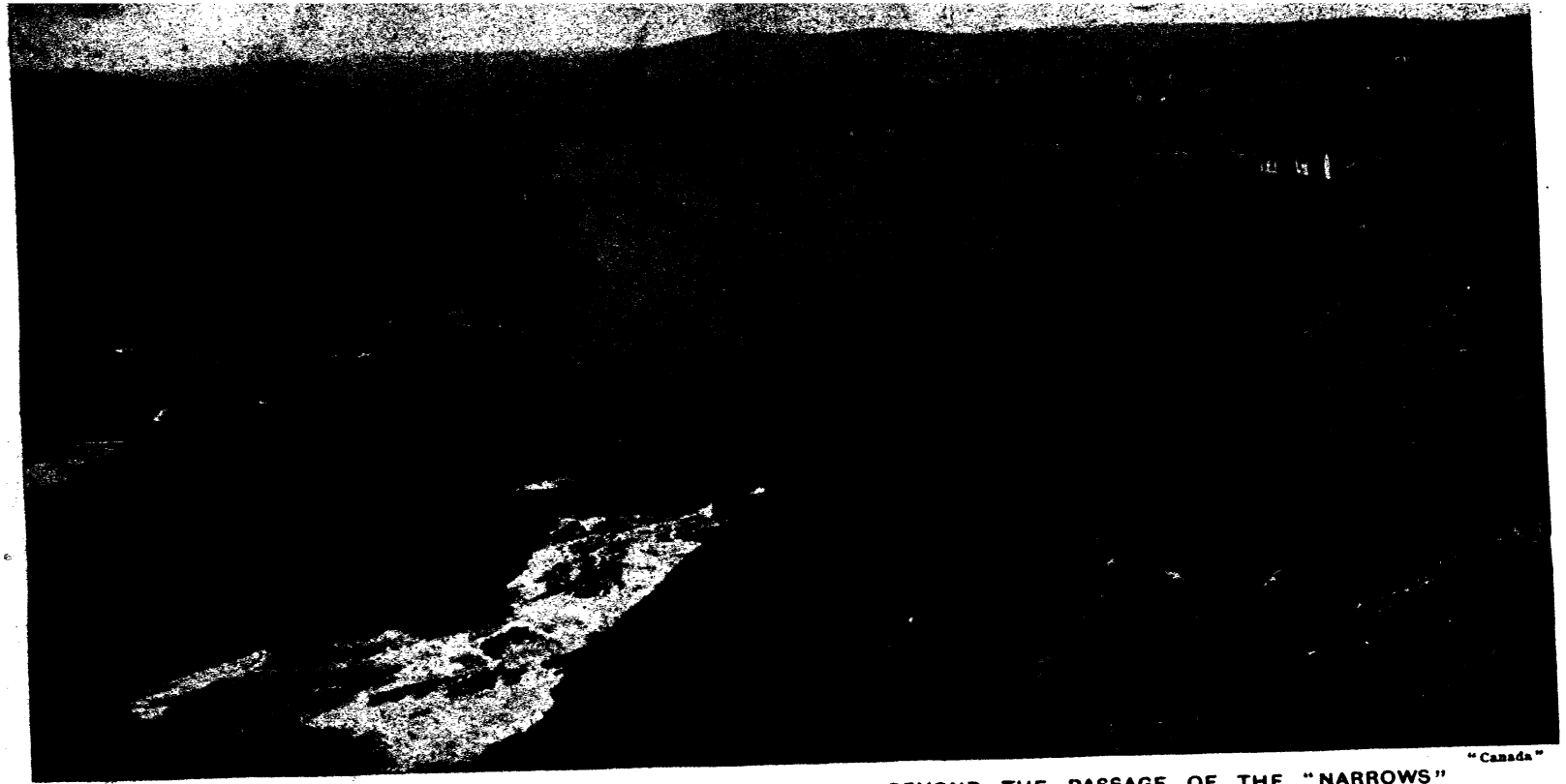
Natural Division. From the interior plateau of Southern Africa the land drops steeply by a scarped edge, here the Drakensberg Mts., to a coastal lowland. Natal is one of the widest and most accidented sections of the east coast lowland, and with fairly definite boundaries to south and north forms a physical region with sharply entrenched rivers.

Climate and Vegetation. With summer rains and high summer temperatures the climate is east coast marginal to the great ocean. (Cf. Florida, French Indo-China, Uruguay.) From the luxuriant plant life of the coastal swamps inland the vegetation changes to forest on the slopes. The rainfall suffices to maintain permanent vegetation.

Products. Coal from one of the most valuable coal-fields of the Southern Hemisphere. (Cf. Newcastle in New South Wales.) Plantation crops—cane-sugar, black wattle, tea. (Cf. New South Wales and Queensland.)

Communications. Overseas traffic concentrates on Durban. Inland railways climb the scarp to the Transvaal and Orange Free State.

Outlook. A handful of white people is faced with the racial problem of the numerous indigenous blacks and the many Asiatic immigrants from India or their descendants. Labour is needed for the mines and plantations, and the future rests with the satisfactory solution of the problem.



"Canada"

WONDERFUL HARBOUR OF ST. JOHN'S, LYING IN PEACE BEYOND THE PASSAGE OF THE "NARROWS"

St. John's is approached by a narrow entrance called the "Narrows" in the rock-bound coast. Huge cliffs of dark red sandstone piled on a foundation of grey slate rock blot out the horizon. On the right towers an almost perpendicular precipice 300 feet high, and on the left a rugged hill attains a height of 600 feet. The "Narrows" is half a mile long and at the narrowest point, between Pancake and Chair rocks—from which a chain was hung in the olden days to keep out hostile ships—it is only 400 feet wide. Vessels of the largest tonnage can enter at all periods of the tide

NEWFOUNDLAND

Where the British Empire Began

by Beckles Willson

Author of "Newfoundland, the Tenth Island"

STRETCHING across the entrance of the Gulf of St. Lawrence, and guarding it both from the north and the south, lies the great island of Newfoundland, the tenth in point of size on the globe. Cape Spear, its most easterly projection, is only 1,640 miles from the coast of Ireland; so that Newfoundland may well claim to be a stepping-stone between the two hemispheres.

Triangular in shape with an area of 42,734 square miles, larger than Ireland and thrice the size of Holland, it has a coast-line so wondrously indented that it goes winding in and out of bays and inlets for a total circumference of 6,000 miles. Beginning at the side facing Europe, it is almost cut in two by the large bays of Placentia and Trinity, its southern peninsula of Avalon being joined to the main body of the island by a neck of land which at one point is only three miles across.

Elsewhere there are bays which penetrate into the interior as far as 90 miles. Some of the larger fjords are studded with islands of varying size which offer scenes of wild and rugged beauty. Naturally to the fishermen these inlets are a great convenience, often enabling them to fish within a stone's-throw of their own dwellings.

Land of Lakes, Rivers and Marshes

While the interior of the island is hilly, there are no mountains of marked elevation. Surrounding some of the bays are considerable expanses of forest and of land capable of tillage. Farther into the interior the land has an undulating surface, with ranges of low hills.

More than a third of the island's area is covered with lakes and rivers, ponds and marshes. Grand Lake, on the west side of the island, is 56 miles in length. Red Indian Lake, located near the centre, is 37 miles in length, while Gander Lake, which drains the rivers in the north-east section, is 33 miles long.

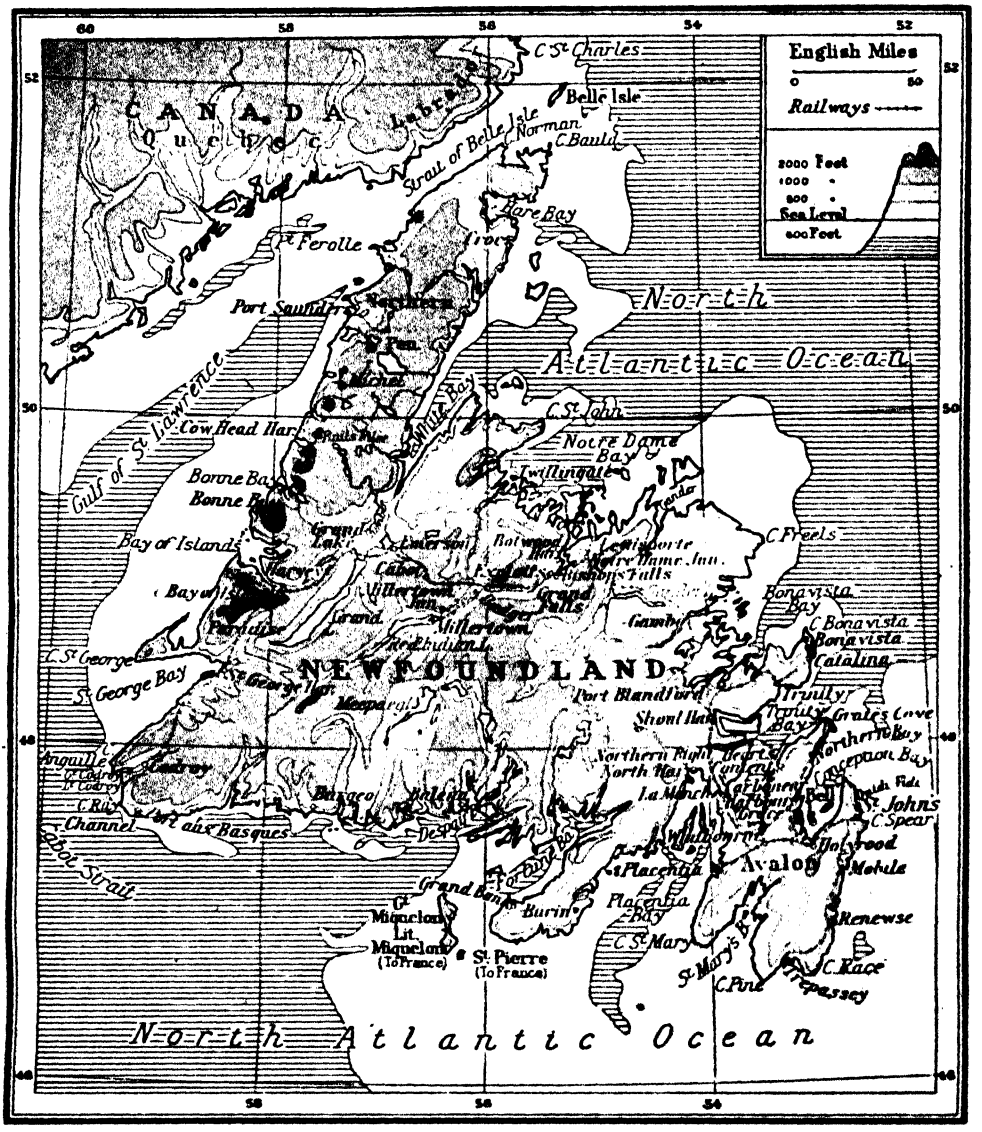
There are three large rivers on the island, the longest of which is the Exploits, 200 miles in length. Then comes the Gander, 100 miles long, and the Humber, which has a course of about 70 miles.

A Climate much Maligned

Newfoundland's climate has long been unfairly aspersed. Its very name suggests, to many people, great extremes of cold and the constant prevalence of fog, whereas in Avalon and the southern part of the island the thermometer rarely goes below zero in winter, the mean temperature in January being 24° F., and ranges from 70° to 80° in the shade in summer with a mean August temperature of 60°. In the north it is, however, much colder, and the summers are very short.

Although the island is occasionally visited by fogs, the fogs popularly associated with Newfoundland are confined to the vicinity of the Great Banks. These great ledges, or mountains in the sea, lie from 200 to 600 miles off the coast of the island. The fog there generated is caused by the meeting of the waters in the Gulf Stream with the colder Arctic current. On the western coast of the island the climate is very agreeable, and vegetation commonly a month in advance of that in the east.

The interior of Newfoundland is virtually a wilderness, and there remain large tracts of unknown country awaiting



NEWFOUNDLAND WITH ITS 6,000 MILES OF IRON-BOUND COAST

exploration. Much of it is barren, but in the valleys there is a considerable area of land favourable to grazing and agriculture.

Altogether there are some 10,000 square miles of forest growth, chiefly black spruce, balsam, fir, birch, white spruce, elm and hazel. Timber grows with remarkable rapidity, and reproduces itself, on an average, every thirty years; in some cases the average is fifteen years. In this way nature compensates for the comparatively short season and provides for reafforestation.

Besides that cut for pulp and paper-making, most of the timber is utilised in the island, principally for ship-building, cooperage purposes, and for pit props. An increasing trade in manufactured lumber is, however, developing. The Newfoundland hard woods, such as yellow birch, tamarack and ash are admirably suited for making tool handles, spools, bobbins and similar articles so important to the textile industry; while the local birch, juniper and tamarack are found useful in ship-building, spruce and fir are, to some

extent, employed in the manufacture of furniture.

In the wild recesses which stream and river drain, game of all kind abounds. Here herds of caribou and other denizens of the forest, such as moose, foxes, rabbits, hares and birds, still live in comparative security and enjoy a rarely interrupted freedom.

The Newfoundland caribou are a valuable asset to the country, and are preserved by salutary game laws. The woods of the northern peninsula are the summer home of these caribou; their habits are migratory, and they can be seen in great numbers doing their annual "trek," passing through woodlands, over the barrens, or swimming in herds across the lakes.

The Newfoundland partridge or willow grouse is found in great numbers on the barrens and near the moorlands of the island, its most popular haunts being in the vicinity of the peninsula of Avalon, from Cape Race to Cape St. Mary.

There is a plentiful supply of game of other kinds—hares, rabbits, wild geese and ducks, curlew, snipe, plover, otter and beaver.

Other forms of wild life are represented by the black bear, which is nourished by the berries that grow in great profusion all over the country, and the silver fox, which is a native-born resident of the remoter northern region.

The lakes and rivers of the country abound in salmon and trout, and therefore attract an annually increasing number of anglers.

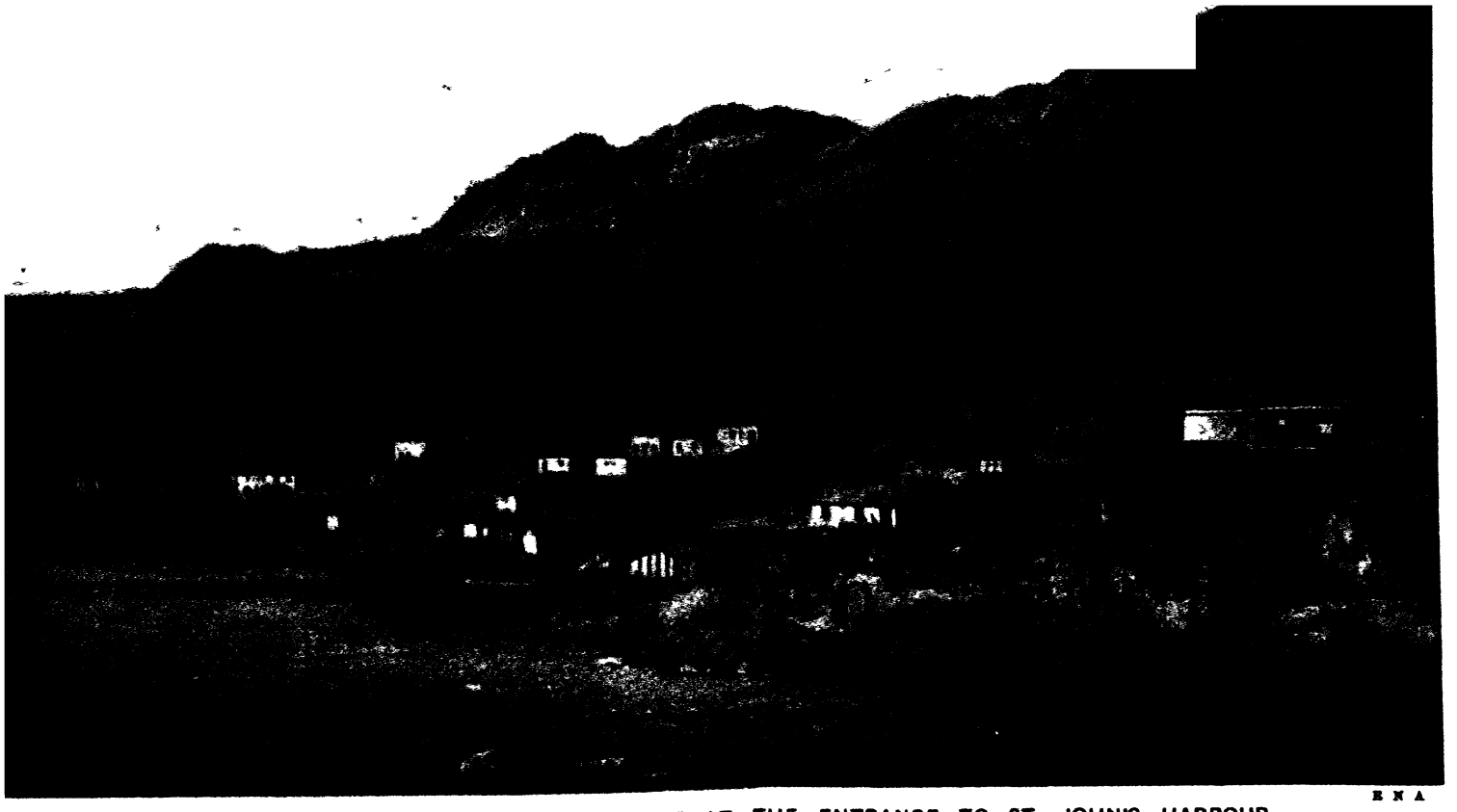
Local capital and energy having been fully occupied with the fishing industry, Newfoundland, with the exception of two or three well known areas, is mineralogically undeveloped, and most of the prospecting work done has been confined to the coast-line.

The principal mineral deposits are of iron ore. They are found in several varieties, including magnetite, hematite, limonite, specular and so on. The only

Lord Morris

GREAT FORESTED HEIGHTS IMPRISONING ST. PAUL'S INLET

St. Paul's Inlet is on the west coast of the island and the grandeur of its scenery ranks it with the fjords of Norway. Some of the towering cliffs are rugged and savage, while others are clothed with trees, and on the flat margins are forests of black spruce, birch, fir and balsam. The interior of Newfoundland is barren in certain regions and considerable stretches are almost unexplored



E N A

FISHING VILLAGE ON THE IRON-BOUND COAST AT THE ENTRANCE TO ST. JOHN'S HARBOUR

Great ramparts of rock guard the coasts of Newfoundland, rising in bold cliffs and headlands to a height of 300-400 feet At frequent intervals, however, this repellent wall is cleft by deep fjords, often more than 10 miles wide at their mouths and running inland for a distance of 40 miles. These splendid bays bring the fish up to the very doors of the fishermen, who live in villages strewn along the coast In these villages the fishermen erect platforms supported by poles on which they dry their catch and tackle in the sun. What is termed the shore fishery is carried on from these settlements

systematic mining is that in connexion with the hematite deposits at Bell Island in Conception Bay.

Two companies working the Bell Island mines at Wabana, an Indian name meaning "the place where the light first shines," are the Nova Scotia Steel and Coal Company, which started operations in 1895, and the Dominion Iron and Steel Company. These two between them own five beds of ore, estimated to be capable of a maximum yield of a million tons annually.

While Newfoundland can hardly yet be considered an agricultural country, there are extensive tracts of pasture land on the western coast, notably in the fertile valleys of the Codroy and Humber rivers, where the raising of cattle and the rearing of sheep is beginning to be carried on profitably. Cattle and sheep thrive out of doors all the year round, when provision is made by the construction of silos, pits for storing forage, to facilitate winter feeding. As much as three millions of pounds of local beef and mutton, with a value of £80,000, has been produced from these areas in one season—that is, about three times as much as the amount imported, and the local yield of forage and root crops is equally satisfactory.

Prosperity Based on Cod

The producing season is short, but this is compensated for by rapid vegetable growth. The average yield of potatoes is seventy-five barrels per acre, and oats per bushel average thirty-five to the acre. Hay is produced at an average of from two to two and a half tons to the acre. Strawberries, raspberries, plums and other garden fruits grow in abundance. It is estimated that there are 2,000,000 acres in the island capable of agricultural development.

But it is as fishermen and in the industries connected with fishing that the bulk of the Newfoundland population gains a livelihood; and the particular species of fish upon which the fortune of the island still continues to be based is the cod.

The Newfoundland cod fishery is the largest in the world, and has made the island famous. At one time codfish was the national currency, payment of debts being made in kind.

There are many other kinds of fish found in the waters round the island, which are also of much commercial importance, such as halibut, haddock, turbot, eels and mussels, besides herring, salmon, lobsters, caplin, squid, in which there is already a growing industry.

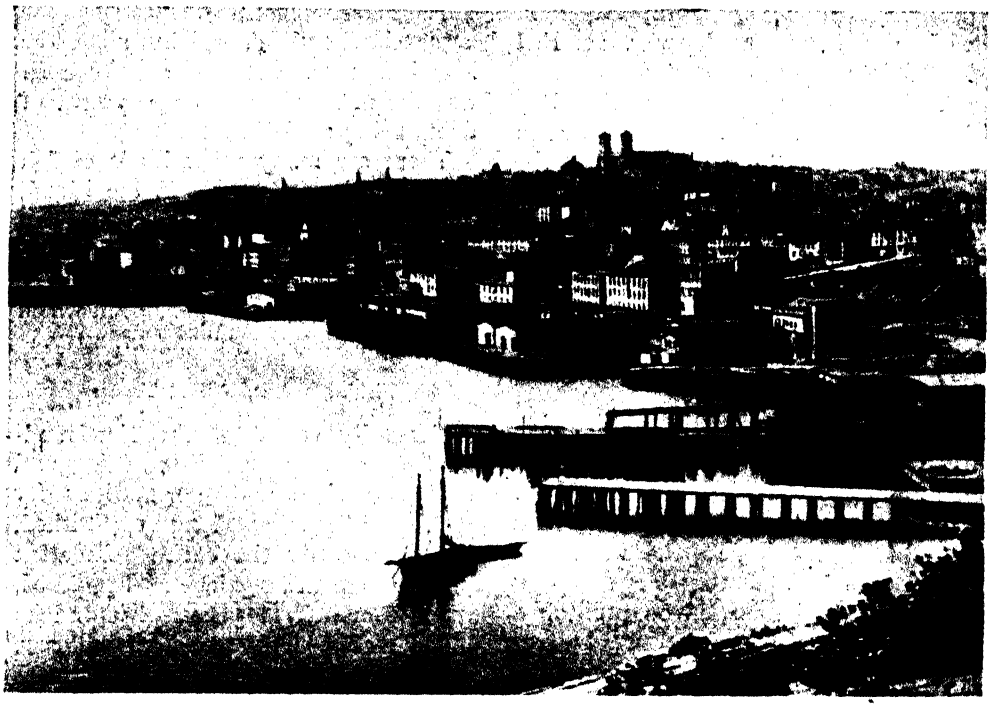
Fishing and its Allied Trades

Generally speaking, the Newfoundlanders are so expert in catching and drying codfish, and the markets for it have been so long established, that practically the entire population of the country gains a livelihood, directly or indirectly, out of it and its allied trades. Ship and boat building, the making of nets, sails, ropes, lines and twines, and other appliances essential to the prosecution of an extensive industry of this kind, provide of themselves continuous employment to a large section of the inhabitants.

Cod-fishing is of three distinct branches, the first and most important being the shore fishery, which is carried on from the coast settlements. Here the fishermen catch the fish a short distance off the shore by means of hooks or jiggers, and trawls or bultows, or more often by cod-traps. About three-quarters of the total catch of Newfoundland fish is taken in this manner. The catch, in an average year, of shore codfish reaches the enormous figure of 1,600,000 quintals, a quintal being equal to a hundredweight.

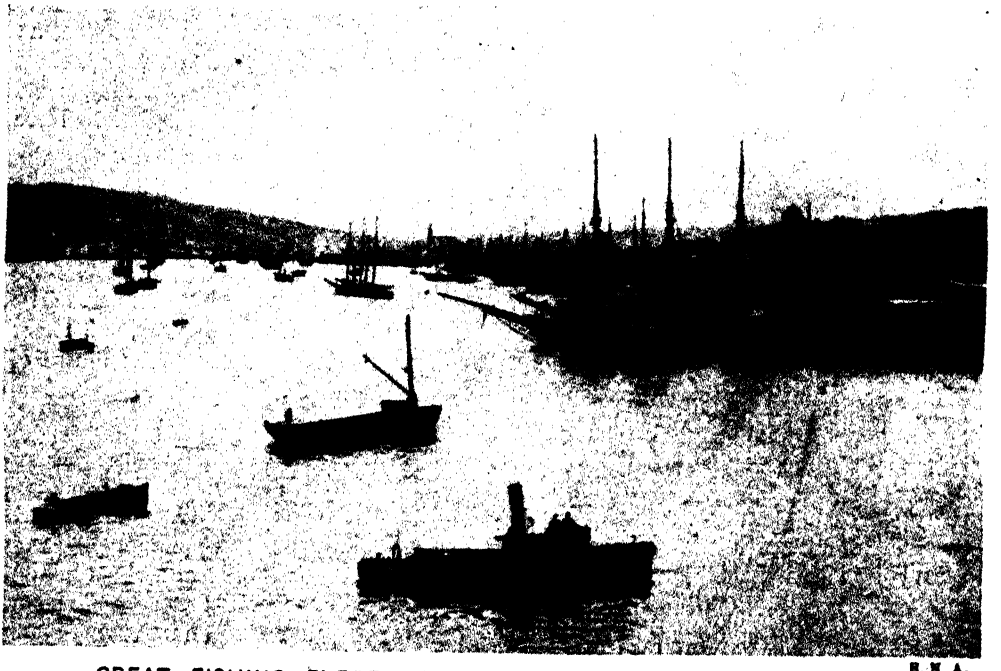
Introduction of the Motor-Boat

The use of motor-boats in recent years has aided very appreciably in the prosecution of this branch of the industry. The shore fishery begins on June 1 and ends on October 30. It is therefore a summer fishery, although there is some fishing off the south coast of the island in the winter months by hook and line. A



ST. JOHN'S RISING FROM THE HARBOUR IN A SERIES OF TIERS

On the crest of the hill is the Roman Catholic cathedral of S. John the Baptist. It is in the form of a Latin cross, and has two towers 138 feet high. The Anglican cathedral, about half-way up the slope, is one of the finest ecclesiastical edifices in British America. It was designed by the elder Sir Gilbert Scott in an Early English style and restored after the fire in 1892



B. N. A.

GREAT FISHING FLEET AT ANCHOR IN ST. JOHN'S HARBOUR

Beyond the " Narrows " the harbour trends suddenly to the west, so that it is completely landlocked. It is fully one mile in length and nearly half a mile wide. St. John's is the headquarters of the fisheries and the chief business centre of the island. To the right in the photograph can be seen the clock-tower of the Court House, opened in 1904, in Water Street

WHITE COTTAGES UPON THE SHORES OF THE BAY OF ISLANDS

The Bay of Islands lies upon the Gulf of St. Lawrence on the west coast of Newfoundland. The three arms of the bay run 20 miles inland with magnificent scenery, amidst which rise the Blomidon mountains. The Humber river, the third largest river in the island, flows into the bay, which, as its name indicates, is dotted with islands. It has long been the centre of the herring fishery

B. N. A.

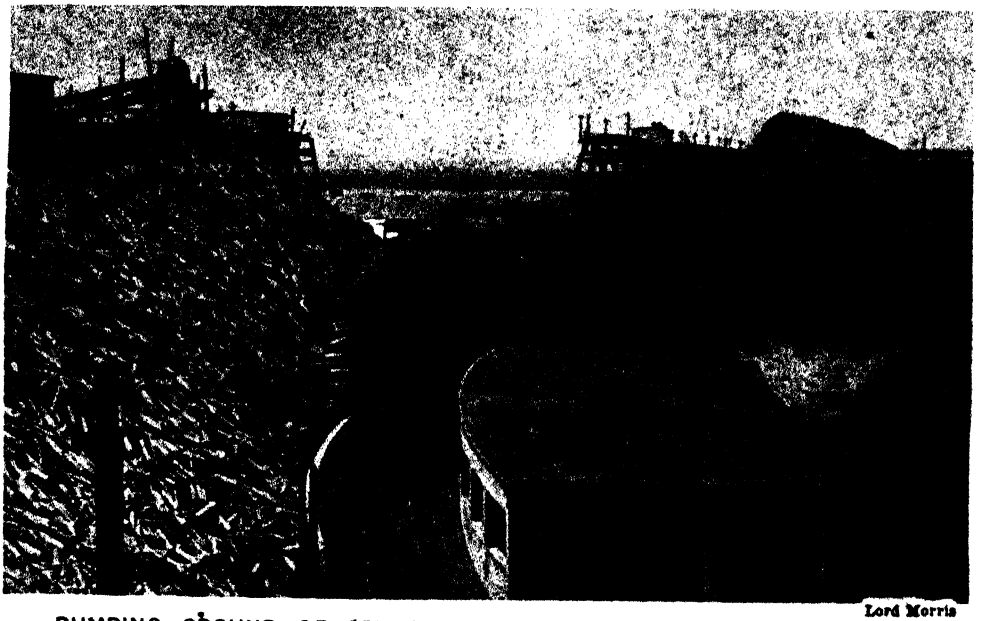
TYPICAL FISHING VILLAGE OF NEWFOUNDLAND NEAR ST. JOHN'S

Fishing occupies the bulk of the inhabitants of Newfoundland, and the cod fisheries are larger than those of any other country. In this small village of Quidi Vidi may be seen the stages at which the fishermen land their catch, the "flakes" on which the cod are hung to dry; in a word all the varied processes, including "splitting," "heading" and "salting," connected with the dried-cod industry

"Canada"

CUT OF LUMBER ON A FROZEN RIVER WAITING FOR THE THAW

The rapid reproductivity of the forest growth in Newfoundland is a principal factor in the development of the lumber and paper industries. The extensive wooded areas represent a vast potential wealth, for the denuded forests grow so quickly as to yield wood suitable for pulp and paper-making within thirty years. Some 3,300 square miles belong to the Anglo-Newfoundland Development Company



Lord Morris

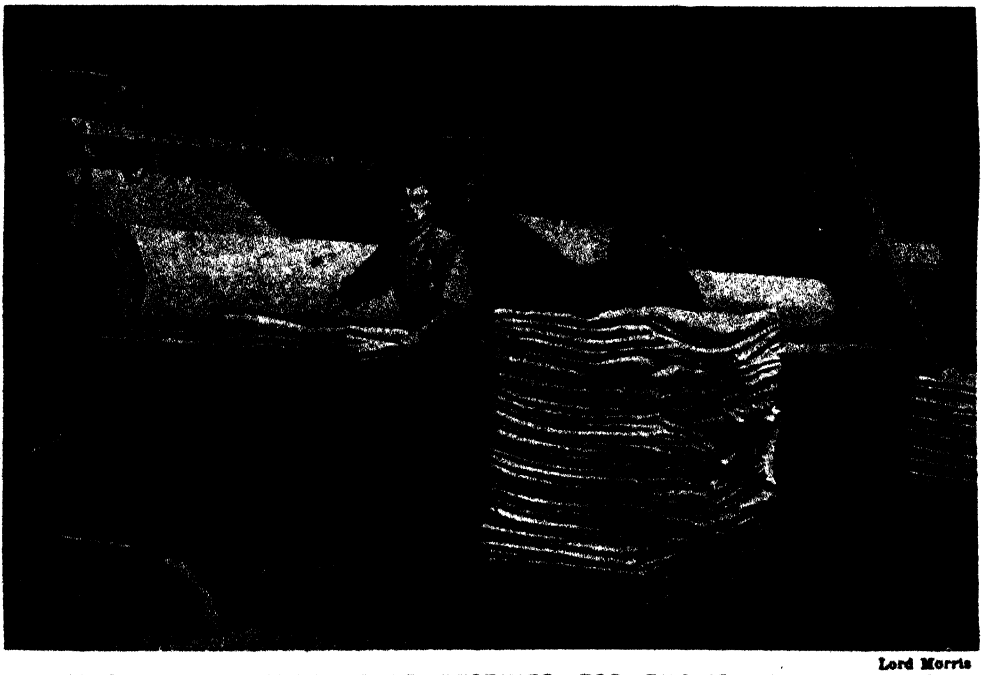
DUMPING GROUND OF SPRUCE LOGS READY FOR THE PULP MILLS

Among the varied forest wealth of Newfoundland, the pine, spruce, fir, juniper, birch and maple have pride of place. The white pine may be said to be the mainstay of the lumbering industry, while spruce is used chiefly in making pulp and paper, and enormous areas exist on the island of what is known locally as "pulp woods." This colossal dumping ground is at Grand Falls

"Canada"

WOOD PULP IN THE MAKING AT THE MILLS OF GRAND FALLS

Some of the finest pulp and paper mills in the world are to be found at Grand Falls in Newfoundland, and the town owes its existence and prosperity to the mills established by the Anglo-Newfoundland Development Company in 1910. The industry has assumed enormous dimensions within recent years, and its large steel and concrete buildings, equipped with modern machinery, cover more than 8 acres



Lord Morris

NEWFOUNDLAND WOOD PULP DESTINED FOR ENGLISH PAPER MILLS

It is estimated that about a million tree-trunks are consumed yearly in the mills at Grand Falls, the power being supplied by the Exploits river, while the maximum daily output is 180 tons of paper, 300 tons of mechanical pulp and 65 tons of sulphite pulp. Whereas much pulp is shipped from Newfoundland to the Imperial Paper Mills, Gravesend, Grand Falls manufactures paper on the spot

feature of the hook and line fishery is that bait is always required, such as herring, caplin and squid, and the elusive habits of these smaller bait fishes often delay the fisherman in the practice of his calling.

How they Fish the Banks

Next comes the bank fishery, on the great submarine islands or banks that lie off the coast of the island at a distance of from 200 to 600 miles. In the shallow waters that cover the banks are countless myriads of the largest species of Newfoundland cod. It is supposed that the meeting of the Gulf Stream and the northerly Arctic current hereabouts has a disturbing effect on the sea bed, releasing an edible sediment and so creating a luxurious feeding-ground.

The bank fishery is carried on in small vessels, containing crews of from twelve to twenty men. Each vessel having been anchored on the banks the men go out in flat-bottomed boats, or "dories," to set their lines, which often contain 3,000 hooks, each one separately baited. At the end of the day the catch is brought to the ship and there salted to await the return to land.

About 150 vessels each year are engaged in this branch of the industry. In this form of fishery there is a good deal of waste, the heads and entrails of the fish being thrown away, instead of being utilised as they should be as a fertiliser.

Failing Foreign Markets

The third branch of Newfoundland fishery is the Labrador fishery, engaged in each summer by the migratory Newfoundlanders, who go in sailing vessels from thirty to sixty tons to that coast and settle there from June to September, returning to Newfoundland with the proceeds of their voyage. A small proportion of permanent residents in Labrador who are called "Liviers" (live-heres) eke out an existence on that coast. Often as many as 800 vessels are engaged in this branch of the fisheries, employing 10,000 to 15,000 men and women.

The greater part of the codfish caught in Newfoundland waters is marketed in Brazil, Italy, Spain, Portugal and the West Indies, about 200,000 quintals to each country. Newfoundland fish is a highly popular article of food in warm climates, where meat is perishable.

Unhappily, owing to the Great War, the foreign purchasers of Newfoundland codfish in Portugal, Spain, Italy, Greece and in Brazil, owing to the depreciation in their currencies, are now unable to pay for the fish they buy at a rate that will yield the Newfoundland shippers a fair margin of profit. This is proving a serious matter for the islanders, and illustrates the great danger which attends the production of a single staple and the too exclusive devotion to special markets.

Possibilities in the Herring

The trade with the United Kingdom in codfish has diminished. This is ascribed to cheaper freight rates for similar fish from Norway, facilities between Norway and England being better than those between Newfoundland and England. The new era of Imperial development may be effectual in promoting improved commerce in this direction.

The herring fishery, too, is one that offers great possibilities in Newfoundland. The gathering ground of the herrings is the Bay of Islands and the Bonne Bay on the west coast, but the herring, like all other fish in Newfoundland, has been traditionally sacrificed to the cod. But demand is growing, and a certain trade is done with Canada and the United States in herrings, either pickled in barrels, or, as is more often the case, sent in bulk in the ship's hold. With improved methods in curing and packing, the herring fishery should be as successful and as profitable in Newfoundland as it is in Scotland.

A new development of the fish industry—the preservation of fresh fish in cold storage—promises to secure a

Col. W. J. P. Rodd

DIFFICULT PASSAGE ALONG A TRIBUTARY OF THE UPPER GANDER

The 100-mile course of the river Gander winds through a remarkable variety of beautiful scenery on its way to Hamilton Sound. Before draining Lake Gander, its upper reaches are fed by several small tributaries; here one of them, known as the Lesser Gull, is seen carving its path with many sharp twists and bends across the face of a water-scored wall of rock

"Canada"

WOODED SHORES OF CONCEPTION BAY AND THE OUTLINE OF BELL ISLAND IN THE DISTANCE

Conception Bay is in the Avalon Peninsula west of St. John's and on its shores lie many pretty villages which are favourite summer resorts. Bell island, about six miles long, is situated in the bay and on it is a deposit of brown hematite iron ore The mines extend under the sea for over a mile and produce about one million tons of ore annually. At the head of the bay are large tracts of good land, covered with fine timber and fit for agricultural and grazing purposes, though agriculture is carried on upon a small scale as compared with the vast fisheries

considerable share in the market of the United Kingdom. Another growing concern is the manufacture of cod-liver oil; the product is taken from fresh cod-livers and, unlike the Norwegian oil, is derived under government supervision from this one species of fish only.

The Newfoundland lobster is of specially fine quality. It is, unfortunately, not so plentiful as formerly, being a slow-moving creature and too easily caught. The whale fishery used to be followed, but whales are of a strong migratory tendency, and in this direction also the supplies have been depleted in recent years.

On the whole, the most interesting branch of the fishing industry in Newfoundland is the hair-seal fishery. It is carried on off the north-east coast of the island by a fleet of special steamers, all hailing from St. John's, and the voyage invariably commences on March 17 (S. Patrick's Day), and ends on April 20.

The Harps and the Hoods

The Newfoundland seal is the hair seal, and not the fur seal from which sealskin wraps are made. The skin of this animal makes the choicest leather known, and is largely used in the manufacture of fancy leather goods, such as bags, belts, purses and cigar and cigarette cases.

There are two varieties of these Newfoundland seals—namely, the "harps" and the "hoods." Upon the backs of the former is a distinct marking in darker colour than the surrounding hair, approximating to the shape of an Irish harp. The harps are smaller than the hoods, though more numerous, and weigh, at maturity, about four hundred pounds, while the hoods reach double that weight.

In summer the seals are distributed along the coast of Greenland and Labrador, the harps on the west and the hoods on the east side. It is not until towards the end of the short Arctic summer, when a cleavage takes place in the ice-flow that stretches across the Gulf of Greenland, that they gather in herds for the annual southerly migration.

The herd usually consists of at least a million seals, each of which is estimated to consume at least four codfish a day, so that at this rate fourteen times as many codfish are consumed by the seal herd than are caught by the fishermen in their nets and traps.

Attractions of Seal Fishing

An interesting feature of the seal fishery is the system of profit-sharing in the proceeds of the voyage. The owner of the steamer takes two-thirds of the voyage, and the crew receive one-third. Each man earns about £30 in a good year for his month's work.

Apart from the financial consideration, Newfoundlanders find the seal fishery specially attractive, providing, as it does, a change from the monotony of life. It is an old saying in Newfoundland that "a man will go for seals where gold won't draw him," and the hardy fisherfolk look upon the annual seal hunt as a holiday. The steamers are fitted with wireless, so that they are in constant touch with the mainland and with one another.

Town Founded on Paper

Besides the fishermen, an increasing number of people are now being employed in the saw mills and pulp mills. At Grand Falls a modern town has sprung up at the pulp and paper mills founded by the late Lord Northcliffe. This company works an area of 3,300 square miles and employs from 500 to 800 men exclusive of loggers, of whom upwards of 1,500 are engaged in cutting and driving.

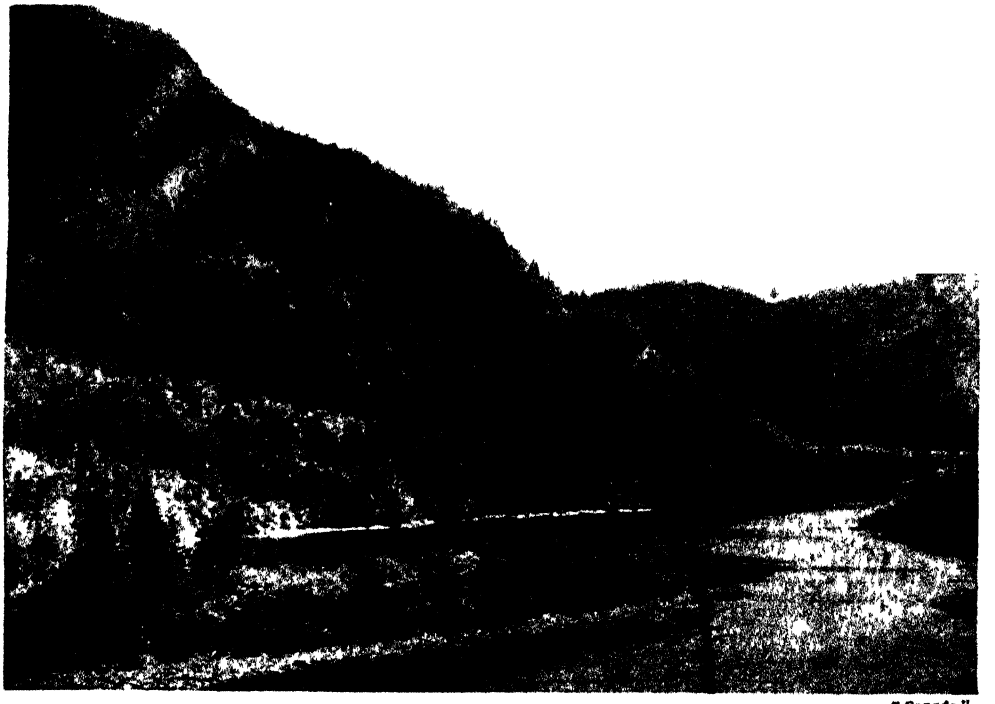
In addition to this huge concern, another paper plant on an even greater scale has been constructed at Humbermouth. It will be capable of turning out newsprint at the rate of about 400 tons a day.

The logs are cut in the winter season and are placed on the frozen rivers to

"Canada"

STILL WATERS IN A LOVELY SETTING ON THE LITTLE CODROY RIVER

From Cape Ray to Cape Anguille the coast is singularly rugged and inhospitable in appearance The Great and Little Codroy rivers enter the sea between these two points after flowing through a beautiful valley nearly 40 miles in length There is excellent salmon and trout fishing on the Little Codroy, while the Long Range, rising to 2,500 feet is celebrated for its fine mountain scenery



"Canada"

UNRIVALLED SCENIC BEAUTY OF THE HUMBER'S SETTING

The Humber, the third largest river in Newfoundland, is 70 miles long and navigable for small craft for about 30 miles up-stream It flows through Deer Lake into the most southerly of the three arms of the Bay of Islands, where some of the island's grandest scenery is located, the magnificent mountains, forest clad to the summits, resembling in parts the Highlands of Scotland

"Canada"

HUNTER AND HAIR SEAL ON THE ICE FLOES OF NEWFOUNDLAND

Thousands of seals are killed annually off the north-west coast of Newfoundland, and despite innumerable years of this slaughter the herds have little diminished and the industry, safeguarded by restrictive legislation, offers lucrative reward to enterprising hunters. The young, considered the chief prize, are bred on the ice floes early in February; by the middle of March they weigh about 50 pounds

"Canada"

HEAP OF SEAL PELTS ON THE WHARF AT ST. JOHN'S HARBOUR

The Atlantic seal, unlike the Pacific seal which is noted for its fur, is covered with hair and prized mainly for its skin and fat, the former being converted into leather, the latter into oil. The Newfoundland sealers bring their cargoes to St. John's harbour, where experts in the industry are employed in large warehouses to refine the fat and clean the hides preparatory to export

wait for the thaw which sets them afloat down stream to the pulp mill. About 120,000 cords of pulp wood are cut each winter. Several prominent London newspapers are supplied with paper from the Harmsworth mill. In 1898 the narrow gauge railway which traverses the island was completed and opened for traffic, and thus was formed the final link in the main travel-route between St. John's on the far east and Vancouver island at the Pacific extremity of British North America. It opens up the chief farming, lumbering, mining and sporting regions of the island and also has a steamer service to the Canadian port of Sydney, Nova Scotia.

The capital of the dominion is St. John's, and the visitor voyaging thither will find the entrance by sea very striking and picturesque. A narrow opening suddenly appears in the rocky wall, as if some convulsion of nature had rent the rampart asunder and the Atlantic Ocean had rushed in. Hills from 500 to 600 feet high stand guarding it on either side, the incoming vessel gliding between them.

These " Narrows," as they are called, are nearly half a mile long. A few minutes after leaving the heaving breakers of the Atlantic, the steamer is moored placidly at its wharf.

St. John's has a population of about 36,000. In some respects it resembles the coast towns of Devonshire, being built on the sloping water front. The harbour is surrounded by busy warehouses and wharves, at which vessels are loading or unloading. The dry dock at the head of the harbour is able to accommodate all but the very largest ocean steamers.

The most conspicuous building of the town is the Roman Catholic cathedral, although a Church of England cathedral, designed by Sir Gilbert Scott (senior), is also a notable structure.

In St. John's there are three attractive new open spaces. Bannerman Park and Victoria Park are both in the centre of the town, and are carefully tended and kept. They are, however, eclipsed by Bowring Park, a beautiful natural estate three miles out.

The situation of Placentia, which was the ancient French capital until the Treaty of Utrecht in 1713, is extremely beautiful and picturesque. It is connected by rail with St. John's.

Heart's Content is the western terminus of the Anglo-American Telegraph Company's Atlantic cable. It is a very old settlement and was taken by the French in 1696, when its population amounted to seventy inhabitants. The town now numbers about 1,500 people and has two fine churches and a number of good private residences.

The other chief towns are Harbour Grace, Carbonear, Twillingate, Burin, Grand Bank, Burgeo, Channel, Grand Falls and Corner Brook.

NEWFOUNDLAND: GEOGRAPHICAL SUMMARY

Natural Division. Island fragment of the old continent of Arctis, with embayed shores and drowned harbours. (Cf. Iceland, Greenland.) The Strait of Belle Isle is a complete trench parallel to others partly obstructed by the island mass between northern and southern bays; the valleys follow the same trend.

Climate. East coast marginal temperate. (Cf. Sakhalien and Hokkaido.) Rainfall and temperature are controlled by ocean currents; the warm Gulf Stream to the south-east, the cold Labrador current to the north-east.

Vegetation. Mainly coniferous forest. (Cf. the maritime states of Canada.) Potatoes and hardier cereals will grow.

Occupations. Cod-fishing (i) shore, (ii) bank, and (iii) Labrador with definite seasons and limitations. The food for the cod is controlled by the ocean currents over the shallow submerged platform of the Grand Banks. (Cf. Lofoden Is., Norway.) Herring-fishing, hair-sealing, trapping. Lumbering mainly for wood-pulp for the paper trade. (Cf. Quebec and Norway.)

Outlook. The fishery was long the staple and depends on the requirements of fish in Catholic countries. The paper pulp trade and a possible mineral development should bring steady prosperity by reducing dependence upon fluctuations in the market for stock and salted fish.

NEW GUINEA

The Island of Mysterious Forest

by C. A. W. Monckton

Author of "Experiences of a New Guinea Resident Magistrate"

NEW GUINEA is, with the exception of Australia, the largest island in the world; it is situated in the Pacific Ocean and lies between 0° 15′ and 10° 40′ south latitude and between 130° 50′ and 150° 50′ east longitude.

It has an area of about 300,000 square miles, which is about six times that of England. It runs from north-west to south-east, and has a total length of nearly 1,500 miles, while in breadth it varies from 20 to 410 miles.

The island was discovered by the Portuguese as early as 1511, and then in turn by the Spaniards and by the Dutch who first landed there in 1616. For several centuries no use was made of the discovery, and the region remained remote and mysterious.

New Guinea owes its name to a resemblance which the early navigators thought they saw between its inhabitants and those of the African Guinea, or according to another account, between the appearance and climate of the two countries.

A Land Geographically Apart

It was not until quite late in the nineteenth century that New Guinea began to attract much attention in Europe, and even at the present day it remains one of the least-known countries in the world. This is largely due to its remote and rather curious position. It lies between Australia and Asia, and between Malaya and Polynesia, and yet it seems to belong to none of them.

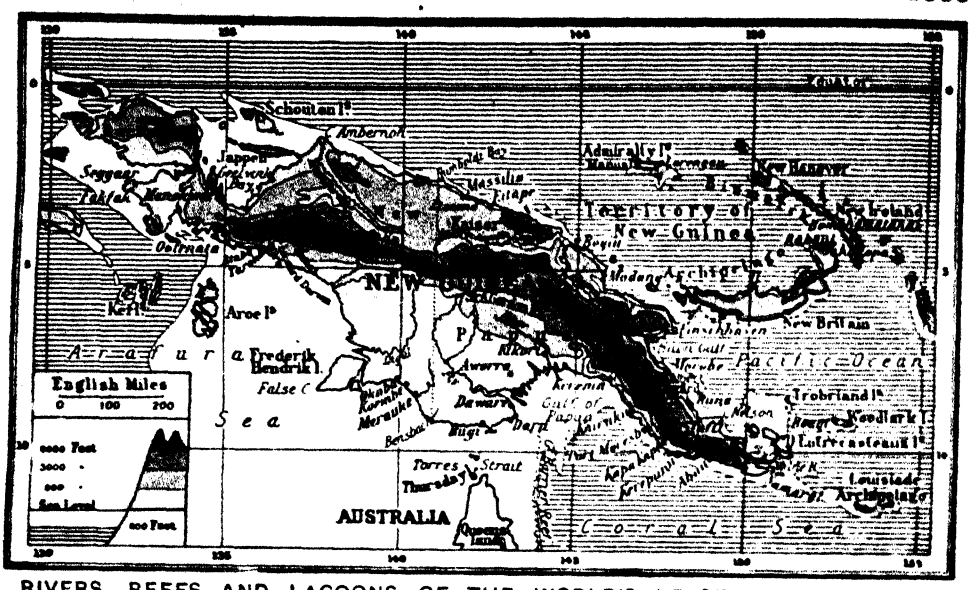
New Guinea is divided politically into three separate parts. The largest of these is Dutch New Guinea, which forms the whole of the western part of the island, extending as far east as about 141° 1′. The Dutch took formal possession of this territory in 1828, grouping it for administrative purposes with the Moluccas, where residences were already established. Little, however, was done in the way of developing the country, and it was not until 1895 that the question of boundaries was definitely settled by a treaty between Great Britain and the Netherlands.

International Boundary Decisions

By this it was decided that the boundary should start in the south from the mouth of the Bensbach river, running due north to the Fly river, which should then form the boundary as far as a point where it cuts the 141st meridian, from which point the meridian should form the boundary as far as the north coast. The total area of the Dutch territory is over 150,000 square miles, about one half of the entire island.

It was not until 1884 that the south-eastern part of the island was formally proclaimed by the British government as the Protectorate of British New Guinea. This action was only taken after long and continued pressure from the government of what were then the Colonies of Australia and New Zealand; the colonial statesmen of that day dreading, and rightly as has since been proved, the establishment of an outpost of some great European or Asian power in their near neighbourhood.

In 1888 the Protectorate became a crown colony, and a further change was made in 1905, when British New Guinea was made a possession of Australia, and called the Territory of Papua. The administration is in the hands of a lieutenant-governor. The area of the territory is about 90,000 square miles,



RIVERS, REEFS AND LAGOONS OF THE WORLD'S LEAST KNOWN ISLAND

and it includes a large number of small islands which lie mainly off the south-eastern extremity and are comprised in various groups, of which the chief are the D'Entrecasteaux islands, the Trobriands, and the Louisiade Archipelago.

The third part of New Guinea is the mainland portion of what is now known as the Mandated Territory of New Guinea, formerly German New Guinea. The German Protectorate was set up in 1885, only a few weeks after the proclamation of British New Guinea. The mainland part of this German territory forms the north-western section of eastern New Guinea, and is known as Kaiser Wilhelms Land. The German possession included also the Bismarck Archipelago, which contains the important islands of New Britain (or Neu Pommern) and New Ireland (or Neu Mecklenburg); in fact, the seat of government was in New Britain, first at Kokopo and afterwards at Rabaul.

Kaiser Wilhelms Land is the smallest of the three divisions of New Guinea, having a total area of about 70,000 square miles. Soon after the outbreak of war in 1914 it was occupied by an Australian force, and after the conclusion of peace it was assigned to Australia as mandatory. In 1921 the new civil administration was set up by the Australian government.

It may be said roughly that the island of New Guinea consists of a large compact central mass which is extended by long promontories towards the north-west and the south-east. Right across this central mass there runs a main chain of mountains, which is continued on the south-eastern side to the extremity of the peninsula, where it ends in the sombre cliffs which rise above Milne Bay some 2,000 feet in height.

Between this main chain and the sea there are various lesser ranges both to the north and south, while in the narrow eastern extremity of Papua, spurs from the central range run out northwards to the coast, where they form headlands such as those at Cape Vogel and Cape Nelson. More often there is a belt of low-lying land between the mountains and the sea, and in some parts the flat country stretches inland for 100 miles or more, consisting of vast swampy plains with a network of creeks.

The mountain ranges are difficult of access and only partly explored and surveyed, so that our knowledge of them is still very imperfect. Many peaks in the higher ranges reach a height of 10,000 feet, the highest in Papua being Mount Albert Edward, at the northern

end of the Owen Stanley range, which rises to over 13,000 feet. In Dutch New Guinea there are mountains which exceed 15,000 feet, among the highest being Mount Carstensz and Mount Leonard Darwin. Other than the fact that these mountains exceed 15,000 feet the heights have not as yet been definitely ascertained.

The coasts of New Guinea vary considerably in nature and aspect. Speaking generally, the coasts at the two extremities, north-western and south-eastern, are much indented and have steep wooded cliffs, whereas in other parts, notably in the Gulf of Papua and on the Dutch south coast, the shores are flat and swampy. A great part of the south-eastern coast of Papua is protected by a coral reef which performs a useful function in making harbours and anchorages safer during the "trades."

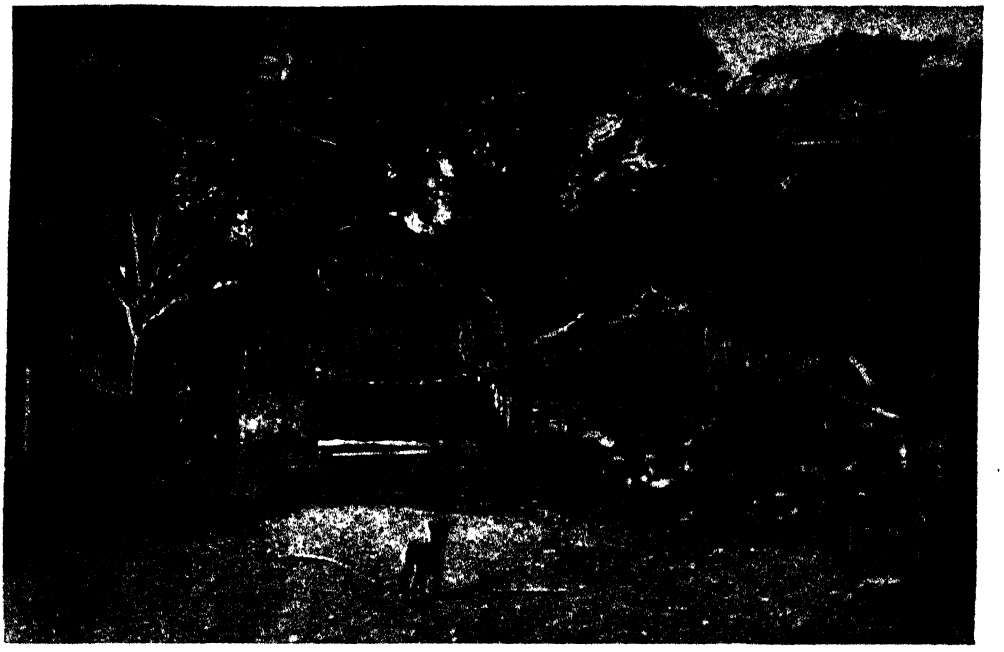
New Guinea is a well-watered country, with many rivers, but only a few of these are navigable for any considerable distance. The longest is the Fly river, which flows out on the western side of the Gulf of Papua, being nearly 50 miles wide at the mouth. It is navigable for over 300 miles. This river, like the Hooghli in India, rejoices in a very considerable tidal bore, and also like the Hooghli is constantly altering its channels in the estuary. Charts of the mouth therefore, however correctly drawn in the first instance, can only be regarded with considerable suspicion.

In the north the greatest rivers are the Momberamo, in Dutch territory, and the Kaiserin Augusta or Sepik, in Kaiser Wilhelms Land, which is navigable for 250 miles, and of which an elaborate survey has been published. The climate may be described as

Underwood

SEAPLANES IN THE HARBOUR OF A PILE VILLAGE IN PAPUA

Nearly all the Papuan villages are built on piles, not only on the coast but on the hillsides. In a few districts the houses have been built at some distance from the shore as a protection against raids. These seaplanes in which a party of explorers reached Papua were regarded as gods, and it was some time before the natives could be induced to assist in mooring them



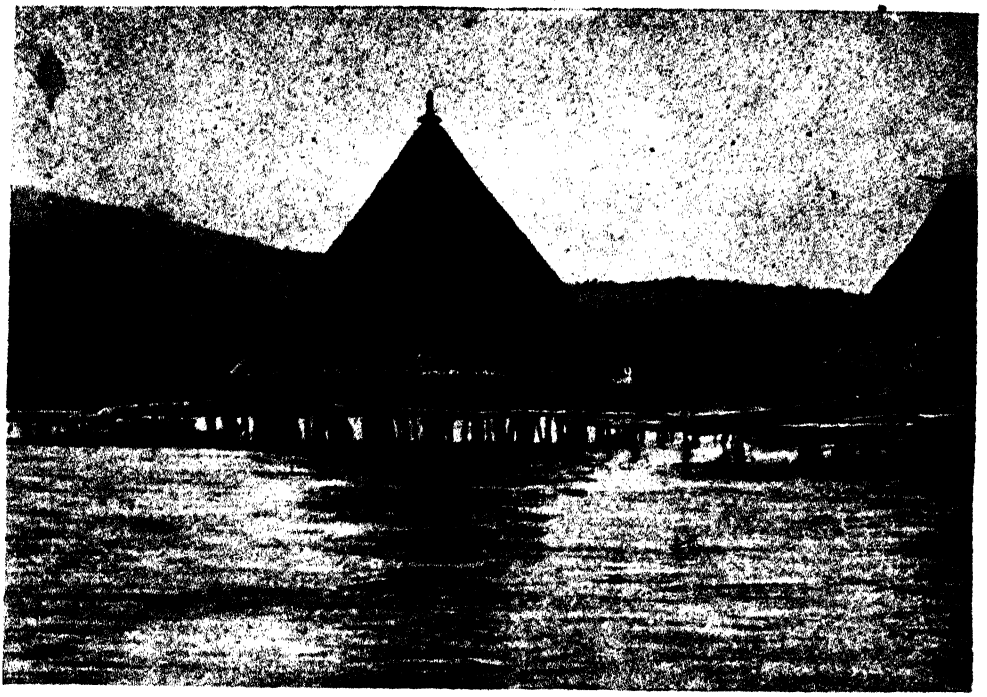
VILLAGE ON RAMBUZO, A SMALL ISLAND OF THE ADMIRALTY GROUP

The Admiralty islands form part of the scattered Bismarck Archipelago to the north of New Guinea. Manus is the largest island, being about 55 miles in length, and Lorengau, the chief town, stands on the north-east coast. Coconuts are the main article of cultivation and there are valuable pearl and other shell fisheries. The villages are composed of the usual leaf huts with projecting eaves

Captain C. G. Rawling

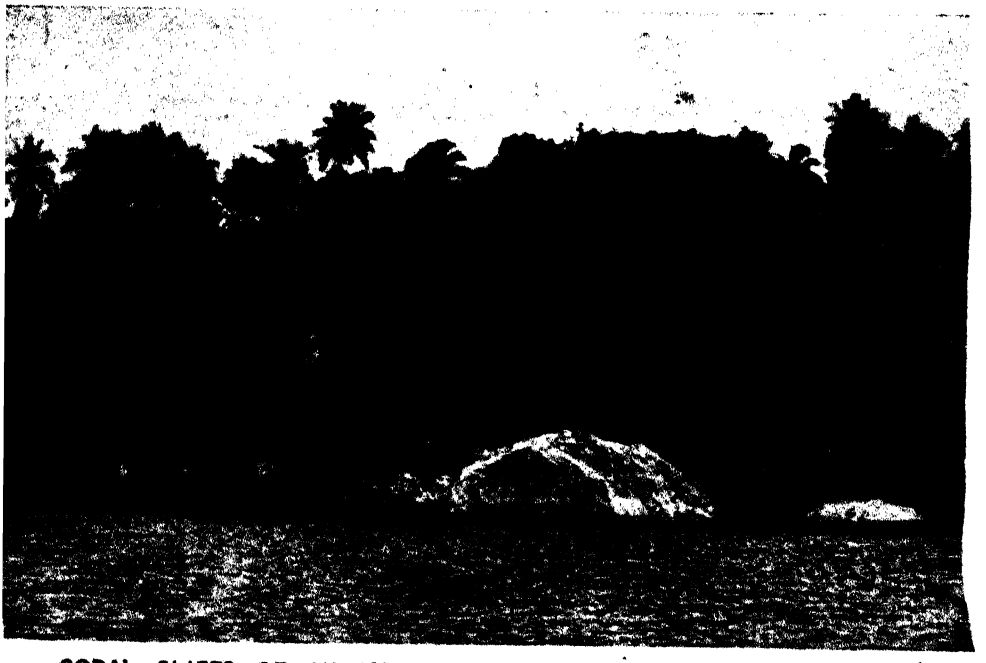
WAMBIRIMI, A PYGMY VILLAGE IN THE NASSAU MOUNTAINS

Wambirimi is a little village inhabited by the Tapiro pygmies, high up on the forested slopes of the Nassau mountains and about four miles from Mount Tapiro, 7,660 feet high. The houses are scattered about the clearing and are entered by means of a rough ladder. To get into the one room the inhabitants climb over the sill of a window. The walls are constructed of strips of flattened bark



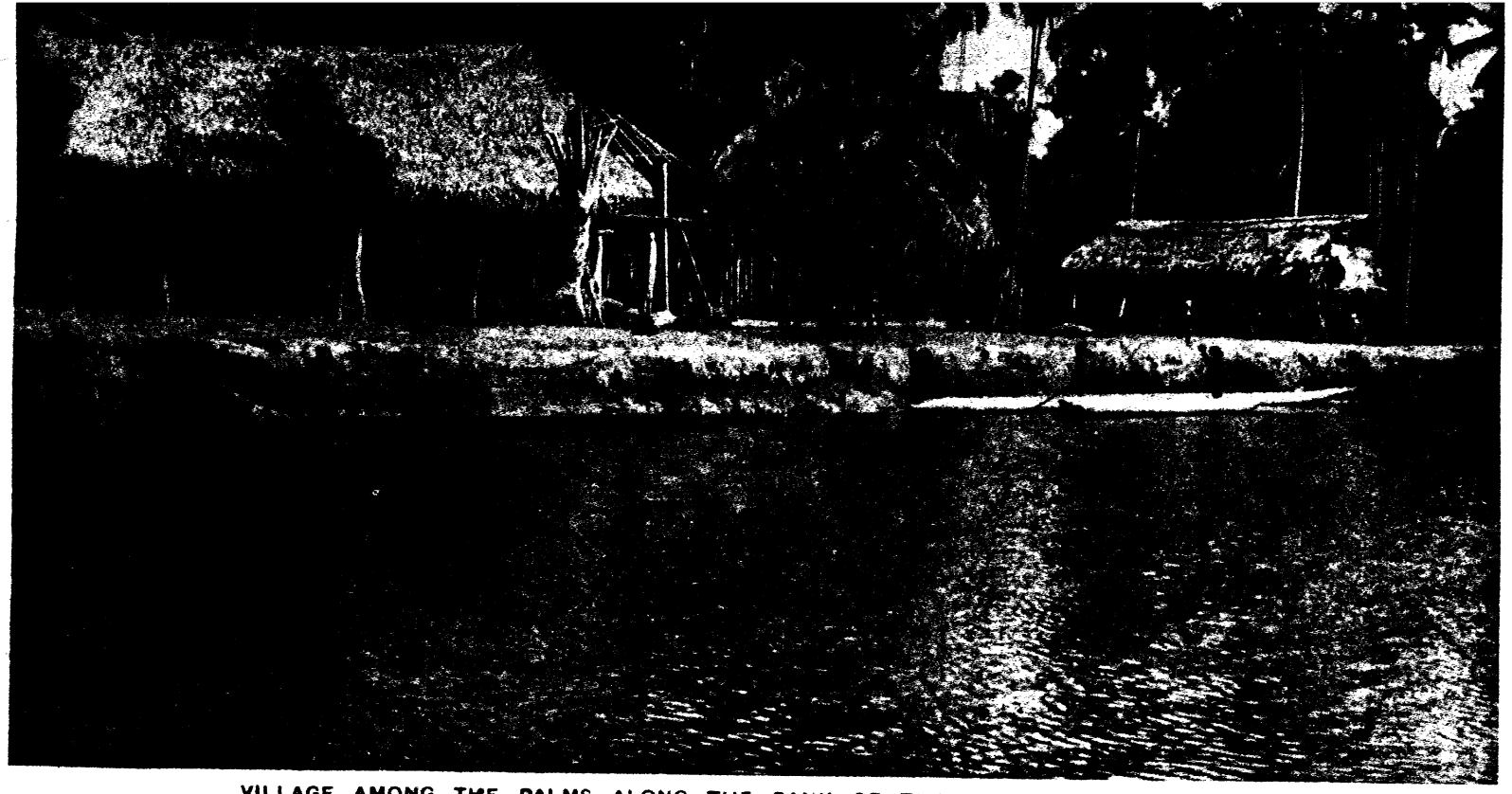
MEN'S HOUSE AND CANOES IN A VILLAGE ON HUMBOLDT BAY

Humboldt Bay on the north coast of Dutch New Guinea is a magnificent inlet, being about five miles wide and three miles in length, but the surrounding country is very wild. The large building in the centre of the photograph is the house in which the young men of the village sleep and in which certain ritual ceremonies, of which little is known, are carried on



CORAL CLIFFS OF AN ISLAND NEAR CAPE MERKUS, NEW BRITAIN

The island of New Britain is separated from the east coast of New Guinea by Dampier Strait, in which there are many islets of coral formation which are covered with trees, chiefly palms. New Britain is a well-wooded island about 300 miles in length. The coasts are low and fertile, but the interior is mountainous and contains several volcanoes. There are plantations under rubber, coffee and cotton



VILLAGE AMONG THE PALMS ALONG THE BANK OF THE KAISERIN-AUGUSTA RIVER

The Kaiserin-Augusta river is the most important river in that part of the island which was formerly known as German New Guinea. The river has its source in the Victor Emmanuel mountains and its mouth is at the eastern extremity of the Hansemann coast. It is navigable for about 125 miles by large vessels, and for hundreds of miles by boats of small draught. New Guinea is rich in rivers, but there are many drawbacks to navigation. Nearly all have bars at their mouths, with little water over them at high tide, while many have strong currents and are subject to sudden rises and falls

Captain C. G. Rawling

.LARGE NATIVE DANCE HALL IN THE VILLAGE OF ATABO, DUTCH ,NEW GUINEA

Atabo lies at the mouth of the Mimika river on the opposite bank to the village of Taroké. Both these places are growing steadily and jointly possess a fine dance hall. This building, the largest in either community, is made of matting and has a length of about 50 feet, a width of 15 and a height of 18 feet. The interior is bare save for fireplaces along the sides and strings of grass stretched from wall to wall. Five low doorways give entrance to the floor of white sand. The music is provided by an orchestra composed of drums and the entertainment continues for hours on end

being on the whole hot, moist and unhealthy. The south-eastern part of Papua is the most favoured region, though even there the humidity of the atmosphere is trying to the white man, and the climate can hardly be called healthy; but in some of the higher parts of the south-east it is at any rate comparatively cool and bracing.

On the other hand, in certain districts of Dutch New Guinea, the climate is considered one of the most unhealthy in the world, and it has been found almost impossible for Europeans to settle there for any length of time. In the northern parts of New Guinea the rainfall is very heavy, and continues all through the year, so that there is no dry season. In the south there are two well-marked seasons: the period of the south-east trade winds, from about May to November; and of the north-west monsoon, from December to April.

Not a White Man's Country

The wettest months as a rule are February and March, the driest September and October. In the north the rainfall ranges from about 100 to 150 inches, in the south from 30 to 80. High winds are frequent, though they usually drop at nightfall; most of the rain occurs at night. During the monsoon period sudden squalls are common, and thunderstorms of great violence occur, but typhoons are unknown.

The temperature varies from about 95° to 70° F., but these outside extremes are not often reached, the average in most districts ranging from about 85° to 75°. Even under the most favourable circumstances the climate is not a suitable one for white men to work in any manual capacity, though they are in some cases able to live there for many years, at any rate in Papua, without apparent injury to their health. Malaria is not perhaps as prevalent as might be expected, but there is much dysentery, also blackwater fever, and leprosy occurs occasionally. In the Dutch and mandated territories there are sometimes outbreaks of small-pox.

The soil of New Guinea is, in some regions, of remarkable fertility, in spite of the fact that so much of the surface of the island is either mountainous or swampy. The vegetation is in consequence notable for its richness, variety and interest. The flora is largely Malayan in character, this affinity being most closely shown in the case of the ferns. There is still much need for classification, as many forms are at present imperfectly understood, and it is probable that many fresh discoveries await the botanist. The great wealth of timber is a noticeable feature of the vegetation; some 120 species having already been noted in Papua alone.

Alpine and Tropical Flora

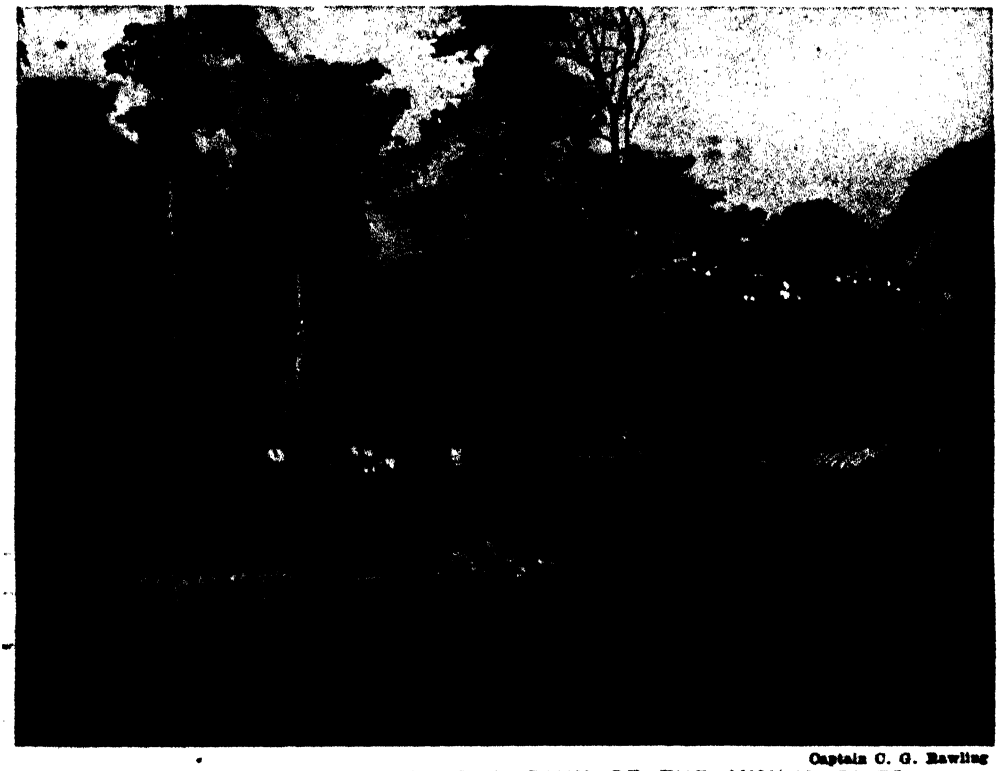
The variety of the New Guinean flora may be judged from the fact that it ranges in character from tropical to Alpine, including not only the banana and the mango but also plants characteristic of the Himalayan region. The scenery that opens out before the traveller in ascending a New Guinea river gives some idea both of the great fertility of the soil and of the amazing variety of the vegetation and of animal life as well. In some cases thick jungle will come right to the water's edge, an almost impenetrable mass of vegetation, in which an endless variety of trees and plants are struggling together in bewildering confusion. The prevailing colour will be dark green, relieved perhaps, if the traveller is lucky, by the blazing scarlet of the wonderful d'Albertia creeper, and by the gleaming wings of the white cockatoo.

Mammals that Lay Eggs

It is interesting to notice that whereas the flora is chiefly Malayan in character, the forms of animal life are more akin to those of Australia. Mammals are comparatively few in number, but they include the egg-laying varieties. Among the indigenous animals are the tree-kangaroo, wallaby, cuscus, flying fox and wild dog. Rats, mice and squirrels

PAPUANS FISHING IN A SHALLOW LAGOON NEAR EISSANO

Eissano is a town on the north coast in that part of New Guinea which was formerly known as Kaiser Wilhelms Land, and is now the Mandated Territory of New Guinea. Portions of this coast are low and swampy with forests of mangroves or planted with coconut palms. Inside the barrier of coral reefs lie the clear waters of shallow lagoons which form fishing grounds for the islanders



Captain C. G. Rawling

VILLAGE OF PARIMAU ON THE BANK OF THE MIMIKA RIVER

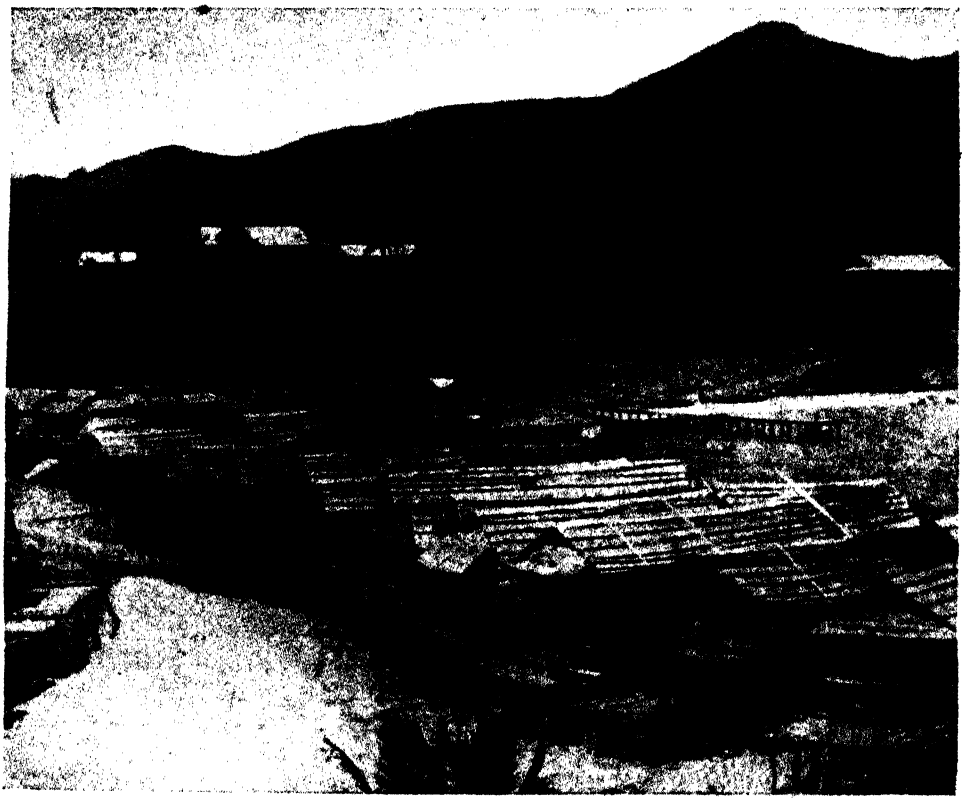
Parimau stands on a bend of the tortuous Mimika about 35 miles from its outlet into the Arafura Sea. Owing to the frequent floods to which the river is subjected the bank has been scoured out and has to be reinforced with a retaining wall. The forests of New Guinea, with giant trees and bushes, about which creepers and parasites are entwined, make travelling almost impossible

are common, but there are no monkeys, nor are the wild animals of Asia to be found in New Guinea. One of the commonest of the animals of New Guinea is the wild pig.

New Guinea is rich in reptiles, and has several species not known elsewhere; crocodiles are common, and so are turtles and tortoises. The python is frequently seen, and there are many other snakes, both poisonous and non-poisonous. Insects are very abundant, as the traveller in New Guinea finds to his cost; mosquitoes and huge blue-bottles are among the more unpleasant varieties. Butterflies are numerous, and include some very large and strikingly beautiful species.

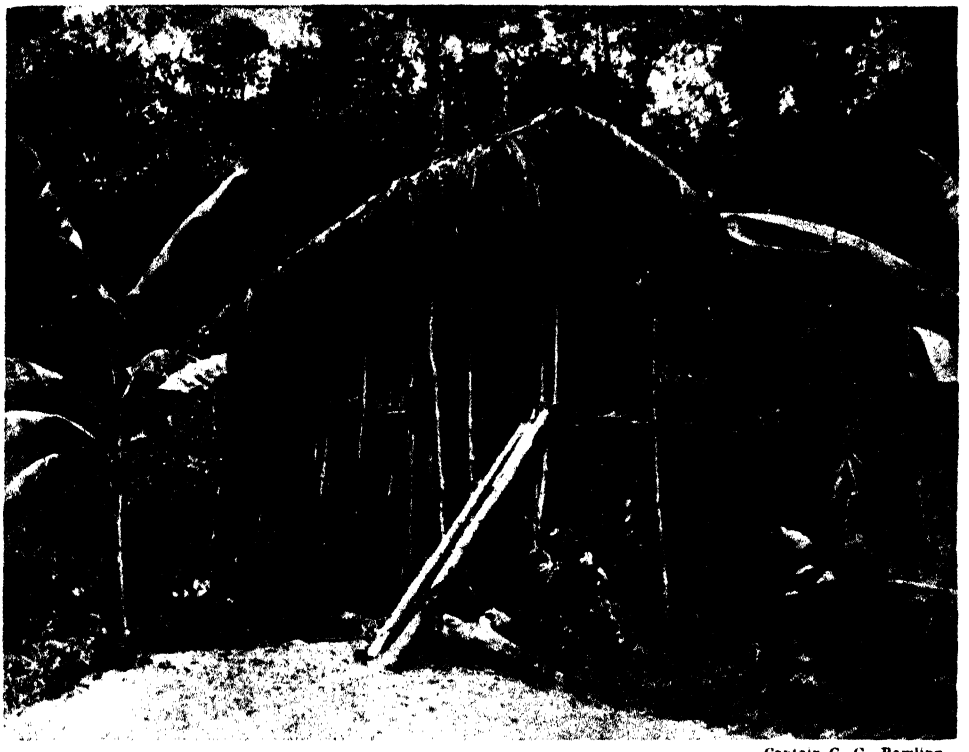
It is, however, for its birds that New Guinea is most famous with naturalists. Over 500 species are known, many of them being peculiar to New Guinea, and others may well be discovered in the more remote regions of the interior. The dense forests are naturally favourable to bird life, and offer great opportunities to the ornithologist. The number and variety of the birds-of-paradise are very striking, and New Guinea is also specially rich in pigeons, parrots, honey-eaters and fly-catchers. Hornbills are common, and attract attention by the loud, whirring noise they make when flying. The largest bird is the cassowary, and there is the large goura-pigeon, with its grey-blue crest and orange-red eyes.

Agriculture is the most important industry of the country, and holds the greatest promise for the future. The system of native plantations is bringing a large area of land under cultivation in certain parts of Papua. The fertility of the soil and the abundance of fresh



NATIVE PILE VILLAGE OF ELAVORA NEAR PORT MORESBY

Port Moresby, the capital and chief port of Papua, is situated on Fairfax harbour. Tanubada, on the coast, and Elavora, on an island, are two large native villages adjacent to the port. A large area with fine copper deposits is being actively developed near Port Moresby which also exports copra, gold, hemp and pearls. There is a wireless station and a regular steamer service with Sydney



Captain C. G. Rawling

PYGMY'S HOUSE ON PILES IN THE MIDST OF THE JUNGLE

Among the pygmies of the Nassau mountains in Dutch New Guinea houses are quite different from the primitive and temporary leaf huts found in the plains. The structures are substantial wooden buildings erected on piles, the floor being about ten feet from the ground. There is one room with a veranda in front which is sheltered by the projecting eaves. The roof is of fan-palm leaves

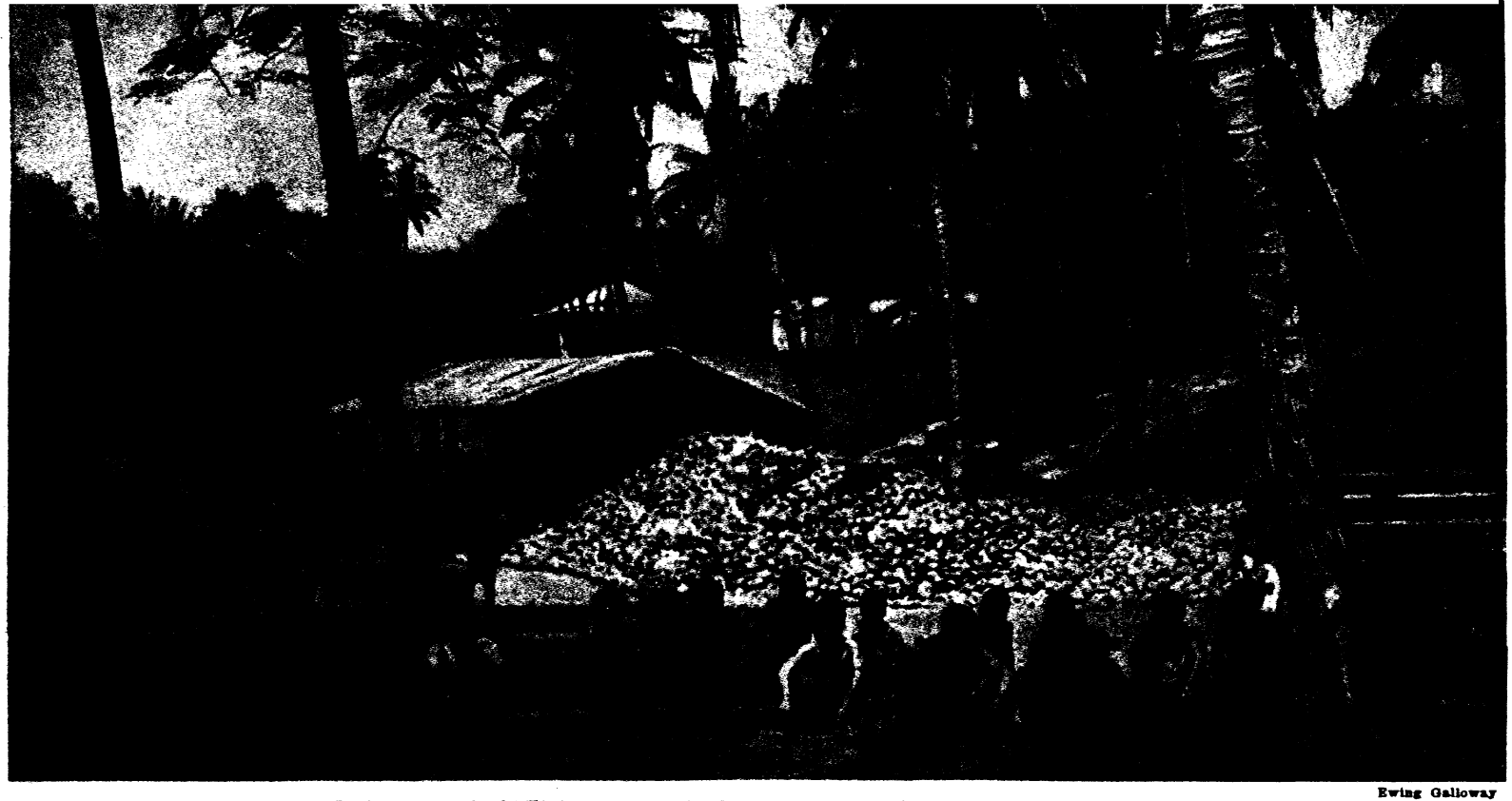
water are favourable features, but on the other hand the difficulties of transport are great. The chief objects of cultivation are coconuts, rubber and hemp. Coconuts are easy to cultivate and very profitable, as copra finds a ready market in Australia.

Rubber presents more difficulties, as it is more dependent on climate, and will only flourish in certain districts. Hemp, like copra, is easy both to produce and to sell. Tobacco and cotton are also grown, though on a much smaller scale, and tea, coffee and rice are produced in small quantities. Fishing as an industry is concerned chiefly with pearls and with bêche-de-mer, a sort of large sea-slug prized by the Chinese as an article of diet.

The mineral resources of New Guinea are at present only very imperfectly known. It is quite probable that with the further exploration of the almost unknown interior of the island new gold-fields may be discovered of greater value than any of those now known. Of these the Woodlark Island field is the most important.

Copper-mines have been worked in the Astrolabe field, not far from Port Moresby, and should prove profitable when the railway now in course of construction is completed. Coal has been found in several districts of Dutch New Guinea, and to a lesser extent in Papua. Petroleum springs exist in various parts of the Dutch territory, and an important field has been discovered on the Vailala river in Papua.

It must be remembered, however, that neither the agricultural nor the mineral resources of New Guinea can be at all fully developed until great improvement has been made in the means of communication. The difficulties of inland travel are very great owing to the



Ewing Galloway

GREAT PILES OF GATHERED NUTS ON A NEW GUINEA COCONUT PLANTATION

Coconuts will grow in most parts of New Guinea, but they thrive best on the rivers and coasts, and the eastern and western portions of the southern coast-line perhaps contain the finest coconut land. More land is devoted to the cultivation of coconuts for the manufacture of copra than to any other article and the value of the copra exported is second only to that of gold. Native palms are numerous and from this tree the Papuan gets food and drink, wood for his house and canoe, leaves for the roof of his hut, clothes from the bark and a kind of sieve from the leaf-fibres

nature of the country. Roads at present are few in number, and road-making in New Guinea is both expensive and laborious. In the Dutch territory the only real roads at present are those which extend for a few miles inland from the principal settlements.

In Papua the most important road is that which connects Port Moresby with the Sogeri district and the Astrolabe copper-fields. Apart from this, and a few short roads which serve plantations or mines, reliance has to be placed on government tracks which are maintained by the natives, each village being responsible for its own neighbourhood.

In the mandated territory there are roads in connexion with the chief ports, but they do not go very far inland. A railway, as mentioned, is being constructed in Papua in connexion with the Astrolabe copper-fields.

The only other means of inland travel is by river, and this too is often difficult, owing to strong currents, rapids, bars at the mouths, and other obstacles. External communication is on the whole easier than internal, as navigation is fairly good, especially inside the Barrier Reef, and there are regular steamship services from Australian ports and from Java and Hong Kong. There is a wireless station at Port Moresby, in communication with Thursday island and with Cooktown.

New Guinea can hardly be said to possess any real towns in the European sense of the word. The most important place is Port Moresby, the capital of Papua, with a non-native population of about 700. It is the seat of government and the principal port of Papua, with a long wharf, and a jetty for smaller vessels. Next in importance comes Samarai island, which lies just off the south-eastern extremity of Papua.

The chief towns of Dutch New Guinea are even smaller than those of Papua. They include Fakfak, a port which has trade relations with the Moluccas and is the seat of an assistant resident; Manokwari in Geelvink Bay, and Merauke, both of which have a few European inhabitants, and carry on an export trade in copra and bird-of-paradise skins. In the mandated territory (or Kaiser Wilhelms Land) the principal port is Friedrich Wilhelmshafen, now called Madang, with a non-native population of about 300. It has good accommodation for vessels, with a coaling station and wharf.

It is not possible to give any accurate figures for the total population of New Guinea. It is thought that in Papua the numbers are approximately 275,000 natives and 1,100 whites. The estimate for Dutch New Guinea is about 200,000, while for the mandated territory estimates vary enormously, ranging from 110,000 to as high as 350,000. These estimates are, however, all purely guesswork; no one knows what is the population of the interior, while every year fresh tribes are discovered.

Now that both the Poles have been reached by explorers, and the Sahara crossed in motor-cars, it would perhaps hardly be an exaggeration to describe the interior of New Guinea as one of the least known and most inaccessible places in the world. There are certainly few countries, if any, that offer so rich a field to the explorer.

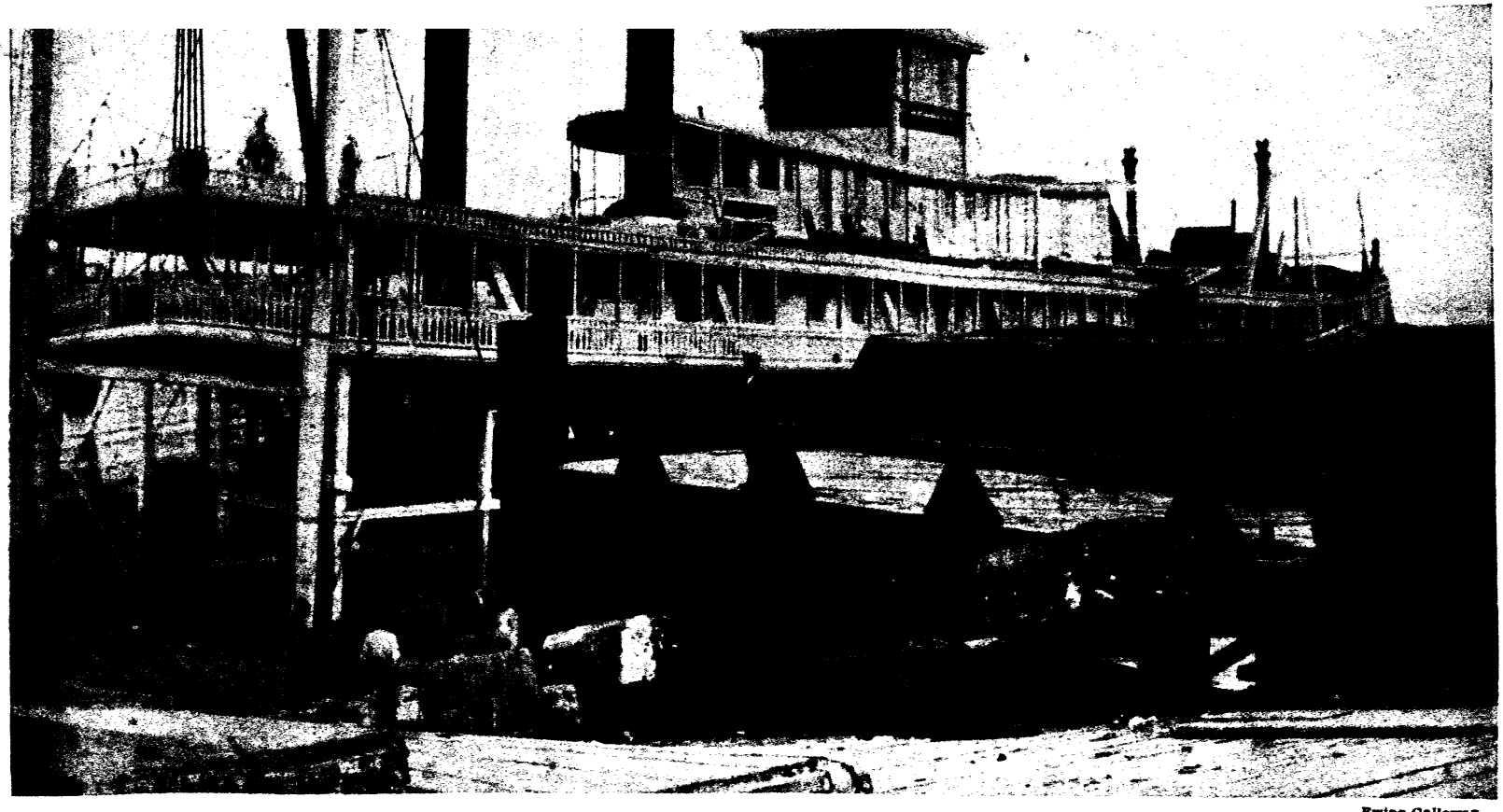
NEW GUINEA: GEOGRAPHICAL SUMMARY

Natural Division. Large island with a mountainous backbone and, on the south, an extensive lowland. The least explored of all inhabited areas. (Cf. the trend of Sumatra and Java.)

Climate and Vegetation. Tropical climate, with tropical constant rains in the north, but with monsoon rains in the summer season (cf. Northern Australia) in the south. Tropical mountain flora (cf. the Himalayas), with jungle vegetation on the lowlands (cf. the Terai swamps of N. India.)

Products. A slight beginning of plantation cultivation of coconut palms for copra, rubber and tobacco. Possible mine-fields for gold, copper and coal.

Outlook. In relation to the exploitation of tropical jungle-lands, New Guinea has but begun to tread the path followed by Sumatra, with Java as a lode star. It lacks both capital and labour.



Ewing Galloway

UNLOADING COTTON WITH AN ELECTRIC BELT CONVEYER ON A WHARF OF NEW ORLEANS, LOUISIANA

There is no more productive region in the world than that drained by the Mississippi, the river that intersects the United States from north to south. This region is rich in forest and mineral wealth, and grain, livestock, cotton, rice, sugar, tobacco and fruits are produced abundantly. About 107 miles from the Mississippi's mouth in the Gulf of Mexico lies New Orleans, the flourishing port of Louisiana state, which next to Liverpool is the world's largest and most important cotton port. In the year 1922 the cotton area of Louisiana state alone was estimated at 1,185,000 acres, which yielded 357,000 bales valued at £8,565,000

NEW ORLEANS

The Splendid City on the Mississippi

by J. A. Hammerton

Editor, COUNTRIES OF THE WORLD

THERE must be some genius for the picturesque in the French people, if one were to judge alone from the study of two such widely-separated cities as New Orleans and Quebec. It has been my fortune to visit most of the great American cities that lie between these points, and any traveller who has had the same experience will almost certainly agree that the two towns named stand away from all other cities of the American continent in the peculiar charm and attractiveness of their architecture.

Nor do they in any measure resemble each other, the one built on low-lying, swampy ground such as we might look for in Holland, and the other climbing over the splendid bluffs which nature seems to have provided for the express purpose of assisting man, the builder, to achieve the picturesque. But there is something essentially French that distils in both places; something that must be the secret of the charm which every visitor experiences.

Much Discussed and Little Visited

I had invited several well-known writers who have travelled extensively in the United States, several of them being themselves Americans, to supply this contribution which I am now a little unwillingly writing myself. The reason is that not one of those to whom I applied had ever visited New Orleans; and I now recall that often in other American towns, discussing the rival merits of the great cities with which that wonderful land is strewn, I noted how few of my American friends had ever visited this historic city of the lower Mississippi.

One American contributor offered to supply the chapter although he had never personally visited the city; but he believed he could describe it with some approach to accuracy, being long familiar with the descriptions of others. There are many cities in America that one could describe without ever having seen them, given a few essential details and some photographic material, American cities in their likeness to one another being an approximation to the proverbial two peas. But New Orleans is one of the exceptions and no one could hope to convey a truthful impression without a personal visit.

Mingling of the Old and New

To me it has a particular appeal in that it was my first sight of the United States. It does not fall to the lot of many travellers to enter America by way of New Orleans, and that may in some degree account for the affection with which I always recall it. I found myself sufficiently fascinated by the place to linger in it several days beyond the need of my journey, and if I were to except New York, with its inexhaustible wizardry, Washington, the city of splendid distances, and Boston, which still retains so much of its old-world English charm, I do not think there are many great commercial centres of the eastern states that would hold the British traveller longer than he need stay. And perhaps I ought to add Baltimore and Philadelphia.

The charm of New Orleans is no doubt the mingling of the old and the new: the fusion of two cultures, the Latin and the Anglo-Saxon. For we must remember that not only the French but in some measure also the Spaniard had a hand

THE "CRESCENT CITY" ON A BEND OF THE MIGHTY MISSISSIPPI

in moulding the character of the city. To-day it is evidently an important centre of American propaganda in the Spanish-speaking countries of the western hemisphere, and many notices in Spanish in the business quarter bear witness to the activities of Americans in their effort to permeate the great southern continent with their influence.

One had come from Spanish lands in sailing up the Mississippi, and it was a little shock, after the courtesies of the farther south, to find such notices as "Keep off this platform" or "Keep off" in the busy stations and on the thronging quays of New Orleans; though one was later to discover that this was a high measure of courtesy compared with "Off this" or "Off," to which the brisker New Yorker had condensed these warnings. But the Yankee strain of them was not reproduced in the character of the inhabitants, and it was a continual delight to saunter along the sidewalks of the famous Canal Street, surely one of the widest thoroughfares in any city and one of the most animated.

The English one heard was mostly spoken with that soft southern accent which is as different from the New York intonation as that is different from the English of the educated Londoner. And everywhere the liquid charm of the French tongue, so that at times and but for the English shop signs it was difficult to suppose that they who spoke the English were other than visitors. It is interesting, too, in wandering the streets of New Orleans to notice when one overhears the French language that despite the intermarriage of the two races the appearance of those who use the language of the old Creole days is still curiously French.

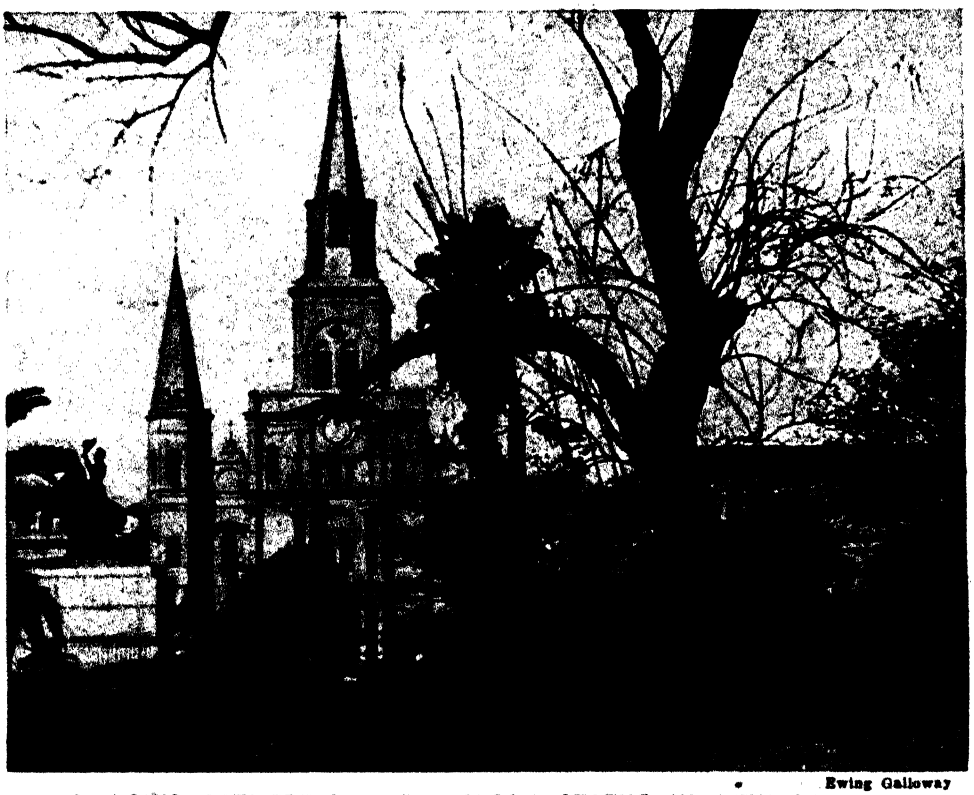
The negro element is, of course, very considerable in this old centre of the cotton and sugar-cane industry, and though the numerous coloured persons of both sexes, whose cheery faces and

love for bright colours add so much to the animation of the street throngs, have lost much of the picturesque qualities which they had in the days that George Washington Cable loved to commemorate, they are still an element not to be despised from that point of view, nor from the point of view of industrial usefulness.

I was reminded that here the negro is still "kept in his place" by my inadvertently sitting in the part of a tramcar reserved for coloured folk, the conductor being most solicitous that I should not so far forget the dignity of the white race. Perhaps it is not entirely a fortunate thing for the United States that somewhere about Washington the "Jim Crow" car ceases to be recognized and black and white sit cheek by jowl in tram or train.

Somewhere I have seen it stated that New Orleans is not a city noteworthy for its architecture. Certainly it would make a very bad comparison if it were to be contrasted with the splendours of Washington, but even architecturally it contains much that is pleasing. In the old French quarter particularly, where the streets are narrow and full of quaint and unexpected corners, a lover of the antique can find much to engage his interest, some of the French courtyards, with their fountains and flowers, having that elusive touch of old-world charm more precious than fine architecture.

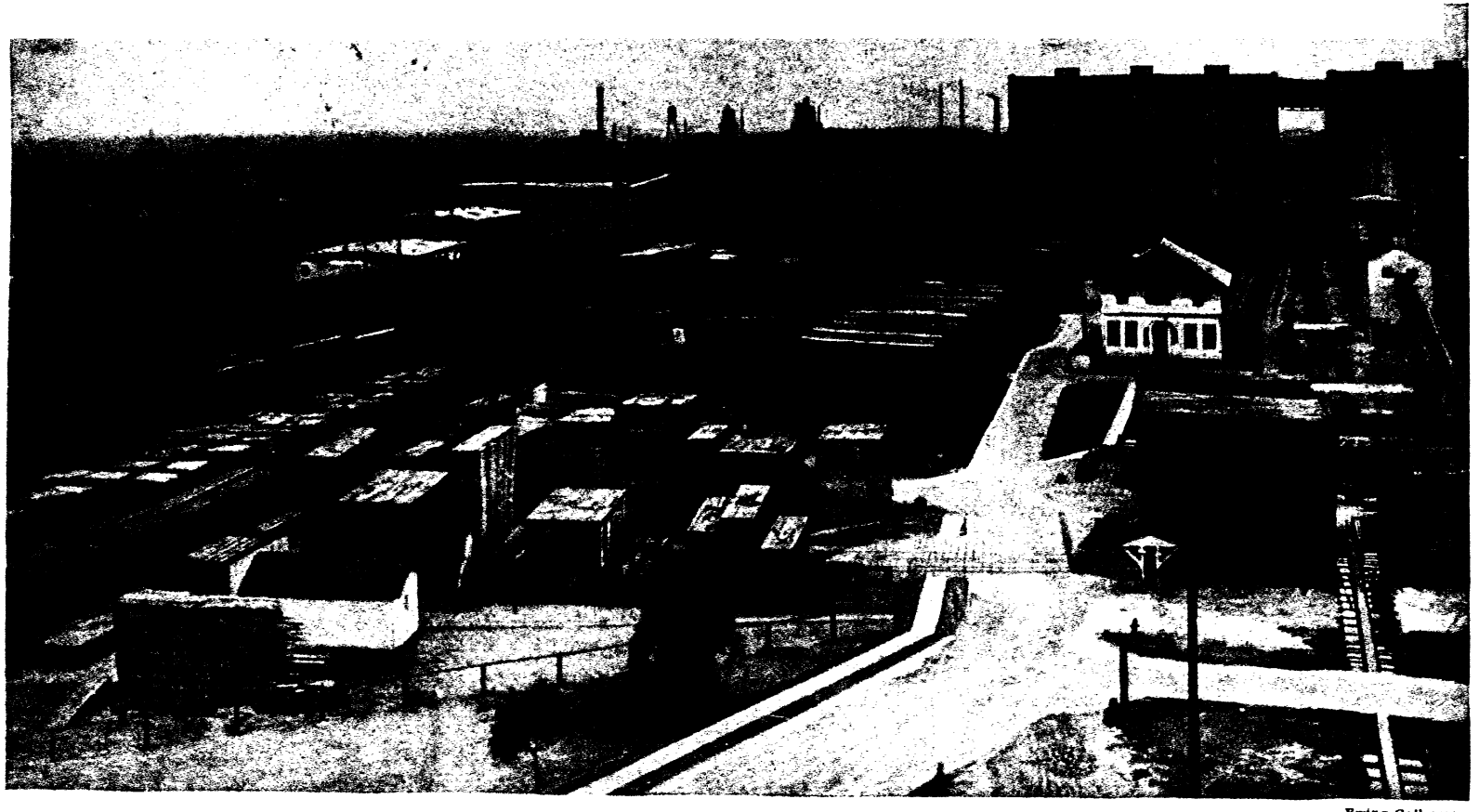
The old Absinthe House, which dates from 1798, and the Cabildo, where the municipal authority during at the end the Spanish regime which lasted from 1763 until 1800, have an historical interest which many American cities would envy. The cathedral of S. Louis, in Jackson Square, has also a peculiar interest in dating from the late days of the Spanish occupation, and being



Ewing Galloway

S. LOUIS CATHEDRAL AND JACKSON STATUE IN NEW ORLEANS

There are few buildings of great architectural interest in New Orleans; the Cathedral of S. Louis, erected in 1792-4 in the Creole-Spanish style and repaired in 1851, is one of the most noteworthy. It stands in Jackson Square, which is adorned with an equestrian statue of General Andrew Jackson, who gained a victory over the British troops at New Orleans in January, 1815



Ewing Galloway

LUMBER YARD AT NEW ORLEANS STACKED WITH TIMBER DRAWN FROM THE FORESTS OF LOUISIANA

It is said that the United States government disposes of more lumber than any other forest owner, and the timber sales bring in a large revenue. The state of Louisiana contains vast woodlands with remarkably fine forests of pine, cypress and oak; many of them have been laid low by great lumber companies and their wealth converted into planks, boards and other structural timber by the saw-mill. Timber is extensively exported from New Orleans, a river port of Louisiana, which carries on an immense international trade and possesses a grand natural harbour with splendidly equipped wharves, where vessels of all nations load and unload

an authentic example of Creole architecture, though the archbishop's palace, essentially French in character, dates back to 1737—a venerable structure for an American city.

There are many fine modern buildings but very few of the skyscraper variety, due perhaps to the difficulties presented by the soil which, lying between Lake Pontchartrain on the north and the Mississippi on the south, is notoriously waterlogged, so that when a citizen of New Orleans dies, unless he chooses to be cremated, his body cannot be committed to the earth. Hence the very remarkable series of cemeteries, full of magnificent tombs and great grassy avenues, which are so curious a feature of the city. Here vaults are erected and cavities built for the coffins to be laid away one above the other in a modification of the Roman columbaria system.

In writing at any length about New Orleans the temptation is always to dwell upon the picturesqueness of the old French quarters; but the great modern residential parts, such as St. Charles Avenue, a noble thoroughfare running mile upon mile between splendid residences standing in their green grounds with wide sweeping lawns, speak of the opulence of the citizens and please the observer with the sense of well-being and cultured taste. The city abounds in splendid parks, of which Audubon Park and City Park are the finest. It was in the latter that the duels of the Creole days were fought.

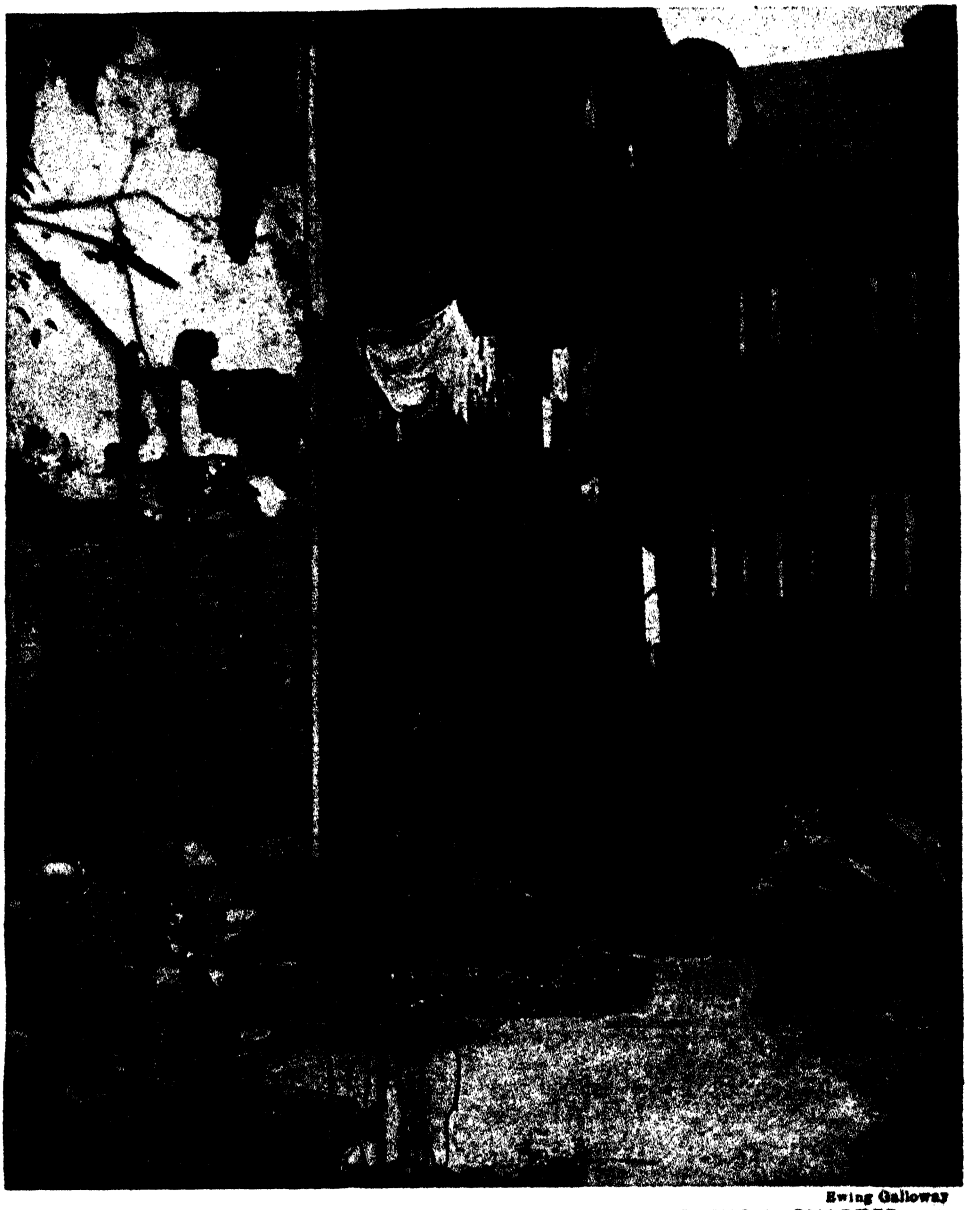
Ewing Galloway

NEGRO LABOURERS FEEDING A GRAIN SUCTION APPARATUS

Agriculture is the leading industry of Louisiana, the chief crops being corn, rice, cotton and cane-sugar. These are brought in large quantities down the Mississippi by government barges to New Orleans, whence they are shipped to many foreign countries. Above is seen the lower end of a grain suction apparatus, which is drawing wheat from the hold of a barge into the grain elevator

Another splendid residential thoroughfare is Prytania Avenue; and a visitor might be excused for deeming the inhabitants of all this spacious quarter the most fortunate on earth. The park commissioners have planted shade-trees along many of the thoroughfares, as if the private gardens had overflowed into the streets; while in these a wealth of tropical plants, such as orange and magnolia, flourish and cast abroad a thousand mingled scents.

Even in winter there are flowers abloom, for though snow falls occasionally the season is short, and on the whole the climate is extraordinarily equable.



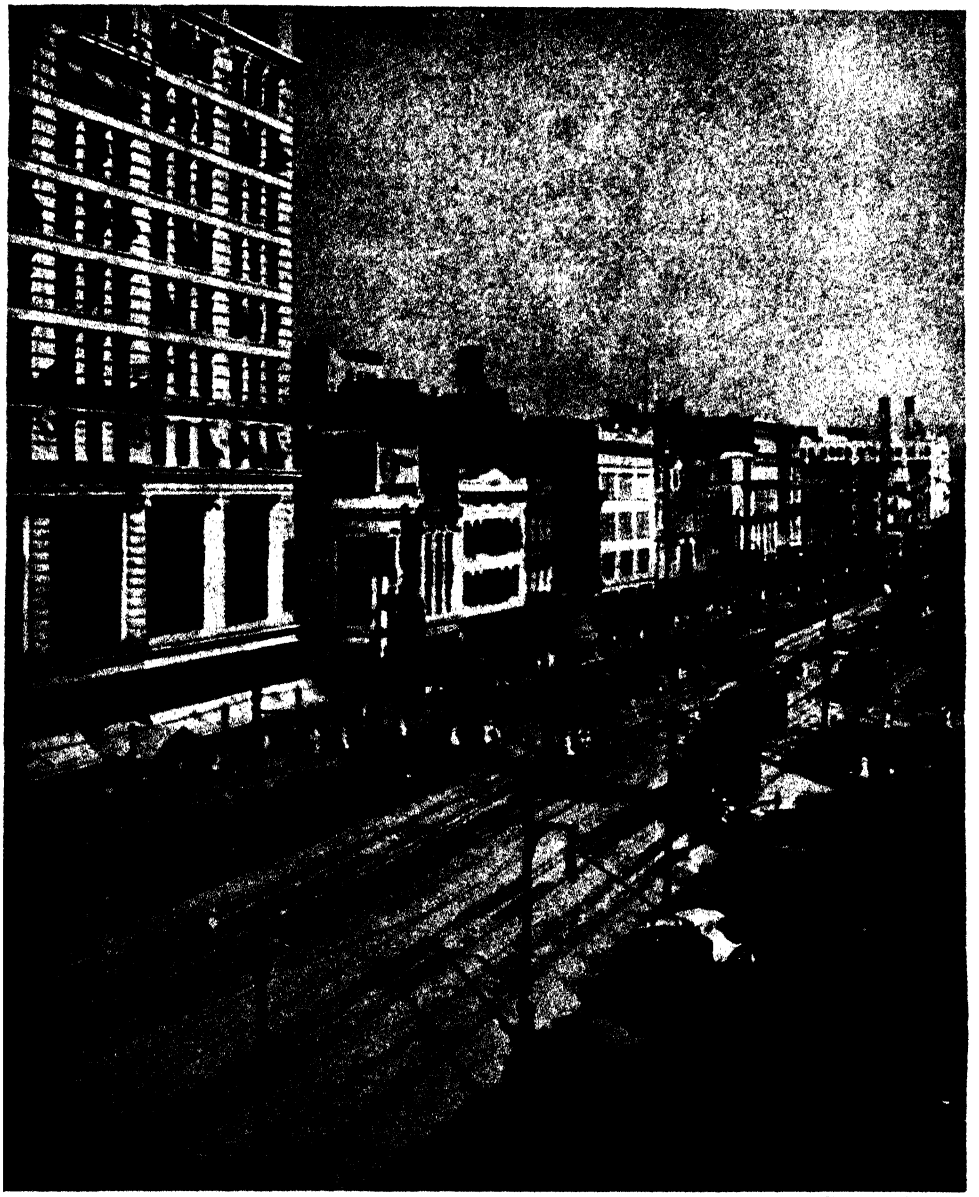
Ewing Galloway

HOUSES AROUND A COURTYARD IN THE OLD FRENCH QUARTER

That quarter of New Orleans bounded by the Mississippi river, Canal Street, Rampart Street and Esplanade Avenue is the French quarter and largely inhabited by Creoles. Most of the streets bear French or Spanish names, and the houses with lime-washed stucco façades, jalousies, small-paned windows and balconies looking on to inner courts give the place quite a foreign aspect

The mean temperature is 69° F., while in the height of summer a heat of 100° is the rarest occurrence; and that although the city is approximately in the same latitude as Cairo. One reason for this, no doubt, is the fact that large water areas surround the city, which also accounts for an average rainfall of nearly 60 inches a year.

Nor does the American quarter alone benefit from nature's kindness, for the "Vieux Carré," or French quarter, has its pleasant courtyards where the creeper riots, while Esplanade Avenue is lined with the gardens of dignified old homes where dwelt the Creole families, those native descendants of the French and Spanish colonists. On the



Ewing Galloway

CANAL STREET, DELIMITING THE FRENCH AND AMERICAN QUARTERS

Canal Street is the line of demarcation between the French and American sections of the city and bisects the town in a north-westerly direction from the Mississippi to the New Basin Canal. Near the foot of the street, which is 200 feet wide, is the river steamboat landing, and at the corner of Decatur Street is the granite building of the custom house, occupying a whole block

whole, however, it must be owned that even with all its picturesqueness on one side of the balance there is a certain air of squalor about the narrow streets in the Carré which makes one grateful for St. Charles Avenue.

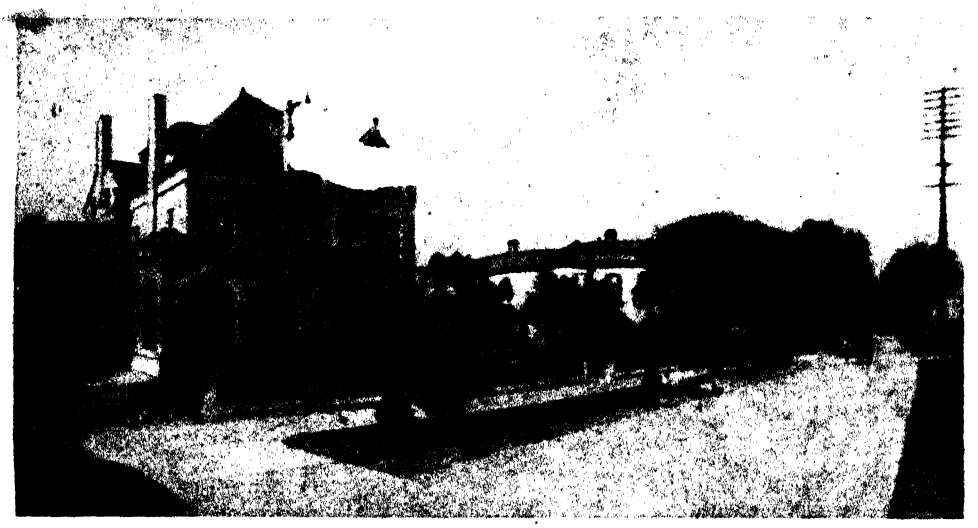
This name, Vieux Carré, is derived from the shape of the original palisaded settlement. It was in 1722 that the Sieur de Bienville transferred the headquarters of the French Company of the West in Louisiana to a spot 107 miles by water from the mouth of the Mississippi river, where a few years before he had laid out a settlement. This place was named New Orleans after the Duke of Orleans, then regent of France; but in after years, when the

town grew, it was often called the Crescent City from the bend of the river on which it stood. Tree-planted "levees" protected the site from inundation, for it lay many feet below the high-water level of the Gulf of Mexico, but even then it was surrounded by floods for three months in the year.

In 1762 Louisiana was ceded by the French to Spain and a Spanish governor arrived to take over the town, only to be met by the active resistance of the inhabitants. Their resistance was short-lived, for O'Reilly, the new governor of Louisiana, dealt mercilessly with the ringleaders.

and progress, but when these were repealed a period of prosperity set in and under his regime the Vieux Carre was reconstructed, and the canal that bears his name dug between the Mississippi and Lake Pontchartrain to the north.

But the old order was almost at an end. In 1800 Louisiana passed back to the French and was sold by them in 1803 to the United States. The citizens were granted a charter and for the first time a city council was elected; capital flowed in and the population rose; the first steamers arrived from Pittsburg and the Mississippi came into its own as a



SPLENDID PRIVATE RESIDENCES LINING ST. CHARLES AVENUE

St. Charles Avenue, extending in a crescent from Lee Circle to Audubon Park, is lined with trees and lawns and contains many of the best houses in New Orleans. Among the public buildings in the avenue are the City Library and the Harmony Club, a white marble structure, and at the corner of Sixth Street is Christ Church Cathedral. This church was made the pro-cathedral in 1891

That was in 1769, and by this time the town was a place of some 3,200 inhabitants with a character entirely French. During the 31 years of the Spanish domination a distinct Spanish imprint was imposed not only on the buildings, for the Spaniards built well, but on the inhabitants. The governors were men of ability and identified themselves with the interests of the inhabitants, and many highly-placed officers married into Creole families.

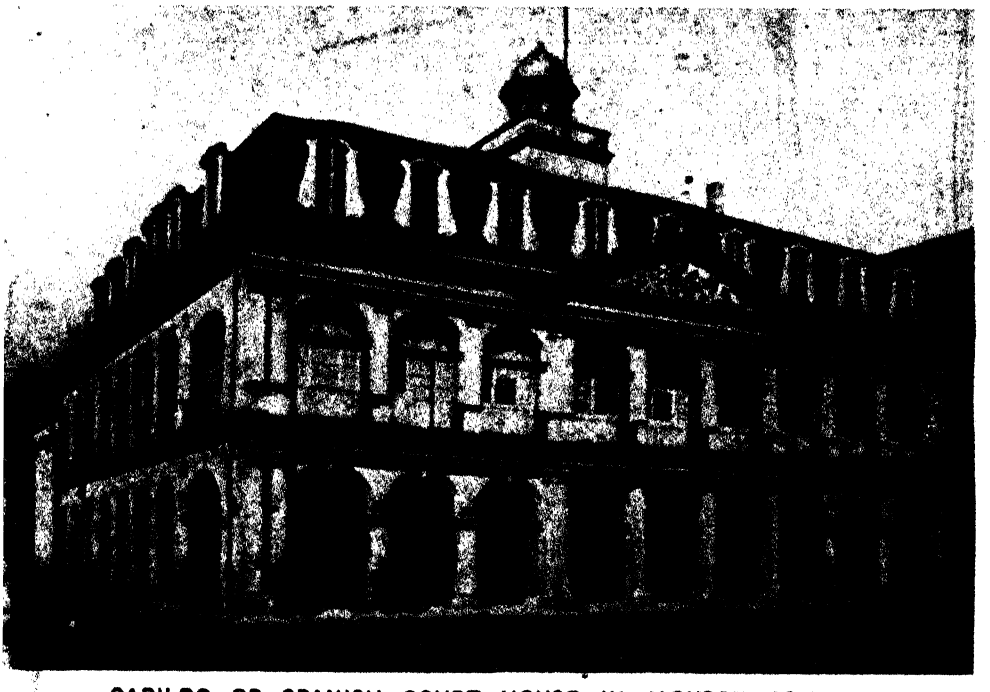
Baron Carondelet was the most indefatigable builder. Up to 1778 Spanish commercial barriers restricted expansion

great commercial highway. The Creoles, hostile at first, were soon reconciled to the new regime. At Chalmette downstream, General Jackson won the battle of New Orleans (1815) in the British-American War.

It cannot be said that the inhabitants used their new civic liberty particularly well. Several administrations were devised, with little success, to suit the heady temper of the citizens. During the Civil War New Orleans was captured and held by Federal troops and matters did not improve. These were the days of carpet-bag rule and elections to the

CHARTRES STREET IN THE "OLD SQUARE" OF NEW ORLEANS

Chartres Street is in the "Vieux Carré" or old French quarter of New Orleans, and runs north-east parallel with Royal Street. The old house with a portico supported by Ionic columns was the house of General Beauregard. From 1820 to 1840 this street was the chief commercial thoroughfare and the upper part is still important. The original New Orleans was more or less square in shape



CABILDO OR SPANISH COURT HOUSE IN JACKSON SQUARE

On the south side of the cathedral is the Cabildo, erected in 1795. The mansard roof was added in 1851, and the balcony was closed with glass and divided into offices; but the interior has undergone little change. It is now the State Museum and the meeting-place of the Louisiana Historical Society. The ceremony of transferring Louisiana from France to the United States took place here

legislature were attended by scenes of the wildest disorder, in which lives were sometimes lost.

The last of the United States troops were withdrawn in 1877, however, and with freedom thus restored New Orleans could turn its mind to development. Progress from then on has been steady, until to-day we find a great living entity spreading from the river to the lake and crossing the river to the south, an area that supports a population of over 360,000 and encloses the Vieux Carré like a currant in a cake.

The World's Second Cotton Port

The great business thoroughfare is Canal Street, 200 feet broad, which cuts the city in two, dividing the American quarter to the west from the older portions eastward. Its riverward end roughly delimits the western boundary of the Vieux Carré. All along the river front runs the raised levee, a quiet grassy wâlk out at Chalmette that merges into busy wharfside scenes at Crescent Bend, the berths of the oyster luggers, huge grain elevators and the cotton warehouses of Stuyvesant Docks. Next to Liverpool New Orleans is the world's greatest cotton port.

Many are the grass-grown spaces that adorn the city—Lee Circle with its column, prim but gracious Lafayette Square, Beauregard Square where the slaves used to dance; but most famous of all is Jackson Square, heart of the Vieux Carré. It was once known as the Place d'Armes, and this name it still seems in spirit to bear, despite General Jackson and his horse caracoling in bronze on a granite pedestal.

Square with a Stirring History

With this square every incident of note in the town's history is connected. Here landed those "filles de la cassette" sent from France at the desire of Bienville as wives for his colonists, here assembled the citizens for attacks against Indian and Spaniard, here drilled the Spanish troops of O'Reilly and Unzaga. On the flagstaff in the centre, Spanish flag gave way to French, French to American.

Facing on Jackson Square are three of the most historic buildings, the Cabildo, the Cathedral and the Court House. For the rest, it owes its present appearance mainly to Madame de Pontalba, a native of New Orleans who spent most of her life in Paris but returned in the eighteen-forties and erected the Pontalba Buildings.

Within easy reach are the French Opera House, the French Market with its cobbles and fruitstalls, the St. Louis Hotel with the old block in its rotunda where slaves were occasionally put up to auction, the "Haunted House" where slaves are said to have been tortured by the owner, and many a building hallowed by history or removed from time and place by its atmosphere of France or Spain.

Carnival Time in New Orleans

New Orleans at any time of year has its charm; but the season at which to visit it is undoubtedly carnival time. No other city in America, or elsewhere for that matter, has anything that quite compares with the festivities that begin on Twelfth Night and continue to "Mardi Gras" on the eve of Ash Wednesday. Magnificent balls are held and many processions take place in which tableaux of extraordinary ingenuity parade the streets mounted on decorated cars.

These processions are organized by secret societies bearing such names as "Rex," the "Mystic Krewe of Comus" and so forth, who commence their preparations almost a year beforehand and preserve the utmost secrecy about them. Each association has some 250 members, wealthy citizens mostly, for a display may cost £5,000.

At such times New Orleans gives itself over to unrestrained gaiety, and one may well judge the proportion of Latin blood that has gone to the making of its population.

END OF VOLUME IV.

लाल बहादुर शास्त्री राष्ट्रीय प्रशासन अकादमी, पुस्तकालय
Lal Bahadur Shastri National Academy of Administration, Library
मसूरी
MUSSOORIE.

यह पुस्तक निम्नांकित तारीख तक वापिस करनी है ।

This book is to be returned on the date last stamped.

दिनांक Date	उधारकर्ता की सख्या Borrower's No.	दिनांक Date	उधारकर्ता की सख्या Borrower's No.

910.202
Cou
v.4
वर्ग संख्या
Class No.
लेखक
Author
शीर्षक
Title Countries of the world

113255
प्राप्ति संख्या
Acc. No. 2144
पुस्तक संख्या
Book No.

910.202 2144
Cou
LIBRARY
Y. H LAL BAHADUR SHASTRI
National Academy of Administration
MUSSOORIE

Accession No. 113255

1. Books are issued for 15 days only but may have to be recalled earlier if urgently required.
2. An over-due charge of 25 Paise per day per volume will be charged.
3. Books may be renewed on request, at the discretion of the Librarian.
4. Periodicals, Rare and Refrence books may not be issued and may be consulted only in the Library.
5. Books lost, defaced or injured in any way shall have to be replaced or its double price shall be paid by the borrower.