

portance. Not only the making of the map but the human features shown upon it will in some measure be transformed by aircraft.

The systematic use of airplane photographs as aids to regional studies has been suggested in a note in the *Review* (Vol. 14, 1924, p. 645) where reference was made to Dr. Otto Flückiger's atlas of airplane photographs of Switzerland. These photographs, it should have been stated in that note, were the work of Walter Mittelholzer, a distinguished Swiss pilot with a flair for geography and a genius for photography. In 1923 Mittelholzer participated in an expedition to Spitsbergen during which numerous flights were made. In the winter of 1924-1925 he flew a plane from Zurich to Bushire on the Persian Gulf by way of Naples, Smyrna, Constantinople, Aleppo, Baghdad, and Teheran. On both of these occasions numerous photographs were taken, many of which are reproduced with geographical comments in Mittelholzer's two volumes (*Im Flugzeug dem Nordpol entgegen: Junkers'sche Hilfsexpedition für Amundsen nach Spitzbergen, 1923, Zurich, 1924* (English translation entitled "By Airplane Towards the North Pole," Boston, 1926) and *Persienflug, Zurich, 1926*). In the volume on Spitsbergen the views of rugged peaks, *névés*, glaciers, ice-flecked fiords, and mists are reproduced in bluish-green: in the one on the Persian flight, Mediterranean shores, barren mountains, and sun-baked villages of the Near East are shown with equal appropriateness in sepia. Mittelholzer's narrative is vigorous.

During the war a large quantity of photographs were taken by German aviators in Palestine. Of these, 2662 are now preserved in the Bavarian War Archives at Munich, from which copies and lantern slides may be purchased at a low cost. As an appendix to a volume by Dr. Gustaf Dalman (*Hundert deutsche Fliegerbilder aus Palästina, Schriften des Deutschen Palästina-Instituts*, edited by G. Dalman, Vol. 2, Gütersloh, 1925) Dr. A. E. Mader describes this collection and gives a catalogue of 1406 of the photographs, i. e. those of geographical and archeological interest. A detailed key map enables the student to locate the areas represented in the views catalogued, which, though by no means embracing all Palestine, cover sufficiently large and widely distributed tracts to provide an adequate conception of the whole. Except for two minor gaps, the entire stretch of road from Jaffa through Jerusalem to Es-Salt in Transjordan is represented, besides large portions of the maritime plain. There are also many scattered views from other localities. To the geographer of the future, collections like this will probably become fully as valuable as collections of maps. In devising methods of cataloguing and rendering them readily available problems will arise which the care and classification of maps do not present. Toward the solution of these problems the Bavarian War Archives and Dr. Mader have performed pioneer service.

From this collection Dr. Dalman has selected for reproduction 101 views, which he gives with detailed descriptions. As in the case of Mittelholzer's views of Switzerland shown in Flückiger's atlas, all the characteristic elements in the landscape are illustrated. Looking down upon "the desert and the sown" we may see almost at a glance the reason for the contrast: on the one hand, rough country cut by a multitude of ravines of dendritic pattern; on the other, smooth hillsides, overgrown with olive orchards, and flat plains with their patchwork of cultivated fields. In the towns the Europeanized communities, their villas and broad straight streets, stand out sharply against the huddled masses of huts and houses of the Arab quarters.

OBITUARY

OLINTO MARINELLI. The death of Olinto Marinelli, one of Italy's foremost geographers, occurred on June 14, 1926. Born in 1874, Olinto was himself the son of an outstanding figure in Italian geography, Giovanni Marinelli, famed internationally as the author of a great treatise in seven volumes, *La Terra*, and as founder

of the *Rivista Geografica Italiana*. From 1902 until his death, the younger Marinelli held an important chair of geography in the University of Florence (before 1924 known as the Institute of Higher Studies). After 1923 he was also president of the Faculty of Letters at the University. In 1901 he succeeded his father as editorial director of the *Rivista*, a post which at the time of his death he held together with Attilio Mori and Roberto Almagià.

Professor Marinelli was an exceptionally productive scholar, and his influence upon geographical studies in Italy was far-reaching. His publications cover nearly all phases of geography, although his interests centered primarily in physiography (studies of mountains, glaciers, karst topography, rivers, and deltas), human geography (questions of population, settlement, and urban geography), cartography, historical geography, and the history of geography and cartography. He was also the author or co-author of several important atlases, notably of an atlas of geographic types characteristic of Italy ("Atlante dei tipi geografici desunti dai rilievi al 25,000 e al 50,000 dell'Istituto Geografico Militare," Florence, 1922), and (with L. Ricci) of an historical atlas ("Atlante storico con testo illustrativo," 3 parts, 1919-1925).

In 1905-1906, with his friend, Giotto Dainelli, Marinelli carried out field studies in Eritrea, the results of which were published in a volume entitled "Risultati scientifici di un viaggio nella Colonia Eritrea," Florence, 1912. Marinelli and Dainelli also participated in Filippo de Filippi's expedition to the Karakoram and Turkestan, and Marinelli was a member of the American Geographical Society's Transcontinental Excursion of 1912, contributing a paper, "Confronto fra i 'bad lands' italiani e quelli americani," to the Memorial Volume. In 1920 he accompanied a party of Italian geographers and economists sent to Cyrenaica under the auspices of the Italian Touring Club and subsequently edited the volume of papers dealing with this expedition. Marinelli also contributed to the *Geographical Review* an article on "The Regions of Mixed Populations in Northern Italy" (Vol. 7, 1919, pp. 129-148).

GIUSEPPE RICCHIERI. Professor Giuseppe Ricchieri died at Milan on February 10, 1926, in his 65th year. For many years professor of geography in the University of Milan he had worked ardently for the cause of geography in Italy. With Signor L. V. Bertarelli, director of the Touring Club of Italy, whose death in January is another loss to Italian geography, Professor Ricchieri had had in hand organization of the National Geographical Congress to be held in Milan in 1927. While Professor Ricchieri devoted much attention to the pedagogical side of geography the breadth of his interests is testified by his numerous writings on problems of cartography, aspects of physical and political geography, exploration, and colonization. His more recent writings include a study of the canyon of the middle Adda in the "Recueil de travaux offert à M. Jovan Cvijić" (Belgrade, 1924); "Riesame della terminologia italiana della morfologia suboceanica," read before the Ninth Italian Geographical Congress and also published in the *Rivista Geografica Italiana* (Vol. 31, 1924) and "Per gli accordi internazionali relativi alla terminologia suboceanica" in the following volume of the *Rivista* (Vol. 32, 1925); "Dal Cairo ad Assuàn" (*L'Universo*, Vol. 6, 1925). To the Memorial volume of the Transcontinental Excursion of 1912 of the American Geographical Society Professor Ricchieri contributed the paper "Sui compiti attuali della geografia come scienza e particolarmente su le descrizioni e le terminologie morfografiche e morfogenetiche."

An appreciation of Professor Ricchieri's work appears in January-February (1926) number of the *Rivista Geografica Italiana*.

GERTRUDE LOWTHIAN BELL. Miss Gertrude Lowthian Bell, Oriental Secretary to the High Commissioner of Iraq, died in Baghdad on July 11. Miss Bell's distinguished work in the Near East began in 1905 with a journey in the borderland between Syria and Arabia. Archeology was her prime objective, but the narrative

account of the journey, "The Desert and the Sown" (1907), forecasts the later developments in her career. "The stories with which shepherd and man-at-arms beguiled the hours of the march, the talk that passed from lip to lip round the camp-fire, in the black tent of the Arab and the guest-chamber of the Druze, as even the more cautious utterances of Turkish and Syrian officials"—speak of the linguistic attainments, the tact, and insight of the narrator. Archeological work in Asia Minor with Sir William Ramsay followed, the results being given in "The Thousand and One Churches" (1909); and two years later a journey in Mesopotamia along the Euphrates to Baghdad and return by the Tigris into Asia Minor was recorded in "Amurath to Amurath" (1911). In 1913-1914 Miss Bell accomplished a notable piece of travel in northern Arabia (briefly described in the *Geographical Journal*, Vol. 44, 1914, pp. 76-77), crossing the Nefud and visiting the Shammar capital, Hail. She was awarded the Founder's Medal of the Royal Geographical Society in 1918.

During the war Miss Bell rendered invaluable service in Mesopotamia; and, when Great Britain accepted the mandate for Iraq and an Arab government was set up, she was appointed Oriental Secretary to the High Commissioner. In this capacity her influence was admittedly great. Of her qualifications no better testimonial could be cited than the well known "Review of the Civil Administration of Mesopotamia" (Cmd. 1061), 1920, a report rich in matters of geographical interest.

WILLIS T. LEE. Through the death of Dr. Willis T. Lee in Washington, D. C., on June 17, in his sixty-second year, the United States Geological Survey loses one of its chief authorities on the southwest. Dr. Lee's work in this region covered many phases, of which special mention may be made of his studies on water resources and on the coal-producing region of Raton Mesa. His writings on the latter include "Geology and Paleontology of the Raton Mesa and Other Regions in Colorado and New Mexico" (in collaboration with F. H. Knowlton), *U. S. Geol. Survey Professional Paper 101*, 1917, and the Raton-Brilliant-Koehler Folio of the Geological Atlas of the United States, 1922; while on the geography of this interesting region with its "inverted" oases he contributed the article "The Raton Mesas of New Mexico and Colorado" to the *Geographical Review* (Vol. 11, 1921, pp. 384-397). He was also joint author with others of the Guidebook of the Western United States (*U. S. Geol. Survey Bull. 112*, 1915).

Later Dr. Lee engaged in work on the Atlantic coastal plain where he was attracted to the study of the geographical possibilities in aerial photography. A preliminary paper, "Airplanes and Geography" appeared in the *Geographical Review* for November, 1920, and in 1922 "The Face of the Earth As Seen From the Air" (*Amer. Geogr. Soc. Special Publ. No. 4*), a volume that has proved extremely popular. From the air Dr. Lee turned to subterranean investigation, exploring many caves in the southwest. A rather unique feature was dealt with in his paper "An Ice Cave in New Mexico" in the January, 1926, number of the *Geographical Review*. Dr. Lee had been much impressed by the wealth of data in both physical and archeological categories awaiting the speleological explorer, and in the last letter received from him by the Society he urged systematic exploration of the caves of the southwest.

GEOGRAPHICAL REVIEWS

ON THE EXTENSION OF COTTON CULTIVATION

- W. H. SCHERFFIUS AND J. DU P. OOSTHUIZEN. **Cotton in South Africa.** 207 pp.; maps, diagr., ills., bibliogr., index. (South African Agric. Ser. No. 3.) Central News Agency, Ltd., South Africa, 1924. £1. 1s. 8½ x 5½ inches.
- RICHARD HARDING. **Cotton in Australia: The Possibilities and the Limitations of Australia as a Cotton-Growing Country.** xviii and 270 pp.; map, diagrs., ills., bibliogr., index. Longmans Green & Co., London, New York, etc., 1924. 9 x 6 inches.
- C. N. FRENCH. **Report on the Cotton-Growing Industry in Uganda, Kenya, and the Mwanza District of Tanganyika.** With Appendices I and II by W. C. Jackson. 44 pp.; map. Empire Cotton Growing Corporation, London, 1925. 1s. 3d. 9½ x 6 inches.
- HASTINGS HORNE. **The Extension of Cotton Cultivation in Tanganyika Territory.** 32 pp.; map. Empire Cotton Growing Corporation, London, 1922. 9½ x 6 inches.
- HECTOR DUFF. **Cotton Growing in Nigeria.** 81 pp.; map. Empire Cotton Growing Committee, London, 1921. 2s. 9½ x 6 inches.
- W. H. HIMBURY. **Iraq (or Mesopotamia) as a Source for Increasing Raw Cotton Supplies.** 42 pp.; maps, ills. *British Cotton Growing Assn. [Publ.] No. 88*, Manchester, 1925.
- A. S. PEARSE. **Cotton in North Brazil, Being the Report of the Journey through the States of Ceará, Maranhão, and Pará together with a Synopsis of the Whole of Brazil's Cotton Potentialities.** 130 pp.; map, ills., index. Internatl. Federation of Master Cotton Spinners' and Manufacturers' Associations, Manchester, England. 9½ x 6½ inches.
- A. S. PEARSE. **Brazilian Cotton, Being the Report of the Journey of the International Cotton Mission through the Cotton States of São Paulo, Minas Geraes, Bahia, Alagôas, Sergipe, Pernambuco, Parahyba, Rio Grande do Norte.** 2nd edit. revised. 236 pp.; maps, diagr., ills., index. Internatl. Federation of Master Cotton Spinners' and Manufacturers' Associations, Manchester, England. 9½ x 6½ inches.
- E. J. RUSSELL. **Cotton on the Nile.** Diagr., ills. *Geogr. Teacher*, Vol. 13, Part 4, Spring, 1926, pp. 296-301.
- The West Coast Leader: Third Annual Cotton Number.** xxxix and 56 pp.; maps, ills. Lima, December, 1925.

Fear of complete dependence on the United States cotton crop was sown in the minds of the British cotton manufacturers during the American Civil War. That fear has been nurtured by the menace of cotton pests and by the increasing proportion of the American crop destined for domestic manufacture. It has in recent years borne fruit in the form of a series of research publications on the possibilities of increasing the production of cotton elsewhere. Old producing regions and new alike have been surveyed, but above all the hope has been that new fields might be found within the territories of the British Empire. Most of the publications listed above are reports of field studies undertaken directly or indirectly for this purpose.