

Hæmaturia of Hot Climates caused by the Presence of *Bilharzia Hæmatobia*", which was published in 1882. Guillemard's most famous journey was begun in 1881 when the *Marchesa* (schooner yacht of 420 tons, Mr. C. T. Kettlewell captain and owner) was commissioned. The *Marchesa* reached Colombo in April 1882; from there she sailed to Singapore, Formosa, the Liukiu Islands, Japan, Kamschatka, the Sulu Archipelago, North Borneo and New Guinea. From the Malay and Papuan regions the *Marchesa* brought home a large collection of natural history objects, most of them obtained in the large islands of north-west New Guinea. In particular, Guillemard was a passionate enthusiast for the birds of paradise, of which seventeen different species were found. The whole collection of birds, numbering about 3,000 specimens, was described by Guillemard in the *Proceedings of the Zoological Society* of 1885, and on his return to England he settled in Cambridge with the view of writing a complete account of his journey. "The Cruise of the *Marchesa*" was published in 1886 and was hailed as one of the best travel books in many years; such passages as that describing the first view of the Kamschatka group of volcanoes have made a permanent place for themselves in the literature of travel.

Guillemard became a member of the British Ornithological Union in 1885 and, at the suggestion of Lord Lilford, went to Cyprus to make a study of the ornithology of the island. Returning to Cambridge, he was the first holder of the lectureship in geography in the University, but owing

to ill-health resigned the post almost immediately. A few years later, Guillemard settled at the Old Mill House at Trumpington, and there he lived until his death. Though he held no official post in the University, he was one of its best known figures: he was the general editor of the Cambridge Geographical Series and of the Cambridge County Geographies published by the University Press; he wrote the life of Magellan and the volume on Malaysia and the Pacific Archipelago in Stanford's "Compendium of Geography"; he was active on the Botanic Garden and Fitzwilliam Museum Syndicates. Above all, he had a wide circle of friends from whom he won affection as well as admiration. With the passing of Henry Guillemard, Cambridge loses something that was exquisite and unique.

WE regret to announce the following deaths:

Dr. D. H. Scott, F.R.S., honorary keeper of the Jodrell Laboratory at Kew in 1892-1906 and foreign secretary of the Royal Society in 1912-16, a leading authority on palæobotany, on January 29, aged seventy-nine years.

Dr. Henry S. Washington, petrologist in the Carnegie Institution of Washington since 1912, an authority on the composition and classification of rocks, especially igneous rocks, on January 7, aged sixty-seven years.

Mr. Edgar Worthington, formerly secretary of the Institution of Mechanical Engineers, on January 23, aged seventy-seven years.

News and Views

Micro-ray Radio Link across the English Channel

ANOTHER milestone in the history of practical radio communication was reached on Friday, January 26, when Sir Philip Sassoon, Under-Secretary of State for Air, officially opened the world's first commercial 'micro-ray' radio service on a wave-length of 17 cm. between the civil airports at Lympne, Kent, and St. Inglevert, France. M. Delesalle, Under-Secretary of State for Air in France, was present at St. Inglevert, and messages of greeting were exchanged, both by teleprinter and by telephone. The inauguration of this service is the outcome of a demonstration given in March 1931 by Messrs. Standard Telephones and Cables, Ltd., who secured the contract for the Lympne installation from the Air Ministry. The corresponding station in France was erected by the associated company—Le Matériel Téléphonique, of Paris. The actual wave-lengths employed in this radio link are 17 cm. in one direction and 17.5 cm. in the opposite direction, and this separation enables duplex working to take place simultaneously by teleprinter and telephone. The teleprinter has been used on land-line commercial telegraph services for some years, and its application to radio communication on this occasion will

enable messages to be sent and recorded at a speed of 60-70 words per minute.

THE power generated at each transmitting station of new cross-Channel radio link is less than one watt, a special valve being employed to produce the requisite high-frequency oscillations, which are fed into an aerial about one inch long. This aerial is situated at the focus of a small concave reflector which directs the waves on to a second reflector approximately 10 feet in diameter. The concentrated beam emanating from this arrangement is directed to the similar reflector system used for reception at the distant station. At the Lympne aerodrome, the aerial and reflectors are erected on the roof of a hangar, and are so placed as to command an optically clear path of the corresponding equipment installed on steel towers at St. Inglevert, 35 miles away. Duplicate aerial and reflector systems are employed for transmission and reception. Special feeder lines are led down to the transmitting and receiving apparatus installed in the buildings below. This apparatus provides for the use of telegraphy and telephony in addition to the normal service to be carried on by means of Creed teleprinters. The

object of this new radio service is to speed up the transmission of essential traffic messages, meteorological reports, and so on, involved in the operation of the cross-Channel air routes; and on account of its freedom from interference and its immunity from the effect of weather conditions, the service is likely to be highly successful and to add materially to the safety of air-travel between England and France.

Gas Warfare and Civilian Populations

DR. F. A. FREETH, of Imperial Chemical Industries, Ltd., addressing a meeting of the City of London Branch of the League of Nations Union on January 26, made some caustic comments on the subject of the position of the civilian population in chemical warfare. The topic of chemical warfare has been so forced on the attention of the populace, he said, that the main danger in case of such an attack would be a psychological one. Every chemical industry necessarily uses various kinds of poisonous materials, gaseous and otherwise, in its processes; but as a menace to the civilian population, they are not worth considering. The really 'killing' gases are of low density and in consequence quickly disperse in the atmosphere. As examples, Dr. Freeth mentioned hydrocyanic acid and carbon monoxide, both of which are particularly subtle poisons. Now the exhaust of an idling motor-bus contains about 6 per cent of carbon monoxide and, in consequence, the atmosphere of a narrow thoroughfare like Bond Street in London must, during a busy time, contain considerable quantities of the gas. Yet owing to the ventilation provided by the air, it is not allowed to accumulate. Of the heavier gases used in warfare, Dr. Freeth mentioned chlorine, which requires for its use a quiet atmosphere and a gentle breeze in the desired direction, and mustard gas, which does not spread rapidly and on wet porous soils decomposes. The percentage of deaths to casualties from mustard gas during the War was less than four. If during a gas raid, a man was able to keep his head sufficiently to shut all the windows of his house and put out the fires, he would be able to wait, in reasonable safety apart from a direct hit, until the authorities had dispersed the gas.

Geography and World Citizenship

THE Education Committee of the League of Nations Union has been meeting for some years and initiating and advising methods for making international questions and an international spirit a more integral part of ordinary school and college work. It is largely through the activity of this committee that teachers as a profession stand so firmly by the League of Nations. Meetings and conferences are arranged, lecturers sent out and publications of various kinds issued from time to time. Of the latter, a brochure has just appeared (to be obtained from 15, Grosvenor Crescent, S.W.1, price 4d.) on "Geography Teaching in relation to World Citizenship". It is edited by Prof. J. F. Unstead with the help of a number of London teachers of geography and others, and will be approved by all engaged in similar work. The subject has always been regarded in schools as

more obviously international than history, and for that reason much of what is said in the pamphlet will appear somewhat commonplace. But there is no objection to enforcing emphatically some of the great commonplaces of human life and thought. It is useful to have set out clearly and in sufficient detail (as here) the main aspect of the inter-relationship of land and people and of the various peoples among themselves throughout the world.

THE attitude of the various contributors to this pamphlet is sane and well-balanced, and they lay stress on those points in their theme which call for most emphasis at the present time. Thus in relation to the mixture of races, it is pointed out that all over Europe—in Germany as well as elsewhere—there has been a blending of stocks, a 'give and take' in blood as well as in ideas. But there is no attempt to pass over, or minimise, the reality or value of the contribution to the whole made by the various national units, based on a definite territorial region. The summary, for example, given of a supposed complete answer to the question, 'What should Italy imply to a well-educated person?', goes from an account of its physiography and natural products to its highest fruit in human genius—Dante, Leonardo, St. Francis, Galileo and the rest. The link is thus brought out between the teaching of geography and history, the more difficult subject. It is understood that a further similar brochure will deal with history.

Lord Derby and the University of Liverpool

THE completion by Lord Derby of twenty-five years as Chancellor of the University of Liverpool was celebrated on January 26 by a special congregation at which honorary degrees were conferred by the Chancellor upon Lady Derby, Lord Halifax (Chancellor of the University of Oxford) and Mr. Stanley Baldwin (Chancellor of the University of Cambridge). Lord Halifax was unable to attend. Following an address by the Vice-Chancellor (Dr. H. J. W. Hetherington) on the growth of the University and the close associations, so long maintained, between Lord Derby, his immediate predecessors, and the University, the graduands were presented by the Public Orator (Prof. Lyon Blease) for the degree of Doctor of Laws. Following the graduation, Mr. Baldwin addressed the congregation and conveyed the congratulations of the University of Cambridge to the University of Liverpool upon the occasion. As the "newest of Chancellors", Lord Halifax conveyed congratulations in writing to both the University and the Chancellor upon the silver wedding of their partnership. In the evening Lord Derby, Lady Derby, The Earl of Crawford and Balcarres, members of the Derby family and the civic heads of the City of Liverpool and Merseyside were the guests at a dinner given by the University Association.

Indian Earthquake of January 15

THE India Office has issued a general survey of the effects of the earthquake. The number of lives lost would appear to be in the neighbourhood of six thousand. The destruction of houses is greatest in the