

Obituary.

LIEUT.-COL. H. H. GODWIN-AUSTEN, F.R.S.

THE death, on December 2, of Lieut.-Col. Henry Haversham Godwin-Austen in his ninetieth year removes the last of the great pioneers in the geography of the Himalaya and a leading authority on Indian Mollusca. Col. Godwin-Austen was born at Teignmouth, July 6, 1834. He was a fellow-student with Lord Roberts at Sandhurst, whence they both went to India at the end of 1851. Godwin-Austen saw service the next year in the second Burmese War. His scientific tastes, which were hereditary—for his father, R. A. C. Godwin-Austen, was a geologist who has left an enduring reputation owing to his exceptional insight—led him in 1857 to join the Indian Survey Department. It was his privilege to survey northern Kashmir, where he discovered the Baltoro, Hispar, and Biafra Glaciers—the greatest group of valley glaciers in the world. They were afterwards traversed and mapped by Sir Martin Conway, who named the tributary glacier to the Baltoro from K_2 the Godwin-Austen glacier. The glaciers were described by Godwin-Austen in a short paper in the Proceedings of the Royal Geographical Society (vol. viii., 1864), the discussion on which is remarkable for Falconer's advocacy of the pre-glacial age of the Alpine lake basins and their preservation by the protective action of glaciers. During this survey Godwin-Austen fixed the position and heights of many of the giant peaks of the Karakorums, including K_2 , which had been previously discovered by Montgomerie. It is often known as Mt. Godwin-Austen, and according to the heights adopted by the Indian Survey Department is the second highest mountain in the world.

While Godwin-Austen was working in this district he made many mountain ascents, of which his highest was on Mata, 20,600 ft., in 1862. In 1863-64 he was engaged in the survey of the eastern parts of the Himalaya around Darjeeling and in Bhutan, and, later still, further east on the Khasia Hills and in Assam. His views on the geographical structure and classification of the Himalaya were stated forty years ago in his presidential address to the Geographical Section of the British Association, which is his most important geographical paper. He contributed to the Geological Society several papers which made important additions to the geology of the Himalaya, including the discovery of the extension into Kashmir of the Spiti series, the most significant horizon in the Himalaya. In 1884 he described the drifts exposed in a new railway cutting near his home at Guildford, and the paper was illustrated by sections, characterised by the same precision and detail as those issued with his Indian papers.

After leaving the Indian Survey, Godwin-Austen's main interest was in the land mollusca. He was described as having "a unique knowledge of Indian molluscs." He contributed to "The Fauna of British India" the volume on the Testacellidæ and Zonitidæ. The value of his work on that group is shown by his election as president of the Malacological Society in 1897-9, and of the Conchological Society in 1908-9. His later years were burdened by financial embarrassment due to an unfortunately worded will. He

inherited the paternal estate of Shalford, which proved a vampire instead of the source of a comfortable income. His interest was subject to fixed charges which, when the value of land fell, used up more than the whole of the income from the property. He bore this trouble with his characteristic courage and cheerfulness. Great sympathy was also recently felt for him, owing to the unfortunate loss of the portfolio of sketches and maps made during his Kashmir service, sixty years ago.

Godwin-Austen was elected F.R.S. in 1880, and received a belated Founders' Medal from the Royal Geographical Society in 1910.

HERLUF WINGE.

It is with much regret that we record the sudden death, on November 10, at Copenhagen, of Herluf Winge, who for many years, and until his death, was "Viceinspektør" in the Zoological Museum of the University of Copenhagen. As a lad Winge began to study the small mammals of Denmark, and his earliest papers upon this subject were full of promise. A little later, in 1877, while still a student in the University of Copenhagen, he published an account of some of the skull characters in the mole, shrew, and other Insectivora, in which he displayed not only remarkable learning but a most clever technique. In 1882 he gave his views upon the mammalian dentition and his theory of cusp homologies in a paper which will ever be regarded as a classic. In the same year appeared an account of a collection of mammals from Greece; and in preparing this Winge was led so far afield investigating the relationships and special adaptations of the species before him that he himself regarded this piece of work as the foundation of the important publications next to be noticed.

Between 1887 and 1915 Winge published a series of works which ostensibly are descriptions of the fossil bones collected by Lund in the caves of Lagoa Santa, Minas Geraes, Brazil, and of the recent mammalia obtained in the same region by Lund and Reinhardt. Taking these mammals order by order (Rodents, 1887; Chiroptera, 1892; Carnivora, Primates, 1895; Marsupials, including Monotremes, 1897; Ungulates, including Sirenia, 1906; Edentates, 1915), Winge commenced each memoir with a description of the Brazilian material; but, that finished, he proceeded in each case to give a review of the whole order, bringing out his views of the evolution and relationships of the orders and of every fossil and living family and genus in a wonderfully clear and concise style. He seems to have prepared a complete monograph of each genus dealt with; and then to have compressed each monograph into a short paragraph and very often into a single sentence. But in this small space he contrives not only to state all that is essential, but to throw many a brilliant beam across what was previously obscure. Companion reviews of the Insectivora (1917) and the Cetacea (1919), the two orders not represented in the Lagoa Santa material, have since been published by Winge. That dealing with the Cetacea has recently been translated from the Danish by Mr. G. S. Miller