

founded his famous "Mineralogisches-geologisches Institut". Here during the following twenty-eight years he attracted successive generations of enthusiastic students from all countries, perfecting his methods and applying them in a number of petrographical memoirs, but doing still more important work by his example and influence on the labours of his devoted followers.

In 1906, upon reaching the age of 70, Rosenbusch retired from his professorship, the event being made the occasion of the publication of a 'Festschrift', in which his students from all parts of the world published original memoirs devoted to the science they had learned from their great master. On January 20, 1914, Rosenbusch passed away, after a short and severe illness, leaving a widow but no children.

No notice of Rosenbusch would be complete without a reference to the amiability and charm of his personality. He was a born teacher and inspired the strongest feelings of affection in his pupils. They loved to dwell in after years on his conversations as he made the round of his laboratory, his enthusiasm when, with lighted cigar, he demonstrated the existence of carbon dioxide in cavities of quartz, and his constant insistence that no determination of a mineral should be considered settled till every optical test had been applied. By his scientific contemporaries in all countries he was equally esteemed and loved. Ever ready to exchange specimens, sections, and ideas, he was modest and gentle in expressing dissentient views, and friendly and generous in agreement and appreciation of the work of others. Rosenbusch has left a great and enduring mark upon the geological science of the nineteenth century.

JOHN W. JUDD.

ALBERT C. L. G. GÜNTHER,
M.A., M.D., PH.D., LL.D., F.R.S., F.L.S., F.Z.S.

BORN OCTOBER 3, 1830.

DIED FEBRUARY 1, 1914.

ANOTHER eminent naturalist has just passed away, an old friend and colleague of the writer for many years in the British Museum, and for half a century the highest authority in this country on Ichthyology.

Albert Charles Lewis Gotthilf Günther was the son of Frederick Gotthilf Günther, of Möhringen, and a descendant of the first Duke of Würtemberg, the founder of the University of Tübingen. Here young Günther, as founder's kin, was entered and received a free education, taking the Ph.D. degree in 1852. He next worked at the University of Bonn, and at Berlin, under Johannes Müller. In 1853 he published his first paper, on the fishes of the River Neckar. He qualified as a physician and surgeon, doing part of his work at St. Bartholomew's Hospital in London, and taking the degree of M.D. at Tübingen in 1862.

In 1855 he was engaged at the British Museum to prepare Catalogues of Fishes and Reptiles, under Dr. J. E. Gray, and after eight years special work he was appointed an Assistant in 1864, and succeeded Dr. Gray as Keeper of Zoology in 1875, a post which he

retained until 1895, when he retired on a pension. While in the Museum he prepared ten volumes of the Catalogue upon Colubrine Snakes, Batrachia, and Fishes. He also published "The Reptiles of British India", "Shore Fish", "Deep Sea Fishes", and "Pelagic Fishes" in the *Challenger* Reports; and an "Introduction to the Study of Fishes". In 1880 he took charge of the removal of the Zoological Collections from the British Museum, Bloomsbury, to the New Natural History Museum in Cromwell Road.

In 1864 Dr. Günther founded the *Zoological Record*,¹ an annual publication. He was also one of the editors for more than thirty years of the *Annals and Magazine of Natural History*. So long ago as September, 1864, Dr. Günther contributed a paper on "A New Fossil Fish from the Lower Chalk, *Plinthophorus robustus*, Gthr." (*GEOL. MAG.*, Vol. I, pp. 114-18, Pl. VI, 1864), and in 1876 "On the Fish Fauna of the Tertiary Deposits of the Highlands of Padang, Sumatra" (*GEOL. MAG.*, Dec. II, Vol. III, pp. 433-40, Pls. XV-XIX).

Dr. Günther was elected to the Royal Society in 1867, became a Vice-President 1875-6, and received a Royal Medal in 1878. He was President of Biology, British Association, 1880; President of the Linnæan Society 1898-1901, F.Z.S. in 1862, and V.P.Z.S. 1874-1905.

He married, first, in 1868, Roberta Macintosh, of St. Andrews (who died in 1869); second, 1879, Theodora Dawrish, daughter of Henry Holman Drake, of Fowey, Cornwall, who survives him. His eldest son, Mr. R. T. Günther, is a Fellow and Tutor of Magdalen College, Oxford, and is distinguished as a zoologist, geographer, and antiquarian.

Dr. Günther died on February 1, 1914, in his 84th year at 2 Lichfield Road, Kew Gardens, leaving behind him a splendid record of biological work accomplished during his long and strenuous life.

HORACE BOLINGBROKE WOODWARD, F.R.S., F.G.S.

BORN AUGUST 20, 1848.

DIED FEBRUARY 6, 1914.

(WITH A PORTRAIT.)

WHEN death severs a friendship of forty years it is difficult to form a true estimate of the friend's lifework, and this is specially difficult in the case of H. B. Woodward, whose life was more generously spent in aiding others than in those original researches which might permanently establish his reputation.

Born in London in 1848, the son of Dr. S. P. Woodward, F.G.S.,² of the Department of Geology in the British Museum (1848-65), Horace was educated in a private school, and in 1863 was appointed assistant to the Secretary, Mr. H. M. Jenkins, at the Geological Society, Somerset House. This position he did not hold for long, being appointed in 1867, at the age of 19, an Assistant Geologist on the Geological Survey, under Sir Roderick Murchison. The greater part

¹ Still continued by a Committee of the Zoological Society.

² See Obituary, *GEOL. MAG.*, August, 1865, pp. 383-4.