

and he maintained it for many years in face of slowly developing opposition.

We may recall Marcel Bertrand's paper unifying the movement in 1884, Suess's conversation with Heim in the same sense in 1892, and Schardt's one-way interpretation of Pre-Alpine tectonics in 1893. Schardt's revolutionary ideas led on to Lugeon's synthesis of Swiss Alpine structure considered as a whole, published in 1902. Lugeon was a pupil of Heim's, and while his masterpiece was passing through the press he received a noble letter from his old professor, in which the latter confessed that he now favoured Bertrand's interpretation and expressed joy at the new vision that had come.

The marvel of Heim's career is that it began in early youth and culminated in old age. When only twenty-four years old, Heim succeeded to the chair of geology at the Polytechnic in Zurich, and in the following year to that at the University of the same town, and held both posts until 1911; and yet, in 1919-22, he produced his three-volume "Geologie der Schweiz", the finest national text-book that is ever likely to be written.

Heim was keenly interested in many aspects of geology besides tectonics. Here there is only room to mention his work on glaciers, of the erosive powers of which he did not have a high opinion.

Heim became a member of the Swiss Geological Commission in 1888, and directed its activities from 1894 until 1925. With C. Schmidt he published a very valuable map of Switzerland on the scale 1:500,000. He received honorary doctorates from Bern, Oxford and Zurich, and was elected a foreign member of the Royal Society of London. He has left a distinguished son, Arnold, called after Escher, who was truly helpful to his father during the latter half of his long life's work. E. B. BAILEY.

#### Lord Rothschild, F.R.S.

IN Lionel Walter Lord Rothschild, who died on August 27 at the age of sixty-nine years, a scientific worker has passed away of whom it may justly be said that he was better known at home and abroad than any other contemporary zoologist. It was inevitable that a Rothschild deeply interested in biology and possessing large zoological collections which he was indefatigable in increasing for the benefit of science, should inspire the imaginative Press of many lands to publish fanciful reports, which gave him a publicity often very embarrassing and inundated him with offers of collections and service and with requests for help. But he would have gained high distinction in science without a family name already world-famous. His interest was so intense and so wide, his ever-ready support of science so valuable and his scientific publications so important, that he held a high place of honour in zoology and was elected an honorary fellow by many foreign scientific societies. Entomologists, ornithologists, herpetologists and mammalogists all claimed him as one of their own.

Being of delicate health as a boy, Rothschild was educated at home and then spent some years at Bonn and Cambridge, following all the time his great love for natural history. The boyhood collections of Lepidoptera and Coleoptera increased to such an extent that in 1889, when he became of age, he built a cottage at Tring for the safe housing of the collections, and soon after a public museum in which were exhibited mounted specimens of all classes of animals. Following family tradition, he entered the bank of Messrs. N. M. Rothschild and Sons to study finance, which left him little time for the supervision of the growing collections. In 1892, on the recommendation of Dr. Albert Günther, he put Mr. Ernst Hartert, the ornithologist, in charge of the collections, and six months later entrusted the Evertbrates to the care of the writer of the present lines. It became the definite policy gradually to build up in the research department collections of birds and Lepidoptera as complete as possible, and to increase the public department as resources permitted.

In 1888, Rothschild had bought a collection of New Zealand birds from Sir Walter Buller, and he became so interested in the faunæ threatened by the spread of the white race that he sent a bird-collector to the Sandwich Islands, took up the study of the giant tortoises restricted to the Galapagos and Mascarene Islands, and of marsupials, and supported all measures for the protection of animals and plants by the creation of Nature reserves. His reputation as a zoologist was established before he was thirty years of age. In 1898, the University of Giessen conferred upon him the degree of Dr.phil. and in 1899 he was elected a trustee of the British Museum. He gave up finance in 1908 and then could devote himself entirely to science and to civic duties. From 1899 until 1910 he represented Mid-Buckinghamshire in Parliament, and in 1911 he was elected a fellow of the Royal Society in recognition of his services to the natural sciences. He travelled a good deal in Europe and North Africa, but being a bad sailor never visited the tropics. On the death of his father in 1915 he succeeded to the title.

At the time of Lord Rothschild's death the buildings of the museum had an aggregate floor-space of nearly an acre and a half. The public department now contains more than 2,000 mounted mammals, among them 13 gorillas, 25 chimpanzees, 24 echidnas, more than 200 marsupials; among the 2,400 mounted birds there is a magnificent series of 62 cassowaries, the great auk and other extinct species. The research department lost in 1932 the collection of 280,000 bird skins, which a sudden heavy call on his finances compelled Lord Rothschild to sell; the large collection of eggs contains the best series in museums of eggs of birds of paradise and two great auk eggs; but the greatest asset is the collection of some two million Lepidoptera invaluable for the study of geographical variation and other problems of evolution. The collections were placed with great liberality at the service of scientific workers, who always found a cordial welcome at Tring. The museum is left to the trustees of the British Museum.

KARL JORDAN.