

his return to Holland wrote the monographs on the two families of the Gorgonacea—the Chrysogorgiidae and Primmoidae—collected by the Expedition. The care he took in the description of the species, his skilful illustrations and his references to type specimens, which he examined whenever available, have rendered these monographs of extraordinary value and interest. They are still the standard works on the subject. After the completion of his work on these coelenterates, he turned his attention to the study of the skull of reptiles and published his first paper on the morphology of the columella bone before he left Amsterdam. In 1904 he migrated to Germany and became a *Privat Dozent* and later an assistant professor in the University of Giessen, and during the following ten years he produced several papers on the skulls of recent and fossil reptiles bearing on what he called “Das Streptostylie Problem”, or the mobility (kinetism) of the bones of the jaws on those of the brain case.

At the outbreak of the Great War, Versluys remained in Germany, but after the occupation of Belgium by the German army he was appointed a professor in the Flemish University in Ghent and remained there until the Armistice. Returning to Holland, he made a home in the beautiful town Hilversum and there he began a study of another subject, which he called “Das Limulus problem”. Working in collaboration with R. Demoll, of Munich, a number of papers were published on the appendages and other structures of recent and extinct Arachnoidea, especially of *Limulus* and the other Merostomata.

The general conclusions reached by these authors were startling in their originality but have not been accepted by most of the zoologists in Great Britain. They suggested that the evolution of *Limulus* was on lines exactly the reverse of those suggested by Sir Ray Lankester in his well-known essays on this subject. *Limulus* was derived, according to their view, not from an aquatic but from an air-breathing, tracheate ancestry; and, moreover, that even the Crustacea are descended from a remote terrestrial group of animals of which *Peripatus* is the only living representative.

After a few years in Holland, Versluys accepted the position of professor in the University of Vienna and remained there until his death. I have not been able to find any record of his original work in this last period of his life, except an abstract of a paper he read at the British Association meeting in 1934, on the distribution of the Primmoidae with reference to the Wegener hypothesis.

He leaves a widow and three children.

SYDNEY J. HICKSON.

Eng.-Commander J. J. Walker

THE death on January 12 of Eng.-Commander James John Walker will be deeply regretted by very many British naturalists, especially by students of his favourite insects—Coleoptera and Lepidoptera.

Elected in 1878, Walker had been for some years the senior fellow of the Royal Entomological Society

of London, and was president in 1919 and 1920, his two addresses being on “The Fringes of Butterfly Life” and “Some Aspects of Insect Life in New Zealand” (*Proc.*, 1920 and 1921). Two of his papers in the *Transactions* of 1890 and 1895 dealt with Lepidoptera from the Straits of Gibraltar and the butterflies of Hong Kong, respectively, while the *Proceedings* (1907–31) includes many of his interesting notes on British and a few on foreign insects. The vast majority of his observations made on voyages and at home appeared, however, in the *Entomologist's Monthly Magazine*, of which he became editor in 1904, on the death of Robert McLachlan. The first of his notes and papers in this excellent journal—more than three hundred in number—appeared in 1872, and the last, dated December 20, 1938, less than a month before his death, was published in January. It records the more interesting of fully three hundred species of Coleoptera which he had observed in about thirty acres of meadow and cultivated land between his house and the River Cherwell.

Among Walker's papers were many on interesting subjects which he always kept in mind and added fresh records as they came to light. Such were his notes in 1908, 1911, 1912, 1928 and 1931, on immigrant insects which invaded Great Britain; in 1922, on butterflies which have reached Iceland and on the Lepidoptera of North Atlantic islands; in 1931, on insects at sea; in 1914, 1915 and 1928, on the Monarch butterfly, *Danaus plexippus*, and its migrations. Among the many British localities from which he published records the most frequently named are, Isle of Sheppey, Sheerness, Chatham, Kent, Portland, New Forest and especially Oxford, which became his home in May 1904. The honorary M.A. was conferred on him by the University in the following year.

Walker was a constant visitor to the Hope Department of Entomology in the University Museum, Oxford, where he gave immensely valuable help in describing, arranging and recording the historic collections. He joined the Ashmolean Natural History Society in 1904, became president in 1913–14 and from 1911 onwards was editor of the *Proceedings*, in which he published (1907–30) a valuable list of Oxford Coleoptera with supplements; also twenty-three interim reports (1911–38), the last four including Lepidoptera in addition to Coleoptera.

The above is a very condensed account of some of the chief publications of one who, in spite of his great age—eighty-seven years—retained to the very end his wonderful memory, keen interest and the never-failing desire and ability to help his brother-naturalists.

E. B. POULTON.

Prof. Albert Sauveur

PROF. ALBERT SAUVEUR, emeritus professor of metallurgy in Harvard University, whose death occurred recently in Cambridge, Mass., was a Belgian by birth, but was long known as the leading teacher of metallurgy in the United States.

Born at Louvain in 1863, he studied in the School of Mines of Liège, and later crossed the Atlantic to enter the Massachusetts Institute of Technology,

where he graduated in 1889. His first post was as chemist to the Pennsylvania Steel Co.; but after a year he was chosen to take charge of the research laboratory of the Illinois Steel Co. in Chicago. From that time onwards he carried out many researches on iron and steel, making great use of microscopical methods, a field in which there were still few workers. His first paper on the microstructure of iron and steel appeared in 1893 and had many successors. In 1905, he was appointed to the chair of metallurgy at Harvard, which he occupied until his official retirement in 1935, with an interval from 1917 until 1919, during which he acted as director of the Metallurgy Division of the Air Service in France, work recognized by his appointment as a Chevalier of the Legion of Honour.

Sauveur's investigations were concerned almost exclusively with the metallurgy of iron and steel, especially with the problems of hardening and of deformation. His contributions, clearly expressed and admirably illustrated, have played an important part in the development of the subject. In 1898 he founded a journal, the *Metallographist*, which became the medium for the publication of much original work from many countries. Although it lasted only for five years, being then absorbed into another journal, its volumes are often consulted by students. His text-book, "The Metallography and Heat Treatment of Iron and Steel", which first appeared in 1912, has passed through several editions, and is greatly valued. A few years ago he discussed, in the form of a dialogue, the current views on controversial questions in metallurgy.

Sauveur's department at Harvard was small in comparison with the metallurgical departments of many universities and colleges; but the quality of its work was excellent, and many of the ablest American research workers in that field received their training there. He had great charm of manner as well as great gifts of exposition, and was revered by metallurgists as one of their leaders. Even in his retirement he continued to be active, and only last year he initiated a movement with the object of simplifying the description of the microscopic constituents of steel, which he considered to have been obscured by unnecessarily complex hypotheses and cumbersome terminology.

Sauveur received many honours from technical societies, including the Bessemer Medal of the Iron and Steel Institute in 1924. He married, in 1891, Mary Prince Jones, of Massachusetts, and had two daughters.

C. H. D.

Mr. Reynold Bray

MR. REYNOLD BRAY, who lost his life by drowning last September, was an Arctic explorer of considerable achievement and much promise. In 1931, he was with the Oxford University Exploration Club's Expedition to Akpatok in Ungava Bay, Hudson Strait. This expedition, on which Bray was nominally photographer, made a complete survey of this hitherto little-known island. The story was told in "The Isle of Auks" by N. Polunin, 1932. In the follow-

ing year Bray, with T. H. Manning, made a winter tramp through Swedish, Finnish and Russian Lapland from Bodo to Murmansk. Bray recounted this fascinating journey, which included trouble on the Soviet frontier, in "Five Watersheds" (1935). In the following year he was again with Manning, in Southampton Island and Melville peninsula mapping much of the eastern shores of those lands as well as the unknown coast of Baffin Island on the east of Foxe basin.

In 1938, Bray planned with P. Baird to continue his exploration of the western coast and the interior of Baffin Island. Ice, however, interfered with the ship's progress and eventually the two men were landed on the south-east of Melville peninsula, whence they set off in their boat last August in an attempt to reach Igloodik Island, 300 miles to the north at the eastern entrance to Fury and Hecla Strait. Some forty miles south of the island, on September 14 last year, Bray was blown out to sea in a canvas boat and lost.

Mr. R. Kanthack

THE late Mr. Ralph Kanthack, who died in his seventy-seventh year at Golders Green, London, on November 12, was chiefly known for his great ability in scientific translations in English and German. He was educated in Hamburg and Lüneberg, Germany, taking an honours degree in engineering. After some period as a marine engineer, he found himself more attracted to scientific and optical studies, and became associated with Messrs. Carl Zeiss, when he had the advantage of intimate association with Abbe, Czapski and others. This led to his establishment as a London agent for Messrs. Carl Zeiss and Messrs. E. Leitz; but in addition to business activities he was known as an authority on various aspects of microscopy.

In later years, Kanthack began the literary work which brought him well-deserved recognition. He translated and revised a German edition of Prof. Heath's work on geometrical optics ("Lehrbuch der Geometrischen Optik". Berlin: J. Springer, 1894), and during the Great War he translated von Rohr's "The Theory of Optical Instruments" at the request of the British Government. Later, he was associated with Messrs. Adam Hilger, Ltd., for whom he prepared a book in two volumes entitled "Tables of Refractive Indices".

Mr. Kanthack was the eldest son of the late Emilio Kanthack, at one time British Consul of Para, Brazil, and brother of the late Prof. Alfredo A. Kanthack, an authority on pathology. He was much respected in optical circles for his outstanding character.

WE regret to announce the following deaths:

Prof. A. P. Coleman, F.R.S., emeritus professor of geology in the University of Toronto, an authority on Canadian metalliferous deposits, on February 27, aged eighty-six years.

Prof. Henry Louis, emeritus professor of mining and William Cochrane lecturer in metallurgy in Armstrong College, Newcastle-upon-Tyne, on February 22, aged eighty-three years.