

1851-54; Copepoda, 1876-79; 1931-33; parasitic Copepoda, 1912-13.

ARACHNIDA: Oribatidæ, 1883-87; Tyroglyphidæ, 1901-3; Hydracarina, 1924-28.

INSECTA: Collembola and Thysanura, 1871; Aphides, 1875-82; Coccidæ, 1900-2; Orthoptera, 1919; Phytophagous Hymenoptera, 1881-92; Dragon-flies, 1930; Larvæ of Butterflies and Moths, 9 vols. 1885-99.

TUNICATA: 1904-12.

VERTEBRATA: Batrachia, 1896-97; Reptiles, 1863; Cetacea, 1866.

Among the botanical works are memoirs on Desmids, 1904-22; Diatoms, 1929; Charophyta, 1917-23; Lichens, 1851; and on Vegetable Teratology, 1868, 1915-6.

In the face of this successful record, it is now amusing to read a passage in one of Bowerbank's early letters to Jardine. "I have seen Owen this morning and find he is strongly opposed to us. I tried him very hard, but it was without effect. Never mind. His weight is not so great as you in the country may imagine, and I can see that we shall get on very well without him."

It is to be observed that although the majority of the volumes issued by the Society are concerned with the systematic description of the animals and plants of the British Isles, this was only one of the objects which the founders had in view, and from the first some of the publications had a wider scope. Some systematic monographs deal with Europe or India, or include the whole world

in their survey, and there are occasional works on such subjects as morphology and teratology and on the historical and biographical aspects of the science.

When, as a boy, I stayed with my father at various country houses, I recall that frequent reference was made to the Ray volumes for the identification of unfamiliar forms of life. The library of a large country house would not have been considered as adequately furnished without these works of reference. Now, alas, owing to increasing specialisation, fewer and fewer people have time to be interested in the productions of their home-land, and it is therefore becoming more and more difficult to obtain support for scientific publications from individual subscribers. It has thus become the bounden duty of the public libraries to stimulate and provide for the public interest.

This account of the monumental achievement of the Ray Society must not be closed without some allusion to the fact that the earliest circulars and volumes issued by the Society in 1844 were printed by Messrs. C. and J. Adlard of Bartholomew Close, and that, although name and address have been modified, no other firm's imprint has appeared on the title pages for ninety years. Nor must we forget the very great services which have in recent years been rendered to the Society and to its authors by Dr. W. T. Calman in his editorial, no less than in his secretarial, capacity.

The agents for the sale of the Ray publications are Messrs. Dulau and Co. R. T. GUNTHER.

Obituary

PROF. T. SWALE VINCENT

DR. THOMAS SWALE VINCENT, formerly professor of physiology, University of London, died on December 31, 1933, at his home in Fishpool Street, St. Albans, at sixty-five years of age.

Born on May 24, 1868, the son of Mr. J. Vincent, Swale Vincent was educated at King Edward VI Grammar School, Birmingham, and took his medical course at the University of Birmingham, then Mason University College. After taking his degree, he went to the University of Heidelberg to study physiological chemistry under Prof. Kossel, and returned to Birmingham to take up his first appointment as demonstrator of physiology. The year 1894 had seen the birth of endocrinology as we know it to-day, with the discovery by Oliver and Sharpey-Schafer of the striking rise in blood pressure produced by the intravenous injection of an extract of the suprarenal capsules. Swale Vincent at once followed this new line of investigation, and pursued it through the whole length of his scientific career, with occasional excursions into the related fields of the circulation and of vaso-motor reflexes. In 1896 he published his first paper entitled "The Suprarenal Capsules in the Lower Vertebrates" in

the *Proceedings of the Birmingham Natural History and Philosophical Society*. Soon afterwards he was appointed British Medical Association research scholar, and went to Sharpey-Schafer's laboratory at University College, London, where he continued his investigations. After two years he became Sharpey scholar in physiology, an appointment which carried with it the post of chief assistant in the physiology department, and later he was appointed assistant professor of physiology under Prof. Starling.

Swale Vincent left University College in 1900 to take up the post of lecturer in histology in the University of Cardiff. One of his students there was T. Lewis, now Sir Thomas Lewis, with whom he published two papers on the biochemistry of muscle. He left this post in 1902 to hold the Francis Mason research fellowship for investigating the physiology and pathology of the thymus and other ductless glands, and went to the Physiology Department of the University of Edinburgh which, under Sir Edward Sharpey-Schafer, had become an active centre of endocrinological investigations. He collaborated there with two advanced students, W. Cramer and W. A. Jolly, now professor of physiology at Cape Town. In 1904 he was appointed to the chair of physiology in the University

of Manitoba, and remained in Winnipeg until 1920. He had to create an entirely new department there, a task which he performed so successfully that when he left Winnipeg to return to London as professor of physiology at the Middlesex Hospital, the University of Manitoba paid him a well-deserved tribute by conferring upon him an honorary LL.D. In London it again fell to his lot to reorganise the Department of Physiology, and its active scientific state when he retired in 1930 bears witness to the success of his efforts. Swale Vincent was at various times examiner in the University of London and the University of Leeds, and also of the Conjoint Board. He had been secretary of the Ductless Glands Committee of the British Association since 1898. In Canada he served as a member of the Industrial Fatigue Board.

Swale Vincent's numerous publications cover a large part of endocrinology. Beginning with a study of the suprarenal glands, he proceeded to investigations on the pituitary, the thymus, the thyroid and parathyroid glands, and the Islets of Langerhans. He was a prominent representative of the Schafer school of physiology which, regarding the cell as a basic unit of physiological functions, combines histological studies with experimental technique. The present generation of physiologists who can buy most of the various internal secretions in a more or less pure state at a chemist's shop, must find it difficult to realise the laborious investigations required to understand the morphological and functional relationships of the different parts of the endocrine organs, most of which are formed as a result of the joining up of histogenetically and functionally different tissues.

In extending his investigations to the action of normal tissues other than endocrine organs, Swale Vincent discovered the existence of substances present in all tissues producing a marked lowering of blood pressure and different from choline. One of these substances was identified later by Barger and Dale as histamine, the subsequent study of which in the hands of Dale and his collaborators has revealed its profound physiological significance. Swale Vincent was a careful worker, with a highly critical mind, qualities which enabled him to make positive contributions of lasting value, and to clear the new science of endocrinology from many pseudo-scientific weeds. The high international reputation of his work found recognition in the request to write a series of reviews on the ductless glands for Ascher-Spiro's "Ergebnisse der Physiologie". These reviews were later expanded into a book "Internal Secretion and the Ductless Glands" which, first published in 1912 and since passed through three editions, is one of the standard works on the subject. He also published in 1924 an "Introduction to the Study of Secretion" and in 1929 with Prof. Sampson Wright, formerly his pupil and now his successor, "Introduction to Practical Mammalian Physiology".

Swale Vincent was a man of firm principles and high ideals on which he would not compromise. He was essentially a shy man, and this sometimes

gave an impression of brusqueness, while to those who had the privilege of knowing him well he was a staunch friend and a charming companion. He had a deep love and a great understanding of music and was himself no mean pianist. It was characteristic that in the last years of his active life he became interested in the study of the physiological reactions of the body to music. In 1914 he married Beatrice, daughter of Mr. W. Overton of London, who survives him, and had two daughters.
W.C.

DR. KNUD RASMUSSEN

KNUD RASMUSSEN, who died in Copenhagen in December last, devoted most of his life to the exploration of Greenland, particularly in regard to the ethnography of the Eskimo. He was born in Greenland on June 7, 1879, the son of Chr. Rasmussen, who was a pastor in that country and later a lecturer in the University of Copenhagen. His mother was of Eskimo descent.

After taking his degree at Copenhagen, Rasmussen visited Lapland to study the natives and in 1902 returned to Greenland with M. Erichsen to examine the social conditions of the Eskimo on the west coast. The report of that two years' study led to several reforms in the Danish system of administration, and in 1905 the Danish Government sent him again to Greenland to explore the conditions for reindeer as a source of livelihood for the natives. From 1906 until 1909 he was in Greenland studying Eskimo folk-lore, and his visits to the isolated Polar Eskimo of the Cape Yuk area led to the foundation in 1909 of the mission station of Nordstjernen in North Star Bay. The following year Rasmussen added a trading station and changed the name to Thule. Afterwards the mission station was moved farther north, and Thule became the base for a long series of scientific expeditions under Rasmussen, in most of which he successfully used the Eskimo technique in travelling and hunting.

The first Thule expedition, in 1912, crossed the ice-sheet in the north-west to Danmark Fjord and Independence Fjord, thus linking the discoveries of Peary with those of Erichsen. After spending some time in exploring around Thule and Melville Bay, Rasmussen led the second Thule expedition in 1916-18 to explore the topography and structure of the north-west coast. The return to Thule over the edge of the ice-sheet led to the death of the Swedish botanist, Th. Wulff, who succumbed to the hardships. This expedition convinced Rasmussen that there can have been no migration of Eskimo round the north to the east coast of Greenland. Rasmussen did not take part in the third Thule expedition but devoted the fourth, in 1919, to a study of the folk-lore of the east coast Eskimo. The fifth Thule expedition, in 1921-24, entailed a journey, with K. Birket-Smith, from Greenland to Bering Strait through the whole extent of Eskimo territory with the view of studying the origin and evolution of