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SIDNEY IRVING SMITH

1843-1926

BY

WESLEY R. COE

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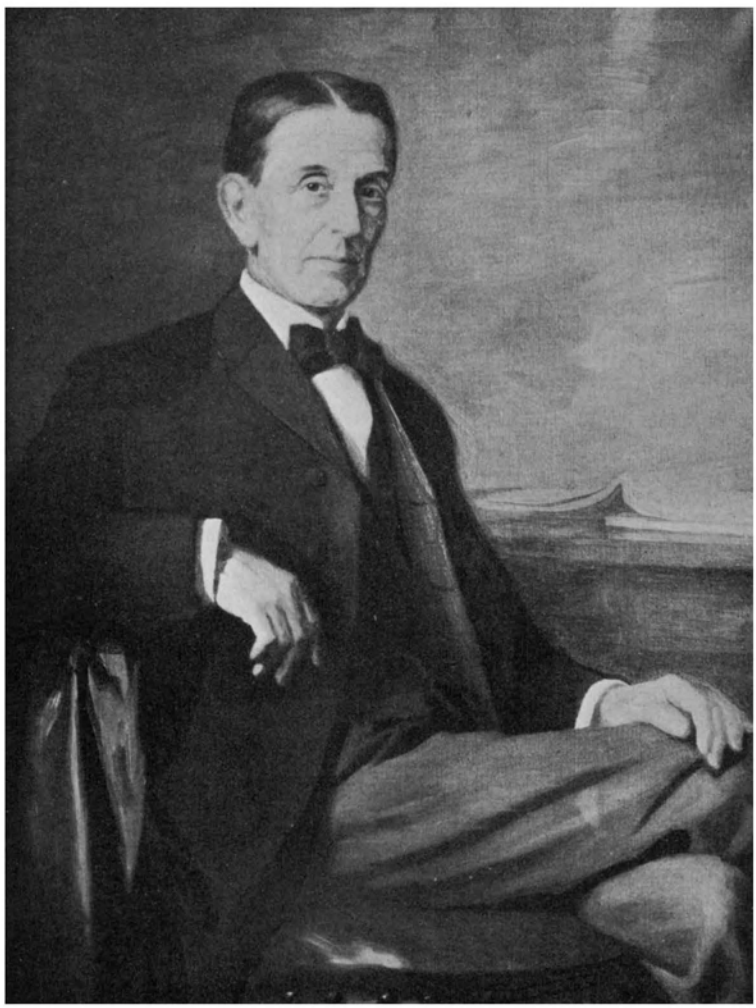

Sidney I. Smith.

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The life of Sidney Irving Smith, professor-emeritus of comparative anatomy at Yale University, well known to a previous generation of zoologists for his studies on the systematics and life histories of the crustacea, was brought to a close on May 6, 1926, at the age of eighty-three years.

Professor Smith was born in Norway, Maine, February 18, 1843. Both his parents were of early New England ancestry and of families with an unusual proportion of prominent men. As a boy he was greatly interested in natural history and he early came under the influence of his later brother-in-law, Addison E. Verrill, at that time a pupil of Louis Agassiz at Harvard. In 1864, when Verrill received his appointment as the first professor of zoology at Yale University, young Smith came with him as a student in the Sheffield Scientific School.

Before coming to Yale, Smith had already made an extensive collection of the insects of his native State. So carefully prepared and so accurately labelled was this collection that it was purchased by Louis Agassiz for the Museum of Comparative Zoology at Harvard College. Finding no similar collection at Yale, Smith spent parts of his vacations during many following years in making a new collection for Yale's Museum, and the Peabody Museum of Natural History at Yale now contains thousands of beautifully prepared specimens which testify to his zeal and skill as a collector and to his accuracy of identification.

In his senior undergraduate year at Yale, Smith became a charter member of the Berzelius Society, and for his essay on the "Geographical Distribution of Animals" was awarded the first of the prizes which have been given by that society. This paper was later published in the *American Naturalist* (1868).

On graduating from Yale with the degree of Ph. B., in 1867, he was appointed assistant in zoology in the Sheffield Scientific School, and with this institution he remained connected for

thirty-nine years—until his retirement from active service in 1906. He was promoted to the professorship in comparative anatomy in 1875.

During all his summer vacations Smith was active in field work, gathering at such times material for his studies during the college year, for he was an indefatigable worker, for many years a bachelor—his teaching and his research receiving his entire attention.

His first official appointment outside the university was as zoologist on the United States Lake Survey in 1871. At this time he participated in a zoological reconnaissance of the deeper parts of Lake Superior. Extensive collections were made and a number of new species of invertebrates discovered. The results of this work were published by him in several papers included in the "Report of the Commissioner of Fish and Fisheries" for 1872, part 2. One of these (1874) gives a summary of the invertebrate fauna of the lake, another (1874) discusses the food of fresh-water fishes, a third (1874) treats of the crustacean parasites of fresh-water fishes, including descriptions of new species, while a fourth (1874) consists of a synopsis of the higher fresh-water crustacea of the United States. Briefer papers on the same topics appeared in the *American Journal of Science* and in the *Canadian Naturalist*.

Portions of each summer from 1864 to 1870 were spent in assisting Professor Verrill on dredging expeditions in Long Island Sound and in the Bay of Fundy. Smith's attention was thus directed to the then almost virgin field of marine invertebrates, particularly the crustacea, and to this branch of zoology he devoted most of his life work, soon becoming the leading authority on the marine crustacea of the western Atlantic. In prosecution of these studies he joined the United States Coast Survey for work on St. George's Bank in 1872, and he was a regular member of the scientific staff of the U. S. Fish Commission during each summer for the ensuing fifteen years.

During all these years he had charge of the vast collections of crustacea taken in the dredgings, and was thus in a position to make known to science the great number of new and

interesting types which they contained. His extraordinarily careful and complete descriptions of these new forms have needed no later revisions, and have been of much value to later students in their interpretation of the relationships and evolutionary history of the crustacea.

Most of the papers in which these new forms were described were published in the *American Journal of Science,* in the "Proceedings of the U. S. National Museum," in the reports of the U. S. Commission of Fish and Fisheries, in the "Transactions of the Connecticut Academy of Arts and Sciences," and in the "Bulletin of the Museum of Comparative Zoology." All of them are models of accuracy, faithfulness to details, skill in illustration, and discrimination in the interpretation of specific and generic relationships.

Most of the type specimens of the new species are to be found in the United States National Museum. With characteristic generosity Smith presented all his cotypes and all his extensive series of the various species in the collections to the Peabody Museum of Natural History at Yale and here they are available to other workers in that field of zoology.

Although Professor Smith's systematic work on the freshwater and marine crustacea entitles him to a position in the front rank of American systematic zoologists, his studies on the life histories of the crustacea proved of more general interest. He was the first to interpret correctly the successive stages in the larval life of the American lobster (1872, 1873); and his descriptions of the complicated metamorphoses which occur during the early life of other crustaceans, particularly of Ocypoda (1873), Hippa (1877), Pinnixa (1880), and Panopeus (1883), have found a wide application in interpretation of the relationships of the various groups.

For several years prior to 1874 he assisted Professor Verrill in the preparation of the classic "Report on the Invertebrate Animals of Vineyard Sound"; an ecological study that had no parallel in America for more than forty years. Professor Smith prepared all the material relating to the crustacea and revised other parts of this widely used book.

While in his later years his scientific research was devoted entirely to the crustacea, Professor Smith was a broadly trained naturalist of the old school, with a keen eye and an inquiring mind. An eager disciple of the then controversial Darwinian theory of evolution, he sought for verification of this hypothesis in all he saw about him. His first paper (1864) was on the fertilization of orchids and his second (1865) on a new species of moth. He was always much interested in insects, gathering extensive collections and reporting on the new and little known species which he found. In 1872-3 he served as State Entomologist of Connecticut and contributed to the reports of the Secretary of the Board of Agriculture for those years.

Smith was one of the founders of the Marine Biological Laboratory at Woods Hole, and one of the early members of its board of trustees. His last scientific work was the revision of the definitions in comparative anatomy for "Webster's International Dictionary" in 1890. Then in the prime of life he accepted ever-increasing administrative duties in connection with the Sheffield Scientific School, and allowed himself to become burdened with committees to which he devoted himself with all the zeal which he had previously shown for science. In the sixteen years prior to his retirement he contributed much to the upbuilding of the Sheffield Scientific School, but this was done, as has been the case with so many other scientists who have accepted executive duties in middle life, at the sacrifice of his scientific career.

He was married in 1882, then nearly forty years of age. His wife, Eugenia Pocahontas Barber, died in 1916. There were no children.

Professor Smith never had the appearance of very robust health, and although his long life testifies that he must have had a sturdy constitution he found it necessary to guard his health carefully. He was extraordinarily modest, quiet and retiring, diffident, and always reluctant to appear in any conspicuous position. And yet, in private company and in his home, he was not only charming in his kindly manners but

extremely entertaining. Only rarely did he and Mrs. Smith appear at public functions, the simplicity of their home life, with an abundance of books, being quite sufficient for their entertainment. He followed the example of his brother-in-law, Prof. A. E. Verrill, in absolutely refusing tobacco and all of the forms of alcohol.

In the classroom and particularly in the laboratory Professor Smith endeared himself to even the most indolent of his students. Demanding of himself the greatest exactness in his work, he expected it of others, and he was justly considered one of Yale's best teachers because of his ability to inspire in his students a real desire for a similar standard of excellence. No teacher at Yale in his day was held in greater affection or esteem. Even the penalties imposed by the discipline committee, of which he was long a member, were accepted without resentment by the students because of the sympathetic manner in which they were administered.

As blindness was approaching some twenty years before his death, Professor Smith continued his daily chores about the house and by means of an ingenious arrangement of sticks and strings he was able to continue work in his garden even when totally blind. He planted and gathered his flowering bulbs each season and sowed his vegetable seeds in symmetrical rows and harvested the crops, guided entirely by the delicacy of the senses which became more acute in compensation for the loss of sight.

His blindness was due to hereditary glaucoma, and it is sad to record that in his later years he was also afflicted with a cancerous condition of the throat which caused him intermittent paroxisms of severe coughing that nothing seemed to relieve. Even the combination of these terrible afflictions failed to alter his serene and cheerful disposition, and he bore them to the end of his life with uncomplaining fortitude.

Professor Chittenden says of him in the "History of the Sheffield Scientific School" (Yale University Press): "Professor Sidney I. Smith was a born naturalist, in the older sense of that term, having an ardent love of nature and a great

passion for studying her different forms of life. He was endowed with great ability, keen discrimination, and a love of truth which permitted no obstacle to stand in the way of a correct description of the types of life he was interested in."

He was among the first zoologists in the country to put in practice Huxley's plan of intensive laboratory work in biology, comparative anatomy and embryology as one of the fundamental studies for pre-medical students.

He was elected to membership in the National Academy of Science in 1884, and was one of the charter members of several of our biological societies. Yale conferred on him the honorary degree of M. A. in 1887.

His bibliography includes about seventy titles. Some of these papers are brief, others more extensive, but all are characterized by such thoroughness and faithfulness to detail that his work will stand the test of future generations, and will not have to be repeated.

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