

Throughout all these years and almost up to the very end of his life his scientific writings steadily appeared, the total number reaching more than eighty. Based upon each of the above expeditions were extensive reports dealing with faunistic and distributional results, either written by himself alone, or in collaboration with Dr. Jordan, Dr. Gilbert or others. The most notable of his many publications deal with the comparative osteology of fishes, in which he became a recognized authority. His careful analytical studies in this difficult field have thrown much light on the relationships of a large number of genera and families, and have furnished a solid basis for their classification. Not a little of the value of this series of studies is due to the unfailing cooperation of his wife, Mrs. Chloe Lesley Starks, whose superb artistic skill and accuracy provided his papers with illustrations not to be excelled anywhere.

Professor Starks was a life member of the California Academy of Sciences, to the *Proceedings* of which he contributed many important papers. He was also a corresponding member of the Zoological Society of London and a fellow of the American Association for the Advancement of Science.

As a teacher he was exceptionally gifted. His broad sympathy with students, his patience and clarity in exposition, his contagious enthusiasm, and his kindly humor won the affection and admiration of all his pupils. As a colleague he held a high place in the estimation of his faculty associates. His modest, retiring disposition led him to shun publicity, but his constant and generous hospitality within his own home drew around him a group small but unusually devoted.

Apart from his scientific work Professor Starks' interests were many and varied. Although a naturalist he found no pleasure in hunting or angling, but took the greatest delight in outdoor life, and in travel contacts with other places and peoples. He was an avid reader and his well-selected library gave evidence of his breadth of interest in the best in literature and art. His usual recreation was sought in his workshop, and from it issued from time to time artistic and beautiful products of his craftsmanship in wood and metal that were the wonder and envy of his friends. Photography and fine printing were also hobbies in which he excelled. His experiences and observations on each of his many expeditions were carefully recorded in separate journals, illustrated with sketches and photographs. Three of these, his own printing and binding, models of fine bookmaking, are highly prized by those of his friends who were fortunate enough to receive copies.

A broad appreciation of the beautiful in nature, in life, literature and art enriched his years. Upon his

release from teaching responsibility he looked forward to continued activity in research and travel. But it was not to be. Never robust physically, an increasing cardiac weakness terminated his life after a short illness. His scientific writings will stand as a memorial to his exact and painstaking industry and high scholarship, his former pupils, his colleagues, and his friends will cherish still more the memory of a kind and joyous personality, sincere and faithful to the end.

F. M. MACFARLAND

STANFORD UNIVERSITY

HERMAN THEODOR HOLM

DR. HERMAN THEODOR HOLM, who was on the staff of the Department of Agriculture for several years and who was connected with the department in various phases of scientific work for many years, passed away at Providence Hospital, after a brief illness, on December 26, 1932.

Dr. Holm was born in Copenhagen, Denmark, on February 3, 1854, and graduated under Warming from the University of Copenhagen in 1880. He was appointed to the Denmark North Polar Expedition in 1882 as botanist and zoologist under Admiral Garda and for some two years was icebound in Greenland. He added greatly to the botanical knowledge of West Greenland, and his extensive knowledge of altitude and circumpolar floras compelled attention of all interested in this subject.

On April 12, 1888, Dr. Holm landed in New York City, and as soon thereafter as possible applied for citizenship. He enjoyed telling that he was an American by choice and that we "could not help ourselves." Very soon after coming to this country he was appointed assistant botanist in the U. S. National Museum and occupied that position from 1888 to 1893, and was then appointed assistant pathologist in the U. S. Department of Agriculture. In 1897 he resigned this position, but, as above stated, he did much work for the department in connection with special botanical problems, drawing, and translating. For drawings that show the anatomy of plants he had no peer, and he read and translated all the Teutonic languages and many Latin languages. So wedded was he to his scientific work that some years ago he moved to an isolated farm in Maryland in order to have uninterrupted time for his work, but was finally persuaded to accept a position on the research staff of the Catholic University of America, where he was given ample room for his collections. Many of his papers were published in Germany. It seems regrettable that American botany should come to us through translation.

Although wedded to his profession Dr. Holm was

a gracious host. He gave many interesting small dinners and could cook on occasion. He took infinite pains to help good work, but for pretense and bad work his criticisms were devastating.

A. F. WOODS

U. S. DEPARTMENT OF AGRICULTURE

RECENT DEATHS

JAMES M. WHITE, professor of architectural engineering and supervising architect of the University of Illinois, died on February 6, at the age of sixty-five years.

SAMUEL ANTHONY GOLDSCHMIDT, chemist, chairman of the Board of Directors of the Parsons Ammonia Company, died on January 29, at the age of eighty-four years.

DR. RONALD STEELE SADDINGTON, an assistant on the scientific staff of the Rockefeller Institute, died at the Rockefeller Institute Hospital on February 4, of an illness contracted three weeks ago while studying herpes. He was twenty-nine years old.

SAMUEL W. PHILLIPS, in charge of the erosion station of the Bureau of Chemistry and Soils of the

U. S. Department of Agriculture at Zanesville, Ohio, was shot and killed by a burglar in his home on January 23. Mr. Phillips was in his thirty-ninth year.

SIR J. ARTHUR THOMSON, emeritus professor of natural history at the University of Aberdeen, died on February 12 at the age of seventy-two years.

SIR DANIEL MORRIS, scientific adviser in tropical agriculture to the British Colonial Office, previously from 1898 to 1905 imperial commissioner of the West Indies Department of Agriculture, died on February 9 at the age of eighty-eight years.

SIR FREDERIC G. HALLETT, secretary of the Imperial Cancer Research Fund and formerly secretary of the conjoint board of the British Royal College of Physicians and Surgeons, died on February 6. He was seventy-two years old.

THOMAS ALFRED COWARD, the British ornithologist, died on January 30, at the age of sixty-six years.

AUGUSTIN MESNAGER, civil engineer, vice-president of the Paris Academy of Sciences, died on February 6. He was seventy years old.

SCIENTIFIC EVENTS

INTERNATIONAL VITAMIN STANDARDS

THE international standards for vitamins A, B (B_1) and D, which have been allotted to this country, have been received by Dr. E. M. Nelson, Protein and Nutrition Division, Bureau of Chemistry and Soils, U. S. Department of Agriculture, Washington, D. C. These standards are made available to investigators in the United States through the generosity of the Health Organization of the League of Nations. Application blanks for obtaining the standards, which will be distributed for scientific purposes, can be obtained from Dr. Nelson. These standards were designed for the sole purpose of enabling investigators to express vitamin potency in units of universally accepted value. The quantities distributed are suitable only for assay with small laboratory animals, such as rats, pigeons and mice. In order to make the best use of these primary standards it is suggested that investigators give consideration to the possibility of making suitable secondary standards through the use of the material distributed.

Allotments of international standards have been deposited with Dr. E. Fullerton Cook, chairman of the U. S. Pharmacopoeia Revision Committee, 43rd Street and Woodland Avenue, Philadelphia, Pennsylvania, for distribution for research purposes and for the standardization of a U. S. Pharmacopoeia reference cod liver oil. The U. S. Pharmacopoeia reference

cod liver oil, a secondary standard for vitamins A and D, is to be available to all applicants at small cost and is intended to serve particularly for establishing new and more desirable definitions for vitamin potency of U. S. Pharmacopoeia cod liver oil. The U. S. Pharmacopoeia reference cod liver oil will also serve as a suitable standard for all products for which claims for vitamins A and D potency are to be made. An announcement concerning this reference cod liver oil will be made by the U. S. Pharmacopoeia Revision Committee.

HENRY G. KNIGHT

THE MORRIS ARBORETUM

APPOINTMENTS to the executive and scientific staffs of the Morris Arboretum of the University of Pennsylvania, at Chestnut Hill, have been announced.

Dr. Rodney H. True, professor of botany and director of the botanical gardens at the University of Pennsylvania since 1920, has been made director of the arboretum. Before going to Pennsylvania he was plant physiologist of the U. S. Department of Agriculture in charge of physiological investigations and also served at various times on the faculties of Radcliffe College, the University of Wisconsin and Harvard.

James Lambert, superintendent of the botanical gardens at the university for a number of years and