

curator, and was also active in the work of the Wisconsin Natural History Society. In 1909 he gave up the practice of medicine and became curator of invertebrate zoology at the museum. In this position he actually covered the whole field of biology, and when he left it was necessary to find a zoologist and a botanist to continue his work. In 1916 he retired from the museum and moved to Florida, largely on account of his health. He established himself at South Miami, making a home out of a veritable wilderness, and in so doing probably overtaxing his strength, so that he was a semi-invalid from about 1926. In 1925 he was able to visit Switzerland.

It is difficult to estimate the value and influence of such a man, but it was great and still continues. Essentially an out-of-door naturalist interested in the relations and interactions of all forms of life, seeing life as a whole, he was of a type now too rare. His zeal knew no bounds, and what he did was only limited by his time and strength. He began to publish in 1903 and 1904 on the bees of the large genus *Andrena*. These had been intensively studied by Robertson at Carlinville, Illinois, but Graenicher found that in his more northern locality many of the species were different and new to science. The study of these and other bees included investigations of their life-histories, their parasites and their relation to the flowers visited. Many discoveries were made, and our knowledge of the structure of bee larvae and of the parasitic habits of several native bees is derived from Graenicher's writings. The work on bees and flowers led naturally to consideration of other flower visitors, and thus special attention was given to certain families of Diptera. Certain flower-loving beetles (*Nemognatha*) were also investigated. In 1935 appeared an elaborate paper on the bee fauna and vegetation of Wisconsin, and in 1930 a similar paper gave the results of his work in the Miami region of Florida. I have a list of 25 papers published by Graenicher, nine of them issued by the Wisconsin Natural History Society.

There have not been many workers in this country who have studied the flower-visiting insects intensively in a particular locality. We think of Graenicher in Wisconsin, Robertson in Illinois, Lovell in Maine. This kind of work offers rich rewards in the way of discoveries, in any part of the country, and would doubtless be more popular if better understood. It is advanced "nature study," of broad cultural value, but demanding much time and labor. It should be especially valuable to those who teach biology in our high schools. It must be promoted by men of the Graenicher type, who combine enthusiasm with knowledge and are not afraid of a fact because it is not mentioned in the books. Unfortunately, no really

adequate book on the subject is available at the present time. The existing records furnish a basis for such a book, but it is very difficult for any beginner to assemble or find the papers in which they are printed. Is there not some publisher who will produce for us a work of the same general character as Rayment's "Cluster of Bees," lately issued in Australia? The necessary author or authors could probably be found, and perhaps the work might be ready in a few years. A similar work on ants, as a memorial to Wheeler, has been suggested.

Graenicher's body was cremated; he wished that there should be no regular services at the time of his funeral, but hoped that his friends might assemble one day on a pleasant afternoon under the trees and speak kindly of him. These friends are widely scattered, but perhaps the above account may serve to stimulate such conversation in many places. For the main facts concerning Dr. Graenicher's life I am indebted to his daughter, Mrs. Sylva G. Martin.

T. D. A. COCKERELL

UNIVERSITY OF COLORADO

RECENT DEATHS AND MEMORIALS

LORD RUTHERFORD, director of the Cavendish Laboratory of the University of Cambridge, died on October 19, at the age of sixty-six years.

DR. FRANK MORLEY, since 1900 until his retirement as professor emeritus in 1929 professor of mathematics at the Johns Hopkins University, died on October 17 at the age of seventy-seven years.

SAMUEL HUME BECKETT, professor of irrigation investigations and practice at the University of California, died on September 17 at the age of fifty-four years.

DR. JOHN NAPOLEON BRINTON HEWITT, linguist and ethnologist of the Bureau of American Ethnology, Smithsonian Institution, died on October 14. He was seventy-seven years old.

HENRY KENDALL MULFORD, president of the Mulford Colloidal Laboratory, Philadelphia, and director of the research and biological laboratories of the National Drug Company, died on October 15 at the age of seventy-one years.

SENATOR ALESSANDRO LUSTIG, formerly professor of general pathology in the University of Florence, known for his work on bubonic plague and sanitation, died on September 23. He was seventy-nine years old.

DR. MAX HOLLRUNG, professor of plant pathology at Halle, died on May 5 in his seventy-ninth year.

FRANK STEPHENS, pioneer west coast biologist, first

director of the San Diego Natural History Museum, and widely known field naturalist, died in San Diego on October 5, as the result of a street-car accident on September 25. He was in his eighty-ninth year, having been born in Livingston County, New York State, on April 2, 1849. Driving a yoke of oxen, he first arrived in California in 1876. Thereafter he lived most of the time in southern California, and since 1897 made his permanent home in San Diego. A fellow of the American Association for the Advancement of Science, fellow of the San Diego Society of Natural History, member of the American Ornithologists' Union, the American Society of Mammalogists, the Cooper Ornithological Club and other scientific organizations, he was originally known as an ornithologist, although he later became remarkably versatile in his interests. Among his publications are "Life Areas of California" (1905); "California Mammals" (1906); "An Annotated List of the Birds of San Diego County, California" (1919); "An Annotated List of the Mammals of San Diego County, California" (1921); "An Annotated List of the Amphibians and Reptiles of San Diego County, California" (1921); "Notes on the Marine Pleistocene Deposits of San Diego County, California" (1929). In 1910 he donated to the San Diego Society of Natural History his private collection of some 2,000 birds and mammals, thereby laying the foundation of its subsequent continuous activity in these departments. He is survived by his widow, Mrs. Kate Stephens, who has been his close collaborator and companion in his scientific work.

C. G. A.

At the Founders' Day exercises of Lehigh University on October 6, honor was paid to the memory of the late Dr. Henry S. Drinker, '71, president of the university from 1905 until 1921, and to the late Dr. Natt M. Emery, formerly instructor, registrar, acting president, vice-president and controller during his forty years' service for the university. Eugene G. Grace, '99, president of the board, spoke in honor of Dr. Drinker, and a 16-foot oak tree was planted on the campus. In memory of Dr. Emery, a bronze tablet, recently placed in Packer Memorial Chapel, was unveiled. The speaker was Dean Philip M. Palmer.

Nature states that in commemoration of the birth of J. D. v. d. Waals on November 23, 1837, an international conference on interaction between molecules will be organized by the "van der Waals Fonds" and the "Nederlandsche Natuurkundige Vereeniging." The ordinary sessions will be held in the van der Waals laboratory in Amsterdam on November 25 and 26, and an official celebration will take place on November 27. The object of the conference is to give a survey of some of the recent work connected with the idea of van der Waals forces. The program will be published later. Sufficient time will be left for general discussion. A special number of *Physica* will appear during the conference; it is hoped to be able to publish in this issue a number of papers on a variety of questions having some relation to the work of van der Waals. Members of the organizing committee are Professor J. D. v. d. Waals, Dr. A. Michels, Professor J. A. Prins and Dr. H. B. G. Casimir.

SCIENTIFIC EVENTS

CAMPAIGNS FOR FUNDS TO FINANCE MUSEUMS

The Museum News states that plans calling for the raising of large additional funds have been adopted by the American Museum of Natural History, the Pennsylvania Museum of Art and the University of Pennsylvania Museum.

The American Museum is proposing to raise ten million dollars for a ten-year development program in all departments and to provide increased annual income of \$431,000. The plan includes an increase in the museum staff, salary adjustments, completion of present exhibit programs and development of new exhibit halls, and expansion of the educational work. A committee to direct the campaign includes F. Trubee Davison, general chairman; A. Perry Osborn, executive chairman; Mrs. Winthrop W. Aldrich, vice-chairman, and E. Roland Harriman, treasurer.

The Pennsylvania Museum of Art has announced a

ten-year program which will involve the addition of \$10,428,000 to the funds for the museum and \$5,117,000 for the museum's textile and industrial schools. The funds for the museum would include \$368,298 to complete payment for the Foulc Collection, \$2,500,000 for completing the interior of the museum, and \$7,560,000 for endowment for purchases, operation and education. The school funds would include \$2,825,000 for a new building, \$500,000 to pay off a mortgage and the remainder for endowment.

The University of Pennsylvania Museum has announced a plan for raising a fund of \$500,000 in connection with the university's bicentennial celebration. Out of this fund \$287,000 is needed to carry on research programs in the field—in the Near and Far East, the Iranian Valley, the Indus Valley, the Mediterranean area and North and South America. The remainder would be used for the museum's educational program, including a publication fund.