

# Obituary

## Theodore Dru Alison Cockerell

1866-1948

"The scientific man is always on the road, never at the journey's end." Thus wrote Prof. Cockerell, of the University of Colorado, some 12 years before his death on January 26, 1948, at the age of 81, in San Diego, California. His career was the exemplification of this assertion. Decade after decade with tireless devotion he followed the path of knowledge, often blazing a new trail, constantly alert to the things of interest in the landscape about him, eager to become acquainted with the infinite diversity of life, and zealous to make others equally cognizant of it. Yet always there was a horizon beyond, something that awaited completion.

Up to the last and undeterred by illness, he gave his failing strength to the task of monographing the bees of Honduras. It was fitting that this should be his last scientific endeavor, for from his middle twenties onward bees interested him perhaps more than any other form of life. The constancy of this interest is best evidenced by the fact that up to 1938 he had published 5,480 new names for species, subspecies, and varieties, and 146 names for genera and subgenera. Since 1938 there have been accretions to this total. The description of bees believed to be new was only part of his work. Extension of the geographic range of species already known was another substantial contribution. Through one channel of publication alone—*Annals and Magazine of Natural History*—he issued about 200 successive papers devoted to descriptions and records of bees. One student of the bees, Prof. H. Friese, has hazarded the opinion that the total number of species the world over, both described and undescribed, might approximate 20,000. On the basis of this estimate, which is probably not excessive, one can visualize the magnitude of the individual contribution of Prof. Cockerell in making known the diversity and structural significance of the tiny creatures that either he himself collected or that were sent to him as a gifted specialist.

In the field of entomology there were, however, other rivals that from time to time claimed his attention. At the beginning of his career, during the few years (1891-93) that he served as curator of the Public Museum at Kingston, Jamaica, he selected the Coccidae for special attention and was able to record from Jamaica alone more species than had previously been reported from all the West Indies.

His transfer subsequently to New Mexico, where he served successively in the New Mexico Agricultural College and in the Normal University, opened up new opportunities for the study of these insects, as it did for the study of the bees. Over the years his active intellect turned to other groups as well, both fossil and recent, and he produced papers dealing with the members of many orders as evidence of his broad interest in the whole field of entomology.

The number of his entomological papers is breathtaking. Those recorded in the *Zoological Record* from 1888 to 1945 number 1,240, including a few that were written in collaboration with others. In each of at least 15 of those years he published from 30 to 50 papers, and in only one of the years between 1893 and 1937, when he was well beyond the retirement age of most people, did he permit his entomological publications to descend to as low as 10. But what amazes one as much as the output is the diversity of the subject matter. Now and then there might be a dominant trend in the work of a given year. In 1919, for instance, the Philippine bees were evidently the special beneficiaries of his studies, and in 1933 he devoted 18 of a total of 27 papers to African bees. In general, however, he evidenced the range of his interest and his mental elasticity by swiftly turning from fossil to recent, from a given order to an unrelated order, from field experience or description of species to reflective discussion of biologic problems.

While insects claimed the largest measure of his attention and represented the greatest aggregate of publication, his interest in conchology tended to run in competition with that in entomology. His interest in the snails and the slugs was firmly founded early in his childhood, was reinforced when his family moved, after the premature death of his father, to Margate by the sea, and in a few years reached such a point of development that by the middle '80s, when he was still under 20 (he was born August 22, 1866, at Norwood, England), he was already contributing papers on the Mollusca to scientific publications. In 1886 no less than 17 such papers appeared. Although this maximum was never again attained and the period from at least 1893 onward was to witness a quite conspicuous disproportion in favor of entomological papers over conchological, nevertheless, in the 60 years from 1885 to 1944, there were only 11 in which he failed to contribute at least something on the Mollusca. The aggregate of his publications devoted to these invertebrates exceeds 200 papers.

It was the contention of Prof. Cockerell that he was merely an amateur botanist, that his professional work was zoological. However, the many evidences of his zeal for botany and the range of his interest in this field leave little doubt that it continued to hold an important place in his interests, even though he was able to do research in it only from time to time. Among his botanical contributions were a number of descriptions of new plants from New Mexico, a revision of the genus *Hymenoxys*, studies of the wild roses, including fossil forms discovered at Florissant, paleobotanical studies involving other plants, and his floricultural achievement in developing the red sunflower—now widely known over the globe—from a single wild plant discovered by Mrs. Cockerell.

Yet in spite of his preoccupation with entomology, conchology, and botany, not to mention other responsibilities, he still found time for research in additional fields. His studies of fish scales as an aid in the classification of the fishes won the attention of ichthyologists, and he concerned himself with other problems that lay beyond the scope of his principal interests. In 1904 he became a reviewer for the Chicago "Dial" and for a number of years discussed books over a wide range of topics.

It is impossible to write about Prof. Cockerell without emphasizing the part of Mrs. Cockerell in making

his work a success. For nearly 50 years she shared his aspirations and was the intimate partner of his undertakings. She accompanied him on his field trips, whether these were made to nearby fossil localities like Florissant and Green River, or to distant parts of the world. She also took part in his scientific research, and several papers were the product of their joint authorship. On the lecture platform, too, they often appeared together to champion an issue or elucidate a problem in which they were jointly interested.

As one looks back over the career of Prof. Cockerell and tries to evaluate the qualities that enabled him to achieve so greatly, one must pay tribute, I think, not only to his keen mind, but in equal degree to his enterprise and devotion. He kept faith throughout the years with the subjects that interested him, turning his back on the smaller things that sidetrack the efforts of so many individuals and dedicating himself wholly to the attainment of goals worth while. But in this exclusiveness of effort he was never the closeted recluse. He had an inexhaustible interest not only in the depth and breadth of nature, but in his fellow man, exemplified in his cordial relations with his students, in correspondence with a host of co-workers and friends, and in cooperative acts without number.

HERBERT F. SCHWARZ

*The American Museum of Natural History*

## NEWS and Notes

**James B. Fisk** has resigned his position as director of the Division of Research, U. S. Atomic Energy Commission, to become professor of applied physics at Harvard University. Dr. Fisk had been on leave from Harvard since his appointment with the AEC in January 1947.

**Robert L. Pendleton**, of the Office of Foreign Agriculture Relations, USDA, and the Department of Geography, Johns Hopkins University, has been appointed a special fellow to study tropical soils and land use practices in the Belgian Congo by the Belgian American Educational Foundation. Dr. Pendleton sailed August 31 for the four months of field work in the Congo. During this time his address will be c/o U. S. Consul General, Leopoldville, Belgian Congo.

**Edwin J. Hart**, formerly a research chemist with the U. S. Rubber Company, recently joined the Chemistry Division of the Argonne National Laboratory as a senior chemist.

**C. A. Knight** recently accepted an appointment as associate professor in the Virus Laboratory, Department of Biochemistry, University of California. Dr. Knight will continue his research on the chemistry of viruses in which he was engaged while an associate of the Rockefeller Institute for Medical Research.

**Freddy Homburger**, former head of the Department of Clinical Investigation, Sloan-Kettering Institute for Cancer Research, has been named research professor of medicine and head of the cancer research and control units at Tufts College Medical School. **William H. Fishman**, another new appointee at Tufts, will serve as research professor of biochemistry and associate director and chief biochemist in the cancer units. Dr. Fishman formerly served on the staff of the University of Chicago.

**Elmer D. West** and **Geraldine Spaulding** have joined the staff of the American Institute for Research, Pittsburgh, Pennsylvania. Dr. West was formerly associate professor of psychology at the University of New Hampshire, while Miss Spaulding served as editor, National Teachers Examination Project, Educational Testing Service.

**Robert Howland Denison**, assistant curator at Dartmouth College Museum, was recently appointed curator of fossil fishes in the Department of Geology, Chicago Natural History Museum. Dr. Denison spent the year 1947-48 as a member of the University of California African Expedition.

**Nathaniel C. Fick** has been named deputy executive director of the Committee on Basic Physical Sciences, Research and Development Board. Mr. Fick was formerly associated with the Battelle Memorial Institute as a metallurgist.

**L. H. Tejada-Flores**, currently lecturing on electrical engineering at the