

James George Needham

March 16, 1868 — July 24, 1957

James George Needham, Emeritus Professor of Entomology, died on July 24, 1957. Throughout a long and busy life he served Cornell University as a great biologist and a productive scholar.

Dr. Needham was born in Virginia, Illinois, on March 16, 1868. He attended public schools and Knox College, from which he received his B.S. and M.S. degrees. In later years, he was fond of telling about the good fun he had with other youngsters while attending a country school on the prairie. After graduating from Knox College, he taught there from 1894 to 1896. During this time he prepared and published a text, "Elementary Lessons in Zoology". This was unique in its presentation of subject matter, and attracted the attention of Professor John Henry Comstock who invited him to come to Cornell to study with him as a Goldwin Smith Scholar. During this period he collaborated with Professor Comstock in establishing a new interpretation of the morphology of insect wing venation. This classical work became accepted by biologists throughout the world and did much to modify entomological procedures.

From 1898 until 1907, Dr. Needham was professor of biology at Lake Forest University. For several summers while teaching there, he worked for the New York State Conservation Department in the Adirondack region, studying aquatic life as a means of maintaining and increasing the food supply of fresh water fishes. In 1907 he was invited to return to Cornell as assistant professor of limnology, to establish for the first time in any American university the subject of limnology as a field of instruction and research. Out of his effort grew the excellent program in limnology that attracted students from many parts of the world. Dr. Needham worked for years at the biological field station in the Renwick Marsh area at the head of Cayuga Lake, studying fresh water biology.

In 1914, Professor Comstock retired as head of the Department of Entomology and with his recommendation, Professor Needham was appointed head of the department, a position he filled until his retirement in 1935.

In 1909, Dean Liberty Hyde Bailey asked Professor Needham to give a course in biology. This course, with modifications, still exists in our college curriculum and has long served as an introduction to biology for students who are majoring in other areas of subject matter. His keen interest in the broader aspects of human biology enabled him to develop a course in the biology of the human species which received widespread acclaim from students in many colleges of the University. The course was noted for his unique manner of presentation, for his wholesome philosophy of life, and reflected the thinking of a great naturalist. He loved students and they

responded with deep affection and respect. From all lands, they came to Cornell to study with Dr. Needham and found him a stimulating, sympathetic teacher, but also one who expected the best that one could give.

Ecology entered the teaching curriculum of the Department of Entomology because Professor Needham developed it along with limnology and biology. Any student who had the privilege of going into the field with him has a lasting memory of a great naturalist at work. Nature unfolded its intricacies around him and with warmth and enthusiasm he made one see the life in a pond, in a stream, on an alder bush, or a goldenrod plant as one had never dreamed it existed. Professor Needham was so much at home with all of his friends in the plant and animal world that students sensed his inspiration and shared his enthusiasm for nature. With a twinkle in his eye, he would show students a parasite attached to a caterpillar and muse about bigger fleas have smaller fleas upon their backs to bite them! He could portray the living interrelationships of plants and animals in simple, understandable terms that students grasped.

Among Professor Needham's most distinguished research is his work with the aquatic insects—the stoneflies, caddis flies, damsel flies and dragonflies. To the damsel flies and dragon flies particularly, he gave much of his time in study of the biology and classification. His outstanding work *A Manual of the Dragonflies of North America*, revised in 1954 with a former student, Dr. M. J. Westfall, as co-author, was published by the University of California Press only a few years before his death. During his career Professor Needham published more than 250 scientific articles, educational papers, and textbooks. His writing was clear, concise, and interesting to read. His style was typically and uniquely his own.

No tribute to the life and work of Professor Needham would be complete without mention of his poetry and philosophical writings. Some years ago friends and former students persuaded him to publish a collection of his poems. Often during his active years he invited groups to his home, and as they sat around the fireplace on a winter's evening, he read from his poems, or perhaps an article about life on the frontier, or an "Uncle Remus" tale, with a buoyancy of spirit that reflected in the entire gathering.

Always a staunch advocate of teaching biology where it existed—in nature, Professor Needham was instrumental in obtaining for Cornell University several of the biological preserves which presently are a great asset to all phases of the biological sciences. He was active in the Entomological Society of America, the American Association for the Advancement of Science, the Limnological Society of America of which he was a past president, and numerous other scientific societies. His teaching and research in China brought him widespread recognition. Many Chinese graduate students came to Cornell to study with him. Professor Needham's life was a wonderful example of

devotion to his family, his students, and his work. His genial personality and friendliness endeared him to his associates and students at Cornell for more than half a century of continuous association with the Department of Entomology. His great pioneering spirit advanced the work he loved so well until almost the very end of his days. His influence will always be felt on the Campus and, in a broader sense, throughout the world.

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