AUSTIN HOBART CLARK

The recent death of Mr. AUSTIN H. CLARK was a great loss to the world of lepidopterists and of biologists in general. He was born on December 17, 1880, at Wellesley, Massachusetts, and grew up a typical New Englander. Before he entered Harvard, he attended Newton High School and Cutler's School in Newton. His interest in Lepidoptera developed when he was a boy, and among

his possessions until his death were specimens of butterflies taken during his high-school days. Mr. CLARK graduated with an A. B. from Harvard at the age of 23, and three years later he married MARY WENDELL UPHAM, who in later years, joined, along with their five children, in his interest in natural history. His first wife died in 1931. In 1933, he married LEILA GAY FORBES, who closely shared CLARK'S interests. She became joint author with him of eight papers on the butterflies of Virginia, and she survives him. Mr. CLARK is also survived by a sister, ROSAMOND CLARK of Boston, and nine grandchildren.

During the years 1906 and 1907, CLARK was the Acting Chief of the Scientific Staff of the U. S. Bureau of Fisheries Steamer, Albatross. For eight months in 1906 he participated in a Pacific cruise, and his first report upon his return was on the birds he studied during this period. In 1908, CLARK joined the Smithsonian Institution, an association which lasted until the end of his life. He was first appointed Assistant Curator of the Division of Marine Invertebrates of the U. S. National Museum, and in 1920 he was made Curator of Echinoderms, the position which he held for 30 years.

AUSTIN CLARK'S scientific and cultural interests were remarkably broad, and it is not surprising that among his proteges of the younger generation are men in such diverse areas as botany, medicine, zoology, and journalism. During his active life, CLARK wrote 630 books and articles in English, German, French, Spanish, Russian, and Hebrew. Although most of his articles were published in the United States, the places of publication of this cosmopolitan author included some twenty different countries. Among his books are *Animals of Land and Sea, Nature Narratives* (vols. I and II), *The New Evolution—Zoögenesis,* and *Animals Alive,* along with a number of major works on the echinoderms, particularly the crinoids, which constituted his principal research field. While he is generally considered one of the world's primary authorities on echinoderms, he found time for research in other groups, among them birds, butterflies, and the peculiar animals of the genus *Peripatus* and its relatives. CLARK'S interest in the last began around 1910 and continued until the end of his life, resulting in twelve published papers. Besides the zoological groups upon which he undertook active investigation, he was keenly aware of other phases of biology, and he frequently surprised his numerous close friends with his special knowledge of problems seemingly far from his own research, including even botanical matters. It was this breadth particularly which made him peculiarly suitable for his role in influencing the popularization of science and scientific journalism.

AUSTIN CLARK was a man of sparkling humor and quick wit. Of medium height and pleasant, dignified manner, he spoke with an unusually deep voice and with a "Harvard accent". In his office at the National Museum, his desk and tables were piled high with innumerable papers and books, the whereabouts of each one of which he seemed, mysteriously, to know precisely. He was always ready to drop his labors for a visitor whether the visitor were a distinguished traveller from abroad, or a local boy of twelve years interested in finding out what his specimen was.

His facility for facts and anecdotes became legendary around Washington. One of the stories tells of a discussion in the Cosmos Club, of which he was a member: Some of the members were trying to decide whether to purchase for the Club a set of the *Encyclopedia Brittanica* for reference. One member spoke up, "But why bother—we already have AUSTIN CLARK."

During the 1930's, CLARK was Director of the Press Service of the American Association for the Advancement of Science. He was much interested in encouraging clear scientific writing, and in popularizing the work of the scientist. He was one of the first to realize the application of radio and television to the dissemination of scientific news and ideas. He was highly contemptuous of careless and misleading reports of scientific work in the popular newspapers and magazines, and his goal was accuracy in scientific journalism. With respect to style and clarity of writing, he had high standards and his own work was exemplary.

During the Second World War, CLARK was especially helpful to those naturalists in the military and naval services who found themselves in exciting biotic areas of the world, and who were able to collect specimens. Many of the specimens of plants and animals which were gathered by servicemen found their way to the U. S. National Museum as a result of his help and encouragement to the collectors.

CLARK has been commemorated appropriately by his fellow zoologists in that three genera of animals were named for him, and at least twenty-eight species.

He was active in many organizations: he was an Honorary Member of the National Association of Science Writers, a Fellow of the Royal Geographic Society, a member of the Long Range Planning Commission of the Southern Association of Science and the Virginia Academy of Science, and a member of the Cosmos Club of Washington, D. C. In 1921, he was the Scientific Aid-de-camp to the Prince of Monaco when the latter visited Washington. CLARK was decorated Knight of the Order of Dannebrog by Denmark. In 1926, he became Secretary of the Section of Oceanography, American Geophysical Union; and in 1928, he became chairman of the Section. He was active also in other organizations and councils, too numerous to list. In 1947, CLARK was President of the Entomological Society of Washington; and he was also a leading member of the Lepidopterists' Society. He was Vice President *pro tem.* of the Lepidopterists' Society in 1950 during its constitutional organization. He presided at the first annual meeting of the Society, which was held in New York, and was the First Vice President for 1950 when the first officers were elected.

For a man who was not a university professor, CLARK had remarkable influence on the younger generation, and is probably more or less directly responsible for the entrance of a number of present-day biologists into the profession. Young scientists and young hopefuls considered his office in the National Museum and his home at 1818 Wyoming Avenue as places of inspiration and encouragement. CLARK'S tutelage, however, was actually accomplished as much through his delightful letters as it was through personal contact, and his "boys" were scattered far away among the states.

Over 65 of CLARK'S papers, approximately one-tenth of his published works, were on butterflies. During the period of 1908 to nearly the time of his death, he collected buterflies from Massachusetts to Florida, although he specialized in the butterflies of the District of Columbia and Virginia. Over 150 people, including his sons, joined him on his numerous collecting trips, but in later years his constant companion was Mrs. LEILA FORBES CLARK, for whom he named a new form of the Gold-Banded Skipper, *Autochton cellus leilæ,* and with whom he made numerous discoveries concerning the butterflies of Virginia. "Butterflies of the District of Columbia" was one of CLARK'S major contributions to the knowledge of North American butterflies. He began the study of District butterflies when he first became a resident of Washington, in 1908, and for the following 24 years he observed the very considerable changes in the faunal balance. A number of species became progressively more rare or limited in occurrence during this period. He regarded the District area as a sort of meeting ground for northern and southern, and mountain and coastal plain forms. One of the primary values of his study of District butterflies is its detailed treatment of habits and seasons of the species.

During the course of his studies of the buttterflies of this general area, including Maryland and Virginia, he encountered a number of species at their southern limits, and discovered that in some the local forms were morphologically strikingly distinct from their more northerly counterparts. *Boloria selene marilandica, Polygonia faunus smythi,* and *Poanes massasoit hughi,* for example, are well-marked types of interest in forming extremes of clinal variation running far to the north, and culminating in northern forms of greatly different aspect.

CLARK'S investigation of the butterflies of Virginia extended from 1933 to 1951. With Mrs. CLARK, he regularly spent his annual leave of two weeks or more in some interesting area of Virginia. These periods, combined with innumerable weekends devoted to the work, enabled them to visit each of the 100 counties of the state at last twice. Their personal records included 800 different localities in the state, and in "Butterflies of Virginia" (1951) each species known from the state was discussed in detail from standpoints of range, occurrence, seasons, and variations.

CLARK'S lepidopteral interests, however, were by no means confined only to collecting and studying butterflies locally. He spent much time in the study of the large, general Lepidoptera collections of the U. S. National Museum. He investigated the odors of living butterflies, and their scent-scales and scent-glands. The effects of the radiation from butterfly wings on photographic plates were examined, and he published 40 photographs illustrating his experiments (in *U. S. National Museum Bull.* 157, plates 59-64; 1932). He was concerned with the broad relationships of butterflies as illustrated by his opinions on the groups within the superfamily Nymphaloidea, as well as with relationships at the subspecific level, as illustrated by the reports of his studies of *Papilio machaon* and *Danaus plexippus.*

AUSTIN CLARK retired in 1950 at the age of 70. He was then made an Honorary Associate in Zoology of the Smithsonian Institution, and he continued his researches until 1954. His death on October 28, 1954, marked the end of

a great zoological career, and the loss of a wonderful friend, colleague, and mentor to all those who knew and loved him.

PUBLICATIONS ON LEPIDOPTERA BY AUSTIN H. CLARK

1913. Three interesting butterflies from eastern Massachusetts. *Proc. U. S. Nat. Mus.* 45: 363-364, pl. 12.

1925. Some unusual and interesting butterflies from eastern Massachusetts. *Psyche* 32: 293-298.

1926. Carnivorous butterflies. *Smiths. Inst. Ann. Rept. 1925*: pp. 434-508, figs. 1-5.

.... Notes on the odors of some New England butterflies. *Psyche* 33:1-5.

.... Our giant moths. *Sci. Monthly* 23: 385-397, figs. 1-19.

1927. Fragrant butterflies. *Smiths. Inst. Ann. Rept. 1926*: pp. 421-446, pls. 1-13.

.... Notes on the melitæid butterfly *Euphydryas phaëton* (Drury) with descriptions of a new subspecies and a new variety. *Proc. U. S. Nat. Mus.* 71: 1-22, pls. 1-5.

1928. Notes on some butterflies from New England. *Psyche* 35: 226-228.

1929. The butterflies of the District of Columbia. *Smiths. Inst. Explorations and Field-Work, 1928*: 101-108, figs. 89-93.

.... Why a butterfly? [and 21 other brief popular articles on insects]. In his *Nature Narratives* 1: 47-107.

.... On certain forms of common American butterflies. *Psyche* 36: 28-33.

.... Preliminary list of the butterflies of the District of Columbia. *Proc. Biol. Soc. Wash.* 42: 113-116.

1930. Notes on some local butterflies. *Proc. Ent. Soc. Wash.* 32: 80-82.

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.... Some observations on butterfly migrations. *Sci. Monthly* 32: 150-155.

.... Notes on the behavior and migration of the Milkweed Butterfly. *Journ. Wash. Acad. Sci.* 21: 171-172.

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1932. The butterflies of the District of Columbia and vicinity. *U. S. Nat. Mus. Bull.* 157, pp. i-ix, 1-337, pls. 1-64.

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1934. Observations on the butterflies of Apple Orchard Mountain, Bedford County, Virginia. *Proc. Biol. Soc. Wash.* 47: 177-180.

1935. Arctic butterflies. *Smiths. Inst. Ann. Rept. 1934*: 267-296, pls. 1-7.

.... The butterflies of Virginia. *Smiths. Inst. Explorations and Field-Work, 1934*: 33-36, figs. 28-31.

.... Another record of the occurrence of *Strymon ontario* in Missouri, with notes on the larva (Lepid.: Lycænidæ). *Ent. News* 46: 123,124.

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1936. Some butterflies from eastern Virginia. *Journ. Wash. Acad. Sci.* 26: 66-70, figs. 1-14 (LEILA F. CLARK, joint author).

.... Notes on the butterflies of the genus *Enodia* and description of a new fritillary from Peru. *Proc. U. S. Nat. Mus.* 83: 251-259, pl. 22.

.... Who's who among the butterflies. *Nat. Geogr. Mag.* 69: 679-692, pls. 1-8.

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.... The swallowtail butterflies. *Smiths. Inst. Ann. Rept. 1935*: 383-408, pls. 1-14.

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.... Preliminary list of the butterflies of Virginia. *Proc. Biol. Soc. Wash.* 50: 87-92 (LEILA F. CLARK, joint author).

.... The butterflies of Virginia. (Abstract of a paper read before the Entomological Society of Washington.) *Proc. Ent. Soc. Wash.* 39: 116.

.... Surveying the butterflies of Virginia. *Sci. Monthly* 45: 256-265.

1938. The butterflies of Virginia. *Smiths. Inst. Explorations and Field-Work 1937*: 77-80, figs. 80-82.

.... Butterflies from Virginia and the District of Columbia. *Proc. Ent. Soc. Wash.* 51: 1-6 (LEILA F. CLARK, joint author).

.... Notes on Virginia butterflies. *Proc. Biol. Soc. Wash.* 51: 177-182 (LEILA F. CLARK, joint author).

.... [Note on Holland's figure of *Danaus plexippus*; and note on the occurrence of *Calpodes ethlius* in Virginia in 1937] *Proc. Ent. Soc. Wash.* 40: 111.

1939. Butterflies of a wood road, Suffolk, Virginia. *Ent. News* 50: 1-5 (LEILA F. CLARK, joint author).

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1941. Butterflies of Farmville, Virginia. *Journ. Wash. Acad. Sci.* 31: 38-40 (FRANK W. TRAINER, joint author).

.... Some early butterfly records from Georgia. *Proc. Ent. Soc. Wash.* 43: 80-85 (LEILA F. CLARK, joint author).

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1946. Two new butterflies from the Admiralty Islands. *Proc. Biol. Soc. Wash.* 59: 119-120.

1947. The interrelationships of the several groups within the butterfly superfamily Nymphaloidea. *Proc. Ent. Soc. Wash.* 49: 148-149.

1948. Surveying the butterflies of Virginia—from the human as well as the scientific viewpoint. (Author's abstract of his address as retiring president of the Entomological Society of Washington). *Proc. Ent. Soc. Wash.* 50: 74-76.

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1949. *Nymphalis io* from England in Washington, D.C. *Entomologist* 82: 72.

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.... Lepidopterous larva feeding on exudations from woolly aphids. *Lepid. News* 4: 52.

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1952. The first record of a butterfly migration in America. *Lepid. News* 6: 42.

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HANS KAUTZ, the Austrian lepidopterist known especially for his outstanding work with *Pieris bryoniæ* and *P. napi*, died at the age of 85 at Seewalchen, Upper Austria, on 28 October 1954. According to an obituary notice by S. R. BOWDEN in *The Entomologist* (vol. 87: p. 272; 1954), KAUTZ was born in Vienna on 5 June 1870, took his diploma in mechanical engineering at Vienna, and served with the State Railways until his retirement in 1923. His principal publication, with L. MÜLLER as co-author, was a superb monograph on *P. napi* and *P. bryoniæ* published in 1939 (*Abh. Oesterr. Ent. Ver.*, vol. 1:191 pp.). KAUTZ by then had personally studied alive at least 50,000 of these complicated and controversial *Pieris* and had reared over 200 broods. His entire collection, notes, and library were destroyed in his house by a bomb in February 1945. Nevertheless, he continued publishing occasional papers after the war.

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