APPENDIX 1.

A Myrmecologist's Life: An Appreciation of Mary Talbot (with photos)

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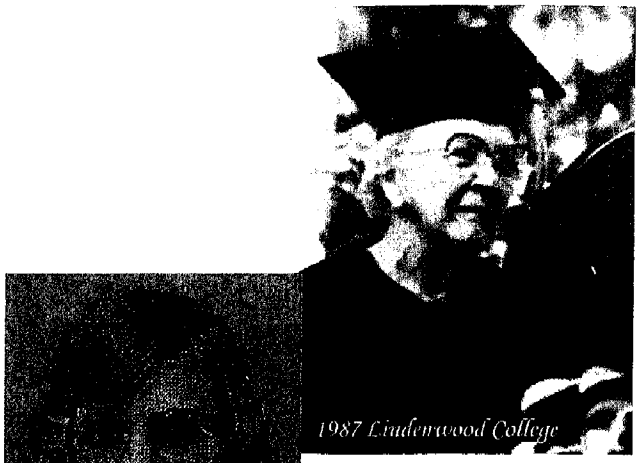
ca. 1930's or 1940's



1987 Lindenwood College

1925 Denison University

ca. 1960's Lindenwood College

ca. 1950's

The study of ants has interested a number of individuals over the years, especially in the 20th Century in North America. Few have persevered for most of their lifetimes as did Mary Talbot. She devoted more than half a century to the careful analysis of the ecology and behavior of ants, almost all of it at one 1146 acre research center, the Edwin S. George Reserve of the University of Michigan. Braving all kinds of weather, inhospitable habitats such as brambles, barren dunes, and floating bog mats, and attacks by mosquitoes, black flies, horseflies, and other pests, she systematically catalogued the species on the Reserve, documented each species ecological distribution, and recorded behavior patterns for most of the species. The ant fauna of no other biological preserve is as well known as that of the George Reserve, and Mary Talbot is almost solely responsible for it.

Her interest in insects began when she was a young girl who followed her brother, Adolph, around the neighborhood in Tiffin, Ohio while he was collecting insects. Adolph's entomological interests lasted only several years, but he opened a view of the world that was to remain with Mary throughout her life. Her curiosity knew no bounds.

Mary Talbot was born in Columbus, Ohio on 30 November 1903 to Paulina Schmitz and Frank Thresher Talbot. At the time her father was a draftsman for a mining machinery company in Columbus. Later he and his family relocated to Tiffin, Ohio where he was a draftsman for a manufacturing plant. Tiffin was Mary's hometown and it was there that she attended secondary schools. She was graduated from Tiffin High School in June of 1921.

That fall she enrolled in Denison University in Granville, Ohio. Attendance at Denison University was a family tradition. Her grandfather, Samson Talbot, graduated with honors from Denison in 1852. A Baptist minister, he became President of the university in 1863 and served until his death on 10 June 1873. Samson Talbot was a widely respected minister and academician; he was awarded an honorary Doctor of Divinity degree from Colgate University in 1864.

Mary's father and mother also attended Denison; her father was in the class of 1888, and her mother in the class of 1896. She was preceded there by her brother, Adolph, who was in the class of 1922, and followed by her brother John, who graduated in 1932.

While at Denison, Mary was active in the Shepardson Club, a female social club, and the Women's Athletic Association. She played baseball in her sophomore, junior and senior years. She was also active in the Big Sister program at Denison in her senior year. Mary graduated from Denison in June of 1925 with a Bachelor of Science degree, majoring in zoology and minoring in botany.

In September of 1925 Mary entered a master's degree program in entomology at Ohio State University in Columbus. There she studied under Clarence Hamilton Kennedy, a distinguished American entomologist and editor. Kennedy was a specialist in the insects of the Order Odonata, dragonflies and damselflies. At that time he was developing an interest in the ecology of ants. However, when Mary joined his laboratory, he assigned her to study a rove beetle, *Creophilus villous*. She completed her Master of Science degree in June of 1927 with a thesis entitled: "The Structure of the Digestive System in *Creophilus villosis*." Her thesis was published in the *Ohio Journal of Science* in 1928.

Following graduation Mary started her teaching career. She served as Instructor in Biology at the University of Omaha in 1927-28 and in the same position at Stephens College in Columbia, Missouri in 1928-30. At this time, the beginning of The Depression in the United States, she decided that she needed a doctoral degree to succeed in higher education. She applied to the University of Chicago and was accepted as a student by Alfred E. Emerson, a highly respected ecologist and entomologist. Emerson's specialty was the biology of termites. Mary had become interested in ants through her association with Kennedy, and wanted to do her dissertation on ants. Emerson agreed and she began the study of the ants in the region around Chicago. Her dissertation, entitled "Distribution of ant species in the Chicago region with reference to ecological factors and physiological toleration," was completed in 1933 and published in the journal, *Ecology*, in 1934.

Mary accepted a temporary position as Instructor of Biology at Mundelein College in Illinois for the first semester of 1935-36. In the spring of 1936 she was appointed to a temporary position as Instructor of Botany at Lindenwood College, a college for females in St. Charles, Missouri. In the fall of 1936 her position was made permanent. She rose in rank to Professor and for a number of years served as chairperson of the Biology Department. She remained at Lindenwood College until May of 1968 when she retired as Professor Emeritus of Biology. (One year later Lindenwood became coeducational. In 1998 the name was changed to Lindenwood University.)

In the summer of 1928 Mary became a research assistant to C. H. Kennedy at the University of Michigan Biological Station at Douglas Lake, Michigan. She also enrolled in Kennedy's entomology course. In the late 1930s she assisted Kennedy in his studies of ants at the Put-In-Bay Biological Laboratory of Ohio State University. While working as his assistant, it was her job to dig the ant nests that Kennedy wanted studied. His admonition to her was always: "Get the queen." Two articles in professional journals, jointly authored with Kennedy, resulted from this research. From the early 1940s until 1951 Kennedy continued his research on ants at the University of Michigan Biological Station. Again, he called on Mary Talbot to be hi assistant. Kennedy was an autocratic researcher and he didn tolerate independence. Mary wanted to carry out some studi that she devised. Kennedy would not agree and he forba her from doing any work at the Biological Station except a hillside where Mary had worked before. She continued l studies there on her own, avoiding areas that Kennedy had p off-limits to her.

At the request of Francis C. Evans of the University

Michigan, she came to the Edwin S. George Reserve of the University of Michigan in the summer of 1952. Evans had undertaken a large-scale ecological study of an old field, now known as "Evans Field" in the late 1940s and wanted someone to study the populations of ants. Mary Talbot was ideally suited for this study, and it developed into a long-term relationship between Mary and the Reserve. After completing the work on Evans project, she returned to the Reserve each summer, with one or two exceptions, for another 26 years.

She received modest support for her work at the George Reserve. Mostly, she used her meager earnings from Lindenwood to support her summer of research. In 1961 she applied to the National Science Foundation for a research grant for a project at the George Reserve on "Flight activities and production of winged individuals in certain Hymenoptera." It was a project on the nuptial flights of ants, but the political climate of the time dictated that "certain Hymenoptera" must be substituted for "of ants." She received a grant of $6,200. It gave her national recognition for her pioneering work, recognition that forced her administrators at Lindenwood to acknowledge the high achievement of their faculty member.

As if she did not get enough research in the summers at the George Reserve, she spent several winters digging populations of ants in a St. Charles woodland. Her studies of the colony populations of ants are the most complete and exacting of any published. She worked in all kinds of weather and in diverse habitats, including swamps, marshes, floating bogs, barren dunes, even blackberry brambles.

Always desiring to advance her knowledge of biological science so that she could be a better teacher, Mary attended two summer institutes for college teachers that were sponsored by the National Science Foundation. The first was on zoology at Williams College in 1958; the second was a session on plant and animal ecology at the University of Wyoming in the summer of 1959.

What characterized her studies and made her accomplishments so unique was her determination to find and identify each species that occurred on the George Reserve. She did this by studying all habitats yearly, by patiently observing individual behavior, by being observant of everything new and unusual, and by having incredible patience in her observations.

What makes her studies at the George Reserve so unique is the long duration (26 years), the complexity of the habitats, and the diversity of the species. Her ecological and behavioral studies enabled her to discriminate different entities, even though they were classified as the same species. Her studies alone discriminated five taxa of ants that are now recognized as separate species: *Monomorium talbotae, Dorymyrmex grandulus, Formica gynocrates, Formica talbotae,* and *Formica vinculans.* In 1993 Wheeler et al. recognized 113 species of ants as being collected within the state of Michigan. Of those 113 species, 88 were collected by Mary Talbot within the 1146 acres of the George Reserve. Fifteen of those species have been collected in Michigan only at the George Reserve. Between 1928 and 1985 Mart Talbot published 32 publications in professional journals.

Her honors were few but significant. Two species of ants were named after her: *Formica talbotae* by E. O. Wilson in 1976, and *Monomorium talbotae* by Mark Dubois in 1980. In addition, she was awarded a Doctor of Science degree, Honors Causa, from Lindenwood College at the commencement on 16 May 1987, and the Entomology Department at the Museum of Comparative Zoology at Harvard University recognized her by hanging her portrait in the Museum.

Her ant collections are now at Harvard University and the University of Missouri, St. Louis. A synoptic set of her collections from the George Reserve are in the Division of Insects of the Museum of Zoology at the University of Michigan.

Mary was a reader who always had a book at hand, usually a mystery. She also was a lover of cats, which would be her companions at her home in St. Charles most of her years there.

In early April of 1990 she moved from her home in St. Charles to the Presbyterian Manor in nearby Farmington, Missouri. There she suffered a heart attack; she was taken to the Farmington Regional Medical Center where she died at 9:37 am on 16 April. She was buried on 18 April at Hillview Memorial Gardens in Farmington; there was no visitation. She was preceded in death by her brothers, Adolph and John.

Mary loved to talk ants, even making fun of one of her own studies. In 1948 she had published the results of research at the Michigan Biological Station in the journal *Ecology.* The publication was entitled "A comparison of two ants of the genus *Formica.*" In 1950 William Steel Creighton synonymized those two species into one species. From that point on Mary poked fun at herself by referring to her study as "Comparison of two ants of the same species."

Virginia Terry, archivist at Lindenwood University, learned directly of Mary Talbot's influence in the scientific world. She described the experience as follows: "I was a member of an Elderhostel in Alaska in 1995. Some of the group were obviously friends of long standing, because at dinner one evening someone shouted across the room something about the "bug" man. The object of this name-calling responded that he was not a "bug" man, but an "ant" man. Remembering that Mary Talbot had done much research on ants and encountering him after dinner, I asked that, being an "ant" man, did he know of Mary Talbot. His eyebrows went up, and he said spiritedly, "Know Mary Talbot? Of course I know Mary Talbot - everyone in this field knows Mary Talbot." "Well," he added, "I never did really meet her, and that is one of my real regrets. But I have read everything that she wrote. Did you know that she has an ant named after her." I said "Yes." "Did you know that her works are housed at Harvard?" I said "Yes." Then he said with some puzzlement, "Tell me how you know Mary Talbot?" I explained that I was from St. Charles, Missouri, where Lindenwood College is located, and that is where Mary taught for over 30 years and retired from there.

He said, "I can't believe that I am actually talking to someone here in Alaska who personally knew Mary Talbot." (The "ant" man was Murray S. Blum, Professor of Entomology at the University of Georgia.)

She was a quiet, unassuming, humble, and well-mannered lady. Although she had occasion to remember a hurt afflicted by a colleague, I never heard her speak ill of another person. There are many women scientists whose work I have appreciated, but none that I admired and respected more than Mary Talbot.

References

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