Proceedings of the Indiana Academy of Science
(1994) Volume 103 (1-2) p. 79-83

ALFRED CHARLES KINSEY AS AN ENTOMOLOGIST

Frank N. Young
Professor Emeritus
Department of Biology
Indiana University
Bloomington, Indiana 47405

ABSTRACT: A review of the entomological work of Alfred C. Kinsey shows that he was an innovator in the field of insect systematics as well as in the study of human sexual behavior. His principal works in entomology involved the Hymenopterous gall-making wasps of the family Cynipidae and their relatives. Among his innovations were his insistence on the use of a massive series of specimens over the widest possible geographic range and the use of all the genetic, physiological, geological, and other data available bearing on classification. His work on insects was widely recognized and appreciated before he began his seminal work on human sexual behavior.

KEYWORDS: Alfred C. Kinsey, Cynipidae, *Cynips,* evolution, Figitidae, higher categories, Hymenoptera, *Neuroterus,* T.W. Torrey.

INTRODUCTION

Alfred Charles Kinsey (1894-1956) was not satisfied to work and gain distinction in a single field of study. He was afflicted from youth with the Puritan work ethic which insists that man's purpose on earth is to work. Kinsey told several people that he came from a line of short-lived men and suspected he would not live long, and that he intended to do as much work as most men in the time he was allotted.

As a boy, he was active in the Boy Scouts of America and became a competent field naturalist. After graduating from Bowdoin and receiving a D. Sci. degree from Harvard, he moved to Indiana University, where he found a wife, Clara McMillan, and, eventually, recognition in two major areas of biology — systematic entomology and human behavior. Kinsey, even shortly before his death, insisted that he was actually a taxonomist working on a taxonomic problem in human behavior.

Kinsey worked diligently until he died. T.W. Torrey, longtime chairman of biology at Indiana University, told the author of a visit from Kinsey in 1956. Kinsey stopped by Torrey's office in regard to some business concerning the developing Sex Institute. As he was leaving, Torrey, concerned about Kinsey's apparent illness, suggested that Kinsey might take some time off from his work to recover. Kinsey replied, "Quit work? If I can't work, I'd rather be dead!" Torrey never saw him alive again.

Kinsey did not drink heavily or smoke. His favorite party joke was to approach someone with a martini and ask, "Does the ice water keep the olive fresh?" He once tried smoking, hoping that the habit might gain him more rapport with some of the people he was interviewing, but he was so inexpert and erratic that he was asked to desist. During his last years, he began to take a Coca Cola in the afternoon, finding he could then work longer without getting sleepy. (For

more information on Kinsey's life, please refer to his obituary by O.B. Christy (1957).)

KINSEY'S WORK ON GALL-MAKING WASPS

During the period immediately following his work at Harvard University, Kinsey traveled widely in the United States on a Sheldon Traveling Fellowship, gathering much of the material on which he later based a major revision of the genus *Cynips.* Later, during his tenure at Indiana University, he made field trips to Mexico and Central America, usually accompanied by students. (One small insight into Kinsey's character comes from one of these later trips when Kinsey sent a student home for refusing to take a cold shower in the morning.) Kinsey, in his work on gall wasps, defined species as populations with a common heritage. He maintained that they were not merely mental concepts but realities which preserve a morphological and physiological identity under varying conditions over vast geographical areas. Species populations contain variations, mutations, and Mendelian races which may be, if isolated, the source of new species. Hybrid populations, although they occur, do not seem to have formed new species in *Cynips.* These conclusions were derived from the morphology, biometry, host relationships, life cycles, and geographic distribution of *Cynips.* Kinsey generally rejected what he called the Darwinian interpretation of the origin of new species through the accumulation of small variations. He also asserted that although species populations may show variation in some characters, large series will show great uniformity of characters. Much mystifying variation might be eliminated if larger series were used. There might also be uniformity in variation. Kinsey maintained that the higher categories were realities and not simply mental concepts convenient for sorting organisms. He felt that his work on gall wasps showed the reality of the higher categories. He summarized his thinking concerning higher categories and the taxonomic method somewhat as follows (1936):

1. Higher categories represent the ancestral stocks from which lower categories (the present day species) have been derived.
2. The ancestral stocks which gave rise to the higher categories were originally single species.
3. The higher category is of more ancient origin (in time) than any lower category.
4. The ancestral stocks representing the higher categories are for the most part extinct; only the products of evolution are available today.
5. Multiplication of species may be accomplished through isolation of portions of an older species and independent mutation and hybridization within each such isolated portion.
6. The higher categories are realities in nature; they were once real species.
7. Evolution has been radiate not linear.
8. The best representation of evolution, therefore, is of a "tree of life" in which the trunk represents ancestral stocks out of which the branches (lower categories) evolved.
9. The number and magnitude of characteristics common to any category depends on the age of the category.

10. Categorical rank is to be determined by the nature of the particular character involved.
11. Reproductive organs (primary or more often secondary) are more conservative than other characters and, therefore, have greater significance in establishing higher categories.
12. The adaptive nature of a character determines the categorical rank of the unit in which the character is found.
13. The capacity of two groups to hybridize is inversely related to the categorical rank.

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ACKNOWLEDGMENTS

The author wishes to thank Liana Zhou, Terry Sare, and Maggie Harter of the Kinsey Institute for Research in Sex, Gender, and Reproduction for assistance with the bibliography. He also wishes to thank Dr. Frank Edmondson, Professor Emeritus of Astronomy, Indiana University, now of the Lowell Observatory, Flagstaff, Arizona, for information concerning the statistics used by Kinsey in his studies on gall wasps. Kinsey was puzzled by the fact that some frequency curves had a single maximum while others had two maxima. The difficulty was overcome by the use of plot correlation scatter diagrams. The two distributions overlapped when they were projected on the body length axis and did not overlap when projected on the wing length axis. This is mathematically identical with a problem in stellar motions that Edmondson was working on at the time (c. 1939).

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