

A BRIEF HISTORY

of

THE DEPARTMENT OF ZOOLOGY AND ENTOMOLOGY

1874 – 1968

by

DWIGHT M. DELONG, PROFESSOR EMERITUS

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A Brief History of Zoology and Entomology

by

Dwight M. DeLong - Professor Emeritus

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A Short History of the Department of Zoology and Entomology  
of The Ohio State University

by

Dwight M. DeLong, Professor Emeritus

Preface

At the request of Dr. John Briggs, Acting Dean of the College of Biological Sciences and Dr. Lyle Goleman, Chairman of the Academic Faculty of Entomology, I have attempted to prepare a brief history of the Department of Zoology and Entomology from 1874 to January 1, 1968, when the department was dissolved in favor of the formation of Academic Faculties.

With the exception of a short period during and following World War 1, I have been a member of the department staff since 1914, covering a period of some 55 years and have served under five of the seven chairmen of the department.

An attempt has been made to present only the facts without personal comment or comparison of the different chairmen, their program or lack of program, their ability as administrators their attitudes toward staff members when dealing with problems and personnel, their involvement in campus administrative and departmental situations and their stress upon different phases of departmental work, depending upon their major interests or concepts of academic disciplines.

One problem that has always confronted staff members of a department is the change in the attitude, rules and policies of a new chairman who is replacing a retiring chairman. One chairman may maintain that research is

not a necessary function of departmental work and that teaching alone should determine a member's promotions and future status. A new chairman may require that staff members perform research and periodically request a list of publications.

In order to be a good teacher one must continue to grow in his subject matter field and the most logical way to grow is through the medium of research; but there is a great difference in the research potential and conditioning of different individuals.

Research is the curiosity of the boy which has come to maturity, searching for "what makes it tick" or trying to answer the "why" and "how". If this can be channeled in a certain field or direction a good researcher will result. Real research can come only from the inner urge of the individual and cannot be performed because a chairman requires it. Teachers and researchers are born and cannot be developed by courses of training or Colleges of Education alone.

Several staff members have produced contributions in the field of research which will be cited for years to come and some have produced text books, monographs, outlines, laboratory guides and other instructional literature which will be used extensively by many future students.

The pleasant and rewarding sides of the departmental associations have been the large number of devoted teachers and researchers who have spent their lives preparing students for positions of responsibility, and devotion to the lives of others. Those students will long remember the members of the staff who guided, directed and assisted them, especially through their years as graduate students in the department. A section of the appendix contains a list of most of these former or present staff members and a

list of their publications.

This historic sketch is presented in order that it may renew some of the almost forgotten facts to the "old timers" and recall interesting persons through the years at Ohio State who touched their lives in one way or another; it may help also to enlighten the youngsters regarding days before automobiles, electric lights, telephones, radios, not to mention televisions, airplanes or space travel, and some of the struggles and budget problems which occurred when a dollar was worth 100 cents, student labor was paid ten cents an hour, graduate assistants were paid \$300.00 a year, a good steak dinner cost a dollar and money did not grow on trees.

#### Introduction

The Ohio State University was founded in 1870 as a land grant college under the name of the Ohio Agricultural and Mechanical College. This came about through a series of situations. Ohio was one of the states formed by the division of the Northwest Territory and was admitted to the Union in 1803. Its first capitol was Chillicothe which was later moved to Columbus.

By an act of Congress signed by President Lincoln July 2, 1862, each state was granted a tract of land consisting of 30,000 acres for each U.S. Senator and Representative, based on the census of 1860, which land was to be sold and the "proceeds to constitute a perpetual fund, capital to remain forever undiminished and interest applied to endowment, support and maintenance of at least one college"; the main objective of which would be "to teach such branches of learning as are related to agriculture and the mechanic arts." After several years had passed and there was extensive debate and disagreement



Concerning this grant, the Ohio Legislature in 1864 passed a bill accepting the land granted for the establishment of such a college.

Difficulty was experienced in selling the land even at 53 cents an acre, the price at which a large amount was eventually purchased. After this fund was accumulated, the legislators were quite undecided how many institutions to support, if several were decided upon, where one or more should be located, and in what parts of the state they should be situated if more than one institution, already founded, was chosen. Finally, after several proposals to distribute the money to several existing colleges, on March 22, 1870, the General Assembly passed an act establishing the Ohio Agricultural and Mechanical College with this provision "The leading objective shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agricultural and mechanical arts". The law also specified that it should "be open to all persons over 14 years of age". The Governor, Rutherford B. Hayes, appointed the first Board of Trustees consisting of 19 members, one member for each Ohio District, one of whom was Dr. Norton S. Townshend who later was appointed the first Professor of Agriculture. One of the first duties of the Board of Trustees was to select a location for the new college. Several counties attempted to secure this new institution. The final decision laid between Clark and Franklin Counties. After extensive balloting Franklin County was chosen and a block of land consisting of 331 acres was selected two miles north of the village of Columbus, which at that time was small and did not extend north on high street beyond the present Union Station.

Dr. Edward Orton was chosen as the first president and was inaugurated

January 8, 1874.

The Trustees planned for the erection of the first building named University Hall which name has been retained until this time (1969). The Trustees now plan to raze the building in view of its hazardous condition.

The Board of Trustees proceeded to organize a course of training and established ten departments of instruction which were as follows:

1. Department of Agriculture
2. Department of Mechanic Arts
3. Department of Mathematics and Physics
4. Department of General and Applied Chemistry
5. Department of Geology, Mining, and Metallurgy
6. Department of Zoology and Veterinary Science
7. Department of Botany, Horticulture, and Vegetable Physiology
8. Department of English Language and Literature
9. Department of Modern and Ancient Languages
10. Department of Political Economy and Civil Policy

Then came the selection of chairmen for these several departments, seven of whom were selected before the opening of the University on September 17, 1873, when 17 students registered for regular college courses. Dr. Norton S. Townshend, one of the members of the Board of Trustees was requested to resign in order that he could be appointed to the Chair of Agriculture.

In the meantime, University Hall had been erected in 1872-73. The basement served as a dormitory and there was a dining room in the east wing. As this was the only building on the campus, all classes were held here.

There was a barbed wire fence on the east side of the road which is now High Street and the land opposite the campus was wooded. Few students were within walking distance. Some drove buggies or rode horseback.

When the university was formally opened for students, work was offered leading to the B.A., B.S., and C.E. degrees.

The State Legislature had already established maximum salaries for the officers and faculty of the University. These were \$3,000. for the president and not to exceed \$2,500. for any professor. The entire salary budget for 1874, including the President, nine professors, the secretary, janitor, etc. was \$26, 700.00.

#### Department of Zoology and Veterinary Science

In establishing the 6th of the original departments, it was described thus, "A professorship in Veterinary Science, to include a thorough knowledge of animal anatomy and physiology, with a rational medical and surgical treatment of the diseases of our domestic animals by which it is hoped the great pecuniary loss now annually sustained by the want of such knowledge may be very much lessened. To this chair is also to be added such a knowledge of general and specific Zoology as may be required, particularly such as relates to a better knowledge of beasts, birds, fishes and insects that may be beneficial or detrimental to man in his industrial pursuits".

In 1878 the name of the University was changed to The Ohio State University. This brought to the University more generous popular and legislative support. Six colleges were established to replace departments in 1896.

Synoptic Chronological Review

of

The Department of Zoology and Entomology

From this beginning was created The Department of Zoology and Entomology, known first as the Department of Zoology and Veterinary Science, later as Zoology and Comparative Anatomy and after 1891 as Zoology and Entomology.

Professor Albert H. Tuttle was elected to the chair of Zoology and Comparative Anatomy in 1874. He was a graduate of Pennsylvania State College where he had been granted the degrees of B. Sc. in 1868 and M. Sc. in 1874. He had also taught Natural Sciences in the State Normal School of Wisconsin in 1870-72 before accepting the position at The Ohio State University. Professor Tuttle was paid a salary of \$2,500.00.

Some interesting facts are learned from the early reports of the department chairman. A report in 1874 by Tuttle to President Orton, the first University President, regarding materials and working conditions in the department states that we have.

- "1. Skeletons enabling us to illustrate the structure of representatives of all the orders and all the important suborders of the mammals".
- "2. A large collection, chiefly of alcoholic material comprising nearly a thousand specimens----including insects, spiders, crustacea, worms, animal parasites of various kinds, mollusca, echinoderms, corals, sponges, etc".
- "3. The works of Entomology in the college library and the writer's private collection of books upon all departments of Biological

Science; also the microscopes and microscopical preparations of the writer".

He further states that an elementary one term course in physiology and another in zoology are offered to first term students. The work is done by the use of a text book with recitations.

It is further stated that those who elect zoology spend two years, "in a careful study of the organization and life of the most important representatives of each of the greater groups of the animal kingdom..." "and such knowledge of insect life as will lay the foundation for special study in entomology." In the third year of work, instruction in "pests of the farm" was required. The first year's work treated mammals, birds and reptiles, amphibia and fishes. The second year's work covered the subjects of insects, crustacea and worms, Echinoderms, Mollusca, Zoophyta and Protozoa.

In Tuttle's report of 1875 we find this statement, "with the exception of microscopes already referred to, no provision has as yet been made for laboratory instruction in physiology".

The salary paid to Professor Tuttle has already been mentioned. In 1876 we find that the entire salary budget of the University including those of the president, fourteen professors, a secretary-treasurer, janitor, etc. was \$27,500.

In 1877 there were 119 course registrations in courses in zoology and physiology. Practically all of these were Arts College students. During the year ending November 15, 1878 only 18 students were registered in agricultural courses.

In 1879 there were 5 graduate students in science courses in the university. The registration in the courses of the department were Elementary Physiology 52, Elementary Zoology 45, Invertebrate Zoology 8, Comparative Anatomy 33, and Advanced Physiology 13. Registration in the University had increased from 17 in

1873 to 235 in 1880. In 1880 we learn that 8 microscopes were available for laboratory work and an assistant had been added to the staff. Until this time it is apparent that all classes had been conducted by Professor Tuttle alone.

Entomology is first mentioned as such in 1880 in a report by Dr. N.S. Townshend, Professor of Agriculture, when he states that Dr. J.M. Wheaton of Columbus was invited to present a series of lectures on entomology in January 1881.

In 1882 the University attendance had increased to 455 students and 10 college degrees were conferred in that year. In November 1882 the average attendance during the year in agricultural classes were 6 students. In the catalogue for the same year is the statement that "all students who are candidates for bachelor's degrees receive instruction in zoology during their sophomore year".

The concept of students being trained in agriculture was not accepted by the farmers of Ohio. Students were not interested in enrolling in the College of Agriculture in spite of the fact that the legislature was willing to appropriate almost any reasonable amount of money needed to encourage students to enroll in the courses in agriculture, instead, farmer's sons in the University preferred other fields of training and there was a general complaint in 1883 that the University was leading young men away from the farm. Dr. Townshend called attention to the fact that although agriculture had offered courses for a period of ten years, no student had graduated in agriculture. He then proposed offering short courses of 2 years in order to try to encourage farm boys to enroll in agriculture.

After fourteen years as chairman of the Department of Zoology and Comparative Anatomy, Professor Tuttle resigned in 1888 to accept the Chair of Biology and Agriculture at the University of Virginia. As a reward for his services, the Board of Trustees voted to confer upon him the Ph.D. degree, but he declined because he believed that this degree should be earned by the successful completion of a regular program of work prescribed for the Ph.D. degree. At a later date the presidency of the University was offered to him but he declined this also, because the maximum salary of \$3000. had been determined by legislative action.

On August 28, 1888, Dr. David S. Kellicott was selected as the second Chairman of the Department. He was a native of New York and had received his training at Genesee College which later became Syracuse University. He first taught in village schools, later the Keystone Normal School and at the Buffalo Normal School from which he resigned in order to accept the appointment at the Ohio State University.

When Dr. Kellicott came to the University he reports that 43 students were registered for courses in the department; the distribution in course registration was - Physiology 21, Comparative Anatomy 7, Histology 6, Agricultural Physiology 6, and Microscopy 7. The first regular assistant was added to the department during that year.

In 1888 the University salary budget had been increased to \$36,157.77, and the entire University budget to \$49,073.36.

President William H. Scott who succeeded Walter Q. Scott had recommended in his first report November 25, 1883, a division of the Chair of Zoology and Comparative Anatomy, and the creation of a new Chair of Entomology and Zoology

to be filled by a skillful entomologist. This division was made in 1891 and Dr. Kellicott became the chairman of what has continued until 1967 as the Department of Zoology and Entomology. Dr. A.M. Bleile of the Starling Medical School, which was located in downtown Columbus was appointed to the Chair of the Department of Anatomy and Physiology. The Starling Medical College was later moved to the Ohio State University campus, became a part of the Medical College and the department was later divided into the Department of Anatomy with Dr. F. L. Landacre as Chairman, and the Department of Physiology with Dr. Bleile remaining as the chairman.

The Department of Zoology and Entomology granted its first Ph.D. degree in 1890 to Clarence M. Weed, President of Massachusetts Teachers College, Lowell, Massachusetts.

In 1890 the Morrill Act, sponsored by Hon. Justin S. Morrill, who had authored and sponsored the Land Grant Act of 1862, was passed in Congress and was an important supplement to the Act of 1862. This provided each land grant college with a permanent annual appropriation out of the proceeds of the public lands, beginning at \$15,000 in 1890 and increasing \$1,000. per year thereafter until the annuity should become \$25,000. Due to a violent breach between the representatives of the Agricultural Colleges and the farmers organization it seemed that this legislation would not pass; but the representatives from The Ohio State University were largely responsible in healing the breach and altering the wording. The bill was so amended as to secure the support of everyone interested in its passage.

In the year 1891-92 the University Faculty had expanded to 18 Professorships, 4 Associate Professorships, 5 Assistant Professorships, 15 Lecturers,



1 Instructor and 18 Assistantships. In spite of this increase the Department of Zoology and Entomology was still a one-man department with one part-time assistant.

In 1894 James H. Canfield became President and we learn that "The first important event occurring during the Canfield Administration was the establishment of a Lake Laboratory at Sandusky, Ohio in connection with the State Fish Hatchery. This was due to the great interest of Kellicott in promoting the study of food fishes in Ohio and the replenishing of the streams". (See separate section on "The Lake Laboratory".)

In 1894 courses offered in the Department were Zoology, Comparative Anatomy, Economic Entomology, Advanced Entomology and Systematic Zoology.

In 1895 James S. Hine and Frank L. Landacre were appointed as Assistant Professors in the department. Certain courses were added, such as Invertebrate and Vertebrate Zoology, Systematic and Practical Entomology for the Agricultural students and Comparative Zoology and Advanced Zoology and Anatomy for Arts students.

In 1896 colleges were established to replace departments. The Department of Zoology and Entomology was then placed in the College of Agriculture, where it remained until the formation of the College of Biological Sciences, July 1, 1966.

Dr. Kellicott died suddenly in 1898. At the time of his death he was active in several scientific societies. He was Secretary of the American Association for the Advancement of Science, President of the American Microscopical Society and Treasurer of the Ohio Academy of Science. He was the author of several scientific papers one especially, "The Odonata of Ohio"

was a pioneer paper in this field.

The Board of Trustees appointed Professor Herbert Osborn as Chairman to succeed Dr. Kellicott. He received his B.S. and M.S. degrees from Iowa State College and had been teaching in the same institution for 19 years before accepting the appointment in Zoology and Entomology. Professor Osborn had been engaged in entomological research and teaching in connection with the College of Agriculture and the Agricultural Experiment Station in Iowa and gave the entomological work a great stimulus which has lasted throughout the remainder of the first century in spite of attempts at times to suppress or devalue it.

As an added facility, a new Biological Building was nearing completion, located on the South Oval Drive near where Hagerty Hall is now located. This was to be occupied by the Department of Zoology and Entomology and the Department of Anatomy and Physiology.

Many students who later became prominent entomologists, occupying important position in various university and government positions in that field, were attracted to the department for graduate training. Among this group were such men as W. B. Hermes later Chairman of the Department of Entomology and Parasitology, University of California; H. C. Severin who became Chairman of the Department of Entomology and Entomologist of the Experiment Station at the University of South Dakota, Brookings, South Dakota; Walter C. O'Kane, later Chairman of the Department of Entomology at the University of New Hampshire, Durham, New Hampshire, and the founder and first Director of the Crop Protection Institute; Elmer D. Ball, Chairman of the Department of Entomology, State College of Iowa at Ames, Iowa, Chairman of Entomology, Utah Agricultural College, Logan, Utah,

Director of Scientific work in the U.S. Department of Agriculture during the President Coolidge Administration and later Chairman of Entomology at the University of Arizona at Tucson; S. W. Bilsing, Chairman of the Department of Entomology and Entomologist of the Experiment Station at College Station, Texas; James G. Sanders who was Professor of Entomology at the University of Wisconsin and State entomologist, Madison, Wisconsin, later the Director of the Bureau of Plant Industry of Pennsylvania at Harrisburg, Pennsylvania; and H.H. Severin, Professor of Entomology at the University of California, a pioneer specialist on Plant Disease Transmission by insects.

A course in Ornithology was first taught in 1898. The following year the College of Agriculture had an enrollment of 4 graduate students and 153 undergraduates. The University enrollment in 1900 was 1,465.

Other courses added to the curriculum in the early 1900's were: Parasites of Domestic Animals, Special Entomology, Anatomy of the Frog, Invertebrate Entomology, Comparative Neurology, Cellular Biology, Embryology of the Frog, Vertebrate Embryology and Cytology. Thus in 1903, 27 courses were being offered including: Research, Seminar and a Teacher's Course, all were taught by Herbert Osborn, J. S. Hine, and F. L. Landacre. Two assistants were added to the staff in 1906.

The second Ph.D. Degree granted by the Department was conferred upon Mel T. Cooke in 1904, and the third upon Elmer D. Ball in 1907.

Dr. William Morton Barrows was added to the staff in 1909 and Dr. Clell L. Metcalf was appointed as an assistant professor in 1911.

By 1910, 38 buildings had been erected on the campus, the faculty had increased from the original 7 to 24, the student enrollment had expanded to

3,566 with a graduating class of 370. The College of Agriculture had been ranked sixth in size in the United States.

In June 1911 a Graduate School was approved by the Board of Trustees Action and Dr. William McPherson, Chairman of the Chemistry Department was appointed Dean of the Graduate School.

During the same year a group of Biologists from 10 Ohio colleges or Natural History Societies founded an Ohio Biological Survey. This organization was officially approved by the Board of Trustees on May 28, 1912 who recommended an appropriation of \$2,500 for field work and publication costs. Professor Herbert Osborn was appointed as the Director. He served in that position until his death in 1954. Professor Dwight M. DeLong was appointed as Associate Director in 1943 and served as Acting Director from 1954 to 1958. (See separate section on the Ohio Biological Survey.)

In the autumn of 1914 the new Botany and Zoology Building located on the west side of Neil Avenue at the west end of 12th Avenue was ready for occupancy by the Department of Botany and the Department of Zoology and Entomology. The Department of Anatomy and Physiology was divided into two Departments and transferred to the Medical School.

Due to the delay in completing the construction of the building, no furniture was in the class rooms when the students reported for their first assignments in September and class work was delayed for several days.

This is the point at which the writer became a member of the department and his first assignment was to assist in moving the equipment from the old Biology Building on the Oval to the new Botany and Zoology Building on Neil Avenue, washing glassware and assisting in arranging the laboratories for the

reception of students.

The staff now consisted of Professor Herbert Osborn, Associate Professor Hine, Assistant Professors W. M. Barrows, F. H. Kreckler, and C. L. Metcalf, Instructor W. J. Koster and five graduate assistants; D. M. DeLong, C. J. Drake, V. L. Haber, Mary Oliver, and Don Whalen.

Due to the fact that Dr. Landacre had been transferred to the College of Medicine and appointed as Chairman of the Department of Anatomy, the course offerings were changed considerably. In the autumn quarter the following courses were offered with their respective registrations: Elementary Zoology 487, Economic Entomology 211, Systematic and Practical Entomology 45, Parasites of Domestic Animals 16, Special Entomology 4, Invertebrate Morphology 7, Invertebrate Zoology 7, Advanced Entomology 7, Ornithology 11, Entomological Literature 7, Medical Entomology 5, Insect Control 4, Entomological Taxonomy 8, and Forest Entomology 10. No students were registered in Apiculture. There was a total of 818 course enrollments in the department.

A course in Variation and Heredity was first taught by Professor Barrows in 1910.

Upon recommendation of President Thompson the Board of Trustees established the first Research Professorship in 1916 and Professor Herbert Osborn was appointed as the University's first Research Professor in which capacity he served until 1933 when he became an Emeritus Professor. He remained active in research work and writing, and retained a part-time secretary until a short time before his death in 1954 at the age of 98 1/2 years.

Professor Osborn was quite active in scientific Societies during his lifetime. He was president of the Iowa Academy of Science in 1887 and of the Ohio

Academy of Science in 1904; he was Treasurer 1898-04. He was President of the Association of Economic Entomologists in 1898, of the Entomological Society of America in 1911 and of the American Microscopic Society 1907-09. He served as Recording Secretary of Sigma Xi in 1907-08 and as Vice President of Section F. of the A.A.A.S. in 1917. During his life time he received many honors, among which were three honorary doctorate degrees; D. Sc. by Iowa State College in 1916, L.L.D. by University of Pittsburgh in 1930, and L.L.D. by the Ohio State University in 1936.

Professor Osborn published extensively during his life time. In his earlier days he published a text book of Economic Zoology and he later published upon Entomological History under the title "Fragments of Entomological History," Part 1, 1937 and Part 11, 1946.

Upon the appointment of Herbert Osborn to a Research Professorship in 1916, Professor Raymond C. Osburn was selected as the new Chairman of the Department. He was a former student of Professors Kellicott and Osborn, having received his B.A. (1898) and M.A. (1900) from the Ohio State University and a Ph.D. degree (1906) from Columbia University. He had for several years been teaching at Fargo College, Fargo, North Dakota, at Barnard College in New York and at the Connecticut College for Women. Although he had worked with Syrphid flies as a hobby, his main biological interests were in fishes and bryozoa. He worked with the U.S. Bureau of Fisheries and was associate director of the New York Aquarium from 1910 to 1915. Two of his major publications were the "Fishes of Ohio" and three large volumes, 841 pages, fully illustrated, on the "Bryozoa of the Pacific".

From 1916 on, the departmental emphasis was placed upon an attempt to

revive and stimulate the work in zoology, which emphasis continued until the appointment of Dr. George Wharton as Chairman in 1961 and the ultimate organization of an Academic Faculty of Entomology in 1967.

In 1916 a Graduate School Publication Series known as "University Studies", a collection of monographs prepared by University Scholars and Faculty, was initiated. The number 5 bulletin of the Series was a contribution from the Department of Zoology and Entomology prepared by Dwight M. DeLong and published under the title "A Synopsis of the Genus *Chlorotettix*" (Homoptera-Cicadellidae).

Extension entomology was initiated in 1918 with the appointment of Professor Thaddeus H. Parks who not only became the first extension entomologist in Ohio but also the first extension entomologist in the United States. He served in this capacity for 38 years, retiring in 1958. In recognition of his services the honorary degree of Doctor of Science was conferred upon him by the Ohio State University in 1959.

Dr. Osburn was active in several scientific societies, and was president of the Limnological Society in 1951. He was the author of several scientific papers. The honorary degree of D. Sc. was conferred upon him by the Ohio State University in 1949. For his outstanding research work upon the Bryozoa, the Daniel Geraud Elliot Gold Medal was awarded to him by the National Academy of Science. He was the director of the Franz Theodore Stone Laboratory from 1919 to 1936.

The growing enrollment in the University and the increasing number of staff in the department necessitated increased space for laboratories, classrooms and offices. Consequently in 1929-30 the roof of the Botany and Zoology Building was elevated and the former attic was converted into a complete third floor. At the same time a full wing was added to the south portion of the building

and a partial wing consisting of a sub-basement, basement and first floor was added to the north end. This wing was not completed until 1949 when a second and third floor were added.

By 1926 the teaching staff of the department had increased to five professors, (one research), one associate professor, two assistant professors, four instructors, four assistants, seven graduate assistants and extension personnel.

President George W. Rightmire had succeeded President Thompson in 1926. He was anxious for the University to study teaching methods and appointed a number of Junior Deans in several of the Colleges to develop this program in several departments. The beginning course in Zoology was selected for this program because of the large number of students required to take the course or who elected to include it in their programs. In view of the small class units, not to exceed 35 students, more teaching staff was required to conduct the increased number of classes and personal student conferences, and all available space was necessary for the beginning course in Zoology, with advanced courses and graduate work relegated to what remained. Furthermore, the depression of the early 1930's had caused three faculty salary cuts and money used for additional personnel in this course work prevented expansion or even caused reductions in other areas.

The beginning course in Zoology continued with little change until Dr. Wharton became chairman in 1961 when it was replaced by a course in beginning biology.

In 1942 Dr. Osburn reached the compulsory retirement age after twenty-five years as the chairman.



In the meantime Dean Vivian of the College of Agriculture had retired and Dean John Cunningham had replaced him. Dean Cunningham selected Dr. Lawrence H. Snyder, a geneticist, who had been a member of the department for 12 years, as the fifth chairman of Zoology and Entomology. Dr. Snyder received a B.S. degree in 1922 at Rutgers University, an M.S. in 1924 and a D. Sc. in 1926, both from Harvard. He had then served as Instructor, Assistant Professor and Associate Professor at North Carolina State College before going to the Ohio State University as an Associate Professor in 1930. After Professor Barrows joined the department in 1909, he had offered a popular course in heredity. When Dr. Snyder joined the department the course was modified, greatly popularized by the use of living material and changed to genetics. Dr. Snyder was a popular lecturer and with an attractive personality. He attracted many students and rapidly increased the enrollment in both undergraduate and graduate courses in genetics. In view of his work in human and medical genetics he became one of the well-known geneticists of his day. He published several books including those on "Medical Genetics" and "Principles of Heredity". He published extensively in the scientific journals of his field. He was active in several scientific societies and held the following offices: Vice President of the American Naturalist Society, 1941; Vice President American Society of Zoologists, 1943; President Genetics Society of America, 1948; President American Society of Human Genetics, 1950; President of the American Association for the Advancement of Science, 1958. He was the recipient of three honorary degrees; the D. Sc. Degree from Rutgers University in 1941, the D. Sc. Degree from Ohio State University in 1940, and the L.H.D. from North Carolina State College in 1962. After five years as chairman he resigned in 1947 to accept the position of Dean of the Graduate

School at the University of Oklahoma. He resigned that position to accept the position of President of the University of Hawaii which he retained only five years, retiring from the presidency in 1963.

Dean Cunningham retired in 1947 and the Board of Trustees decided to combine the research and teaching staffs of the Ohio Agricultural Experiment Station and the corresponding departments of the College of Agriculture at the University. Dean Leo L. Rummell was appointed to the position of Dean of the College and Director of the Experiment Station. He selected Dr. David F. Miller as the sixth chairman of the Department of Zoology and Entomology. Dr. Miller was a graduate of Wittenberg College with a B.A. degree in 1917. He entered the department as instructor in 1923 and received his M.A. degree at the Ohio State University in 1924, and a Ph.D. in 1928. He received an honorary D. Sc. from Wittenberg College in 1952. During his years as chairman, emphasis was placed upon the course in elementary Zoology, teaching students in small sections, not to exceed 35, and frequent personal conferences with each student.

Dr. Miller is the coauthor of a text book entitled "Methods and materials for teaching biological sciences" a source book for teachers in training of Biology. In 1936 he served as chairman of the Zoology section of the Ohio Academy of Science.

After 14 years as chairman, Dr. Miller retired in 1961 and Dr. George W. Wharton was appointed as the seventh chairman of the department. He was granted a B.S. degree in 1935 and a Ph.D. in 1939, both from Duke University. He taught at Duke University from 1939 to 1953. He was Professor and Chairman of the Department of Zoology at the University of Maryland

from 1953 to 1961 when he resigned to accept the chairmanship of the Department of Zoology and Entomology at the Ohio State University in 1961. Dr. Wharton, a specialist in Acarology, and the Director of the Institute of Acarology transferred the Institute work with him from Maryland to the Ohio State University. The Institute and opportunities for research in this field has attracted graduate students to the University each year and has increased the graduate enrollment. Dr. Wharton has been an active member of several scientific societies and has served on several important national boards and committees. He was a Lieutenant in the U.S. N. R. in 1944-46 and a Guggenheim Fellow in 1950-51. He has served on the National Advisory Council of the National Institute of Allergy and Infectious Diseases since 1964; he is a past Secretary of the Society of Systematic Zoologists and served as President in 1956. He is a member of the Editorial Board and the Council of the American Society of Parasitologists. He is the author of several books and journal publications among which are "An Introduction to Acarology" 1952; "A Manual of the Chiggers" 1952 and "Mites Parasitic on Vertebrates" 1958.

A large addition was added to the west end of both the south wing (Botany) and North wing (Zoology & Entomology) of the Botany and Zoology Building 1962. This addition still left the department operating with cramped quarters and insufficient space due to a course in beginning Zoology with an enrollment of more than 6,000 students and a total department enrollment of 8,319.

Upon the retirement of President Bevis in 1956, Novice G. Fawcett was selected as the eighth University President. His scientific associates had advised him of the new concept of Biology and the molecular interpretation; as a result he appointed a committee to study the possibility of the formation

of a College of Biological Sciences. On July 1, 1966, upon the recommendation of the President, the Board of Trustees approved the formation of a College of Biological Sciences to include five departments or divisions, Biochemistry, Biophysics, Botany, Microbiology and Zoology and Entomology. Dr. Ralph H. Johnson, a biochemist, was appointed Dean of the College of Biological Sciences. He resigned in April 1968 to accept a similar position at his Alma Mater, The University of Utah. Dr. John Briggs of the Department of Zoology and Entomology was appointed as Assistant Dean in July 1967 and later as Acting Dean after the resignation of Dean Johnson. Dr. Richard H. Bohning, Associate Dean of the College of Agriculture was appointed Dean of the College of Biological Sciences in January 1969. The several departments studied the possibility of the formation of Academic Faculties in order to merge similar departmental interests and abolish departmental lines. As a result the following action was taken "Be it resolved that on January 1, 1968, the College Faculty, acting in accordance with University Rule 23.03, abolish the four departments and one division of the College of Biological Sciences, and that the new basic units (Academic Faculties) for instruction research and extension in a defined field of learning be established at that time, in such numbers as is necessary to meet the needs of, and to serve at the discretion of the College Faculty."

The departments of Botany, Microbiology, and Zoology and entomology then merged and formed five distinct Academic Faculties, the Faculties of Entomology, Genetics, Microbial and Cellular Biology, "Organismic and Developmental Biology", and Population and Environmental Biology."

Dr. Lyle Goleman was selected as the Chairman of the Faculty of Entomology. Dr. J. Bruce Griffing was chosen as Chairman of Genetics, Mathew C.

Dodd, Chairman of Microbiology and Cellular Biology, Dr. Carroll A. Swanson, Chairman of Organismic and Developmental Biology and Dr. Tony J. Peterle as Chairman of Population and Environmental Biology.

As this historic account is being completed in 1969, Dean Bohning has recommended and the College of Biological Sciences has adopted the return to "Botany" and "Zoology" as designations for Academic faculties replacing "Organismic and Developmental Biology" and "Population and Environmental Biology".

Thus a historic sketch of the Department of Zoology and Entomology terminated before the end of the first century. The several groups of the former department will progress along their respective scientific fields and certain of these, at least, will carry an identity which they did not bear before. The opportunity for growth or development in any of the fields is greater when the teaching and research are administered by a chairman whose training and interests are primarily in that field.

Teaching and Research Staff in Zoology and Entomology

1874 to 1968

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
Albert H. Tuttle	1874	Professor
David S. Kellicott	1888	Professor
James S. Hine	1894	Assoc. Professor
F. L. Landacre	1895	Assoc. Professor
Herbert Osborn	1898	Professor
Mel T. Cook	1901	Teaching Fellow
Max Morse	1904	Teaching Fellow
James G. Sanders	1904	Teaching Fellow
W. B. Herms	1905	Teaching Fellow
C. F. Jackson	1905	Teaching Fellow
H. C. Severin	1907	Teaching Fellow
H. H. Severin	1907	Teaching Fellow
C. L. Metcalf	1908	Teaching Fellow
J. G. Wittenmyer	1908	Teaching Fellow
William M. Barrows	1909	Asst. Professor
	1923	Professor
S. W. Bilsing	1910	Teaching Fellow
E. D. Faville	1910	Teaching Fellow
Margerite Iches	1910	Teaching Fellow
Wencel J. Kostir	1910	Instructor
	1922	Asst. Professor
	1942	Assoc. Professor
	1945	Professor
Clell L. Metcalf	1911	Asst. Professor
	1920	Professor
Dwight M. DeLong	1914	Grad. Asst.
	1916	Assistant
	1917	Instructor
	1921	Asst. Professor
	1923	Professor
Carl J. Drake	1914	Grad. Asst.
	1915	Assistant
	1916	Instructor
Vernon L. Haber	1914	Grad. Asst.
	1915	Assistant
Frederick Krecker	1914	Asst. Professor
Frank H. Lathrop	1914	Grad. Asst.
Mary Oliver	1914	Grad. Asst.
Don B. Whelan	1914	Grad. Asst.
Thomas L. Guyton	1915	Grad. Asst.
	1916	Assistant
Neale Howard	1915	Grad. Asst.
Jessie M. Robinson	1915	Grad. Asst.

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
Louis A. Stearns	1915	Grad. Asst.
	1916	Assistant
John Eckert	1916	Grad. Asst.
Max Kisliuk	1916	Grad. Asst.
Raymond C. Osburn	1916	Professor
Otis Wade	1916	Grad. Asst.
Charles A. Weigel	1916	Grad. Asst.
	1917	Assistant
Dorothy M. Evans	1917	Grad. Asst.
John R. Eyer	1917	Grad. Asst.
Robert K. Fletcher	1917	Grad. Asst.
	1918	Assistant
John C. Hamlin	1917	Grad. Asst.
Mable Stehle	1917	Grad. Asst.
Walter V. Balduf	1918	Grad. Asst.
Wilma B. Balduf	1918	Assistant
Walter C. Kraatz	1918	Grad. Asst.
	1919	Assistant
	1921	Instructor
Edna Mosher	1918	Instructor
Thaddeus H. Parks	1918	Extension
Claiborne H. Young	1918	Grad. Asst.
A. Talmage Harshman	1919	Assistant
Edwin A. Hartley	1919	Assistant
Clarence H. Kennedy	1919	Instructor
	1922	Asst. Professor
	1930	Assoc. Professor
	1933	Professor
Edward L. Wickliff	1919	Instructor
Mary Auten	1920	Grad. Asst.
Clifford O. Eddy	1920	Grad. Asst.
Margariet Frey	1920	Grad. Asst.
Fay E. Guyton	1920	Grad. Asst.
J. W. Bulger	1921	Grad. Asst.
	1922	Fellow
Clifford R. Cutright	1921	Grad. Asst.
Herbert Spencer	1921	Grad. Asst.
Ruth Veth	1921	Grad. Asst.
William D. Webster	1921	Instructor
Ralph Bangham	1922	Grad. Asst.
	1923	Fellow
Linden F. Edwards	1922	Grad. Asst.
	1923	Instructor
Albert Hartzell	1922	Grad. Asst.
	1923	Fellow
Frank M. Hull	1922	Grad. Asst.
Julia Jasper	1922	Grad. Asst.

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
Frank Lathrop	1922	Grad. Asst.
	1923	Fellow
R. N. McCormick	1922	Grad. Asst.
	1925	Instructor
David F. Miller	1922	Instructor
	1929	Asst. Professor
	1933	Assoc. Professor
	1943	Professor
Claude Neiswander	1922	Grad. Asst.
	1923	Scholar
Edna Patterson	1922	Grad. Asst.
	1923	Assistant
Josef N. Knull	1923	Research Asst.
	1934	Asst. Professor
	1945	Assoc. Professor
	1958	Professor
Hugh Setterfield	1923	Assistant
	1925	Instructor
Archie Tissot	1923	Assistant
Mary Walters	1923	Assistant
Marion Caskey	1924	Fellow
F. L. Gambrill	1924	Grad. Asst.
	1929	Fellow
A. L. Hamner	1924	Grad. Asst.
G. F. Knowlton	1924	Grad. Asst.
Harold Lewis	1924	Scholar
A. E. Noble	1924	Assistant
R. H. Painter	1924	Grad. Asst.
J. O. Pepper	1924	Grad. Asst.
S. F. Potts	1924	Grad. Asst.
J. A. Reeves	1924	Assistant
Mary Walker	1924	Grad. Asst.
	1925	Assistant
Harry W. Allen	1925	Scholar
Marion Boesel	1925	Grad. Asst.
	1926	Assistant
Julia N. Britten	1925	Grad. Asst.
Mary Conrad	1925	Grad. Asst.
	1927	Assistant
Lelia Evers	1925	Assistant
H. H. Miley	1925	Assistant
Joe N. Miller	1925	Grad. Asst.
	1926	Assistant
	1927	Instructor
Harold Peters	1925	Grad. Asst.
Morris Schlosberg	1925	Instructor
Mary Talbot	1925	Grad. Asst.
Grace Townshend	1925	Grad. Asst.



<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>	
Donald J. Borrer	1926	Instructor	
	1946	Asst. Professor	
	1948	Assoc. Professor	
	1959	Professor	
Charles Dambach	1926	Grad. Asst.	
	1942	Instructor	
	1945	Assoc. Professor	
	1955	Professor	
W. E. Dunham	1926	Instructor	
	1934	Asst. Professor	
	1946	Assoc. Professor	
James K. Halloway	1926	Grad. Asst.	
Merlin Jones	1926	Instructor (Extension)	
William E. Niehaus	1926	Grad. Asst.	
John Price	1926	Grad. Asst.	
	1927	Instructor	
	1930	Asst. Professor	
	1933	Assoc. Professor	
	1943	Professor	
	Wilbur Tidd	1926	Grad. Asst.
		1929	Assistant
1930		Instructor	
1942		Asst. Professor	
1947		Assoc. Professor	
1956		Professor	
1926		Grad. Asst.	
Harry G. Walker	1927	Instructor	
Virgil Argo	1927	Grad. Asst.	
Arthur B. Clark	1927	Assistant	
Clyde A. Dennis	1927	Assistant	
Frank R. Elliott	1927	Grad. Asst.	
Fred W. Fletcher	1927	Assistant	
	1928	Instructor	
	1930	Grad. Asst.	
	1927	Grad. Asst.	
John C. Hammond	1927	Grad. Asst.	
Lydia A. John	1927	Grad. Asst.	
	1928	Assistant	
	1927	Grad. Asst.	
Birely A. Landis	1927	Assistant	
George S. Langford	1927	Assistant	
James B. Mack	1927	Assistant	
Josephine A. Manry	1927	Grad. Asst.	
Walter C. McNelly	1927	Grad. Asst.	
	1928	Scholar	
	1927	Grad. Asst.	
Ralph L. Miller	1928	Fellow	
	1927	Grad. Asst.	
Cloden B. Waugh	1927	Instructor	
Donald Wilber	1928	Grad. Asst.	
Amos E. Badertscher	1928	Grad. Asst.	
Elmer W. Beck	1928	Grad. Asst.	
Edward M. Becton	1928	Grad. Asst.	
John T. Bigham	1928	Grad. Asst.	

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
Walter H. Dove	1928	Assistant
John F. Harper	1928	Grad. Asst.
	1930	Instructor
Robert A. Hefner	1928	Scholar
Joe W. Howland	1928	Grad. Asst.
	1929	Assistant
Paul H. Johnson	1928	Grad. Asst.
Horatio G. Mason	1928	Grad. Asst.
Barbara Metz	1928	Grad. Asst.
	1929	Assistant
John A. Miller	1928	Assistant
	1929	Instructor
	1933	Asst. Professor
	1942	Assoc. Professor
	1947	Professor
Alvah Peterson	1928	Professor
Frank M. Semans	1928	Assistant
Floyd F. Smith	1928	Fellow
William M. Squires	1928	Assistant
Edward N. Warner	1928	Grad. Asst.
	1929	Instructor
Esther R. Zurcher	1928	Grad. Asst.
	1929	Assistant
Cyril E. Abbott	1929	Assistant
Mildred Baker	1929	Grad. Asst.
Emory D. Burgess	1929	Grad. Asst.
Arthur C. Cole	1929	Grad. Asst.
James G. Conklin	1929	Grad. Asst.
Craig W. Eagleson	1929	Grad. Asst.
	1930	Assistant
Robert M. Geist	1929	Scholar
Kenneth A. Haines	1929	Grad. Asst.
John F. Harper	1929	Assistant
Clayton M. Huff	1929	Grad. Asst.
John C. Lotze	1929	Grad. Asst.
	1930	Assistant
Charles C. B. Mayer	1929	Assistant
William E. McMillan	1929	Grad. Asst.
William C. McQuiston	1929	Asst. Professor (1 yr.)
Albert H. Meier	1929	Grad. Asst.
	1931	Instructor
Blanche Montgomery	1929	Assistant
	1930	Instructor
Charles C. Plummer	1929	Grad. Asst.
Ralph T. White	1929	Grad. Asst.
Merrill M. Darley	1930	Fellow
Ernest V. Fowler	1930	Tech. Asst.
Clarice M. McAdow	1930	Grad. Asst.
Bailey Pepper	1930	Grad. Asst.
Mary Rogick	1930	Grad. Asst.

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
	1931	Assistant
Paul E. Schaefer	1930	Grad. Asst.
	1931	Instructor
Lawrence H. Snyder	1930	Assoc. Prof.
Henry A. Bess	1931	Assistant
Myles F. Bowen	1931	Grad. Asst.
Edward P. Breakey	1931	Fellow (O.B.S.)
Frank A. Cowan	1931	Grad. Asst.
Ralph H. Davidson	1931	Research Asst.
	1935	Instructor
	1936	Asst. Professor
	1946	Assoc. Professor
	1958	Professor
Norma C. Furtos	1931	Grad. Asst.
Gordon W. Haug	1931	Assistant
William L. Hughes	1931	Grad. Asst.
David Rife	1931	Grad. Asst.
	1932	Assistant
	1934	Instructor
	1938	Asst. Professor
	1942	Assoc. Professor
	1945	Professor
Paul J. Seyler	1931	Grad. Asst.
	1935	Assistant
William J. Tinkle	1931	Grad. Asst.
Harold A. Waters	1931	Grad. Asst.
Forest B. Whittington	1931	Assistant
Myron V. Anthony	1932	Grad. Asst.
Stanley F. Carpenter	1932	Scholar
Hubert G. Grey	1932	Assistant
Wilbur M. Grimm	1932	Grad. Asst.
James Haub	1932	Grad. Asst.
	1935	Instructor
	1944	Asst. Professor
	1945	Assoc. Professor
	1958	Professor
Dorothy Johnson	1932, 35	Fellow
Carl E. Venard	1932	Grad. Asst.
	1936	Instructor
	1942	Asst. Professor
	1946	Assoc. Professor
	1959	Professor
Claude Wakeland	1932	Fellow
Harriett Hyman	1933	Grad. Asst.
	1939	Instructor
Paul Rice	1933	Scholar
Herbert J. Crandall	1934	Grad. Asst.
J. Arthur Herrick	1934	Grad. Asst.

Name	Date	Appointment Title
Albert C. Miller	1934	Grad. Asst.
	1935	Fellow
Ralph G. Schott	1934	Instructor
Kalman D. Archibald	1935	Grad. Asst.
George W. Brainard	1935	Assistant
William P. Bunner	1935	Grad. Asst.
John S. Caldwell	1935, 36	Fellow (O.B.S.)
Charles W. Hood	1935	Grad. Asst.
Anne Marshall	1935	Grad. Asst.
	1937	Instructor
Wilma B. Setterfield	1935	Grad. Asst.
	1937	Assistant
Herman Von Dach	1935	Grad. Asst.
	1937	Assistant
Karl W. Wilber	1935	Grad. Asst.
	1941	Instructor
Karl H. Busch	1936	Grad. Asst.
Frank L. Campbell	1936	Assoc. Professor
	1940	Professor
Charles W. Cotterman	1936	Grad. Asst.
	1937	Instructor
Donald W. Dunham	1936	Grad. Asst.
	1937	Assistant
R. E. Groves	1936	Grad. Asst.
Lawrence Hicks	1936	Asst. Professor
Basil G. Markos	1936	Grad. Asst.
Otis L. Meehan	1936	Fellow
Hugh E. Morrison	1936	Fellow
Clyde F. Smith	1936	Grad. Asst.
Elton N. Woodbury	1936	Scholar
Norris D. Blackburn	1937	Grad. Asst.
Hamblin H. Crowell	1937	Grad. Asst.
Harold R. Dodge	1937	Grad. Asst.
Bruce D. Gleissner	1937	Grad. Asst.
Herbert U. Matsumori	1937	Grad. Asst.
	1941	Assistant
A. L. Pierstorff	1937	Instructor, Asst. Professor
Beckford Coon	1938	Grad. Asst.
H. A. Crandall	1938	Fellow
B. C. Dickinson	1938, 42	Fellow
Robert H. Edgerly	1938	Grad. Asst.
W. C. Ferguson	1938	Fellow
Thomas H. Langlois	1938	Professor
James T. Walker	1938	Grad. Asst.
E. N. Woodbury	1938	Fellow
Mike Wright	1938	Grad. Asst.
Hubert Bezdek	1939	Grad. Asst.

Name	Date	Appointment Title
Gordon E. Bucher	1939	Grad. Asst.
Geo. R. Ferguson	1939	Grad. Asst.
John Flunk	1939, 40	Fellow (O.B.S.)
Richard W. Hutton	1939	Grad. Asst.
H. W. Kleppfer	1939	Grad. Asst.
Daniel L. Laedy	1939	Instructor
A. R. Runner	1939	Grad. Asst.
Edwin R. Willis	1939	Grad. Asst.
Roger W. Allen	1940	Grad. Asst.
Blake B. Haran	1940	Grad. Asst.
Norman A. Preble	1940	Grad. Asst.
David T. Rees	1940	Grad. Asst.
A. G. Runner	1940	Grad. Asst.
Ely W. Swisher	1940	Grad. Asst.
William C. Forbes	1941	Grad. Asst.
Irwin H. Gilbert	1941	Grad. Asst.
Earl Green	1941	Instructor
	1946	Assoc. Professor
Carl B. Huffaker	1941	Grad. Asst.
Eleanor Meckler	1941	Grad. Asst.
M. R. Newbark	1941	Grad. Asst.
Elton F. Paddock	1941	Asst. Professor
	1954	Assoc. Professor
	1968	Professor
Roy W. Rings	1941	Grad. Asst.
	1947	Asst. Professor
	1954	Assoc. Professor
	1961	Professor
Howard W. Smith	1941	Grad. Asst.
Sue D. Sparks	1941	Grad. Asst.
Fenton T. West	1941	Grad. Asst.
H. P. Brown	1942	Grad. Asst.
	1943	Assistant
J. A. Chapman	1942	Grad. Asst.
Robert T. Cossaboom	1942	Assistant
Roberta Cossaboom	1942	Grad. Asst.
	1943	Assistant
Berton Dickinson	1942	Grad. Asst.
J. R. Gerberich	1942	Grad. Asst.
	1943	Assistant
Margaret Green	1942	Assistant
Margaret Hoare	1942	Grad. Asst.
John M. Rutzel	1942	Instructor
R. W. Strandtmann	1942	Fellow
Doris Ball	1943	Grad. Asst.
Ruth Hershberger	1943	Grad. Asst.
Dorothy Knull	1944	Fellow (O.B.S.)

Name	Date	Appointment Title
Dorothy Knull	1947	
Patricia Beacon	1945	Grad. Asst.
John B. Calhoun	1945	Instructor
Shirley Harvey	1945	Grad. Asst.
Margaret Jessup	1945	Grad. Asst.
Kathleen Johnson	1945	Grad. Asst.
Willard Myser	1945	Assistant
	1948	Instructor
	1954	Asst. Professor
	1960	Assoc. Professor
	1963	Professor
Loren Putnam	1945	Instructor
	1948	Asst. Professor
	1953	Assoc. Professor
Charles Reichert	1945	Grad. Asst.
	1947	Assistant
Doris Snedeker	1945	Grad. Asst.
Everett G. Snyder	1945	Assistant
Ann Stansu	1945	Grad. Asst.
Mark C. Wilson	1945	Grad. Asst.
E. F. Atwood	1946	Grad. Asst.
N. Wilson Britt	1946	Research Asst.
	1955	Asst. Professor
	1959	Assoc. Professor
	1968	Professor
Frederick Cunliffe	1946	Grad. Asst.
Vincent G. Dethier	1946	Professor
Edgar Dresner	1946	Grad. Asst.
J. G. Edwards	1946	Grad. Asst.
William A. Fish	1946	Assistant
Maurice L. Giltz	1946	Instructor
	1954	Asst. Professor
	1959	Assoc. Professor
Ann Hardie	1946	Grad. Asst.
Shirley Harvey	1946	Grad. Asst.
R. N. Hofmaster	1946	Grad. Asst.
Margaret Jessup	1946	Grad. Asst.
Kathleen Johnson	1946	Grad. Asst.
John J. Maxwell	1946	Grad. Asst.
R. Emerson Niswander	1946	Grad. Asst.
Gail R. Norris	1946, 47	Grad. Asst.
John R. Olive	1946	Grad. Asst.
	1947	Assistant
Donald J. Ott	1946	Grad. Asst.
William B. Owsley	1946	Grad. Asst.
George A. Petrides	1946	Instructor
James R. Rodriguez	1946	Grad. Asst.
James S. Summers	1946	Grad. Asst.

Name	Date	Appointment Title
Marian Thomas	1946	Assistant
Clyde R. Weaver	1946	Grad. Asst.
John D. Wilcox	1946	Grad. Asst.
	1947	Fellow (O.B.S.)
Mark C. Wilson	1946	Grad. Asst.
E. H. Wollerman	1946	Grad. Asst.
Tyler Woolley	1946	Grad. Asst.
	1947	Assistant
J. W. Bronson	1947	Instructor
J. L. Isenberg	1947	Instructor
Fred A. Lawson	1947	Grad. Asst.
C. T. Pennock	1947	Grad. Asst.
Carl Reese	1947	Asst. Instructor
	1948	Instructor
	1952	Asst. Professor
	1958	Assoc. Professor
	1968	Professor
Charles A. Reese	1947	Asst. Professor
Dorothy Biesinger	1948	Assistant
Joseph Camin	1948	Grad. Asst.
E. E. England	1948	Grad. Asst.
Allen S. Fox	1948	Asst. Professor
E. E. Good	1948	Instructor
	1953	Asst. Professor
	1959	Assoc. Professor
Margaret Groce	1948	Grad. Asst.
Blake B. Hanan	1948	Assistant
D. R. Hanawalt	1948	Grad. Asst.
Etta D. Hart	1948	Grad. Asst.
W. L. Henning	1948	Grad. Asst.
Frances W. Henry	1948	Grad. Asst.
Howard Hintz	1948	Grad. Asst.
Marie Lay	1948	Grad. Asst.
Charles Lee	1948	Grad. Asst.
John F. Long	1948	Grad. Asst.
Carolyn Madison	1948	Grad. Asst.
Samuel I. McIlween	1948	Grad. Asst.
Frank Mead	1948	Grad. Asst.
George Pappas	1948	Grad. Asst.
Charles Pennock	1948	Grad. Asst.
George E. Ross	1948	Grad. Asst.
Katherine Schafer	1948	Grad. Asst.
James N. Spuhler	1948	Asst. Professor
Irwin Sturgis	1948	Grad. Asst.
Peter Chacharonis	1949	Grad. Asst.
Arthur F. Duve	1949	Grad. Asst.
Lafe R. Edmunds	1949	Grad. Asst.

Name	Date	Appointment Title
Frank W. Fisk	1949	Asst. Professor
	1955	Assoc. Professor
	1967	Professor
Leola Ellen Ford	1949	Grad. Asst.
Daniel Hunt	1949	Grad. Asst.
Russell Long	1949	Grad. Asst.
Ellin B. McCabe	1949	Grad. Asst.
Mildred Miskimen	1949	Grad. Asst.
Vernon H. Oswald	1949	Grad. Asst.
Lawrence H. Ralson	1949	Grad. Asst.
Edward Ritter	1949	Grad. Asst.
Jeff Swinebrood	1949	Grad. Asst.
Howard Weems	1949	Fellow (O.B.S.)
R. D. Alexander	1950	Grad. Asst.
N. E. Armstrong	1950	Grad. Asst.
Jay A. Buxton	1950	Grad. Asst.
Joe Chamberlin	1950, 51	Sponsored Research
Eugene Dustman	1950	Asst. Professor
Joe Enke	1950, 51	Sponsored Research
Beryl C. Franklin	1950, 51	Grad. Asst.
C. E. Gerber	1950, 51	Sponsored Research
Martha Gray	1950	Grad. Asst.
R. A. Hennacy	1950	Grad. Asst.
Willard A. Henning	1950	Grad. Asst.
John Herron	1950, 51	Sponsored Research
Dan Kerlin	1950	Grad. Asst.
John Knierin	1950	Grad. Asst.
Hugh C. Land	1950	Grad. Asst.
Arden Lea	1950, 51	Sponsored Research
R. D. Miller	1950	Grad. Asst.
Vernon Oswald	1950	Grad. Asst.
William Pinschmidt	1950	Grad. Asst.
Edward Ritter	1950	Grad. Asst.
Ervin Ruffing	1950	Grad. Asst.
Gordon Smith	1950, 51	Sponsored Research
Maynard Stamper	1950, 51	Grad. Asst. & Assistant
William D. Sudia	1950, 51	Sponsored Research
N. M. Templin	1950, 51	Sponsored Research
C. A. Triplehorn	1950	Grad. Asst.
	1957	Asst. Professor
	1962	Assoc. Professor
	1967	Professor
R. F. Tuppel	1950, 51	Sponsored Research
Richard Wessel	1950	Grad. Asst.
T. B. White	1950, 51	Sponsored Research
Natalee Barish	1951	Grad. Asst.
William Coleman	1951	Grad. Asst.



Name	Date	Appointment Title
John L. Crites	1951	Grad. Asst.
	1953	Instructor
	1957	Asst. Professor
	1962	Assoc. Professor
	1967	Professor
Vernette Ericson	1951	Grad. Asst.
George Ferdinger	1951	Grad. Asst.
Beryl C. Franklin	1951	Grad. Asst.
Elsie D. Helsel	1951	Instructor
Phillip J. Holmes	1951	Grad. Asst.
Merton D. Honeyman	1951	Grad. Asst.
H. E. Hrubant	1951	Grad. Asst.
Don L. Kirlin	1951	Grad. Asst.
A. T. Kissen	1951	Grad. Asst.
Jeane C. Lockwood	1951	Grad. Asst.
Robert P. McCourt	1951	Grad. Asst.
William A. Piersol	1951	Grad. Asst.
J. L. Schoar	1951	Grad. Asst.
Robert A. Champlain	1952	Grad. Asst.
W. W. Gallati	1952	Grad. Asst.
Carter R. Gilbert	1952	Grad. Asst.
Charles L. Griswold	1952	Assistant
Edwin Hibbs	1952	Asst. Professor
J. P. Mackey	1952	Grad. Asst.
D. G. Meyer	1952	Grad. Asst.
Louise Overton	1952	Grad. Asst.
Joseph B. Polivka	1952	Asst. Professor
C. R. Weaver	1952	Asst. Professor
Richard Alexander	1953	Grad. Asst.
A. P. Arthur	1953	Grad. Asst.
E. S. Burcham	1953	Grad. Asst.
T. F. Daly	1953	Grad. Asst.
R. L. Goulding	1953	Grad. Asst.
L. B. Graves	1953	Grad. Asst.
Katherine Hahn	1953	Grad. Asst.
Edwin P. Les	1953	Grad. Asst.
John Moser	1953	Grad. Asst.
Wayne B. Parrish	1953	Grad. Asst.
	1963	Asst. Professor
Magdalene E. Pferrer	1953	Grad. Asst.
James Tullis	1953	Grad. Asst.
C. J. Zenisek	1953	Grad. Asst.
Eldon Sleeper	1953	Fellow (O.B.S.)
Virgil Auchard	1954	Grad. Asst.
Robert Davis	1954	Asst. Professor
Ruth Dial	1954	Grad. Asst.
D. D. Francois	1954	Grad. Asst.

Name	Date	Appointment Title
Lyle Goleman	1954	Asst. Professor
	1959	Assoc. Professor
	1965	Professor
Richard Kaufer	1954	Grad. Asst.
E. N. Lambramont	1954	Grad. Asst.
Henry L. Plaine	1954	Asst. Professor
	1959	Assoc. Professor
C. R. Rhodes	1954	Grad. Asst.
Vernon Semones	1954	Grad. Asst.
C. R. Taylor	1954	Grad. Asst.
T. J. Walker	1954	Grad. Asst.
Gale E. Williamson	1954	Grad. Asst.
Derrell L. Chambers	1955	Grad. Asst.
D. E. Donley	1955	Grad. Asst.
R. W. Donohue	1955	Grad. Asst.
K. A. Drossman	1955	Grad. Asst.
T. B. Crucci	1955	Grad. Asst.
George Hull, Jr.	1955	Grad. Asst.
D. J. Leedy	1955	Grad. Asst.
J. H. Lowe	1955	Grad. Asst.
Loren W. Mosely	1955	Grad. Asst.
W. K. Patton	1955	Grad. Asst.
Geo. J. Phinney	1955	Grad. Asst.
Lawrence H. Rolson	1955	Asst. Professor
H. W. Shaver	1955	Grad. Asst.
Shirley Sims	1955	Grad. Asst.
Albert B. Snyder	1955	Grad. Asst.
D. H. Stansbery	1955	Grad. Asst.
Lois M. Bayless	1956	Grad. Asst.
Arthur C. Borrer	1956	Grad. Asst.
Norman B. Crain	1956	Grad. Asst.
Neva L. Curry	1956	Grad. Asst.
Elisea B. Delfin	1956	Grad. Asst.
Dean Dillery	1956	Grad. Asst.
Paul H. Freytag	1956	Grad. Asst.
	1963	Research Assoc.
	1964	Assoc. Professor
F. W. Kessler	1956	Asst. Professor
William B. McIntosh	1956	Asst. Professor
	1960	Assoc. Professor
John C. Medur	1956	Grad. Asst.
C. C. Platonos	1956	Grad. Asst.
Donald E. Smith	1956	Grad. Asst.
Ruth H. Smith	1956	Grad. Asst.
Imogene P. Snyder	1956	Grad. Asst.
George W. Ware	1956	Asst. Professor
	1962	Assoc. Professor

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
Robert Woodruff	1956	Grad. Asst.
William E. Bachop	1957	Grad. Asst.
Lois I. Bear	1957	Grad. Asst.
A. Carter Broad	1957	Asst. Professor
	1960	Assoc. Professor
P. A. Daughtery	1957	Grad. Asst.
Robert Gilbert	1957	Grad. Asst.
William Gilbert	1957	Grad. Asst.
John R. Gorham	1957	Grad. Asst.
Ronald Pagniano	1957	Grad. Asst.
Chad Murvosh	1957	Grad. Asst.
R. J. Shields	1957	Grad. Asst.
Carlisle A. Tesmer	1957	Grad. Asst.
Carolyn Weber	1957	Grad. Asst.
John B. Hitt	1958	Grad. Asst.
Robert P. Holdsworth	1958	Asst. Professor
	1959	Assoc. Professor
	1964	Professor
Verl L. House	1958	Assoc. Professor
	1967	Professor
George Marziui	1958	Grad. Asst.
William L. Pflieger	1958	Grad. Asst.
Herman Preston	1958	Grad. Asst.
Jerome G. Rosen	1958	Asst. Professor
Thomas Stockdale	1958	Grad. Asst.
	1960	Instructor
	1968	Asst. Professor
Richard White	1958	Grad. Asst.
Roger K. Burnard	1959	Grad. Asst.
	1960	Assistant
	1961	Instructor
J. H. Clark	1959	Grad. Asst.
Patricia Daugherty	1959	Grad. Asst.
W. D. Dawson	1959	Grad. Asst.
Jeanette Ernest	1959	Grad. Asst.
Tom Fite	1959	Grad. Asst.
George Graff	1959	Grad. Asst.
Edwin Hazard	1959	Grad. Asst.
Jerry Hubs	1959	Grad. Asst.
Elizabeth Wydallis	1959	Grad. Asst.
Russell Skavaril	1960	Grad. Asst.
	1964	Asst. Professor
Barry P. Valentine	1960	Asst. Professor
	1966	Assoc. Professor
Dorothy Adalis	1961	Grad. Asst.
Carl Albrecht		

Name	Date	Appointment Title
Billie Blair	1961, 63	Instructor, Asst. Professor
	1965	Assistant Professor
	1966	Assoc. Professor
Adam Cibula	1961	Instructor
Robert Crowl	1961	Instructor
Donald Dean	1961	Grad. Asst.
James Deck	1961	Grad. Asst.
Ronald Engel	1961	Grad. Asst.
Charles Huff	1961	Grad. Asst.
Andrew Kuntzman	1961	Grad. Asst.
William P. Lyon	1961	Grad. Asst.
	1962	Instructor
Elizabeth McBride	1961	Grad. Asst.
Carolyn Merrithew	1961	Grad. Asst.
Peter J. Mikolaj	1961	Grad. Asst.
John S. Munzinger	1961	Grad. Asst.
Tony J. Peterle	1961	Assoc. Professor
	1964	Professor
B. R. Rao	1961	Grad. Asst.
Ulf Soch	1961	Grad. Asst.
Stephanic Swartzel	1961	Grad. Asst.
George Wharton	1961	Professor
Joseph Yuhas	1961	Grad. Asst.
John Briggs	1962	Professor
W. C. Rothenbuhler	1962	Professor
W. A. Stephan	1962	Professor
Edith Ackerman	1963	Grad. Asst.
Barbara Anderson	1963	Grad. Asst.
Wilfred Ball	1963	Grad. Asst.
Alvin Bartholomew	1963	Grad. Asst.
Alan P. Brockway	1963	Asst. Professor
May Bruce	1963	Grad. Asst.
William Davies	1963	Grad. Asst.
D. L. Dindal	1963	Grad. Asst.
W. D. Dolphin	1963	Grad. Asst.
L. A. Ebersole	1963	Grad. Asst.
Elinor Emery	1963	Grad. Asst.
Mary Ewert	1963	Grad. Asst.
H. W. Forsythe	1963	Asst. Professor
Evelyn Franks	1963	Grad. Asst.
E. W. Hamilton	1963	Grad. Asst.
Jeanne Hanks	1963	Grad. Asst.
Nancy Heinen	1963	Grad. Asst.
Linda J. Hill	1963	Grad. Asst.
Donald E. Johnson	1963	Asst. Professor
Willi Knulle	1963	Assoc. Professor
R. A. Kolson	1963	Grad. Asst.
Charlene Lutes	1963	Grad. Asst.

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
G. R. Maxwell	1963	Grad. Asst.
Bruce McLean	1963	Grad. Asst.
R. C. Murray	1963	Grad. Asst.
L. E. Nauman	1963	Grad. Asst.
Sally Niederhuber	1963	Grad. Asst.
Jeanette Palmquist	1963	Grad. Asst.
T. C. Rambo	1963	Grad. Asst.
Eldon L. Reeves	1963	Grad. Asst.
D. I. Richard	1963	Grad. Asst.
R. I. Rose	1963	Grad. Asst.
George F. Shambaugh	1963	Assoc. Professor
Elizabeth Thompson	1963	Grad. Asst.
J. R. Tripp	1963	Grad. Asst.
Jerry Van Meter	1963	Grad. Asst.
Georgia Weetman	1963	Grad. Asst.
Rebecca Wright	1963	Grad. Asst.
Sue Barrett	1964	Grad. Asst.
Barbara Brockway	1964	Asst. Professor
Thomas J. Byers	1964	Asst. Professor
Paul A. Colinvaux	1964	Asst. Professor
	1967	Assoc. Professor
Edwin Franks	1964	Grad. Asst.
Evelyn Franks	1964	Grad. Asst.
W. D. Guthrie	1964	Asst. Professor
Walter R. Harvey	1964	Professor
Eugene Keferel	1964	Grad. Asst.
Richard A. Kolson	1964	Grad. Asst.
Carol McKechnie	1964	Grad. Asst.
Walter Momot	1964	Instructor
	1965	Asst. Professor
	1968	Assoc. Professor
Marianne Moore	1964	Assistant
Sharon Mourer	1964	Assistant
H. D. Niemczyk	1964	Asst. Professor
F. D. Obenchain	1964	Grad. Asst.
Roger Pinnicks	1964	Grad. Asst.
W. J. Pitman	1964	Grad. Asst.
E. I. Richard	1964	Grad. Asst.
R. L. Shew	1964	Grad. Asst.
E. J. Skoch	1964	Grad. Asst.
R. D. Slack	1964	Grad. Asst.
K. R. Smith	1964	Grad. Asst.
G. W. Still	1964	Asst. Professor
Victoria Waters	1964	Grad. Asst.
Edward Webster	1964	Grad. Asst.
Elizabeth West	1964	Grad. Asst.
Jon Williams	1964	Grad. Asst.
Geraldine Yeatts	1964	Grad. Asst.

<u>Name</u>	<u>Date</u>	<u>Appointment Title</u>
Billy B. Barry	1965	Asst. Professor
Theodore Bookhout	1965	Asst. Professor
	1967	Assoc. Professor
Bruce Griffing	1965	Professor
Norman Lin	1965	Asst. Professor
Robert Menefee	1965	Asst. Professor
Gordon R. Stairs	1965	Asst. Professor
Paul Bard	1967	Grad. Asst.
Christopher Bastian	1967	Assistant
Thomas Birch	1967	Grad. Asst.
Ann Cheney	1967	Grad. Asst.
William J. Collins	1967	Asst. Professor
Jack Manischevitz	1967	Assistant
John Negulesco	1967	Assistant
Dennis Radabaugh	1967	Assistant
Bertha Richard	1967	Assistant
Norton Rubenstein	1967	Assistant
William Schultz	1967	Assistant
Richard Shaw	1967	Assistant
Gerhard Spory	1967	Assistant
Fraze Lee St. John	1967	Assistant
Mary Ellen St. John	1967	Assistant
Richard A. Tubb	1967	Asst. Professor
	1968	Assoc. Professor
Sydney Young	1967	Asst. Professor

Increase in Department Teaching and  
Research Staff 1874 to 1968

In 1874 the Department of Zoology and Veterinary Science was composed of one person, the Chairman, Professor Albert H. Tuttle. For the next fourteen years there was no increase in the Department staff except the use of an occasional assistant, usually an undergraduate paid by the hour. In 1888 when Dr. Kellicott became the chairman, the situation remained the same for a short time. The department was changed to Zoology and Entomology in 1891 and soon afterward in 1894, Professor J. S. Hine was added to the staff as an Assistant Professor and Dr. F. L. Landacre joined the department at about the same time. In 1900 and 1901 Mel T. Cook was added to the staff as a fellow. Three years later two fellows, Max Morse and J.G. Sanders were appointed and were replaced by C. F. Jackson and W.B. Hermes in 1905; H.H. Severin and H.P. Severin were fellows in 1907. Two assistants and two fellows were on the teaching staff in 1908. A year later W.M. Barrows joined the staff as an Assistant Professor. In 1910 C. L. Metcalf was a teaching assistant. The following year the teaching staff was composed of the Chairman, one Associate Professor, two Assistant Professors, eight Fellows or Graduate Assistants, one of whom W. J. Kostir remained in the department teaching invertebrate Zoology until his retirement as a Professor Emeritus in 1955.

In 1915 the teaching staff consisted of one Professor, one Associate Professor, three Assistant Professors, one Instructor and five Graduate Assistants. By 1926 it consisted of five Professors, one Associate Professor, two Assistant Professors, four Instructors, four Assistants, seven Graduate Assistants and two Extension specialists. Until this time, a period of 40 years,

only one professor was on the departmental staff. This situation changed rapidly during the next five years, the staff was increased to 15 and three were appointed to professorships. The increase was gradual to 1945 when the staff was composed of 89 members who were engaged in instruction, 13 of whom were professors.

The final year 1967-68, before the department was changed into units of academic faculty, there was a teaching staff of 98, 27 of whom were Professors. During the first hundred years 39 have served with the rank of Professor, 7 of whom have been Department Chairmen, and 27 of whom are on the present staff (1968).



	Professor	Emeritus Professor	Associate Professor	Assistant Professor	Research Professor	Instructor	Assistant	Graduate Assistant	Research Fellow	Industrial Fellow	Scholar & Fellow	Extension	Total
1874	1												1
1880													
1885													
1900	1						2				1		4
1905	1			2							2		5
1910	1		1	2			1				2		7
1915	1		1	3		1		5					11
1920	3		1	2		3		6				1	16
1925	4		1	2	1	3	4	7			2	1	25
1930	4		2	3	1	8	7	10	2	7		3	47
1935	6	1	2	3	1	9	2	10	3		1	2	40
1940	9	1	2	7	1	9	4	13	8		1	2	57
1945	13	3	5	7	1	6	2	9	6		1	2	55
1950	9	3	13	6		5	4	25	19		1	2	87
1955	14		15	11		3	7	26	15			2	93
1960	16	3	17	5		2	5		2			3	53
1964	23	10	15	20		4		22		12		3	109
1967	27	10	19	10		11	27	35	27		17	4	187

### Increase in Department Enrollment

In the early days of the Department very little is known concerning actual registration in certain courses. From a report of 1874 we learn that a one term course in physiology and another in zoology were offered to first term students. In 1877 there were 119 registrations in courses in zoology and physiology. In 1879 the registration in the courses of the Department were Elementary Physiology 52, Elementary Zoology 45, invertebrate Zoology 8 and Comparative Anatomy 13. The total university enrollment in 1880 was 235.

In 1888 when Dr. Kellicott became chairman of the department there were 43 students registered for courses in the department.

In 1914 there was a course enrollment of 818 in the department, 487 in Elementary Zoology and 211 in Economic Entomology.

There is a period of some 20 or more years, for which no records of departmental registrations are available. The records since 1940 have been preserved.

In 1940 the total departmental registration was 4410. By 1945 this had increased to 6890 and had further increased to 7525 by 1950. By 1955 the departmental enrollment had declined to 5430 and began to increase again in 1960 when it reached 6905, then further climbed to 8,319 in 1961, well beyond the 1950 figure. The year 1962 showed further increase to 8,786. In 1963 a peak registration was established when a departmental enrollment of 10,594 was reached. At this time a beginning course in biology sponsored by Botany and Zoology was replacing beginning courses in each of these scientific fields, consequently, the registrations do not show in Zoology as such.

Total Department Registrations

<u>Year</u>	<u>Enrollment</u>	<u>Year</u>	<u>Enrollment</u>
1877	119	1960	6905
1879	151	1961	8319
1914	818	1962	8786
1940	4410	1963	10594
1945	6890	1964	4199
1950	7525	1965	6378
1956	5714	1966	5071
1959	7499	1967	4892

Graduate enrollment is available for certain years. Records show that from 1949 to 1964 the total graduate school enrollment varied from 70 to 108 per year. In 1950 the high peak of 108 was reached and in 1956 this had declined to 70 students. This was probably the result of the "G.I. buldge" causing increased graduate students in the late forties.

The enclosed table shows the total for each year of available records and the number in each field of specialization.

Graduate Student Enrollment - Showing Field of Major

	<u>Entomology</u>	<u>Zoology</u>	<u>Genetics</u>	<u>Conservation</u>	<u>Total</u>
1948	42				42
1949	40	32	13	12	97
1950	42	34	17	15	108
1951	38	38	12	18	106
1952	33	34	15	10	92
1953	40	29	10	11	90
1954	37	28	7	11	83
1955	37	25	7	11	80
1956	33	21	4	12	70
1957	25	33	3	13	74
1958	26	35	2	13	76
1959	26	34	8	14	82
1960	26	28	12	16	82
1961	28	31	11	15	85
1962	28	36	11	13	88
1963	27	43	8	10	88
1964	31	48	9	10	98

The Financial Support of the Department of  
Zoology and Entomology 1874-1965

When the Department was activated by the appointment of Dr. Albert Tuttle as chairman in 1874, the annual budget was \$2700. After 20 years (1904) the budget had increased to \$5400., and to \$8,563.93 by 1910. In the next ten years, (1920) the budget was almost tripled, reaching \$24,003.25. In another ten years (1930) it was slightly more than tripled again. Then it grew rapidly, with increasing enrollments and the faculty growing proportionately, the budget reached \$99,355.18 in 1940, \$181,574.56 in 1950, \$394,998.82 in 1960 and to \$996,249.33 in 1967, with an active teaching and research staff at that time of some 120 members.

The figures for periodic years are recorded in the chart below.

Department Budget Growth 1874-1968

Year	Salaries	Expenses	Equipment	Total
1874	2500.	200.		2700.
1901	4525.	200.		4725.
1904	5200.	200.		5400.
1905	5200.	200.		5400.
1906	6100.	200.		6300.
1907	6900.	200.		7100.
1908	6900.	200.		7100.
1909	7900.	350.		8250.

	Salaries & Expenses		Equipment	
1910	8,101.20		462.73	8,563.93
1911	8,986.12		988.80	9,974.92
1915	13,954.24		5,002.07	18,956.31
1920	23,421.22		582.03	24,003.25

	Salaries			
1930	68,178.83	2,720.29	1,701.95	72,601.07
1940	88,545.67	6,403.72	4,405.79	99,355.18
1950	164,299.84	10,160.15	7,114.57	181,574.56
1960	347,170.50	32,814.42	15,013.90	394,998.82
1965	574,975.89	135,258.28	42,947.54	753,181.70
1967	717,085.04	62,885.08	216,279.21	996,249.33

Sponsored Research

In the early 1900's and as late as 1925 sponsored research at The Ohio State University was viewed with great doubt and considered as non-academic by the administration and most of the faculty. Industrial sponsored research was contamination in the mind of the "pure" scientist. In fact this idea prevailed in general until the time of the founding of the Research Foundation in 1936 and to some extent afterward. The number 5 project of the Foundation was sponsored by the Sherwin Williams Company of Cleveland and was concerned with the Development and Improvement of Insecticides. This was supervised by D. M. DeLong who was informed by one member of the staff, upon his acceptance of this project work, that the Department was ruined. In time sponsored research became acceptable and was looked upon as a great aid in the development of graduate students and graduate school programs. It is now, in 1969, enthusiastically accepted.

In the thirty three years since the founding of the Research Foundation sixty projects have been supervised by staff members of the Department of Zoology and Entomology. These have been sponsored by both industry and government agencies. Following is a list of the projects numbered chronologically with the title of each project, the name of the supervisor and the dates of its activity.

R.F. No.	Supervisor	Subject	Dates
3-Clensel Products, Inc.	F. L. Campbell	Insecticidal properties Clensel	7-1-37 to 6-30-39
4-Nat'l Assoc. of Insecticide & Disinfectant Mfgs.	F. L. Campbell	Methods of testing liquid household insecticides against crawling insects	7-1-37 to 6-30-39
5-The Sherwin-Williams Co.	D.M. DeLong	Insecticides	7-9-35 to 6-30-44
32-Pittsburgh Coal Carbonization Co.	D. M. DeLong	Coal tar products as insecticides & fungicides	10-1-38 to 7-31-39
34-Standard Container, Inc.	F. L. Campbell	Hand sprayers	10-1-38 to 9-30-39
45-Dr Alfred Weed & Assoc's	F. L. Campbell	Household Insecticides	7-1-39 to 1-31-40
53-Commercial Solvents Corp.	F. L. Campbell	Fumigants; insecticides	12-1-39 to 3-29-40
61-Rohm & Hass Co.	F. L. Campbell	Codling moth control; insecticides	4-1-40 to 6-30-40
62-Nat'l Assoc. of Insecticide & Disinfectant Mfgs.	F. L. Campbell	Insecticides - roaches	6-1-40 to 3-31-42
68-Velsicol Corp.	F. L. Campbell	Insecticidal value new solvents from petroleum	10-1-40 to 6-30-41
70-Ohio Dept. of Public Welfare	F. L. Campbell	Household Insecticides	10-1-40 to 6-30-41
92-Green Trading Co. (Agents for Kenya Farmers Coop. Assoc.)	F. L. Campbell	Insecticidal values of Kenya pyrethrum	8-1-41 to 9-30-42
101-Tanglefoot Co.	F. L. Campbell	Application of pyrethrum concentrate in housefly control	1-2-42 to 4-1-42
143-Shell Development Co.	J. M. Hutzel	Crystox vs. roaches	3-1-43 to 5-31-43

R.F. No.	Supervisor	Subject	Dates
168-O.S.R.D. - OEMcmr-375	D. M. DeLong	Insecticides	9-1-43 to 10-31-45
206-Fraenkenberg Paper Box Co.	D. M. DeLong	Package protection against insects	11-1-44 to 7-31-45
236-Nat'l Academy of Sciences W 44-109 QM-305 Sub QM 51	D. M. DeLong	Insect behavior mosquitoes	11-1-45 to 6-30-46
242-B. Heller & Co.	D. M. DeLong	Insecticidal compounds	1-10-46 to 4-9-46
272-Quartermaster Corps	D. M. DeLong	Insect behavior	7-1-46 to 6-30-47
329-The Velsicol Corp.	Ralph Davidson W. G. Stover	Insecticides Fungicides	11-1-47 to 10-31-48
388-Nat'l Inst. of Health	D. M. DeLong	Mosquito Studies	5-15-49 to 6-30-50
16A-Mathieson Chemical Corp.	C. C. Allison F. W. Fisk	A Study of Fungicides and Insecticides	5-1-50 to 6-30-51
687-U.S. Atomic Energy Commission	E. L. Green	Genetic Effects of Irradiation in Mice	3-1-56 to 2-28-57
688-U.S. Department of Agriculture	W. C. Myser	Attenuation of Gamma Rays by Wood	4-1-56 to 8-31-56
702-National Institutes of Health	D. M. DeLong	Mosquito Studies	7-1-56 to 6-30-57
902-National Institutes of Health	D. R. Meyer	Studies of Primate Learning & Perception	1-1-59 to 12-31-59
946-Nat'l Science Foundation	C. A. Dambach	Photosynthesis & Respiration in an Aquatic Environment	6-1-59 to 5-31-60
1019-Nat'l Science Foundation	W. B. McIntosh	Comparative Genetics of the Deer- mouse & the Laboratory Mouse	10-1-59 to 9-30-61



<u>R. F. No.</u>	<u>Supervisor</u>	<u>Subject</u>	<u>Dates</u>
1026-Nat'l Science Foundation	D. M. DeLong	The Gyponinae of the World	6-1-60 to 9-1-62
1063-Nat'l Institutes of Health	F. W. Fisk	Biochemical Studies on Blood-sucking insects	1-1-60 to 12-31-60
1120-Nat'l Science Foundation	J. G. Rozen, Jr.	Systematic-Evolutionary Study of the Parasitic Bee Genus <i>Oreopasites cockerell</i>	6-16-60 to 6-15-63
1124-U.S.A. Chemical Corps R&D Command, Biological Warfare Laboratories	D. M. DeLong	Fundamental Studies Concerning Eggs, Larvae and Adults of <i>Aedes aegypti</i> (L)	7-1-60 to 6-30-61
1207-U.S. Atomic Energy Commission	T. J. Peterle	New Tracer Techniques for Evaluating the Effects of an Insecticide on the Ecology of a Forest Fauna	12-1-60 to 11-30-61
1325-Nat'l Science Foundation	D. R. Meyer	Automatic Primate Test Apparatus	1-1-61 to 12-31-61
1345-Nat'l Science Foundation	R. P. Goldthwait	Ecological Survey of Soil Arthropods in Relation to Microenvironment, Mirny Station, Antarctica	7-1-61 to 12-31-63
1354-USA Chemical Corps Biological Laboratories	D. M. DeLong	Fundamental Studies Concerning Eggs, Larvae, & Adults of <i>Aedes aegypti</i> (L) and <i>Aedes triseriatus</i> (Say)	9-1-61 to 8-31-62
1375-Nat'l Science Foundation	W. B. McIntosh	Comparative Genetics of the Deer-Mouse and the Laboratory Mouse	10-1-61 to 9-30-62
1510-USA Biological Laboratories	D. M. DeLong	Salivary Studies on Mosquitoes	10-31-62 to 8-31-63
1546-Nat'l Science Foundation	S. M. DeLong	The Gyponinae of the World	10-1-62 to 9-30-64

<u>R. F. No.</u>	<u>Supervisor</u>	<u>Subject</u>	<u>Dates</u>
1572-Nat'l Institutes of Health	W. C. Rothenbuhler	Genetic Analysis of Foulbrood Resistance	1-1-63 to 12-31-63
1633-Nat'l Institutes of Health	W. C. Rothenbuhler	Genetic Bases of Behavior Differences	4-1-63 to 9-30-63
1684-USA Biological Laboratories	John Briggs	Investigations of the Nutritional Requirements for the Growth of Insect Tissues	6-28-63 to 6-30-65
1720-Bureau of State Service,HEW	E. E. Good	Effects of Pesticides on Reproductive Success of Mice	10-1-63 to 9-30-64
1794- AEC	T. J. Peterle	The Cycling of CL <sup>36</sup> Labeled DDT in a Marsh Ecosystem	2-28-67
1795-Nat'l Science Foundation	L. Krader	The Evolution of Ecological Adjustment	5-1-64 to 4-30-61
1958-Nat'l Aeronautics & Space	G. W. Wharton	Determination of Minimum Concentrations of Environmental Water Capable of Supporting Life	5-1-64 to 4-30-67
1870-US Dept. of the Interior, Fish & Wildlife Service	T. J. Peterle	Kinetics of Cl-36 DDT in Wild Waterfowl	6-15-64 to 6-15-60
1900-Nat'l Science Foundation	D. M. DeLong	A Monographic Study of the Gyponinae of the World	10-1-64 to 9-30-66
1949-Public Health Service	P.R. Dugan	Fish Susceptibility to Pesticides & Detergents	1-1-65 to 12-31-65

R. F. No.	Supervisor	Subject	Dates
1928-U.S. Atomic Energy Commission	W. C. Myser	A Study of Radiation on the Biology & Population Dynamics of the Cereal Leaf Beetle, <u>Oulema melanopa</u> (L). Order, Coleoptera, Family Chrysomelaidae	1-1-65 to 12-31-65
1950-NSF	B. Brockway	Avian Social Behavior and Reproductive Physiology	1-18-65 to 12-31-67
2024-Nat'l Science Foundation	K. A. Brownell	The Opossum Adrenal	7-1-65 to 6-30-67
2117-Bureau of State Services,HEW	T. Peterle	Sublethal Levels of DDT and Rabbit Adrenal Function	10-10-65 to 9-30-66
2161-Nat'l Science Foundation	P. Colinvaux	Environmental History of the Galapagos Islands	1-1-66 to 12-31-67
2222-U.S. Dept of the Interior	T. J. Peterle	Endocrine Response to DDT & Social Stress in the Male Mallard Duck	5-1-66 to 4-30-69
2266- USCI	T. J. Peterle	Neutron Activation Analyses to Determine Natal Areas of North American Water Fowl	6-16-66 to 6-15-67
2296-U. S. Dept. of the Interior Fish & Wildlife Service	T. A. Bookhout G.J. Lauer	Study of a Strip-mined Area in Perry County, Ohio	7-1-66 to 6-30-67
2334-Nat'l Science Foundation	D. M. DeLong	Monographic Study of the Gyponinae of the World	10-1-66 to 9-30-71
2611-General Foods Corp.	G. W. Wharton	Critical Equilibrium Activity of <u>Tyrophagus putrescentiae</u> on Gaines Burgers	4-1-68 to 4-30-68
2740-Nat'l Institutes of Health	G. W. Wharton	Identification, Isolation & Culture of Mites	11-26-68 to 11-25-69

Partial List of Research Fellows and Assistants

Industrial Fellows

C. C. Alexander	1939-40	Robert F. Ruppel	1951-52
Tien Hsi Cheng	1939-40	Walter Jones	1952-55
B.C. Dickinson	1940-43	L. R. Roddy	1952-53
B.D. Gleissner	1939	R. E. Treece	1952-54
C. W. Meadows	1940-41	R. J. Daum	1952-53
H.A. Waters	1940-43	J. A. Isert	1952-53
H.C. Crowell	1940	W. A. Jeffers	1952-53
John Hutzell	1940-42	G. G. Lytle	1952-53
George McCall	1940	C. B. Melton	1952
Clyde Barnhart	1941	R. C. Ballard	1952
Joseph Enke	1941-49	F. W. Plapp, Jr.	1952
Louis Roth	1941	M. V. Ericson	1952
E. H. Glass	1941	P. D. Ludwig	1952
Robert Peffly	1942-47	J. A. Rudinsky	1952
Theo. B. Myers	1943	James Bowman	1953-54
Marens Anderson	1944-45	R. A. Champlain	1953-54
Lynn Brown	1946-47	D. M. Daughtery	1953-54
L. A. Hetrick	1946	J. B. Diamond	1953-57
Louis M. Roth	1946	Merton S. Honeyman	1953-54
R. E. Waites	1946-49	Arden O. Lea	1953-59
E. R. Willis	1946-47	Roberta Jacobson	1953-54
Harold Groves	1946-47	R. O. Wolf	1953-54
William Wagner	1946-47	D. E. Born	1953-54
Lawrence Bewick	1946-47	Wm. L. Butts	1953-54
Marylyn Jones	1946	Paul H. Dunn	1953-54
Julian L. Dusi	1946-47	R. F. Brooks	1953-54
Clyde S. Johnson	1946-47	Charles E. Cole	1953-54
H. E. Meadows	1946-47	Howard Hunt	1953-55
J. J. Chamberlain	1947	J. Liles	1953-55
J. R. Foster	1947	Jean Swinebrood	1953-54
Owen J. Smith	1948-49	Jeff Swinebrood	1953-55
Robert K. Thompson	1948-49	J. N. Liles	1955
Arden Lea	1949-50	R. W. Whiting	1954-55
Charles Gerber	1949	W. F. Hahnert	1955-56
N.W. Templin	1950	Robert Patterson	1955
J. A. Buxton	1951	Robert W. Winner	1955-56
W.H. Pierce	1951	Shahid H. Ashrafi	1958-59
Gordon Smith	1950	Neva Currie	1958-59
John Herrin	1950	James Huber	1958-59
S.S. Ristich	1951	E. L. Lambrimont	1958-59
D.H. Lockard	1951	Roger Meola	1958-63
L. H. Bolston	1951	Robert G. Sagar	1958-59
G. M. Busch	1951-52	Vernon Stevens	1958-59
Paul Ludwig	1951-52	Paul A. Stewart	1958-59
John E. Lane	1951-52	Raymond Barbush	1959-60
Julius A. Rudinsky	1951-52	Charles Hansen	1959-60
		Walter Jones	1959-60
		Don Mount	1959-60

Industrial Fellows

1961-1968

J.T. Addis  
Margaretta Allietta  
Judith Bank  
Richard L. Berry  
William Bode  
Gretchen T. Brook  
Richard Brown  
Ann Cali  
J.H. Carlson  
Beatrice Cassidy  
Mary E. Clay  
Mary L. Corn  
Wallace Dawson  
Terry Devine  
Beth Jayne Ellis  
Paul Freytag  
F. Harriet Gray  
Pensri Guntavanis  
Patricia Gusty  
W. Fred Hink  
Marilyn G. House  
R. R. Hildebrand  
Frank J. Jerome  
John Jordon  
Karl D. Kappus  
Michael Kosztarali  
Goro Kuno  
Adda J. Liggitt  
Kay L. Lindsay  
William F. Lyon  
John M. McCabe  
Charlene McClanahan  
Betty McDaniel  
Elizabeth M. Martin  
Carol Maxwell  
R. L. Meeks  
Kathe Murphy  
S. H. Odalinsky  
John W. Reese  
Carol Reeves  
Eldon Reeves  
Thomas E. Rinderer  
W. M. Romoser  
Robert Rose  
Eileen Schofield

Robert G. Sago  
Christine A. Simoner  
R. L. Smith  
D. B. Snyder  
J.D. Stewart  
Andrew Terranova  
Betty Lou Turcek  
Elizabeth West  
Jon L. Williams  
Wm. T. Wilson  
James E. Wright  
Linda M. Zesinger

### Faculty Awards, Honors and Recognitions

During the first hundred years various types of awards and honors have been presented to many members of the Zoology and Entomology Staff. Also certain recognitions of their abilities in their scientific fields have been designated by their selection to offices in national and state scientific societies and academies.

#### The following have been awarded honorary degrees

Name	Degree	Year	Donor
Dwight M. DeLong	D. Sc.	1941	Ohio Wesleyan University
Walter C. Kraatz	D. Sc.	1966	University of Akron
David F. Miller	D. Sc.	1952	Wittenburg University
John A. Miller	D. Sc.	1963	Ashland College
Herbert Osborn	D. Sc.	1916	Iowa State University
Herbert Osborn	LLD	1930	University of Pittsburg
Herbert Osborn	LLD	1936	Ohio State University
Raymond C. Osburn	D. Sc.	1949	Ohio State University
Thaddeus H. Parks	D. Sc.	1959	Ohio State University
Laurence H. Snyder	D. Sc.	1941	Rutgers University
Laurence H. Snyder	D. Sc.	1960	Ohio State University
Laurence H. Snyder	L.H.D.	1962	North Carolina State Univ.
Milton B. Trautman	D. Sc.	1951	Wooster College

#### Ohio State University Teaching Awards

Three members of the department staff have been selected to receive The Ohio State University Distinguished Teaching Awards; in 1962 Dwight M. DeLong; in 1967 Roger K. Burnard and in 1969 E. Eugene Good.

#### Daniel Geraud Elliot Gold Medal

Dr. Raymond C. Osburn was presented with the Daniel Geraud Elliot Gold Medal by the National Academy of Science in 1953 for his outstanding research work on the Bryozoa.

Founders Memorial Award

Dwight M. DeLong was chosen to receive the Founder's Memorial Award of the Entomological Society of America in 1964 and he presented the Memorial Award Lecture honoring Professor Herbert Osborn.

Insect Photographic Awards

Several unique awards have been won by Dr. Alvah Peterson. These concern photomicrographic prints and color transparencies of minute insect eggs. He has been awarded the following prizes.

- 1959      Detroit, Michigan. Joint meeting of E.S.A., E.S.C., E.S.O.  
            First Prize - Photomicrographic Print  
            Honorable Mention (Two). Photomicrographic Prints
- 1960      Atlantic City, New Jersey, E.S.A.  
            Grand Prize - Color Print  
            First Prize - Color Transparency Sequence Print
- 1962      Phoenix, Arizona, E.S.A.  
            First Prize - Taxonomic Monochrome Print  
            Second Prize - Taxonomic Monochrome Print  
            Third Prize - Taxonomic Monochrome Print  
            Honorable Mention - Taxonomic Monochrome Print  
            First Prize - Nature Color Print  
            Honorable Mention (Three) - Natural Color Prints
- 1967      New York City, New York, E.S.A.  
            Honorable Mention - Color Transparency Sequence

Fellowship Awards

Roosevelt Fellowship to University of San Marcos, Lima, Peru awarded to Bruce Griffing in 1941

Chilean Pan American Fellowship to University of Santiago, Chile awarded to Bruce Griffing 1942.

National Council Postdoctoral Fellowship for study at Cambridge University, England awarded to Bruce Griffing 1953

A. Guggenheim Fellowship awarded to George W. Wharton in 1950-1951.

Sigma Xi

Practically all the members of the Department permanent staff have been elected to active membership in the Society of Sigma Xi, the National Honorary Scientific Society.

Herbert Osborn was Recording Secretary 1907-1908.

Participation in Scientific Societies, National  
Boards, Councils and Committees

American Association for Advancement of Science - D.S. Kellicott served as Secretary in 1897-98. Herbert Osborn was Vice President, Chairman of Section F., American Society of Zoologists in 1917, L.H. Snyder was Vice President - Section F. in 1943, and was President of the A.A.A.S. in 1958.

American Association of Economic Entomologists - Herbert Osborn was President in 1898. Dwight M. DeLong was associate editor of the Journal of Economic Entomology and a member of the Editorial Board, 1929-1936.

American Microscopical Society - D. S. Kellicott was President in 1898 and Herbert Osborn was President 1907-1908.

American Society of Human Genetics - L. H. Snyder was President in 1950.

American Society of Parasitologists - George Wharton served as a member of the Editorial Board.

American Naturalists Society - L.H. Snyder was Vice President in 1941.

Entomological Society of America - Professor Herbert Osborn was President in 1911. Clarence H. Kennedy served in 1934 and Alvah Peterson was President in 1949. (Former organization) Under the new Entomological Society organization D.J. Borror served in a similar capacity as chairman of Section A in 1956, D.M. DeLong served as chairman of Section A in 1957, and Barry Valentine in 1957.



Entomological Society of America (continued)

Herbert Osborn was Editor of the Annals of the Entomological Society of America from 1908 to 1921 and was Emeritus Editor 1922 to 1954. C.H. Kennedy was Editor of the Annals from 1922 to 1943, Emeritus Editor 1944-1952.

Three members of the Department have been elected Honorary Life Member of the Entomological Society of America. Alvah Peterson (1965), Dwight DeLong (1966), Thaddeus Parks (1968).

Institute of Acarology - Founded by George W. Wharton in 1953 and directed by him since that time.

Iowa Academy of Science - Herbert Osborn was President in 1887.

Genetics Society of America - L.H. Snyder was President in 1948.

Limnological Society of America - R. C. Osburn was President in 1941.

National Advisory Council of the Institute of Allergy and Infectious Diseases - George Wharton has been a Board Member since 1964.

Ohio Academy of Science - David S. Kellicott was Treasurer 1897-1898.

Herbert Osborn was Treasurer 1898 to 1904. Five members of the Department served as President; David S. Kellicott in 1895, Herbert Osborn 1905; Raymond C. Osburn 1922; James S. Hine 1929 and Dwight M. DeLong 1959. Three members have been elected to Honorary Life Membership - Herbert Osborn, 1943; Frederick H. Kreckler 1948 and Dwight M. DeLong 1969 (See section on Ohio Academy of Science).

The Ohio Journal of Science

Several members of the Department have served as editors of The Ohio Journal of Science since it was established as the Ohio Naturalist in 1900. They are Frederick Kreckler 1917-29; Herbert Osborn 1930-32; Lawrence H. Snyder 1933-52; Earl L. Green 1950-52; Henry Plaine 1956-61 and David H. Stansbery 1962-64.

Ohio Biological Survey - Herbert Osborn served as Director 1912 to 1954.

D.M. DeLong served as Associate Director 1943 to 1954 and Acting Director 1954 to 1958; C. A. Dambach served as Executive Secretary 1958 to date (1969).

Society Systematic Zoologists - George W. Wharton was Secretary 1948 and President in 1956.

The Institute of Acarology

One of the important new assets to the Department is the Institute of Acarology which had its beginnings with the acarology group headed by Professor G. W. Wharton at Duke University in the years immediately following World War II. A special summer course was first offered at Duke University in 1951. The summer program was gradually expanded with the addition of several specialists. In 1954 Wharton moved to the University of Maryland where, with Dr. George Anastos participating, the Institute of Acarology was set up as a formal teaching and research center. In the fall of 1957 Dr. Conrad E. Yunker was appointed Curator and the Institute began to function on a permanent, year-around basis. An enormous collection has been built by gifts and the assembling of several collections. Yunker left the Institute in 1959 and Donald E. Johnson was appointed in 1960.

In 1961 Professor Wharton accepted the Chairmanship of the Department of Zoology and Entomology at The Ohio State University and the Ohio Agricultural Experiment Station, and the Institute was moved to the latter institution.

In January 1962 Dr. W. Knülle, formerly of the Biologischen Bundesanstalt in West Berlin, joined the staff of the Institute. This completed the present complement of the Institute: the Director (G.W. Wharton) the Curator (D.E. Johnston), the Research Associate (W. Knülle), two laboratory technicians, and a secretary. Also associated with the Institute as Collaborators in Acarology are Dr. H. Y. Forsythe (Ohio Agriculture, Washington), Dr. A. Fain (Institut de Medecine Tropicale, Anvers) and Dr. A. E. Miller (Petoskey, Michigan). The Institute was moved to the Ohio State University Campus in 1964, where adequate space and equipment are available for a large staff of research workers and technicians.

The summer teaching program was also transferred from the University of Maryland to The Ohio State University where it is supported, in large measure, by a Training Grant from the National Institutes of Health. The teaching staff from 1962 to the present has included G. Anastos, E. W. Baker, J. H. Camin, D.E. Johnston, W. Knülle, R. W. Strandtmann, and G. W. Wharton.

The summer teaching sessions have attracted graduate students and instructors from several universities and institutions throughout the United States and Canada and from several foreign countries as well, including Australia, Egypt, West Germany (2), India (20), Pakistan, Philippines, South Africa, Sudan, Thailand (2), Turkey and Brazil.

## The Lake Laboratory

Now Known as the Franz Theodore Stone Laboratory

The concept of a biological laboratory situated on Lake Erie was first conceived by David S. Kellicott the Chairman of the Department of Zoology and Entomology in 1894. He was especially interested in studying the fish of Ohio and requested of President Scott "the establishment in the near future of a lake laboratory at or near Sandusky and the creation of a State collection of fishes in Ohio".

He also stated "The purpose of the plant that I would advocate is to afford an opportunity and a stimulus to instructors, students, of biology in the University to spend their vacations investigating living problems in biology, especially such as are connected with important industries like the fisheries". He also sited Sandusky or its proximity as a desirable place for the location of such a laboratory.

The Board of Trustees approved the project on September 2, 1895 and appropriated the sum of \$350.00 for the construction of a second floor on the Sandusky Fish Hatchery Building.

The laboratory was operated during the summer of 1896 with a personnel of Dr. Kellicott and four graduate students, E. B. Williamson, R. C. Osburn, J. S. Hine and W. E. Kellicott. This program was repeated in the summer of 1897, but due to the death of Dr. Kellicott there was no program in 1898.

Professor Herbert Osborn succeeded Dr. Kellicott as chairman of the department and directed a summer program in 1899 similar to that followed by Kellicott in previous years. Courses of instruction were offered first in 1900, chiefly by the request of high school teachers who wished instruction in field biology.

Fourteen students attended the first classes.

Professor Osborn, desirous of a more adequate location for field work with more laboratory space, was able to obtain from Mr. Boeckling, manager of the Cedar Point Resort, a 50 year lease on land a short distance from the resort for the construction of an Ohio State University Lake Laboratory. A frame building was erected on the new site and was dedicated July 2, 1903. Twenty two students and investigators were in attendance during that summer.

In 1905, two members of the instructional staff were chosen from other institutions, and this policy has been followed through the first century of the University. This has promoted cooperation from the other colleges and universities and has attracted students from many other institutions to the Lake Laboratory. Professor Osborn directed this program until his retirement from the Chairmanship of the Department in 1916. In 1909, 1914 and 1916 an acting director was in charge of the program. By 1913 the growth and popularity of the Cedar Point resort caused the location of the laboratory to become more undesirable so in 1918 arrangements were made to transfer the teaching program to the Put-in-Bay State Fish Hatchery where the hatchery authorities had generously granted quarters on the second floor for office and table space for the laboratory. Most of the students for the next few years were men who were housed and fed in a large summer cottage called "The Cedars" which was near the laboratory. Attendance averaged about 20 students previous to the beginning of hostilities of the first world war but declined to an all time low of 2 students in 1918.

Dr. F. H. Kreckler served as acting director from 1917 until 1925 and remained as Assistant Director until 1936.

Dr. Raymond C. Osburn succeeded Professor Herbert Osborn as Chairman of the Department and also as Director of the Lake Laboratory, remaining in the latter position until 1937.

Dr. Raymond Osburn was appointed a member of the Advisory Board of the Ohio Fish and Game Division in 1920 and was thus able to arrange subsidies for fisheries research. As a result Dr. Osburn with several graduate student assistants conducted a fisheries survey of Ohio during 1920 to 1923 while Dr. Kreeker had most of the responsibility of the Lake Laboratory.

Across the bay from the fish hatchery buildings on South Bass Island was a high bluff of rock known as Gibraltar Island. It is known historically because it was in the shelter of this island that Commodore Perry built the small vessels of his fleet that defeated the British fleet in the channel just north of South Bass Island in the War of 1812. Jay Cooke a Civil War financier had built a summer home on Gibraltar Island in 1864-65, which contained some 20 rooms and was known as "The Castle".

Dr. Osburn was instrumental in arranging the acquisition of Gibraltar Island in 1925 which was purchased from the Cooke heirs by Julius F. Stone, a member of the Board of Trustees, and presented it to the University as a permanent place for the summer biological laboratory. Dr. Osburn was also instrumental in obtaining the construction of a three story, 21-roomed laboratory building in 1926-1928. The building was dedicated on June 22, 1929 as the Franz Theodore Stone Laboratory. On that occasion speeches were made, some very brief, by Julius F. Stone, Chairman of the Board of Trustees, President George W. Rightmire, Governor Myers Y. Cooper, Honorable Perry Green, Director of Agriculture, Professor Raymond C. Osburn, Chairman of the Department of Zoology and Entomology,

Mr. Charles D. Barney, son-in-law of Jay Cooke, and Professor Edwin G. Conklin of Princeton University.

When Gibraltar Island was first aquired by the University, the summer work and housing were distributed in the buildings then on the island. The Cooke Castle served as a men's dormitory and dining hall and Barney cottage was used as a women's dormitory. The "Halfway House" became a makeshift laboratory for botanists and entomologists and the "Dock House" served as a laboratory for work in Invertebrate Zoology, Ichthyology and Ecology. The basement of the new laboratory building was occupied in the summer of 1927 and the entire building was ready for occupancy in 1928.

In 1934 President Rightmire, by Trustee action, appointed a committee to study the laboratory, its history, accomplishments, functions, scopes of instruction and research, and its possible future function. The committee consisted of J. Paul Visscher, Julius F. Stone, Walter C. O'Kane, Chancey Juday and Henry S. Houghton.

This committee made a detailed report in which they stated the objective, "The laboratory should now enter new fields of activity and service pictured in the phrase "Biology and Human Welfare".

They also stated: "A large part of the Laboratory's activities should consist of forward looking and productive research in medicine, biochemistry, parasitology, conservation and natural resources, conservation of human lives, nutrition and other fields".

They further recommended that the laboratory be operated full time with a full-time director and a permanent staff and that undergraduate students should not be admitted for course work. The Franz Theodore Stone Laboratory was adminis-



tratively placed directly under the President of the University and removed from the College of Agriculture and from the Department of Zoology and Entomology.

A further recommendation was that

III.....Laboratory should be a center where all interests of the University can meet for intensive and cooperative experimental enterprises"

The over enthusiasm of Mr. Stone and probably other members of the committee had set a goal which could not possibly be attained by any group of scientists working on an isolated island, separated by a water barrier from the mainland where transportation was not possible except by plane during the winter months, and a laboratory which could not be operated in the winter, far removed by time and space from the Ohio State University campus.

In the autumn of 1936 Dwight M. DeLong a professor in the Department of Zoology and Entomology was appointed as Director and Thomas H. Langlois a member of the Division of Conservation was appointed Assistant Director. Professor DeLong accepted the position as Director with the understanding that he would retain his Professorship in the Department of Zoology and Entomology, that he would not immediately become a permanent resident of Put-in-Bay and that Dr. Langlois would spend full time upon the course work and research in the field of fisheries. No progress was made with the fisheries work during 1936-37.

In February 1938 Professor DeLong resigned and returned to his position in the Department of Zoology and Entomology from which he retired in 1962. Dr. Langlois was appointed Director with certain definite directives regarding a concentrated research program on the fisheries work in Lake Erie, which was to be "maintained and expanded", the "employment of a full-time fisheries biologist" and "the organization of a symposium on the biology of fishes for the summer

session of 1938". Also the Director was given complete supervision of the caretaker and other problems which had previously been under the maintenance department of the University and which had previously definitely limited the Director in supervision of the laboratory.

Director Langlois began to assemble a full-time staff consisting of Dr. Charles F. Walker, Dr. David C. Chandler, Professor Milton B. Trautman and Bert Anderson; later Dr. Wilson Britt and Dr. Jacob Verduin were added to the permanent staff.

The problems of winter quarters for a laboratory and living conditions were faced then by a situation where the Franz Theodore Stone Laboratory could not be operated through the winter months. This required finding space in the state and federal fish hatcheries for make-shift laboratories and the purchase of housing for the permanent staff.

The summer courses were changed from botany, Zoology and Entomology to hydrobiology.

The laboratory under its new year-round plan faced many difficulties due to years of economic depression, reduced state financial support, and reduced student enrollment. Then came the second world war and this caused enrollment to remain low or decline further. Only five students were enrolled in the summer of 1955. As a result of these situations the University Administration decided that the financing of a year-long project which was not attracting students or research workers was not worth continuing. The program consequently was abandoned, three staff members of the laboratory, Dr. Langlois, Dr. Britt and Professor Trautman were transferred to the Department of Zoology and Entomology at the University and the disposition of the Laboratory was placed in the hands of

Dean Rummell of the College of Agriculture. The Administration was not inclined to support the continuation of the Laboratory as a summer biological station even under previous summer arrangements.

The continuation of the laboratory beyond 1955 has been due solely to the encouragement and enthusiasm of former students now members of the Department of Zoology and Entomology who had gained so much from their early experience at the Laboratory that they desired to see the summer courses continued.

As a result the Administration approved the renewal of a summer teaching program and the Laboratory has regained its former place among the advanced biology students of the State under the able leadership of Dr. Loren S. Putnam, the present Director.

Under the present plan (1969) advanced under graduates as well as graduate students from the 45 Ohio Colleges as well as other colleges and universities are encouraged to enroll at the Franz Theodore Stone Laboratory. Credits for this work are given by the Ohio State University and may be transferred to other colleges and universities.

Courses of instruction and the instructional staff, most of whom are from the Ohio State University, are rotated from year to year. Courses offered are related to the environmental conditions and adapted to field studies. The variety of ecological habitats is limited by the island location but it offers certain types of habitats that are difficult to duplicate along the mainland.

At the end of the first century the Lake Laboratory is offering eighteen courses of instruction in two summer terms and has a staff of sixteen instructors. A capacity of some 60 students have been enrolled during the past few years.

The Vertebrate and Invertebrate Collections of or  
Closely Associated with the Department

A recent summary statement of the Departmental Collections prepared by Charles A. Triplehorn, Curator of Insects and assisted by John L. Crites, Josef N. Knull, David H. Stansbery, Milton B. Trautman and Barry D. Valentine is presented at this time with slight changes and additions.

The Ohio State University has been authorized by the Ohio Revised Code (Statute 3335.19) which states: "The board of trustees of the Ohio State University shall secure and keep in the university a collection of specimens in mineralogy, geology, zoology, botany, and other specimens pertaining to natural history and the sciences. The president of the university shall collect and deposit in the collection in the manner directed by the trustees, a full set of specimens as collected by him and his assistants, together with a brief description of the character thereof, and where obtained. Such specimens shall be properly classified and kept for the benefit of the university".

Purpose of Natural History Collections: Reasons for maintaining collections of specimens and objects of natural history are many fold. One of the primary functions is as a reference collection to provide material for revisionary studies and to serve as a repository for specimens upon which such studies are based. These specimens then serve as a basis for future work and are consulted again and again by specialists.

Large series of specimens are needed for sound taxonomic work and space and storage facilities are generally the limiting factors in determining how many specimens will be retained. Several zealous collectors can soon exhaust the storage facilities of the most ostentatious physical plant. It is obvious

that no single institution can hope to be outstanding in every facet of natural history. Most institutions concentrate on certain groups and are best known in these particular fields, generally reflecting the interests of those intimately associated with the institution.

Another valuable function of a collection is as a reference for the identification of specimens submitted by interested parties who, for various reasons, need to know the name of the organism. These may be farmers or housewives who want to control an insect, an ecologist who is studying the interrelationships between or among plants and animals, a physician or veterinarian, a wildlife or fish management specialist.

Learning the name of an organism is generally the first and most basic step in any scientific investigation, be it anatomical, physiological ecological, behavioral, genetic or some other aspect. An extensive and comprehensive, well organized and curated collection of accurately identified specimens is as valuable if not more valuable than a large library.

As mankind irrigates deserts, cuts forests, drains swamps, and the myriad other activities labelled as "human progress", entire habitats of plants and animals often disappear, sometimes forever, from a particular ecological niche. It is important in the overall understanding of the ecologist, taxonomist and general naturalist to have representatives of the flora and fauna from these areas placed in a collection where they will be available to students. In other words, the historical aspect of specimens in a collection is of great importance.

Collections are invaluable to students who are attempting to learn to recognize the vast array of animals that inhabit the earth. These students must have specimens to observe or textbooks and keys are meaningless. For this reason,

an institution such as The Ohio State University is perfectly justified in maintaining several types of collections without an actual duplication of effort. This report is designed not only to describe such collections as now exist at The Ohio State University but to indicate the scope and nature of future work.

Recent efforts by Drs. Trautman, Valentine, Crites and Stansbery and their students have stimulated interest in the fishes, reptiles, amphibians, fresh water bivalve mollusks and crayfish. Extensive collections have resulted from these activities and these along with the insects must be mentioned among our assets in a report such as this.

Vertebrates: (Milton B. Trautman) Fishes. 123,000 catalogued specimens in 15,365 lots as of April 24, 1969. This included only specimens preserved in the O.S.U. Collections.

An overwhelming proportion of the fish material came from over 1,300 of the 1,400 + townships of Ohio. It is one of the major State collections. About 15% or more of the material is unobtainable today because of destruction of habitats, and it is, therefore, of historical significance. A primary objective of collecting was obtaining specimens of maximum use to researchers and students; as a result, researchers and students in other states have been utilizing this material considerably.

That material not collected in Ohio came largely from adjacent states, and is largely used for comparative purposes with Ohio material.

Amphibians and Reptiles. To date, 2585 lots of amphibians have been catalogued, and there is a roughly estimated number of 9,000 to 10,000 specimens, virtually all of which came from Ohio. A goodly proportion of the specimens are of considerable historical interest. There is much uncatalogued material, dating

back to 1950. No worthwhile estimate of number of uncatalogued specimens can be given.

To date, 1,260 lots of reptiles have been catalogued, and there is roughly estimated number of 1,800 specimens, most of which came from Ohio, the remainder from many other states from Florida to California. There is considerable uncatalogued material dating back to 1950.

Birds. To date 15,131 birds, in the same number of lots, have been catalogued. There are approximately 600 specimens, uncatalogued, many from the recently acquired Oberlin College collection. The majority of catalogued specimens are from Ohio, the remainder from other states, Central and South America, and Europe. There is comparatively little material from the Old World, Europe, Africa, Australia and Asia. A fair proportion of the skins, possibly 15%, was collected prior to 1900. There is much material of great teaching, historical, distributional, and other research value. The collection contains skins of several extinct species, and of species now extirpated from Ohio. There are exceptionally fine series of skins of game birds and waterfowl, which are especially useful in teaching.

Skeletal material: There is an uncatalogued collection of possibly 300-500 bird skeletons, mostly of Ohio species. This material is in excellent condition.

Eggs: There is an outstanding collection of more than 4500 bird eggs in excellent preservation. The majority of the zoological material is from Ohio; however, almost every North American species is represented and there is a fair number from the Old World.

Mammals. To date, 2,206 mammals, in the same number of lots, have been

catalogued, and there are several hundred uncatalogued. The majority of specimens were taken in Ohio and are of considerable historical, distributional, and other research value. There is a fair number of skins from several other states, especially the Southwest and skulls or other skeletal parts, some species of which formerly occurred in Ohio.

Nemotode Collection: (John L. Crites) The collection contains catalogued specimens of free-living freshwater forms, marine forms, and nematodes parasitic in invertebrate and vertebrate animals. The specimens are all maintained in vials, they are not on slides. This is a reference collection for research purposes. Holotype and allotype specimens are sent to the U.S. National Museum Helminthological Collection at Beltsville, Maryland. Paratypes are maintained in this collection. More than two hundred genera are represented at present.

Crustacea and Mollusks: (David H. Stansbery) The crustacean material held by the museum consists almost entirely of crayfish and almost all of these specimens are from North America east of the Rocky Mountains. This part of the earth, however, contains several times the number of species of the rest of the world combined. Special attention has been and is being directed toward 1) the construction of a research collection rather than simply a synoptic collection and 2) to cover in scope the entire world fauna. This collection contains an estimated 13,500 specimens comprising about 2,700 lots representing approximately 540 individual collections of one or more species. Only one-fifth of the total collection is completely processed at this date. The collection is, without doubt, the finest in the midwest, and one of the best 3-5 in the nation and improving rapidly.

Pelecypods: The molluscan material held by the museum consists primarily



of naiades with fresh-water gastropods and marine molluscs of many kinds forming two somewhat smaller groups. No effort has been made as yet to catalog anything but the naiad collection, since this is the only collection being actively added to and presently used in several research projects. The scope presented by the collection is world-wide but is especially rich in North American species. The size of the collection has nearly doubled in the past year due to intensive collecting and exchanging both "at home and abroad" and contains, at present, an estimated 70,000 specimens--most of which are catalogued and arranged for study. While this collection is not particularly notable in size (those at harvard, Michigan, and the U. S. National Museum being larger and presenting a greater variety of species at present) the nature and extent of the individual lot series, the accompanying data, and the organization of the collection make it exceptional as a research tool in naiad taxonomy, ecology, zoogeography, and evolution.

Arthropod Collections: The arthropod collection exclusive of Acarina occupies six rooms on the third floor of the Botany and Zoology building. Although an accurate count of specimens in the collection at any one time has never been made, a reasonable estimate would place it between 2,5 and 3 million 2.5 determined insects. These are housed in glass-topped National Museum type drawers, each species occupying its own cork-lined unit tray. At this writing there are 3,000 drawers enclosed for the most part in steel museum cabinets. Unidentified insects are kept in schmitt boxes. There are more than 600 of these boxes awaiting study by qualified specialists.

Arachnida (Spiders). This group is represented primarily by the collection of the late Professor William M. Barrows. This collection is mainly of historical

interest and is not large, consisting of approximately 3,000 specimens. A recent revival of interest in Ohio spiders will undoubtedly cause this collection to expand. The Barrows collection is especially representative of Ohio, Florida and the Great Smoky Mountain fauna. In 1963 the Ohio portion of the spider collection was completely rearranged for greater accessibility to research workers.

Acarina The Institute of Acarology with its large collection of mites and ticks and its extensive library is located in the Department. Dr. Conrad E. Yunker was appointed Curator in 1957. He revised the collections, devised a punched card coding system for specimens, and issued a preliminary catalog listing 404 determined species (excluding Ixodides) in the Institute. At the same time a punched card coding system for acarological literature was prepared by Wharton and was used to build an abstracting-indexing system for the Institute library. These activities were continued by Hunker until he left the Institute in 1959.

At the time the Institute collections were first catalogued, the specimens were, for the most part, those assembled through the endeavors of Wharton and his students. Approximately one-half of this material consisted of Wharton's personal collection of Trombiculidae, then one of the best in existence. In 1959 the Institute received as a gift all of the non-type material of Acari in the Museum of Comparative Zoology, Harvard University. This collection, comprising alcoholic and slide materials accumulated at the MCZ since the early 1900's, represented a major addition to our collections.

In 1960 Donald E. Johnston assumed the Curatorship of the Institute. At that time the Collection, except for unsorted alcoholic material in the Harvard

collection, consisted of slides arranged in a teaching collection, a research collection, and various miscellaneous collections (mostly gifts). The impermanent and inconvenient nature of slide preparations led the present Curator to adopt the British Museum methods of alcohol-storage for mite specimens. This is the system about which the present collection is built.

Growth in the Institute Collections has largely occurred in the period 1960 to the present. Large collections of soil and litter mites from the eastern United States were made by staff and students at the University of Maryland. After the move to Ohio, work was directed to build the collections of European Acari. These efforts were aided by a number of colleagues in Europe and through collecting done by the Curator in the late summer and fall of 1962. A significant addition to the European material was the accession of the Knülle collection of determined Oribatei from Germany and his undetermined alcoholic material from the Mediterranean region. Also during this period the Institute took over the A. E. Miller collection from the Ohio State University. Building of the collection, with emphasis on extra-American species as well as those from the Nearctic region, continues to the present. As with any modern collection, however, the greater part (over 98%) is undetermined. This undetermined material is in various degrees of order, ranging from unsorted faunal samples to specimens sorted to genus, and almost all of this material is in alcohol.

Insects: (Charles A. Triplehorn) The Ohio State University has long been known for the excellence of its insect collection which, is still its foremost formally recognized research collection of zoological specimens. This collection was built by the acquisition of personal collections of insects made by former faculty members, the purchase of several valuable private

collections of certain groups and extensive field work by the former curator, Professor Josef N. Knull, whose dedication to meticulous arrangement has made this collection world famous.

The dedicated life long researches of former Professors Herbert Osborn, James S. Hine, Clarence H. Kennedy, Alvah Peterson and Josef N. Knull have made portions of this collection well known throughout the world.

Immature Insects. For many years Dr. Alvah Peterson, Professor Emeritus of this Department, was one of the foremost students of immature insects in the United States and published several books and numerous articles on the subject. The collections upon which these studies were based now fill four large steel cabinets. This collection is used for both reference and teaching.

Coleoptera (Beetles). In 1927 the University purchased the private Coleoptera collection of H. W. Wenzel of Chester, Pennsylvania. At that time it was considered one of the most outstanding collections in private hands in the United States. Many years of field work with emphasis on beetles by J. N. Knull and his students have created a truly outstanding collection of North American Coleoptera. The collection is particularly strong in the Cerambycidae, Elateridae, Cleridae, Buprestidae, Tenebrionidae, and Chrysomelidae but all families are well represented. Through cooperation with other coleopterists, the University has obtained types of many species of Coleoptera.

Diptera (Flies) Forming the nucleus of the Diptera collection is the Professor J. S. Hine collection. Professor Hine was a world authority on the family Tabanidae and the collection is especially rich in type specimens of these flies. The Hine Asilidae and the Raymond Osborn Syrphidae collections are also outstanding and rich in types.

Hymenoptera (Bees, wasps, ants). The C. H. Kennedy ant collection is the highlight of the Hymenoptera collection. Certain families of bees and the velvet ants (Mutillidae) are also fairly complete for North America.

Homoptera (Leafhoppers, aphids, etc.). The collection of the late Dr. Herbert Osborn, who pioneered in the study of several families of Homoptera, is one of the most important parts of the Ohio State Collection. Worldwide in scope, it contains an enormous number of types. Two rather large additions have recently been made to this group. The Dorothy J. Knull collection of North American cicadillidae contains material from practically every portion of the United States and many valuable type specimens. The Dwight M. DeLong collection contains representatives from all areas of the United States and many valuable types, but is especially rich in material from Mexico, Guatemala, Panama, Labrador, British Columbia, several South American Countries and Alaska. Together these combined collections represent one of the major collections of world Cicadellidae.

Ohio State has long been a center for the study of leafhoppers and their allies and the specimens forming the bases for revisionary studies by numerous students, including their types, are housed here. In 1969 the Aphid Collection of Dr. Clifford Cutright was moved from Wooster to Columbus. Although it is small, it consists of meticulously prepared slides, which are all identified, labeled and arranged, and considered quite a valuable acquisition. The same may be said for the J. S. Houser scale collection which consists of both dry host material and slides. In addition the research of Dr. Michael J. Kostarab has greatly improved the collection of Coccidae. Dr. John S. Caldwell has developed an excellent collection of Psyllidae and Fulgoridae, and the Cicadidae.

were prepared by Dr. William T. Davis. Dr. Herbert Osborn published upon the Membracidae.

Lepidoptera (Butterflies and moths). The university purchased the Richard A. Leussler collection, notable for the painstaking manner in which the insects are mounted and the accuracy with which they are identified. The collection also contains the W. N. Tallant collection. It is an excellent synoptic collection but does not contain large series. Some additions to this collection have been made thus making it a valuable reference collection for the identification of North American Macrolepidoptera. The Microlepidoptera are poorly represented and few Lepidoptera types are housed here. The neglect of this major order is probably due to the fact that there has never been anyone at Ohio State who specialized in the group.

Orthoptera (Grasshoppers, crickets, etc.) A good but not outstanding collection of these insects has been built up largely through the efforts of Dr. W. J. Kostir and J. N. Knull. Ohio orthoptera have been somewhat neglected because of the intense interest and outstanding collection developed by Dr. Edward S. Thomas of the Ohio State Museum.

Odonata (Dragonflies and damselflies) The university has an excellent synoptic collection of mounted Odonata and an even larger collection in paper envelopes. The work of C. H. Kennedy, D. J. Borror and, more recently, Dr. Robert Alrutz has assured us of a good representation of this order.

Mallophaga (Bird lice) With the generous gift of the private collection of Dr. Robert M. Geist of Capital University, the collection now has a noteworthy collection of these insects.

The Ohio State Museum Although not actually a part of the University,

the Ohio State Museum, of the Ohio Historical Society, located on the campus, houses a number of valuable natural history collections. Extensive research collections of reptiles, amphibians, fishes, birds, mammals, mollusks and crustaceans are available for study. The Ohio Orthoptera collection, representing the lifetime efforts of Dr. James Hine and of Dr. Edward S. Thomas, is particularly valuable as are the may beetle and robber fly collections. While the collection is rich in Ohio forms there is worldwide representation in several groups. The bird collection is world wide in scope.

## Departmental Military Participation in World War I and II

### World War I

One staff member, Dwight M. DeLong entered military service in World War I. He enlisted in the army in August 1917 and was in the 158th Depot Brigade stationed at Camp Sherman, Chillicothe, Ohio. He was soon placed on the Chemical Reserve, sent to Yale Medical School for special training in bacteriology and chemistry then served as a technician in the laboratory at the base hospital at Camp Devens, Ayer, Massachusetts, until February 1918.

### World War II

Four staff members left the department to enter World War II.

Donald J. Borrer was commissioned Lt. (j.g.), USNR (Hospital Corps Specialist), May, 1944 and assigned to Naval Medical School, Bethesda, Md., for training in epidemiology. He was then assigned to the Marine Air Station at Cherry Point, N. C., in July, 1944, as the officer in charge of pest control on this base.

In November 1944 he was assigned to overseas duty and joined the Second Marine Division on Saipan in January, 1945, as an entomologist in a Malaria and Epidemic Control Unit. He was based on Saipan until September, 1945; during this time he took a brief part in the Okinawa campaign, and led a survey of the fauna of Agrihan (in the northern Marianas Islands). In September, 1945, he went with the Second Marine Division to Japan, as part of the occupation forces; was located in Nagasaki until late December, 1945, then was transferred to Sasebo, Japan. He returned to the United States and was mustered out of the service in February, 1946. He was promoted to Lieut. in January, 1946.



World War II

Earl L. Green served as a Second Lieutenant, First Lieutenant and Captain in the U. S. Army Air Force.

Paul J. Seyler was in military service from 1943-46 in the U.S. Army Medical Service, Sanitary Corps. He was separated as a Captain in 1946.

Edward N. Warner was with the Air Force as Aviation Physiologist at Mountain Home, Idaho in May 1943. He was promoted to First Lieutenant in March 1944 and to Captain in April 1945.

Graduate Degrees granted in Zoology and Entomology

1874 to 1968

The first Doctorate Degree granted by the Department was in Entomology to Clarence M. Weed in 1890. The first Masters Degree was in Entomology to E. E. Bogue in 1896. In the first 30 years, 1890 to 1921, 7 Ph.D. Degrees were conferred all in Entomology. In the same period of time 61 Masters Degrees were granted, 47 of which were in Entomology.

A total of 1267 graduate degrees were granted by the Department from 1874 to 1969. Of this number 854 were Masters Degrees and 413 were Doctorates. If these are divided according to the major field of work, 641 were in Entomology, 618 were in Zoology, 5 in Wildlife and Conservation, and 3 in Genetics. The larger number of Masters Degrees were in Zoology, 455 compared to 393 in Entomology but in the Ph.D. Degrees, Entomology with 248 outnumbered Zoology with 163.

These figures indicate very definitely that a predominate number of graduate students were attracted to the Ohio State University to obtain graduate degrees in Entomology in spite of the fact that the Department was chaired by a Zoologist or Geneticist from 1916 to 1967, the period of the larger enrollment of graduate students and the period of the granting of the larger number of graduate degrees. The figure also indicates that while many graduate students working in the field of Zoology accepted assistantships and obtained Master Degrees at The Ohio State University, they went elsewhere to pursue graduate studies toward the Ph. D. Degree.

Following is a list of graduate students who were awarded Masters and Doctorate Degrees showing the year that each was granted and the field of specialization.

M.S. in Zoology and Entomology

Year	Student	Field
1896	Bogue, E. E.	Entomology
1900	Osburn, Raymond C.	Zoology
1902	Mills, William C.	Zoology
1903	Sanders, James G.	Entomology
1904	Morse, Max W.	Zoology
1905	Surface, Frank M.	Entomology
1906	Herms, William B.	Entomology
1907	Jackson, Cicero F. Smead, Annie	Entomology Zoology
1908	Jackson, Alma D. Durrant, Edwin Hambleton, J.I. Severin, H.C.	Entomology Entomology Entomology Entomology
1909	O'Kane, Walter C.	Entomology
1910	Hollister, Emily C. Jewett, Howard H.	Zoology Entomology
1911	Niswonger, H.R.	Entomology
1912	Conger, Allen C. McLellan, Marie F. Metcalf, Clell L. Mote, Don C.	Zoology Zoology Entomology Entomology
1913	Bilsing, Sherman W. Brain, Charles K. Faville, Esther D. Goodwin, William H. Kostir, Wencil J.	Entomology Entomology Entomology Entomology Zoology
1914	Cogan, Eric S. Drake, Carl J. Howe, Mary B. Ickes, Margurite Osborn, Evelyn	Entomology Entomology Entomology Zoology Entomology

M.S.

Year	Student	Field
1915	Chase, Harvey D.	Entomology
	Lathrop, Frank H.	Entomology
	Smith, Roger C.	Entomology
1916	DeLong, D.M.	Entomology
	Guyton, Thomas L.	Entomology
	Haber, Vernon R.	Entomology
	Kostir, Mary Storer	Zoology
	Oliver, Mary Harriet	Entomology
	Paddock, Floyd B.	Entomology
	Price, Walter Allen	Entomology
	Robinson, Jesse M.	Entomology
Wiltberger, P.B.	Entomology	
Yingling, Hal C.	Entomology	
1917	Cockerham, Kirby L.	Entomology
	Eckert, John	Entomology
	Jaques, H.E.	Entomology
	Jung, Goey Park	Entomology
	Smith, Marion R.	Entomology
	Stearns, Louis A.	Entomology
	Wade, Otis B.	Entomology
1918	Fenton, Frederick A.	Entomology
	Stehle, Mabel	Zoology
	Kisliuk, Max, Jr.	Entomology
	Weigel, Charles A.	Entomology
1919	Evans, Dorothy	Zoology
	Fletcher, Robert K.	Entomology
1920	Balduf, Walter V.B.	Entomology
	Basinger, Almon J.	Entomology
	Kraatz, Walter C.	Zoology
	Wickliff, Edward L.	Zoology
1921	Guyton, Fay E.	Entomology
	Hanawalt, Fred A.	Zoology
	Hartley, Edwin A.	Entomology
	Hough, Walter	Entomology
	Huber, Lawrence L.	Entomology
Lowry, Philip R.	Entomology	
1922	Auten, Mary	Entomology
	Bulger, Jacob W.	Entomology
	Cutright, Clifford	Entomology
	McCormick, Robert N.	Zoology

M.S.

Year	Student	Field
1922	Miller, August E.	Entomology
	Naude, Theunis J.	Entomology
1923	Eddy, Otis	Entomology
	Edwards, Linden F.	Zoology
	Ewers, Lela A.	Zoology
	Fravel, Charles H.	Zoology
	Harris, Benjamin B.	Entomology
	Hitchcock, Fred A.	Zoology
	Kraatz, Julia Jaster	Zoology
	Lee, Milton O.	Zoology
	Neiswander, C. R.	Entomology
	Patterson, Edna L.	Entomology
Price, John W.	Zoology	
1924	Hamner, Arthur Lee	Entomology
	Hefner, Robert A.	Zoology
	Hull, Frank M.	Entomology
	Knull, Josef N.	Entomology
	Mathewson, Adonis A.	Entomology
	Miller, D. F.	Zoology
	Noble, Alden E.	Zoology
	Reeves, Joseph Amos	Entomology
	Setterfield, Hugh	Zoology
	Smith, Floyd F.	Entomology
	Spencer, Warren P.	Zoology
	Van Cleve, M.R.	Zoology
Wiebe, Abraham H.	Zoology	
1925	Cartwright, Oscar L.	Entomology
	Conrad, Mary E.	Zoology
	Gambrell, Foster Lee	Entomology
	Jones, Merlin P.	Entomology
	Lewis, Harold C.	Entomology
	Miley, Hugh H.	Zoology
	Miller, Ralph L.	Entomology
	Pepper, John O.	Entomology
	Swingle, Homer S.	Entomology
	Tissot, Archie N.	Entomology
	Walker, Mary E.	Zoology
	Warters, Mary	Zoology
1926	Esselbaugh, Charles O.	Entomology
	Hanan, B.P.	Zoology
	Keeler, Alma	Entomology
	Miller, Joseph N.	Zoology
	Olson, Henry W.	Zoology

M.S.

Year	Student	Field
1926	Osburn, Max R.	Entomology
	Peters, Harold S.	Entomology
	Schlosberg, Morris	Entomology
1927	Dunham, Winston E.	Entomology
	Miller, John A.	Zoology
	Miller, Warren C.	Entomology
	Sleesman, Jay P.	Entomology
	Steiner, Loren F.	Entomology
	Talbot, Mary	Entomology
	Tinkle, William J.	Zoology
Wilbur, Donald A.	Entomology	
1928	Clark, Arthur B.	Zoology
	Dennis, Clyde	Zoology
	Gahm, Otis E.	Entomology
	Geist, Robert M.	Entomology
	Herr, Edgar A.	Entomology
	Jahn, Lydia A.	Entomology
	Lancaster, Lennie Y.	Zoology
	McNelly, Walter C.	Zoology
	Manny, Josephine A.	Zoology
	Neiswander, Ralph B.	Entomology
	Scherer, Flora B.	Zoology
	Semans, Frank M.	Zoology
	Swingle, Millard C.	Entomology
Townsend, Grace B.	Zoology	
Waugh, Cloden B.	Zoology	
1929	Barker, Charles A.	Zoology
	Burrell, Charlene M.	Zoology
	Darley, Merrill M.	Entomology
	Fletcher, Fred W.	Entomology
	Hazard, Frank O.	Entomology
	Howland, Joe W.	Zoology
	Johnson, Paul H.	Entomology
	Mason, Horatio C.	Entomology
	Mayer, Charles C. B.	Entomology
	Metz, Barbara	Zoology
	Sleesman, George B.	Entomology
	Squires, William A.	Entomology
Tidd, Wilbur M.	Zoology	
Landis, B.J.	Entomology	
1930	Baker, Mildred Mae	Zoology
	Becton, Edward M., Jr.	Entomology

M.S.

Year	Student	Field
1930	Bigham, John T.	Entomology
	Bowers, Arthur A.	Entomology
	Borrer, Donald J.	Entomology
	Clarke, William H.	Entomology
	Cole, Arthur C., Jr.	Entomology
	Common, Faith	Entomology
	Dietz, Harry F.	Entomology
	Eagleson, Craig W.	Entomology
	McIlhenny, Marian V.	Entomology
	Surrarrer, Thomas B.	Zoology
	Warner, Edward N.	Entomology
	Williams, Isabella R.	Zoology
	Zimmer, Lawrence A.	Entomology
1931	Benard, Ralph M.	Zoology
	Burgess, Emory D.	Entomology
	Davidson, Ralph H.	Entomology
	Foreman, Madeline C.	Zoology
	Franks, Roscoe W.	Zoology
	Haden, William Rau	Entomology
	Haines, Kenneth A.	Entomology
	Haub, James G.	Entomology
	Kenworthy, Harry	Zoology
	Lotze, John C.	Zoology
	McAdow, Clarice Mae	Zoology
	McMillan, William E.	Zoology
	Pepper, Bailey B.	Entomology
	Pyrtle, Ralph N.	Zoology
	Raquet, Violet M.	Zoology
	Rife, David C.	Zoology
	Schaefer, Paul E.	Entomology
	Schwartz, Samuel H.	Zoology
	Seyler, Paul J.	Zoology
	Stanley, John C.	Zoology
	Stanley, William W.	Entomology
	Wolfe, Richard E.	Zoology
	Wortham, Joseph H.	Zoology
Zeisert, E. E.	Entomology	
Zurcher, Esther R.	Zoology	
1932	Anthony, Myron B.	Entomology
	Barrett, John P.	Zoology
	Barr, Eber C.	Entomology
	Brubaker, Ross W.	Entomology
	Cameron, R. Douglas	Zoology
	Cowan, Frank A.	Zoology
	Dean, Ralph W.	Entomology
	Diller, Weldon E.	Entomology

M.S.

Year	Student	Field
1932	Huff, Clayton H.	Entomology
	McFadden, Merle G.	Entomology
	Miller, Albert C.	Entomology
	Mutchmore, William I.	Zoology
	Nettles, W. Carl	Entomology
	Pettay, Fred B.	Zoology
	Rinear, Ruth Veth	Zoology
	Schramm, Mabel M.	Entomology
	Stupka, Arthur	Zoology
	Taylor, Claude R.	Zoology
	Turnbull, Wildlah M.	Zoology
	Venard, Carl E.	Zoology
	Vogel, Matthew A.	Entomology
	Waterman, Frederick A.	Zoology
	Weir, Kenneth J.	Entomology
	Whittington, Forrest B.	Entomology
Zarembski, Sigmund J.	Zoology	
1933	Alden, John S.	Zoology
	Blackburn, Norris D.	Entomology
	Clark, Robert L.	Entomology
	Deafenbaugh, Adaline B.	Zoology
	Grimes, Dillard W.	Entomology
	Guy, Hubert G.	Entomology
	Harris, Clarence S.	Entomology
	Herrick, Arthur	Zoology
	Hyman, Harriet S.	Zoology
	King, Paul E.	Entomology
	Meyer, William G.	Zoology
	Reed, Thomas W.	Entomology
	Ruckman, Paul T.	Entomology
	Seyler, Zelma K.	Zoology
	Steiner, Harold M.	Entomology
Waters, Harold A.	Entomology	
Watts, J. Gordon	Entomology	
Yospur, David H.	Zoology	
1934	Archibald, Kalman D.	Zoology
	Caldwell, John S.	Entomology
	Carpenter, Florence E.	Zoology
	Crandell, Herbert A.	Entomology
	Fletcher, Robert L.	Entomology
	Freshwater, Harold C.	Zoology
	Gates, Herbert A.	Zoology
	Jones, Clyde R.	Entomology
Lee, Benjamin F.	Zoology	



M.S.

Year	Student	Field
1934	Linnell, Mary B.	Zoology
	Martorell, Luis F.	Entomology
	Matsumori, Herbert U.	Entomology
	Reiches, Aaron J.	Zoology
	Schwartz, Jacob	Zoology
	Skinner, Betty Jane	Zoology
	Smeltzer, Mae Jenkins	Zoology
	Trimble, Charles A.	Entomology
	Ullman, Vaughn J.	Entomology
Webb, Joseph E., Jr.	Entomology	
1935	Andrew, Bertha	Zoology
	Ahrens, Carsten	Entomology
	Brainerd, George W.	Zoology
	Clark, Anabel E.	Entomology
	Davidson, D. Franklin	Zoology
	Everly, Ray T.	Entomology
	Morrison, H.E.	Entomology
	Murray, William D.	Entomology
	Pierpont, Virginia	Zoology
	Rostorfer, Howard H.	Zoology
	Roszman, Foster D.	Zoology
	Setterfield, Wilma	Zoology
	Solomon, M.P.	Zoology
Von Dach, Herman	Zoology	
1936	Bailey, Olin Alwood	Zoology
	Baumgartner, Luther L.	Zoology
	Bunner, William P.	Zoology
	Dunham, Donald W.	Zoology
	Flannery, William A.	Zoology
	Gebhart, James W.	Zoology
	Hendershot, William B.	Zoology
	Hood, Charles W.	Entomology
	Horowitz, Martin M.	Zoology
	Katz, Sidney C.	Zoology
	Levin, Clemence	Entomology
	Lockshin, Abraham D.	Zoology
	Meyer, Marvin C.	Zoology
	Olmstead, Josephine	Zoology
	Robinson, Radcliffe F.	Zoology
	Shallhaas, Mark	Zoology
	Stout, Walter M.	Zoology
	Ward, Clifford L.	Entomology
	Wilbur, Karl M.	Zoology
Wolfe, Cleman	Entomology	

M.S.

Year	Student	Field
1937	Ball, Robert C.	Zoology
	Berry, Lawrence A., Jr.	Entomology
	Blair, Charles H.	Entomology
	Boye, Charles L.	Zoology
	Busch, Karl H.	Zoology
	Campbell, Doris McLean	Zoology
	Cotterman, Charles W.	Zoology
	Elsas, Donald H.	Zoology
	Ewart, William H.	Entomology
	Francis, Betty Lee	Zoology
	Huber, Wilmer Brooks	Zoology
	Kornblum, Lucile	Zoology
	Mattingly, Herman E.	Entomology
	Pelton, John Z.	Entomology
	Piper, William R., Jr.	Entomology
Ramsay, Ben P.	Zoology	
Rhoades, Rendell	Zoology	
1933	Boehme, Mary E.	Zoology
	Brancamp, Joseph H.	Zoology
	Cheng, Tien Hsi	Entomology
	Fassig, Walter W.	Entomology
	Franklin, Clair E.	Entomology
	Gleissner, Bruce D.	Entomology
	Gross, Joseph R.	Entomology
	Groves, R. E.	Zoology
	Kincaid, Robert M.	Zoology
	Knisely, Alton William	Zoology
	Marshall, Nelson	Zoology
	Neiswander, Allen C.	Zoology
	Sharp, Mary F.	Entomology
	Walker, James T.	Entomology
	Williams, Helen M.	Zoology
Wilkins, Lawrence A.	Zoology	
1939	Carpenter, Charles	Zoology
	Donaldson, John	Zoology
	Edgerley, Robert H.	Zoology
	Ferguson, William C.	Entomology
	Fluno, John A.	Entomology
	Gleitsman, Louis A.	Zoology
	Headley, A.E.	Entomology
	Hutton, Richard W.	Entomology
	Jenkins, Dale W.	Entomology
	Klick, Katharine	Zoology
	McCormick, Elizabeth M.	Zoology
	McLeod, James Herbert	Entomology

M.S.

Year	Student	Field
1939	Moffett, Robert Leigh	Zoology
	Reed, Elizabeth	Zoology
	Smith, Myron W.	Entomology
	Walters, James M.	Entomology
	Webster, Willis W.	Entomology
	Wene, George P.	Entomology
	Wynkoop, Judson R.	Zoology
1940	Alexander, Clair Cahill	Entomology
	Amstutz, Mary Elizabeth	Entomology
	Atzenhoefer, Daniel R.	Zoology
	Beougher, Judson J.	Entomology
	Bezdek, Francis H.	Zoology
	Chamberlain, Joseph H.	Entomology
	Chamberlain, Joseph J.	Entomology
	Dickinson, Berton C.	Entomology
	Friend, Owen B.	Zoology
	Hofmaster, Richard N.	Entomology
	Hutzel, John M.	Entomology
	Kautz, Lorin G.	Zoology
	Lubin, Morris	Entomology
	Mitchell, Kenneth A.	Zoology
	Mitchell, Robert T.	Entomology
	Newkirk, Maurice R.	Entomology
	Preble, Norman A.	Zoology
	Price, Afton E.	Zoology
	Rings, Roy W.	Entomology
	Runner, Alfred G.	Zoology
Schaefer, Mary E.	Entomology	
Shapins, Seymour	Zoology	
Smith, Charles E.	Zoology	
Sparks, Sue D.	Entomology	
Walther, Rowland F.	Zoology	
1941	Allen, Jack McDowell	Zoology
	Arnold, Clyde H.	Entomology
	Beacher, John H.	Entomology
	Bryden, Robert R.	Zoology
	Clay, Edythe I.	Zoology
	Clum, Dorothy V.	Zoology
	Crall, Howard W.	Zoology
	Cromwell, Howard R.	Zoology
	Dambach, Charles A.	Entomology
	Enke, Joseph W.	Entomology
	Gage, Theodore M.	Entomology
	Gilbert, Irwin H.	Entomology
	Hanan, Blake B.	Entomology

M.S.

Year	Student	Field
1941	Katz, David T.	Zoology
	McCall, George L.	Entomology
	Musgrove, Joseph E.	Zoology
	Page, Charles R., Jr.	Entomology
	Patton, Donald B.	Entomology
	Peffly, Robert L.	Entomology
	Volk, Lloyd E.	Zoology
Warefel, John H.	Zoology	
1942	Allen, Margaret J.	Zoology
	Allen, Roger W.	Entomology
	Boring, William R.	Entomology
	Cullen, Mary Urban	Entomology
	Ellison, Robert Samuel	Zoology
	Haller, Frank Denver	Zoology
	Hendon, Emory V.	Zoology
	Meckler, Eleanor Elizabeth	Zoology
	Strode, Don H.	Zoology
Wollerman, Ed. H., Jr.	Entomology	
1943	Cossaboom, Robert T.	Entomology
	Dustman, Eugene H.	Zoology
	Elliott, Dorothy V.	Zoology
	Hibbs, Edwin T.	Entomology
	Kelly, Sister Thomas Aquin	Zoology
	Mills, Robert H.	Zoology
1944	Hershberger, Ruth Vesta	Entomology
1945	Reichart, Charles V.	Entomology
1946	Abdel-Malek, Albert	Entomology
	Dusi, Julian L.	Zoology
	Edwards, J. Gordon	Entomology
	Fish, William A.	Entomology
	Niswander R. Emerson	Entomology
	Rodriguez, Juan G.	Entomology
	Waites, Robert E.	Entomology
	Wagner, William E.	Entomology
Wilson, M. Curtis	Entomology	
1947	Ahmed, Dhia D.	Entomology
	Beckham, Clifford	Entomology
	Betz, Daniel O.	Entomology
	Camin, Joseph H.	Entomology
	Dresner, Edgar	Entomology
	Good, Ernest Eugene	Entomology

M.S.

Year	Student	Field
1947	Hardy, Mildred Ann	Zoology
	Herron, John Coe	Entomology
	Jessup, Margaret Louise	Zoology
	Johnson, Margaret Kathleen	Zoology
	Lawson, Fred A.	Entomology
	Myser, Willard C.	Entomology
	Norris, Gail R.	Zoology
	Olive, John R.	Zoology
	Ott, Donald James	Entomology
	Patton, John R.	Entomology
	Richardson, Ben Harrison	Entomology
	Riley, Charles V.	Zoology
	Snedeker, Dorris M.	Zoology
	Sproull, Besse McClanahan	Entomology
	Stancu, Ann Grimm	Zoology
	Weaver, Clyde R.	Entomology
	Wilcox, John A.	Entomology
1948	Bean, Patricia Fehlman	Zoology
	Brown, Shirley	Entomology
	Bundy, Roy E.	Zoology
	Chiavetta, Kenneth	Zoology
	Crystal, Maxwell	Entomology
	Garrett, Mary Lois	Zoology
	Gast, Robert T.	Entomology
	Goulding, Robert Lee	Entomology
	Hanna, Ralph B., Jr.	Entomology
	Hanawalt, Donald R.	Zoology
	Long, John F.	Zoology
	Madison, Caroline Rabb	Zoology
	Myers, Theodore B.	Entomology
	Pappas, George D.	Zoology
	Pennock, Charles T.	Zoology
	Primmer, Merl E.	Zoology
	Riley, Charles V.	Zoology
	Rosenberg, Leon T.	Zoology
	Rosenfeld, Richard Taylor	Zoology
	Schultz, Vincent	Zoology
Seubert, John	Zoology	
Summers, James S.	Zoology	
Telford, Paul	Entomology	
Thompson, Robert K.	Entomology	
1949	Banks, William M.	Zoology
	Chao, Yung-Chang	Entomology
	Connin, Richard V.	Entomology
	Ekstract, Leonard S.	Zoology

M.S.

Year	Student	Field
1949	Glass, Gordon	Zoology
	Goldston, Leo S.	Zoology
	Guevara, Jose	Entomology
	Hart, Etta Donajue	Zoology
	Hintz, Howard W.	Entomology
	Hirsh, Jack	Zoology
	Jones, Walter L.	Entomology
	Lawson, William D.	Zoology
	Mead, Frank	Entomology
	Miskimen, Mildred	Zoology
	Reynolds, Daniel J.	Entomology
	Ross, George	Zoology
	Steffan, Alan	Entomology
	Walther, David John	Entomology
	Warvel, Harold	Zoology
	Wessell, Richard D.	Entomology
	Westerskov, Kaj	Zoology
White, Shirley Plummer	Zoology	
1950	Abarca, Miguel	Entomology
	App, Bernard A.	Entomology
	Chacharonis, Peter	Zoology
	Escabi, Luis A.	Zoology
	Ellis, Fay Thelma	Zoology
	Garmus, Ralph	Entomology
	Gerber, Charles	Entomology
	Jones, David L.	Zoology
	Lay, Marie	Zoology
	Ritter, Edward	Zoology
	Ruppel, Robert Frank	Entomology
	Smith, Guyon A.	Entomology
	Subich, Joseph Jr.	Zoology
	White, William John Jr.	Zoology
	Wu, Shiu-Ye	Entomology
	Barnhart, Clyde S.	Entomology
	Duwe, Arthur M.	Zoology
	Formichella, Francis John	Entomology
	Hennacy, Richard A.	Zoology
	Hunt, Daniel Anderson	Zoology
	Kniernim, John Arthur	Entomology
	Lea, Arden O., Jr.	Entomology
	Nagelsen, Margaret Groce	Zoology
	Rolston, Lawrence H.	Entomology
	Sudia, William Daniel	Entomology
	Swinebroad, Jeff	Zoology
	Templin, Norman	Entomology

M.S.

Year	Student	Field
1951	Alexander, Richard Dale	Entomology
	Bolling, Dolores Jenkins	Zoology
	Boush, George Mallary	Entomology
	Clark, Charles Augustus	Zoology
	Cochran, Rilla Waldo	Zoology
	Concannon, Joseph Norris	Zoology
	Cretekos, Lola	Zoology
	Dittman, Iise	Zoology
	Elder, Frederick William, Jr.	Entomology
	Feldmiller, Victor A.	Zoology
	Forsthoefel, Paulinus F.	Zoology
	Ham, George Forrest	Entomology
	Hensel, Jean Leugers	Zoology
	Jackson, Joan Marie	Zoology
	Joy, Samuel John	Zoology
	King, Donald Roy	Entomology
	Kinsel, Raymond Christian	Zoology
	Layne, George W., Jr.	Entomology
	Miller, Robert Dale	Zoology
	Miller, William E.	Entomology
	Moore, Paul Joseph	Zoology
	Oswald, Vernon Harvey	Zoology
	Piersol, William A.	Entomology
	Pitman, W. J.	Zoology
	Ronsheim, Samuel B.	Zoology
	Ruksha, Paul William	Zoology
	Shambaugh, George F.	Entomology
	Sleeper, Elbert L.	Entomology
	Smith, Gordon Lee	Entomology
	Smith, James Franklin	Entomology
	Tyner, Shirley Harvey	Zoology
	Whitesell, Dale E.	Zoology
1952	Andrews, Ralph	Zoology
	Booher, John Bentley	Zoology
	Burrier, Gail Warren	Zoology
	Dowdy, A.C.	Entomology
	Essex, John Reed	Zoology
	Fendinger, George S.	Zoology
	Foote, Benjamin Archer	Entomology
	Gibson, William Andrew	Zoology
	Gray, Martha Jean Gray	Zoology
	Johnson, Warren T.	Entomology
	Kirlin, Dan Lee	Zoology
	Kissen, Abbott T.	Zoology
	Land, Hugh Colman	Zoology
	Lane, John Edward	Entomology

M.S.

Year	Student	Field
1952	Lockard, Dan Hamilton	Entomology
	Ludwig, Paul David, Jr.	Entomology
	Maurer, Margaret A.	Zoology
	McCourt, Robert Perry	Zoology
	Melton, Clarence Bizzell, Jr.	Entomology
	Nevels, Walter B.	Zoology
	Pinschmidt, William C., Jr.	Zoology
	Ruffing, Ervin J.	Zoology
	Triplehorn, Charles Albert	Entomology
Wolf, Robert O.	Zoology	
1953	Ballard, Ralph C.	Entomology
	Beckelheimer, Calvin Edward	Entomology
	Bednarik, Karl E.	Zoology
	Daugherty, David M.	Entomology
	Dunn, Paul Hayden	Entomology
	Ericson, Mildred Vernetta	Entomology
	Frantz, William L.	Zoology
	Gilbert, Carter R.	Zoology
	Holmes, DeField Trollinger	Zoology
	Hrubant, H. Everett	Zoology
	Isert, Justin August	Entomology
	Jeffers, William Aloysius	Entomology
	Kessler, Francis W.	Zoology
	Lee, Charles William	Entomology
	Les, Edwin Paul	Zoology
	Liles, James Neil	Entomology
	Myer, Donal G.	Zoology
	Overton, Louise Flinn	Zoology
	Plapp, Frederick William	Entomology
	Smith, Rodney J.	Zoology
	Stewart, Paul Alva	Zoology
	Sroufe, Stanley A.	Zoology
Treece, Robert Eugene	Entomology	
Trimble, Jimmy R.	Zoology	
Williamson, Gale Erwin	Zoology	
Wong, Ming Ming	Zoology	
1954	Born, Dewey E.	Entomology
	Bowman, James Shepard	Entomology
	Butts, William Lester	Entomology
	Cole, Charles Everett	Entomology
	Daum, Richard Jay	Entomology
	Echelberger, Doyt W.	Zoology
	Hawkins, James Richard	Zoology
	Hunt, Howard L., Jr.	Entomology
Mackey, James Penrose	Zoology	



M.S.

Year	Student	Field
1954	Margroff, Dale	Zoology
	Moser, J.C.	Entomology
	Muhlbach, Walt L.	Zoology
	Ortega, A.C.	Entomology
	Pemberton, Charles	Zoology
	Seabrook, Jeanne A.	Zoology
	Snowden, Parker	Entomology
	Swinebroad, Jean L.	Entomology
	Walker, Thomas J.	Entomology
Wallick, Leonard Stanley	Entomology	
1955	Brooks, Robert Franklin	Entomology
	Coleman, Grant William	Zoology
	Crispens, Charles Gangloff	Zoology
	Dillery, Dean G.	Entomology
	Dondale, Charles D.	Entomology
	Fanary, Yusuf Najib	Entomology
	Goetz, James Conrad	Entomology
	Greider, Marie	Zoology
	Hahnert, William Franklin, Jr.	Entomology
	Mengle, Donald Claude	Entomology
	Parrish, Wayne B.	Zoology
	Patterson, Robert Allen	Entomology
	Pferrer, Magdalene Elizabeth	Entomology
	Pruess, Kenneth Paul	Entomology
	Randall, John Gill	Zoology
	Semones, Vernon Dallas	Zoology
	Shanks, Carl Harmon, Jr.	Entomology
Stevenson, James O.	Entomology	
Whiting, Russell William	Entomology	
Zenisek, Cyril J.	Zoology	
1956	Carson, James D.	Zoology
	Daly, Thomas Francis	Zoology
	Karjcer, Richard F.	Zoology
	King, Charles Crawford	Entomology
	Laub, Kenneth Wilder	Zoology
	MacPherson, Douglas Richard	Entomology
	McGraw, James C.	Zoology
	Moseley, Loren Wilfred	Zoology
	Owens, Mattie Ernestine	Zoology
	Patton, Wendell Keeler	Zoology
	Phinney, George Jay	Zoology
Sagar, Robert Gale	Zoology	
Williams, Russell	Zoology	
1957	Chambers, Derrell Lynn	Entomology

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Year	Student	Field
1957	Graves, Lynn Boyd	Zoology
	Jarvis, James Lawrence	Entomology
	Leedy, Donald J.	Zoology
	Lowe, James Harry	Entomology
	McGraw, James C.	Zoology
	Mount, Donald Irvin	Zoology
	Osborne, Alfred Frank	Entomology
	Shaver, Henry W.	Entomology
	Snyder, Albert Beery	Zoology
Williams, Russell	Zoology	
1958	Bachop, William Earl, Jr.	Zoology
	Barnes, William Wayne	Entomology
	Borrer, Arthur C.	Zoology
	Brass, Charles Lee	Entomology
	Currie, Neva Louise	Entomology
	Drossman, Keith Allen	Zoology
	Fernandez, Roberto	Entomology
	Francois, Donald Davis	Zoology
	Harner, Whitman Holt	Zoology
	Meola, Roger Walker	Entomology
	Murvosh, Chad Michael	Entomology
	Pagniano, Roland Paul	Zoology
	Schneider, Imogene Pauline	Zoology
	Smith, Donald Eugene	Zoology
	Stanfield, Norma Jean	Entomology
	Stevens, Vernon Cecil	Zoology
Tesmer, Charlise Ann	Zoology	
1959	Brungs, William Aloysius, Jr.	Zoology
	Gilbert, William M.	Entomology
	Gingrich, Richard Earl	Entomology
	Graves, Stephen Raymond	Zoology
	Huber, James Joseph	Zoology
	Huque, Heshmul	Entomology
	Shields, Robert James	Zoology
	Snyder, Donald	Zoology
	Stockdale, Thomas Michael	Zoology
	Weber, Carolyn Jane	Zoology
	White, Richard Earl	Entomology
Wolfe, Stephen Landis	Zoology	
1960	Appleby, James Elson	Entomology
	Artigas, Jorge	Entomology
	Baird, Sister Thomas More	Zoology
	Carlson, James Harry	Zoology
	DeSylva, Damayanthi Hemamali	Zoology

M.S.

Year	Student	Field
1960	Ernest, Jeannette Ruth	Zoology
	Estioko, Bienvenido Rasario	Entomology
	France, Henry Lawton	Entomology
	Freytag, Paul Harold	Entomology
	Gulish, Eugene Frank	Zoology
	Hanson, Charles Littleton	Zoology
	Hazard, Edwin Irwin	Entomology
	Hitt, John Burton	Zoology
	Kennedy, Bruce Hamilton	Entomology
	Kunkel, Allan Burt	Entomology
	Marzluf, George Austin	Zoology
	Miller, Jack Bernard	Zoology
	Pfieger, William Leo	Zoology
	Roth, Robert Earl	Zoology
Wydallis, Elizabeth Ann	Zoology	
1961	Barbush, Raymond John	Zoology
	Bear, Lois Irene	Zoology
	Brown, Edward Herriott	Zoology
	Byers, Robert Allan	Entomology
	Donohoe, Robert White	Zoology
	Dunegan, Bertrand Howard	Zoology
	Gillespie, David Miller	Zoology
	Kelly, George Martin	Entomology
	Meola, Shirlee May	Zoology
	Miller, Henry Keith	Entomology
	Skavaril, Russell Vinceth	Zoology
	Terranova, Andrew Charles	Entomology
	Thornborough, John Randle	Zoology
	Wentker, Carroll Joseph	Entomology
Yeatts, Virginia Dare	Zoology	
Zilka, William Anthony	Zoology	
1962	Albrecht, Carl William, Jr.	Zoology
	Barger, Jack H.	Entomology
	Bartholomew, Alvin Ray	Zoology
	Edwards, William Robert	Zoology
	Engel, Ronald Allan	Zoology
	Gibson, Lester Paul	Entomology
	Kappus, Karl Daniel	Entomology
	Kelso, Anne Gardner	Zoology
	Kolson, Richard Arthur	Zoology
	Lyon, William Francis	Entomology
	McClanahan, Charlene	Zoology
	Mikolaj, Peter Joseph	Zoology
	Secoy, Diane Marie	Zoology
	Soehngen, Ulf	Entomology

M.S.

Year	Student	Field
1962	St. Pierre, Ronald Leslie	Zoology
	Thomson, Dale Stirling	Zoology
	Thorpe, Darwin Ralph	Zoology
	Tissot, Robert Glen	Zoology
	Yuhas, Joseph George	Zoology
1963	Adalis, Dorothy	Zoology
	Bird, Nancy Thornton	Zoology
	Brooks, Gretchen Terhune	Zoology-Entomology
	Cannon, Stephanie Swartzel	Zoology
	Davies, William Donald	Zoology
	Deck, James Emerson	Zoology
	Kennedy, Manert Howard	Zoology
	Kuntzman, Andrew Jacob	Zoology
	McLean, Edward Bruce	Zoology
	Meeks, Robert Leon	Zoology
	Munzinger, John Stephen	Zoology
	Norbert, Arthur Harold	Zoology
	Rambo, Thomas Clough	Zoology
	Smith, John Milton	Zoology
	Spory, Gerhard Reiner	Zoology
	Stein, Carol B.	Zoology
Swarts, William Paul	Zoology	
Van Meter, Jerry Robert	Zoology	
1964	Addis, James Theodore	Zoology
	Burnard, Roger Keith	Zoology
	Burns, Denver Peeper	Entomology
	Condit, John Milton	Zoology
	Devine, Terry Lee	Zoology
	Durdow, William Harry	Zoology
	Ewert, Mary Ann	Zoology
	Guptavani, Pensri	Zoology
	Hamilton, Robert Wilson	Entomology
	Hanks, Jeanne Boyle	Zoology
	Hetherington, Martin Thomson	Zoology
	Hink, Walter Fredric, Jr.	Entomology
	Horwath, Ann Benning	Entomology
	Mourer, Sharon LaVonne	Zoology
	Murray, Robert Charles	Zoology
	Palmquist, Jeanette Elsie	Zoology
	Petit, Gedeon Daniel	Zoology
	Thatcher, Thomas Orlo	Zoology
	Thompson, Donald Wayne	Wildlife
Thompson, Elizabeth McBride	Zoology	
Vila-Pinto, Irma	Zoology	

M.S.

Year	Student	Field
1965	Ackerman, Edith Louise	Zoology
	Bandy, LeRoy Wilson	Wildlife
	Barnes, James Norris	Zoology
	Burkholder, Timothy Jay	Entomology
	Miller, Thomas Anthony	Entomology
	Nauman, Lyle Edward	Zoology
	Niederhuber, Sally Guttormsen	Zoology
	Richard, David Irving	Zoology
	Robinson, Edsel Dale	Zoology
	Rose, Robert Ingersoll	Entomology
	Russell, Kenneth Robert	Wildlife
	Scurry, Henry Lewis	Zoology
	Tripp, John Rathbone	Zoology
1966	Anderson, Barbara Estel	Zoology
	Booth, Betty Lou	Zoology
	Bruce, William Alvin	Entomology
	Cali, Ann	Entomology
	Clay, Mary Ellen	Entomology
	Bruce, William Alvin	Entomology
	Davidson, Joseph Lynn	Entomology
	Ebersole, Lynn A.	Genetics
	Emery, Elinor Elizabeth	Zoology
	Emery, Richard M.	Zoology
	Engel, Helen B.	Genetics
	Guenther, Albert W.	Entomology
	James, Thomas Emrys, Jr.	Zoology
	May, Bruce	Zoology
	Reeves, Carol McKechnie	Entomology
	Shew, Richard Lee	Zoology
	Slack, Richard Douglas	Zoology
	Smith, Kenneth B.	Zoology
	Stevenson, Frederick	Zoology
	Stewart, Joseph B.	Entomology
	Turner, David V.	Zoology
	Waters, Victoria Louise	Zoology
Webster, Edward Joseph	Zoology	
Whitacre, David M.	Entomology	
Williams, Jon Loel	Entomology	
1967	Angerer, Lynne Musgrave	Zoology
	Bastian, Christopher Walker	Zoology
	Birch, Thomas Joseph	Zoology
	Gelpe, Marcia Rehmar	Genetics
	Greegor, David Haynie, Jr.	Zoology
	Henry, Dale Bryce	Zoology
Jezerinac, Raymond Felix	Zoology	

M.S.

<u>Year</u>	<u>Student</u>	<u>Field</u>
1967	Leach, Lester Irvan	Zoology
	Martin, Richard Lee	Zoology
	Mickel, Cynthia Cornell	Zoology
	Nehman, Barbara Feinberg	Zoology
	Parker, Richard O.	Zoology
	Radabaugh, Dennis C.	Zoology
	Rimbey, Marilyn Helfrich	Zoology
	West, Elizabeth Jeanne	Entomology
Zapotosky, John Edward	Zoology	
1968	Bailey, Theodore Nicholas	Zoology
	Barefield, Kaye Porter	Entomology
	Bowers, Allan Lloyd	Zoology
	Colbaugh, Penelope Rush	Zoology
	Dimmitt, William Albert	Entomology
	Harker, George Randall	Zoology
	Harlan, Harold Jonathan	Entomology
	Holoman, Verna LaVerne	Zoology
	Lindsay, Kay Chaffey	Entomology
	Moore, Nelson Jay	Zoology
	Oleksiak, Lawrence Charles	Zoology
	Olson, Daniel Chris	Entomology
	Ramirez, Jorge Rojas	Zoology
	Reese, John William	Entomology
	Rinderer, Thomas Earl	Entomology
	Song, Chung Min	Zoology
	Taylor, Stephen Victor	Zoology
	Tucker, Thomas Robert	Zoology
Urban, David	Zoology	
Vendeland, Carla Bauer	Zoology	

Ph.D's in Zoology and Entomology

Year	Student	Field
1890	Weed, Clarence M.	Entomology
1904	Cook, Melville T.	Entomology
1907	Ball, Elmer D.	Entomology
1915	Parker, J.B.	Entomology
1916	Cogan, Eric S.E.	Entomology
1918	Fenton, Frederick A.	Entomology
1921	Drake, Carl J.	Entomology
1922	Balduf, Walter V. DeLong, Dwight M. Dozier, Herbert L. Huber, Lawrence L. Spencer, Herbert	Entomology Entomology Entomology Entomology Entomology
1923	Bangham, Ralph V. Guyton, Thomas L. Hartzell, Albert Kraatz, Walter C. Lathrop, Frank H. Naude, Theunis J. Potgieter, Johannes T.	Zoology Entomology Entomology Entomology Entomology Entomology Entomology
1924	Bilsing, Sherman W. Bulger, Jacob W.	Entomology Entomology
1925	Caskey, Marion W. Cutright, Clifford R. Hough, Walter S. Larrimer, Walter H. Miller, August E. Weigel, Charles A.	Zoology Entomology Entomology Entomology Entomology Entomology
1926	Allen, Harold W. Neiswander, Claud Rever Painter, Reginald H. Poos, Frederick W.	Entomology Entomology Entomology Entomology
1927	Watson, Sheppard A.	Entomology
1928	Conrad, Mary E.	Zoology

Ph.D's

Year	Student	Field
1928	Edwards, Linden F.	Zoology
	Fletcher, Robert K.	Entomology
	Hamlin, John C.	Entomology
	Howard, Neale F.	Entomology
	Miller, David F.	Zoology
	Miller, Ralph L.	Entomology
	Riley, H. H.	Zoology
	Mote, Don C.	Entomology
	Olson, Henry W.	Zoology
	Schoene, William J.	Entomology
	Stearns, Louis A.	Entomology
Walker, Mary E.	Zoology	
1929	Eddy, Clifford O.	Entomology
	Elliott, Frank R.	Zoology
	Ewers, Lela A.	Zoology
	Hefner, Robert A.	Zoology
	Langford, George S.	Entomology
	Mack, Jas. B.	Zoology
	Sleesman, Jay P.	Entomology
	Smith, Floyd F.	Entomology
Spencer, Warren P.	Zoology	
1930	Cecil, Rodney	Entomology
	Dunham, Winston E.	Entomology
	Gambrell, Foster L.	Entomology
	Geist, Robert M.	Entomology
	King, Joseph L.	Entomology
	Polivka, Joseph B.	Entomology
	Price, John W.	Zoology
Walker, Harry G.	Entomology	
1931	Dietz, Harry F.	Entomology
	Eckert, John E.	Entomology
	Filinger, George A.	Entomology
	Howland, Joe W.	Zoology
	Kelsheimer, Eugene G.	Entomology
	Lancaster, L. Y.	Zoology
	Osborn, Herbert T.	Entomology
Tissot, Archie N.	Entomology	
1932	Bishopp, Fred O.	Entomology
	Breakey, Edward P.	Entomology
	Eagelson, Craig W.	Entomology
	Furtos, Norma C.	Zoology
	Knowlton, George F.	Entomology



Ph.D's

Year	Student	Field
1932	McCormick, Robert N.	Zoology
	Miller, John A.	Zoology
	Gui, Harry L.	Entomology
	Jahn, Lydia A.	Zoology
	Tinkle, William J.	Zoology
1933	Auten, Mary (Mrs. Trautman)	Entomology
	Cole, Arthur C., Jr.	Entomology
	Harries, Ford H.	Entomology
	Heizer, E. E.	Zoology
	Merino, Gonzalo	Entomology
	Rife, David C.	Zoology
	Semans, Frank M.	Zoology
Wakeland, Claud C.	Entomology	
1934	Bess, Henry A.	Entomology
	Bromley, Stanley W.	Entomology
	Johnson, Dorothy M.	Entomology
	Letze, John C.	Zoology
	Neiswander, Ralph B.	Entomology
	Rogick, Mary D.	Zoology
1935	Anthony, Myron V.	Entomology
	Borrer, Donald J.	Entomology
	Creighton, John T.	Entomology
	Davidson, Ralph H.	Entomology
	Langlois, T.H.	Zoology
	Miller, Joseph N.	Zoology
	Waters, Harold A.	Entomology
1936	Hyman, Harriet S. (Mrs. Parker)	Zoology
	Morgan, George D.	Zoology
	Schaefer, Paul E.	Entomology
	Waterman, F.A.	Zoology
1937	Hammond, John C.	Zoology
	Abbott, Cyril E.	Entomology
	Brainerd, George W.	Zoology
	Cox, James A.	Entomology
	Crandall, Herbert A.	Entomology
	Dennis, Clyde A.	Entomology
	Grimm, Wilbur W.	Zoology
	Hazard, Frank O.	Zoology
	Haub, James G.	Entomology
	Rice, Paul L.	Entomology
	Tidd, Wilbur M.	Zoology

Ph.D's

Year	Student	Field
1938	Caldwell, John S.	Entomology
	Chapman, Floyd B.	Zoology
1939	Boesel, Marion W.	Entomology
	Cheng, Tien-Hsi	Entomology
	Dean, Ralph W.	Entomology
	Marshall, Anne C.	Entomology
	Parker, Barbara M.	Entomology
	Smith, Clyde F.	Entomology
	Von Dach, Herman	Zoology
	Whittington, Forrest B.	Entomology
	Woodbury, Elton N.	Entomology
Worthley, Harlan N.	Entomology	
1940	Baumgartner, B.S., M.A.	Zoology
	Busch, Karl H.	Zoology
	Cotterman, Charles W.	Zoology
	Crowell, Hamblin H.	Entomology
	Leedy, Daniel L.	Zoology
	Meehean, Otis L.	Zoology
	Plummer, Charles C.	Entomology
	Rostorfer, Howard H.	Zoology
	Seyler, Paul J.	Zoology
Warner, Edward N.	Zoology	
1941	Anderson, Lauren D.	Entomology
	Boye, Charles L.	Zoology
	Conklin, James G.	Entomology
	Dunham, Donald W.	Zoology
	Ferguson, George R.	Entomology
	Huffaker, Carl B.	Entomology
	Markos, Basil G.	Entomology
Marshall, George E.	Entomology	
Wright, Mike	Entomology	
1942	Blickle, Robert L.	Entomology
	Coon, Beckford F.	Entomology
	Dickinson, Berton C.	Entomology
	Edgerley, Robert H.	Zoology
	Hutzel, John M.	Entomology
	Kloepfer, H.	Zoology
	Meadows, Charles M.	Entomology
Preble, Norman A.	Zoology	
1943	Glass, Edward H.	Entomology
	Gleissner, Bruce D.	Entomology
	Martorell-Davila, Luis F.	Entomology

Ph.D's

Year	Student	Field
1943	Swisher, Ely M.	Entomology
1944	Addair, John	Zoology
	Blackburn, Norris D.	Entomology
	Gibson, Walter W.	Zoology
	Groves, Reuben E.	Zoology
	Strandtmann, Russell W.	Entomology
1945	Brown, Harley P.	Zoology
	Dambach, Charles A.	Entomology
	Dodge, Harold R.	Entomology
	Owsley, William B.	Entomology
	West, Fenton T.	Entomology
1946	Bucher, Gordon E.	Entomology
	Halperin, Sidney L.	Zoology
	Newkirk, Maurice	Entomology
	Rings, Roy	Entomology
1947	Jenkins, Dale W.	Entomology
	McDonald, Howard	Entomology
	Reichart, Charles V.	Entomology
	Roth, Louis M.	Entomology
	Snyder, Everett G.	Entomology
	Willis, Edwin Roy	Entomology
1948	Abdel-Malek, Albert	Entomology
	Fish, William A.	Entomology
	Hofmaster, Richard Namon	Entomology
	McCall, George L.	Entomology
	Petrides, George	Zoology
	Woolley, Tyler A.	Entomology
1949	Ahmed, Dhia D.	Entomology
	Dresner, Edgar	Entomology
	Dusi, Julian	Zoology
	Dustman, Eugene	Zoology
	Edwards, J. Gordon	Entomology
	Lawson, Fred A.	Entomology
	Olive, John	Zoology
	Rodriguez, Juan G.	Entomology
	Schull, William	Zoology
	Schultz, Vincent	Zoology
	Ting, Hanpo Paul	Zoology
	Waites, Robert E.	Entomology
	Webb, Lloyd	Zoology
	Wollerman, Edward	Entomology

Ph.D's

Year	Student	Field
1950	Camin, J.G.	Entomology
	Hibbs, Edwin T.	Entomology
	Niswander, R. Emerson	Entomology
	Smith, Howard W.	Entomology
	Smith, Owen J.	Entomology
	Thompson, Robert K.	Entomology
	Weaver, C. Richard	Entomology
1951	Beckham, Clifford Myron	Entomology
	Biesinger, Dorothy I.	Zoology
	Gerberich, John Barnes	Entomology
	Harris, Clarence S.	Entomology
	Henning, Willard Loren	Zoology
	Herron, John Coe	Entomology
	Hetrick, Lawrence Andrew, Jr.	Entomology
	Hill, Clarence H.	Entomology
	Johnson, Carl S.	Zoology
	Long, Russell J.	Zoology
	Mizell, Floyd Monroe	Entomology
	Norris, Gail Royal	Zoology
Wessel, Richard Deaton	Entomology	
1952	Chamberlain, Joseph J.	Entomology
	Chao, Yung Change	Entomology
	Edmunds, Lafe	Entomology
	Good, Eugene	Zoology
	Hanan, Blake B.	Entomology
	Hintz, Howard W.	Entomology
	King, Donald R.	Entomology
	Madison, Carolyn Rabb	Zoology
	Miskimen, Mildred	Zoology
	Myser, Willard C.	Entomology
	Pappas, George D.	Zoology
	Reese, Carl Richard	Zoology
	Riley, Charles	Zoology
Ruppel, Robert F.	Entomology	
1953	App, Bernard Auman	Entomology
	Banks, William M.	Zoology
	Chovnick, Arthur	Zoology
	Duwe, Arthur E.	Zoology
	Forsthoefel, Paulinus F.	Zoology
	Glenny, Fred H.	Zoology
	Ritter, Edward	Zoology
	Roddy, Leon Raymon	Entomology
	Rudinsky, Julius A.	Entomology
	Shambaugh, George F.	Entomology

Ph. D's

Year	Student	Field
1953	Weems, Howard Vincent, Jr.	Entomology
	Yoon, Chai H.	Zoology
1954	Archibald, Kalman Dale	Entomology
	Barish, Natalie	Zoology
	Brakel, William J.	Zoology
	Chacharonis, Peter	Zoology
	Dowdy, Alfred C.	Entomology
	Foster, J.R.	Entomology
	Giltz, Maurice L.	Zoology
	Honeyman, Merton S.	Zoology
	Ludwig, Paul D.	Entomology
	McCourt, Robert P.	Zoology
Peffly, Robert Luther	Entomology	
Stamper, Maynard N.	Zoology	
1955	Boush, George Mallory	Entomology
	Champlain, Robert Allison	Entomology
	Goulding, Robert Lee	Entomology
	Huffman, Edward W.	Entomology
	Knierim, John A.	Entomology
	Miller, William E.	Entomology
Rolston, Lawrence Hubert	Entomology	
1956	Alexander, Richard Dale	Entomology
	Arthur, Alfred Pibus	Entomology
	Carrick, Louis Burrell	Zoology
	Crites, John Lee	Zoology
	Kissen, Abbott Theodore	Zoology
	Liles, James Neil	Entomology
	Maldonado-Capriles, Jenaro	Entomology
	Negus, Norman Curtis	Zoology
	Oswald, Vernon H.	Zoology
	Seubert, John Lyman	Zoology
	Sleeper, Elbert L.	Entomology
Swinebroad, Jeff	Zoology	
Watts, J.G.	Entomology	
1957	Burcham, Elden Glenn	Entomology
	Buxton, Jay A.	Entomology
	Crowell, Robert Merrill	Zoology
	Dimond, John Barnet	Entomology
	Franklin, Beryl Cletis	Zoology
	Frantz, William L.	Zoology
	Gallati, Walter William	Zoology
	Guevara, Jose Calderon	Entomology
Hrubant, H. Everett	Zoology	

Ph.D's

Year	Student	Field
1957	Hull, George, Jr.	Entomology
	LaBrecque, Germain Claude	Entomology
	Lea, Arden O., Jr.	Entomology
	Patterson, Robert Allen	Entomology
	Pruess, Kenneth Paul	Entomology
	Riley, George Bernard	Entomology
	Stewart, Paul Alva	Zoology
	Taylor, Claude Randolph	Zoology
	Walker, Thomas Jefferson	Entomology
Winner, Robert William	Zoology	
1958	Barnhart, Clyde Sterling	Entomology
	Guthrie, Wilbur Dean	Entomology
	Holmes, DeField Trollinger	Entomology
	Kira, Mohamed Tahir	Entomology
	Lambremont, Edward Nelson	Entomology
	Myer, Donal Gene	Zoology
	Myers, Theodore Blow	Entomology
	O'Connor, Charles Timothy	Entomology
	Parrish, Wayne B.	Zoology
Stroufe, Stanley Alexander	Zoology	
Sudia, William Daniel	Entomology	
1959	Graves, Lynn Boyd	Zoology
	Donley, David Edward	Entomology
	Kalkat, Gurcham Singh	Entomology
	Kessler, Francis William	Zoology
	Les, Edwin Paul	Zoology
	Normandin, Robert Fortunat	Zoology
1960	Ashrafi, Shahid Husain	Entomology
	Batth, Surat Singh	Entomology
	Delfin, Eliseo Dais	Entomology
	Forbes, Robert Shirley	Entomology
	Gorham, John Richard	Entomology
	Greider, Marie Helen	Zoology
	Jones, Joseph, Jr.	Zoology
	Jones, Walter LaRue	Entomology
	Mount, Donald Irvin	Zoology
	Murvosh, Chad Michael	Entomology
	Ortega-Corona, Alejandro	Entomology
Rhoades, Clarence Rendell	Zoology	
Stansbery, David H.	Zoology	
1961	Currie, Neva Louise	Entomology
	Daugherty, Patricia Ann	Zoology
	Dillery, Dean George	Zoology

Ph.D's

Year	Student	Field
1961	Embree, Douglas Gordon	Entomology
	Gingrich, Richard Earl	Entomology
	King, Charles Crawford	Entomology
	Tullis, James Earl	Zoology
	Williams, Robert Ellis	Entomology
	Wolfenbarger, Dan	Entomology
1962	Augustine, Mithra Gandham	Entomology
	Dawson, Wallace Douglas	Zoology
	Graff, George Portsmouth	Zoology
	Hubschman, Jerry Henry	Zoology
	Kosztarab, Michael	Entomology
	Sechriest, Ralph Earl	Entomology
	Shields, Robert James	Zoology
	Smith, Donald Eugene	Zoology
	Stevens, Vernon Cecil	Zoology
	Welker, George William	Zoology
1963	Bachop, William Earl	Zoology
	Brungs, William Aloysius	Zoology
	Cannon, William Nelson	Entomology
	Carlson, James Harry	Zoology
	Craft, Thomas Jacob	Zoology
	Freytag, Paul Harold	Entomology
	Hanselman, David Lee	Zoology
	Huber, James Joseph	Zoology
	Julyan, Frederick John	Zoology
	* Kanungo, Kalpataru	Zoology
	Lane, John Edward	Entomology
	Meola, Roger Walker	Entomology
	Snyder, Donald Benjamin	Zoology
	White, Richard Earl	Entomology
	Williams, Russell Raymond	Zoology
Zenisek, Cyril James	Zoology	
1964	Appleby, James Elson	Entomology
	Barnes, William Wayne	Entomology
	Blair, Billie Davis	Entomology
	Butts, William Lester	Entomology
	Crowl, Robert Harold	Zoology
	Fabian, Michael William	Zoology
	Giles, Robert Hayes	Zoology
	Kappus, Karl Daniel	Entomology
	Rao, Balakrishna Raghavendra	Entomology
	Romoser, William Sherburne	Entomology
	Skavaril, Russell Vincent	Zoology
	Yates, Harry Orbell, III	Entomology

Ph. D's

Year	Student	Field
1965	Ball, Wilfred Randolph	Zoology
	Cibula, Adam Burt	Entomology
	Daniel, Paul Mason	Zoology
	Deema, Prayoon	Entomology
	Franks, Edwin Clark	Zoology
	Johnston, Donald Earl	Entomology
	Maxwell, George Ralph	Zoology
	Phelps, Harriette Longacre	Zoology
	Terranova, Andrew Charles	Entomology
Thomson, Dale Stirling	Zoology	
1966	Aubele, Audrey Marie	Zoology
	Brooks, Gretchen Terhune	Zoology
	Engel, Ronald A.	Zoology
	Hink, Walter Frederic, Jr.	Entomology
	Meeks, Robert Leon	Wildlife
	Pensri, Guptavanij	Entomology
	Reeves, Eldon L.	Entomology
Wright, James Elbert	Entomology	
1967	Artigas, Jorge Narcisco	Entomology
	Balding, Terry Allen	Zoology
	Burns, Denver Peeper	Entomology
	Deal, Andrew Stuart	Entomology
	Dindal, Daniel L.	Wildlife
	Guram, Malkiat S.	Entomology
	Miller, Thomas Anthony	Entomology
	Peacock, John William	Entomology
	Phinney, George J.	Zoology
	Rambo, Thomas Clough	Zoology
Wilson, William Thomas	Entomology	
1968	Carey, Walter Emmitt	Zoology
	Dolphin, Warren Dean	Zoology
	Gray, Faith Harriet	Entomology
	Lutes, Charlene McClanahan	Zoology
	McGraw, James Carmichael	Zoology
	McLean, Edward Bruce	Zoology
	Morgan, Fred Durward	Zoology
	Richard, David Irving	Zoology
	Skoch, Edwin James	Zoology
	Wright, Rebecca Hayworth	Zoology
	Yokley, Paul Jr.	Zoology



The Ohio Academy of Science

The Ohio Academy of Science was formally organized by a group of scientists, predominantly Biologists and Geologists, at an organizational meeting held at Columbus, on December 31, 1891. Dr. David Kellicott was one of the prime motivators of the formation of the Academy and served as vice president in 1893 and president in 1895. This should properly be considered as a partial development from the Department of Zoology and Entomology.

One of the first projects was to sponsor a series of annual field meetings. These were held each year from 1892 to 1901. The last one was in 1905 after a brief interval.

The first field trip was held at Akron on June 3 and 4, 1892. The second was at Logan, in Hocking County on June 2 and 3, 1893. On June 1 and 2, 1894 the field trip was at Denison University. In early July, 1895 they met at Sandusky in conjunction with the Ohio Teaching Association. The Ohio Academy met jointly with the Indiana Academy of Science at Oxford, in June of 1896. The sixth annual field trip in 1897 was at Brinkhaven and Gambier, sponsored by Kenyon College. In 1898 they met at Dayton. The summer meeting in 1899 was held at Columbus, Ohio as a part of the meetings of the American Association for the Advancement of Science.

The ninth summer meeting was held at Put-in-Bay on South Bass Island in connection with the Ohio Teachers Association.

The last regular field meeting was held at Wooster in June 1901. A final field trip was at the Lake Laboratory at Cedar Point, July 5 to 8, 1905. A meeting of the American Microscopic Society was held at "The Breakers" at Cedar Point at the same time.

According to the constitution proposed and adopted at the first meeting of the Academy, the name agreed upon for the new organization was "The Ohio State Academy of Science". The word "State" was dropped in 1914 and it has since been known as the Ohio Academy of Science. In 1908 there were only two sections, designated as Biology and Geology. In 1909 the Biology section was divided into Botany, later changed to Plant Sciences, and Zoology. In 1912 a section on physics was added. This was later changed to Physical Sciences and further changed to Physics and Astronomy. In 1917 a section on Anatomy and Physiology was formed, later changed to Medical Sciences. In 1919 a section on Psychology was approved. A section on Geography was formed in 1932, a section on chemistry in 1933, a section on mathematics in 1938 and a Junior Academy was formed in 1940. Four other sections have more recently been added, namely, Science Education, Conservation, Genetics, and Sociology and Anthropology.

Scientific and Professional membership has increased to more than 2000. There are now 123 corporation and institutional memberships.

The executive duties of the secretary were performed by some professional member with what time he could devote to the Academy until 1960 when a full time executive secretary was secured. Mr. Kenneth B. Hobbs served in this capacity in 1960-61 and Mr. John H. Melvin has been the efficient Executive Secretary since 1961. The Battelle Memorial Institute has kindly furnished office space for the Ohio Academy of Sciences since 1960.

#### The Junior Academy of Science

For several years the Ohio Academy had been attempting to gain the interest of High School Teachers in promoting the study of science in their classes. As

a result the Junior Academy of Science was organized in 1940 and a series of papers were presented by high school students. Dr. C. G. Shatzer had attempted to arouse such interest prior to this date but had given up in despair. Dr. C. W. Jarvis was placed in charge in 1939 and he had stimulated a definite response as indicated above. Then the period of the second World War prevented even the Ohio Academy of Science from proceeding with its annual meetings. After the war period in 1947 Dr. Frederick Kreckler was appointed as Director of the Junior Academy and he furnished the stimulus and energy to promote this work even beyond expectations. The first Annual Science Day for the Junior Academy under the new plan of operation, where students displayed demonstrations of their project work, was held on April 22, 1949 at Denison University. Participation of grade and high school students increased rapidly and in 1966 had reached 4,434, from which number a total of 877 students selected from 233 schools took part in the Science Day Program. Dr. R. E. McKay succeeded Dr. Kreckler as Director in 1953 and Professor G. G. Acker succeeded Dr. McKay in 1958 and is still (1969) contributing outstanding leadership to this program. At the Annual meetings in 1960 Professor Acker presented a Distinguished Service Citation to Dr. Kreckler for his "eminent service in reviving and guiding the Program of the Junior Division".

In 1948 a section on Science Education was organized for science teachers.

Eleven Frederick H. Kreckler Awards, sponsored jointly by the Academy and Battelle Memorial Institute, each carrying a cash stipend of \$150.00 are presented annually to schools in each of the eleven districts which produce the outstanding "Science Day" students. Also eleven certificates of merit are awarded annually to eleven high school science teachers who are judged to be outstanding.

From 1895 to 1969 five members of the Department of Zoology and Entomology have served as president of the Ohio Academy of Science, they are David S. Kellicott in 1895, Herbert Osborn 1905, Raymond C. Osburn 1922, James S. Hine 1929 and Dwight M. DeLong in 1959.

Fifteen members of the Department have served as vice president of section A-Zoology, namely D. S. Kellicott 1893, F. L. Landacre 1916, F. H. Kreckler 1921, W. M. Barrows 1924, C.H. Kennedy 1926, D. M. DeLong 1930, W. J. Kostir 1931, D. F. Miller 1936, J. W. Price 1940, Alvah Peterson 1954, J. A. Miller 1955, T. H. Langlois 1956, D. J. Borrer 1960, L. S. Putnam 1961, and D. H. Stansbery 1965.

#### The Ohio Naturalist and The Ohio Journal of Science

When the Ohio Academy of Science was organized in 1892 the members desired a source of publication for their scientific manuscripts. The committee on publications selected the technical series of publications of the Ohio Agricultural Experiment Station and the Journal of the Cincinnati Society of Natural History as the official publication organs of the Ohio Academy of Science until an official organ of their own was established.

Several bulletins on Ohio Fauna and Flora were published in the early years of the Academy (1893-1900) in the Annual Reports.

The Ohio State University Naturalist was founded in November 1900 by the Biology Club of the Ohio State University. This was published as a monthly journal and was financed by society dues and by popular subscription. The name was changed to the Ohio Naturalist in 1901.

The Ohio Naturalist was officially adopted by the Ohio Academy of Science and was renamed the Ohio Journal of Science in 1915 in order to include

manuscripts in all fields of science. It was sponsored by the Ohio State University Scientific Society.

In 1931, by recommendation of a special committee on Relation of the Ohio Academy of Science to the Ohio Journal of Science, and subsequent action of the Board of Trustees of the Ohio State University, it was agreed that "The Ohio Journal of Science shall be published jointly by the Ohio State University and the Ohio Academy of Science under a joint administrative board as was recommended by the Academy at its April meeting and as was voted by the trustees of Ohio State University in their meeting of May 1931".

Under this arrangement the University receives many copies which can be used in exchange for other Scientific Journals. At this time (1969) the University is contributing \$3000.00 annually toward the publication costs.

Biologists have edited the Ohio Naturalist and the Ohio Journal of Science since its first issue in 1900 to 1964. The present Editor, Dr. Jane Forsyth is a geologist. Of the ten editors, six have been from Zoology and Entomology and are, Frederick Kreckler 1917-29; Herbert Osborn 1930-32; Lawrence H. Snyder 1933-35; Earl L. Green 1950-52; Henry Plaine 1956-61; and David H. Stansbury 1962-64.

#### The Ohio Biological Survey

The Ohio Biological Survey is an inter-institutional organization formed by a group of biologists from the Ohio Academy of Science. The first organization meeting was May 28, 1911 and the Survey was formally organized on February 1, 1912. The Board of Trustees approved the organization of the Ohio Biological Survey on May 28, 1912. Ten Ohio Institutions were members of the original organization, they were Baldwin Wallace University, Buchtel College

(University of Akron), Cincinnati Society of Natural History, Denison University, Kenyon College, Miami University, Oberlin College, Ohio State University, Ohio Wesleyan University, and Wittenberg College.

The original objectives of the survey were "To secure accurate and detailed information as to the occurrence, distribution and ecology of the animals and plants of Ohio for the benefit of the people in general and particularly for those engaged in school instruction, and to collect, identify, and distribute material that may be of service in educational work".

Membership was open to all members of the Ohio Academy of Science, and an institutional fee of \$25.00 was established for each College or University, regardless of the number of Survey members from any institution. In addition, the Ohio general assembly appropriated \$2,500.00 in 1913 to assist the Biological Survey budget during 1913-1914.

Professor Herbert Osborn was elected to serve as Director and remained in this capacity for more than 44 years, until the time of his death in 1954. He also assumed the duties of editor and chairman of the executive committee.

Eight volumes comprising 43 bulletins were published in the first series of Bulletins of the Ohio Biological Survey from 1913 to 1954.

In 1953, ten institutions had paid the \$25.00 membership fee and the original \$2500.00 annual appropriation had dwindled to \$1500.00 by a succession of budget cuts. Furthermore the original interest and enthusiasm had not been maintained. In 1943 Professor Osborn appointed Dwight M. DeLong to serve as Associate Director, who at the time of Professor Osborn's death was designated as the Acting Director.

Soon after the death of Professor Osborn, the Acting Director called a

Meeting of the representatives of the member institutions and discussed with them the possibility of either revitalizing the Survey or discontinuing the organization. The sentiment for continuing was somewhat divided but a spark of life remained and this was gently fanned by a few optimistic members, because of the potential possibilities of such an organization. As a result a meeting was called, of representatives from the Ohio Colleges who might be interested, at Wittenberg College in conjunction with the annual meeting of the Ohio Academy of Science on April 19, 1956.

The Institute of Natural Resources had just been organized at the Ohio State University and Dr. Charles A. Dambach had been appointed as the Director of the Institute. It seemed logical that the Biological Survey should be placed in this institute and that he should be selected as the executive officer of the Survey, if it was to be continued.

Three alternatives were presented to the assembled administrative board:

1. Continue present status with the administration through the Institute of Natural Resources.
2. Discontinue affiliation with the Ohio State University and the Ohio Academy of Science and work independently.
3. Discontinue the Survey.

After a lengthy discussion and because of the many problems which were involved regarding the reorganization, future considerations and objectives, the acting director was authorized to appoint a committee to study the entire problem and report their findings and recommendations to the board at a future meeting or by mail ballot.

In the interim, the acting director had appointed an editorial board con-

sisting of A. W. Lindsey (Zoology) Denison University, Glenn Blaydes (Botany) The Ohio State University and W. B. Stull (Zoology) Ohio Wesleyan University. All publications since that date have been selected with the approval of the executive committee and edited by the editorial board.

The "Study Committee" appointed at the April 19, 1956 meeting reported to the members of the board by mail and the board approved their recommendation, that the Survey be transferred to the Natural Resources Institute and Dr. Dambach be made the Executive Secretary.

A meeting of the advisory board of the Natural Resources Institute consisting of Deans Carson, Cottrell, Fullington, Walters, Weidler, A.W. Marion, (Director of the Ohio Department of Natural Resources) and Director Woolpert (Research Foundation) met in the Office of Dean Rummell on January 28, 1957. Dr. Dambach and Acting Director DeLong presented the report and recommendations of the administrative board of the Ohio Biological Survey, and the Advisory Council of the Natural Resources Institute approved the acceptance of the Survey into the Institute and agreed to the services of Dr. Dambach as the Executive Secretary of the Biological Survey in which capacity he has served until the present time (1969). D. M. DeLong was elected as the first chairman of the executive committee and is at present (1969) the committee representative of the Ohio Academy of Science.

Responsibility for the program of the Biological Survey was placed in the Natural Resources Institute by action of the Board of Trustees on January 10, 1958.

A new constitution and by-laws were adopted by the Executive Committee of the Cooperative Board of the Biological Survey on May 15, 1957, approved by the Board of Trustees of The Ohio State University on January 10, 1958, and amended



on April 22, 1961.

The new objectives adopted are:

1. To secure accurate and detailed information concerning the occurrence, distribution and ecology of the plants and animals in Ohio for the people in general and for those engaged in public education in particular.
2. To collect, identify, describe and distribute biological materials that may be used in educational work.
3. To publish the results of biological surveys and studies as above provided for in a new technical series of bulletins of the Ohio Biological Survey and in occasional memoirs, monographs, and educational bulletins in accordance with material and financial support available.

A new series of publications was also approved by the administrative board at the time of reorganization. This new Series was started in 1959 and two volumes consisting of 10 bulletins and one bulletin of Volume 3 have been published to date (1969).

Still another series of papers, under the title of Biological Notes was begun in 1964, four of which have appeared to date (1969).

In order to carry out the objectives of the Survey the executive committee requested through the executive secretary and the Board of Trustees an increased budget for an expanded operation.

In order to encourage ecological and faunistic studies in the Ohio Colleges and Biologic Institutions, the executive committee, during the past few years, has been receiving applications for and allocating funds to individuals or groups of research workers in areas throughout the state for the investigation of projects approved by the committee. This has proved to be an excellent beginning

in carrying out the objectives of the Survey and has aroused enthusiasm in the organization and its program. In 1968 the operating budget of the Survey has been increased to \$40,000.00 from \$1,500 in 1958. A half time administrative assistant and a half time secretary has been added to the office staff to assist especially with the inter-institutional contacts.

During the past year eight research grants have been allocated to five institutions amounting to \$23,500.00.

Among the many and interesting worth-while projects which the Biological Survey had sponsored is one which should be given special commendations. This is entitled, "Natural Areas Project" and consists of locating and securing for permanent preservation areas which have not been disturbed by man and which can be used for study and observation by biologists. "These areas are composed of forests, bogs, swamps, marshes, dunes, prairies, ponds, gorges, etc.". "Some are so rare and so delicate that public knowledge could spell their doom". This work has been accomplished almost single handed by J. Arthur Herrick of Kent State University. His hard work, devoted interest and determination to save natural areas for future generations of scientists is deserving of our sincere appreciation and the highest commendations.

The revitalizing of the Survey and the stimulus needed in order to bring it to the present state of activity must be credited in a large measure to the loyal and enthusiastic support of representatives of several Ohio colleges and institutions who were willing to serve as members of the executive committee, editorial board and other important committees in the early 1960's. Among this group were

W. C. Beaver  
A. H. Blickle  
G. W. Blayder  
C. Dambach  
C. C. Davis  
D. M. DeLong  
Margariet Fulford  
Gareth Gilbert

Fred Glenny  
Wm. H. Hohnert  
Arthur Herrick  
D. J. Higgins  
Kenneth Hunt  
G.T. Jones  
E. J. Koestner  
A. W. Linsey

L. S. Roach  
James Skelly  
W. D. Stull  
T. C. Surrarrer  
H. V. Truman  
Walter Tucker

The Ohio Biological Survey has become a vital and expanding part of the program of biologists of the State and has been responsible for the initiating and sponsoring of some important and interesting research. It has especially given many of the younger biologists the stimulus and an opportunity to investigate problems which could not have been attempted without this assistance.

The following persons served as Ohio Biological Survey fellows from 1931 to 1946.

Edward P. Breakey  
Dorothy Johnson  
John S. Caldwell

John Fluno  
James E. Gillaspay  
R. H. Strandtmann

Dorothy F. Knull  
John A. Wilcox

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William M. Barrows, Professor of Zoology 1909-1945. 36 years of service. Assistant Professor 1909, Professor 1923-1945. B.S. Michigan Agricultural College 1903; M.S. 1906 and Ph.D. 1920 Harvard.

The publications of Professor Barrows are listed below

- 1906 The effects of Inbreeding, Cross-breeding, and Selection upon the Fertility and Variability of *Drosophila*. (co-author with W.E. Castle, F.W. Carpenter, A.H. Clark, S.O. Mast). Proc. Amer. Acad. Arts and Sci., Vol. XLI, No. 33, pp. 731-786.
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- 1935 Some New Spiders from Florida. (Co-author with Wilton Ivie) Bull. Univ. Utah, Vol. 26, No. 6, Biol. Ser., Vol. III, No. 2 pp. 1-24.
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- 1945 New Spiders from the Great Smoky Mountain National Park. Ann. Ent. Soc. Amer., Vol. XXXVIII, No. 1, pp. 70-76.

Clifford R. Cutright Professor of Entomology. Forty years of service. 1922 to 1962. Asst. Entomologist, O.A.R.D.C. 1922; Assoc. 1928; Prof. Ent. 1953; Emeritus Professor 1962-66. A.B. 1921, M.S. 1922, Ph.D. 1925 - all from Ohio State University.

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1923-1964

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- 1963 The European red mite in Ohio. Ohio Agr. Exp. St. Res. bull. 953. 32 p.
- 1964 The codling moth in Ohio; historical and ecological aspects. Ohio Agr. Exp. St. Res. bull. 969. 48 p.

Dwight M. DeLong, Professor Entomology 1914-1962. 45 years of service. Graduate Assistant 1914; Assistant 1916; Instructor 1918; Assistant Professor 1922; Professor 1923; Emeritus Professor since 1962. B.Sc. Ohio Wesleyan 1914; M.Sc. Ohio State University 1916; Ph.D. O.S.U. 1922. D.Sc. 1941 (honorary) Ohio Wesleyan University. Served in First World War, 1917-18. Visiting Professor, Michigan State University 1966. Ento. Penna., Dept. Agri. 1918-21. Dir. Franz Theodore Stone Laboratory 1936-37. Ento. U.S.D.A. 1915, 1917, 1924-32. Ento. Illinois Natural Hist. Survey during 1934, 1936, 1938, 1941, and 45. War. Res. O.S.R.D. and Nat. Inst. Health 1943-1958. Field expeditions to Mexico 1939, 41, 45, and 54, to Guatamala 1942, to Panama 1967 and to Peru, Chile, Argentina and Brazil 1967-68. Ohio State Univ. Inst. Polar Studies Exped. to Alaska, Muir Inlet 1965. O.S.U. Distinguished Teaching Award 1962. Ent. Soc. Amer. Founders Memorial Award 1964. Section Editor, Biological Abstracts since 1956.

The publications of Professor Dwight M. DeLong are listed below

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- 1919 A Synopsis of the Genus Chlorotettix (Hemiptera, Homoptera). Ohio State University Bulletin 23:1-30. March 1919.
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- 1924 Some Observations on the Life Cycle and Habits of Dorydiella floridana Baker (Homoptera-Cicadellidae). Ohio Jour. Sci. 24:195-198. 1924.
- 1925 The Mexican Bean Beetle--A Pest in Ohio. Agr. Student 31(6):149-150. 1925.
- 1925 The Influence of Temperature and Humidity upon the Development of Myzus houghtonensis Troop. (Co-author with A.A. Mathewson) Jour. Econ. Ent. 18:172-176. 1925.

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Winston E. Dunham, Associate Professor of Entomology. 1926-1962. 36 years of service. Instructor 1926; Assistant Professor and Extension Specialist 1934; Associate Professor 1946; Associate Professor Emeritus since 1962. B.S. 1925 Univ. Vermont; M.S. 1927; Ph.D. 1930 The Ohio State University.

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James S. Hine, Associate Professor of Entomology 1894-1930. Thirty six years of service. Instructor 1894; Assistant Professor 1896; Associate Professor 1902-1930. B.S. Degree 1893 Ohio State University. During Professor Hine's last three years before retirement he gave half of his time to the insect collections of the Ohio Archeological Museum.

The publications of J.S. Hine are listed below

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Clarence H. Kennedy, Professor of Entomology 30 years service 1919-1949. Assistant, Biology 1915, Instructor Limnology 1916-17, Cornell Univ. Assistant Bureau of Fisheries and Scientific Artist Instructor North Carolina State College 1918-19. Instructor 1919; Assistant Professor 1922; Associate Professor 1930; Professor 1933; Professor Emeritus 1949 to 1952. He was managing editor of the Annals of the Entomological Society of America from 1929 to 1945. He was a member of the Royal Entomological Society of London and Societe Entomologique de France.  
A.B. 1902 University of Indiana; A.M. 1903 Stanford; Ph.D. 1919 Cornell.

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Josef N. Knull, Professor of Entomology and Curator of Insects. 1923-24 and 1934 to 1962, 28 years of service. Assistant Professor 1934; Associate Professor 1945; Professor 1958; Professor Emeritus since 1962. B.Sc. 1915, Pennsylvania State College; M.Sc. 1924 Ohio State University

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Wencil J. Kostir, Professor of Zoology 1909-1957. 46 years of service. Assistant 1909; Instructor 1914; Assistant Professor 1922; Associate Professor 1942; Professor 1945. Professor Emeritus since 1957. A.B. 1912, M.A. 1913. The Ohio State University.

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Thomas H. Langlois, Professor of Zoology and Director of the Franz Theodore Stone Laboratory 1936-1964. 28 years of service. Asst. Professor 1936; Professor 1938; Professor Emeritus 1964 to 1968; B.S. 1924; Univ. of Michigan. M.S. 1925. Ph.D. 1935 Ohio State University. State Dept. Conservation - Michigan 1924-27; Fish Pathologist 1927-29. Ohio Div. Conservation and Natural Resources 1930-46.

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David F. Miller, Professor of Zoology and chairman of the Department. 1922-1963. 41 years of service. Instructor 1922; Asst. Professor 1929; Assoc. Professor 1933; Professor 1943. Professor Emeritus since 1963. A.B. 1917 Wittenberg University; M.A. 1924. Ph.D. 1928. The Ohio State University. Sc.D. (honorary) Wittenberg University 1952.

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John A. Miller, Professor of Zoology, 1929-1963. 34 years of service. Asst. 1928; Instructor 1929; Assistant Professor 1933; Assoc. Professor 1942; Professor 1947; Emeritus since 1963. A.B. Ashland College 1926; M.Sc. 1927, Ph.D. 1932. The Ohio State University, D.Sc. (honorary) 1963 Ashland College. Professor of Biological Sciences, University of Miami (Florida) 1963-1968. Dean of Academic Affairs Ashland College since 1968.

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Claud R. Neiswander, Professor of Entomology and Associate Chairman in charge of the Division of Entomology Ohio Agr. Res. & Devel. Center. Thirty eight years of service, 1923 to 1961. Asst. Ent. 1923; Assoc. Ent. 1928; Professor and Assoc. Chairman 1948-1961. Emeritus Professor 1961 to date. A.B. 1922, M.Sc. 1923, Ph.D. 1926 Ohio State University.

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Herbert Osborn, Professor of Entomology and chairman of the Department 1898-1916; Research Professor 1916-1932. 34 years of service. Professor Emeritus 1932-1954. B.S. 1879. M.S. 1880, Sc.D. 1916 (honorary) Iowa State College; L.L.D. 1930 (honorary) University of Pittsburgh, L.L.D. 1936 (honorary) The Ohio State University. Museum Comp. Zool. Harvard 1881-82. Naples Zool. Station 1894-95; Asst. Zool. and Ent. Iowa State College 1879-83. Assistant Professor 1883-85; Professor 1885-89.

The publications of Professor Herbert Osborn are listed below

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- 1891 Report on the damage of destructive locusts during the season of 1891. U.S. Dept. Agr. Div. of Ento. Bull. 27.
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- 1926 Economic Zoology - The Macmillan Company XV + 490 pp., illus.
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- 1952 A brief history of Entomology including time of Demosthenes and Aristotle to modern times. Columbus, Ohio. Spohr and Glen. 295 pp.
- 1884 Insects of the orchard. Bull. Iowa Agr. Coll. Dept. Ent. 2:87-97. Economics of various species.
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- 1892 Homoptera injurious to grasses. Science. 19:228-229; figs. 1-5. Notes on the economics of various species of Jassidae.
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- 1893 Report on insects of the season in Iowa. Bull. United States Dept. Agr. Div. Ent. [o.s.] 30:42-48. Notes on species of leafhoppers injurious to grasses.

The publications of Professor Herbert Osborn - (continued)

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- 1906 Descriptions of two new Cicadas from Louisiana. *Ohio Nat.* 6:497-499.



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- 1907 Descriptions of new forms of Jassidae. Proc. Davenport Acad. Sci. 10:163-166. Dorycephalus 1 n. sp., Deltocephalus 2 n. spp. and Thamnotettix 1 n. sp.
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- 1909 Notes on Guatemalan Hemiptera with descriptions of a few new species. Ohio Nat. 9:457-466. A list of species with notes and 1 n. sp. Dorydium, 2 n. spp. Scaphoideus and 1 n. sp. Schlorotettix.
- 1910 Polymorphism in Hemiptera and some of its significances. Advance Print Proc. Int. Zool. Congr. 7:1-3.
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- 1916 Studies of life histories of leafhoppers of Maine. Bull. Maine Agr. Exp. Sta. 248:53-80; figs. 1-13.
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The publications of Professor Herbert Osborn - (continued)

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- 1924 Neotropical Homoptera of the Carnegie Museum. Part 4. Report upon the collection in the subfamily Jassinae, with descriptions of new species. Ann. Carnegie Mus. 15:397-462; pls. 56-59. Descriptions of new species from various genera.
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- 1926 Notes on the economic status of certain Cuban Homoptera. Sci. Contr. Trop. Pl. Res. Found. 1:99-106. Reprint of Osborn 1926a.
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- 1934 Cicadellidae of the Marquesas Islands. Bull. Bernice P. Bishop Mus. 114:239-269; figs. 1-23. Description of new genera and species.
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- 1937 Fragments of entomological history, including some personal recollections of men and events. 1937:1-394; pls. 1-47.
- 1938 Art. II. Neotropical Homoptera of the Carnegie Museum. Part 7. Report on the species of the subfamily Gyponinae. Ann. Carnegie Mus. 27:11-62; pls. 1-5.

The publications of Professor Herbert Osborn - (continued)

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- 1939 Chapter VIII. Hemiptera-Homoptera. Meadow and pasture insects. 1939:i-viii, 1-288; figs. 1-103 (99-170; figs. 38-77). Economics of various species.
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- 1948 Recent insect invasions of Ohio. Ohio Biol. Survey 7(5):357-358.
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- 1897 Studies of the life histories of grass feeding Jassidae. Bull. Iowa Agr. Exp. Sta. 34:612-640; pls. 1-7. (Co-author with Ball, E.D.).
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- 1902 A review of the North American species of Athysanus (Jassidae). Ohio Nat. 2:231-256; pls. 16-17. Keys to and descriptions of the species. (Co-author with Ball, E.D.).

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- 1915 Records of Guatemalan Hemiptera-Heteroptera with descriptions of new species. Ohio Nat., vol. 15, No. 8, pp. 529-541. (Co-author with Drake, C.J.).
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- 1916 Some new species of Nearctic Tingidae. Ohio Journ. Sci., vol. 17, No. 1, pp. 9-15, 3 figs. (Co-author with Drake, C.J.).
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- 1917 Notes on American Tingidae with descriptions of new species. Ohio Journ. Sci., vol. 17, No. 8, pp. 295-307, 2 figs. (Co-author with Drake, C.J.).
- 1922 An ecological study of the Hemiptera of the Cranberry Lake Region, New York. Tech. Publ. New York State Coll. For. 16:5-24; figs. 1-12. (Co-author with Drake, C.J.).
- 1891 Some Iowa clover insects. The clover leafhopper. (Agallia sanguinolenta, Prov.). (Co-author with Gossard, H.A.).
- 1892 Notes on life-history of Agallia sanguinolenta, Prov. Canadian Ent. 24:35. (Co-author with Gossard, H.A.).
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- 1917 Rhynchota of the Isle of Pines. Ann. Carnegie Mus. 11:346-355. Lists 25 species of Homoptera with 1 n. sp. Rhamphixius and 1 n. sp. Ormenis. (Co-author with Heidemann, O.).

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- 1947 Checklist of Ohio leafhoppers (Homoptera:Cicadellidae). Ohio J. Sci. 47(6):329-339. (Co-author with Dorothy J. Knull).
- 1920 Some observations on insects of the between tide zone of the North Carolina coast. Ann. Ent. Soc. America. 13:108-117; pls. 10-12. Ecology of various species. (Co-author with Metcalf, Z.P.).

Raymond C. Osburn, Professor of Zoology and chairman of the Department, Director of the Lake Laboratory 1919 to 1936. 25 years of service. Professor of Zoology and chairman 1916-1942. B.A. 1898; M.A. 1900 both from The Ohio State University. Ph.D. 1906 Columbia University. D.Sc. (honorary) The Ohio State University 1949. Inst. Starling Medical College 1898-1899. Professor Biology Fargo, N.D. 1899-02. Inst. Zool. Barnard, Columbia. 1907-10, Assistant Professor Biol. Conn. College for women 1915-17.

The publications of Professor Raymond C. Osburn are listed below

- 1898 The crayfish of Ohio. (Co-author with E.B. Williamson). 6th Ann. Rept. Ohio Acad. Sci.
- 1899 A descriptive list of the fishes of Big Jelloway Creek and tributaries, Knox County, Ohio. Ohio Acad. Sci. 7th Ann. Rept. 18-29. (Co-author with E.B. Williamson and J.B. Parker).
- 1899 Fishes of Franklin County, Ohio, additional notes on the Ohio Acad. Sci. 7th Ann. Rept., 33-34. (Co-author with E.B. Williamson).
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- 1912 Bryozoa from Labrador, Newfoundland, and Nova Scotia collected by Dr. Owen Bryant. Proc. U.S. Nat. Mus. 43:275-289. Nov. 20 illus.
- 1914 The Bryozoa of the Tortugas Islands, Florida. Carnegie Institute of Washington, Wash. D.C. Vol. 5 p. 181-222., illus.
- 1919 Bryozoa of the Crocker Land Expedition. Amer. Mus. Nat. Hist. 40: 603-624. Dec. 30.
- 1920 The Bryozoa of Curacao. K. Zoologisch genootschap "Natura artis magistra" Amsterdam Bijdragen tot de Dierkunde Afl 25.
- 1920 The syrphid fly, Mesogramma marginata and flowers of Apocynum. Ohio J. Sci. P. 261-266.
- 1921 Bryozoa as food for other animals. Sci. N.S. 53: 451-453. May 13.
- 1922 A New Type of Bryozoan Gizzard with Remarks on the Genus Buskia Ohio Jour. Sci. 22:158-163. illus. (Co-author with Ruth M. Veth).
- 1922 Some common misconceptions of evolution. Ohio Jour. Sci. 22:173-192.
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Thaddeus H. Parks, Professor of Entomology and Extension Entomologist 1918-1956. 38 years of service. Professor Emeritus since 1956. B.Sc. 1909 Ohio State University; M.Sc. 1925 University of Illinois; D.Sc. (honorary) 1957 Ohio State University. Scientific Assistant, U.S.D.A. 1909-13. Extension Entomologist, University of Idaho 1913-14; Extension Entomologist Kansas State Agricultural College 1915-1918.

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Joseph B. Polivka, Associate Professor of Entomology. Thirty five years of service, 1925 to 1933 and 1941 to 1968. Asst. Ent. Ohio Agr. Res. and Devel. Center, 1925; Jr. Forester, Civil Cons. Corps. 1933-37; Asst. Forester 1937-39; Camp Supt. 1939-41; Asst. Ent. O.A.R.D.C. 1941; Assoc. Ent. 1953. B.S. and M.S. Univ. of Wisconsin, Ph.D. 1930 The Ohio State University.

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David C. Rife, Professor of Genetics 1931-51. 26 years of service. Graduate Assistant 1931; Assistant 1932; Instructor 1934; Assistant Professor 1938; Associate Professor 1942; Professor 1946. B.S. 1922 Cedarville; B.S. 1923; A.M. 1931; Ph.D. 1933 Ohio State University. Instructor Sci. and Agr. Mission School, Sudan 1927-30. Livestock Instructor Coop. Adm. Thailand 1957-59. Dept. Sci. Attache, American Embassy, New Delhi, India 1960-62. Director Inst. Rels., American Inst. Biol. Sci. 1962-63; Sci. Administrator, Nat. Inst. Gen. Med. Sci. 1963-65. Visiting Professor, Genetics, Florida 1966.

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A. Carter Broad Associate Professor of Zoology. Seven years of service 1957-1964. Assistant Professor 1957; Associate Professor 1960-64; Resigned to become Professor Biology and Department Chairman, West Wash. State College 1964 - . B.A. 1943; M.A. 1951 North Carolina State University, Ph.D. 1956 Duke Institute Fisheries Res. North Carolina 1948-51. Res. Invert. Marine Lab - Duke 1953-57.

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Alan P. Brockway Assistant Professor of Zoology. Four years of service  
1963-1967. Assistant Professor 1963-67. A.B. 1958 St. John's College,  
Maryland. Ph.D. 1963 Western Reserve University, Nat. Sci. Foundation  
Fellow 1962-63.



Barbara Brockway Assistant Professor of Zoology. Four years of service 1964 to 1968. Assistant Professor 1964-68. B.S. 1956 Santa Barbara, California. M.S. 1958, Ph.D. 1962 Cornell University Institute Biology Western Reserve 1961-63. Nat. Sci. Foundation 1962-63, 1965-67.

Roger Burnard Instructor in Zoology. Nine years of service 1958 to 1967.  
Graduate Assistant 1958; Assistant 1960; Instructor 1961-67. B.S. 1958,  
M.S. 1964, Ohio State University. Received Distinguished Teaching Award 1967.

Publications by Roger Burnard

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Frank L. Campbell Professor of Entomology - Seven years service. 1936-1943. Associate Professor 1936-40; Professor 1940-43. B.S. University of Pennsylvania 1921; M.S. Rutgers 1924; Sc. D. Harvard 1926. Chemist U.S.D.A. Laboratory Riverton N.J. 1921-22. Assistant Professor N.Y. Univ., 1926-27; Associate Entomologist U.S.D.A. 1927-30; Ent. and Senior Ent. same 1930-36. Exec. Asst. Res. Foundation 1943; Editor Sci. Monthly 1943-48; Asst. to Administrator, U.S. Agr. Res. Admin. 1948-53. Exec. Secy., Division of Biology and Agr. Nat. Res. Com. 1953-64.

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Vincent G. Dethier Professor of Entomology. One year of service. 1947-48. A.B. 1936; A.M. 1937; Ph.D. 1939 Harvard. Sc.D. 1964 (Honorary). Providence Coll. Inst. John Carroll 1939; Assistant Professor 1941. Res. Phys. Army Chem. Corps 1946; Associate Professor Hopkins 1948. Professor 1952-58. Zoology and Physiol. Penna. 1958. Associate Inst. Neurol. Sci. Sch. Med. 1958.

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Allen S. Fox Assistant Professor 1948-53. Five years of service.

B.S. 1941; Ph.D. 1948 Chicago, Fulbright Professor, 1953-54. Associate Professor Michigan State 1954-59. Professor (biochemistry) 1959-63; Professor of Genetics 1963, Wisconsin.

Publications by Allen S. Fox

- 1948 Centigenic differences between mutant strains of Drosophila melanogaster.
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Paul H. Freytag Associate Professor of Entomology. Three years of service.  
1963-1966. Res. Assoc. 1963; Assoc. Professor 1964-1966; B.S. 1956  
Wyoming; M.S. 1960; Ph.D. 1963 Ohio State University.

Publications by Paul H. Freytag

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Earl L. Green Associate Professor of Genetics 1941-64. Thirteen years of service. Instructor 1941; Assistant Professor 1944; Associate Professor 1946. Resigned in 1956 to become Director of the Jackson Laboratory, Bar Harbor, Maine. Leave of absence 1953-1955. Geneticists, Division of Biology and Medicine, U.S. AEC. Ph.D. Brown University 1940.

Publications by Earl L. Green

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Margaret C. Green Instructor in Zoology. Ten years of service 1946 to 1956. Instructor 1946, Res. Associate 1951-1953, 1955-1956. B.A. Conn. Col., 1935; Sc.M. 1937 Brown; Ph.D. 1940 Iowa; Asst. Biol. Brown 1935-1937; Asst. Iowa 1937-1940. Geneticist, Jackson Laboratory since 1956.

Publications by Margaret C. Green

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Lawrence E. Hicks Assistant Professor and First Director of the Cooperative Wildlife Research Unit. Sixteen years of service, 1929 to 1945. Graduate Assistant 1929 (Botany); Instructor 1931; Asst. Professor 1936. B.A. 1929 Otterbein, M.S. 1929, Ph.D. 1933 Ohio State University. Ecologist and Field Instructor New York State Museum and Allegany School of Nat. Hist. 1931. Forester and Game Conservationist for the U.S. Soil and Conservation Service in Muskingum Valley 1934 to 1936. Director Coop. Wildlife Res. Unit. OSU 1936-45. Commercial Apiarist 1945-57. Former Secretary of the Amer. Ornithologists Union.

Publications by Lawrence E. Hicks

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Merlin P. Jones Assistant Professor of Entomology 1925-31. Six years service. Assistant Exten. Entomologist 1925-30. Assistant Professor 1930-31. B.A. 1924; M.S. 1925 Ohio State University Extension Service U.S.D.A. 1931-35; Sr. Extension Entomologist 1935-63.

He was President of the Entomological Society of America in 1960.

Publications by Merlin P. Jones

- 1925 A Two Year study of the biology and control of the Mexican Bean Beetle (Epilachna corrupta) in Ohio (Master's Thesis).
- 1939 4-H Club Insect Manual. U.S.D.A. Miscellaneous Publication No. 318, 56 pp., illus.
- 1940 4-H Club Insect Manual. U.S.D.A., Miscellaneous Publication No. 318, 56 pp., illus. (Revised).
- 1960 ESA and You - Bull Ent. Soc. Amer. 6(1):1-2.
- 1961 Selling Insect Control Bull. Ent. Soc. Amer. 7(1):3-5.



David S. Kellicott Professor of Zoology and Entomology and second chairman of the Department 1888-98. Ten years of service. A.B. Genesee College. Teacher, Keystone Normal School and Buffalo Normal School.

Publications by David S. Kellicott  
(Partial)

- 1879 The discovery of a new species of marine Crustacea in the waters of Lake Erie. J. Roy. Microscop. Soc. 2:152.
- 1890 On injurious aegerians. J. Columbus Hort. Soc. 5:11-19.
- 1891 Notes on two borers injurious to the mountain ash. Can. Entomol. 23:250-251.
- 1891 Observations on forest insects. J. Columbus Hor. Soc. 6:92-95.
- 1893 Preliminary report on the dragon-flies of Ohio. Ohio Acad. Sci. 2nd Ann. Rept., 11.
- 1894 Catalogue of the Odonata of Ohio. Cincinnati Soc. Natur. Hist. 17:195-216.
- 1894 Some museum and grainary pests. J. Columbus Hort. Soc. 9:11-12.
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- 1895 Catalogue of the Odonata of Ohio. Cincinnati Soc. Natur. Hist. 18:105-114.
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- 1897 Spongilla fragilla fragillis Leidy. Columbus 1888 to the present 1897. Ohio Acad. Sci. 5th Ann. Rept., 50 pp.
- 1897 Additions to the catalogue of the Odonata of Ohio. Ohio Acad. Sci. 5th Ann. Rept., 47 pp.
- 1898 Additions to the catalogue of dragonflies of Ohio. Ohio Acad. Sci. 6th Ann. Rept., 27-28.
- 1898 Feeding habits of winter birds of interior Ohio. J. Columbus Hort. Soc. 13:45-51.
- 1899 Odonata of Ohio. Ohio Acad. Sci. Spec. Publ. 2, 116 pp.

Walter C. Kraatz Instructor in Zoology. Five years of service 1918-1923. Graduate Assistant 1918; Assistant 1919; Instructor 1922. Resigned in 1923 to accept an Assistant Professorship at Miami University. B.A. 1918. University of Wisconsin, M.A. 1920, Ph.D. 1923 Ohio State University. D.Sc. (honorary) University of Akron 1966. Assistant Professor, University of Miami 1923-24, Assistant Professor of Biology, University of Akron 1924-28, Associate Professor 1928-32, Professor of Biology and Chairman of Biology Department at University of Akron 1932-58, Professor Emeritus since 1958.

Publications by Walter C. Kraatz

- 1918 *Sciirtes tibialis*, Guer., (Coleoptera-Dascyllidae) with observations on its Life History.
- 1920 Food of the Young Large-Mouth Black Bass in Some Ohio waters. Proc. Amer. Fish Soc. Vol. for 1920. (with C. L. Turner).
- 1921 A Preliminary Survey of the Macrofauna of Mirror Lake on the Ohio State University Campus. Ohio Journal of Science; XXI. No. 5. 137-184, 2 plates.
- 1923 A Study of the Food of the Minnow *Campostoma anomalum*. Ohio Jour. of Sci. XXIII, No. 6, 265-283.
- 1924 The Intestine of the Minnow *Campostoma anomalum* (Rafinesque) with special reference to the Development of its Coiling. Ohio Jour. of Sci. XXLV, No. 6, 265-298, 7 plates, (PhD Dissertation).
- 1928 Study of the Food of the Minnow, *Pimephales notatus*. Ohio Jour. of Sci. XXVLL, No. 2, 86-89.
- 1931 A Quantitative Net-Plankton Survey of East and West Reservoir, near Akron, Ohio. Ohio Jour. of Sci. XXXI, No. 6, 475-500.
- 1933 More freshwater Medusae. Science 77(1936):87-88.
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- 1949 Anti-vivescetion versus your health-Hygeia 27:120.
- 1951 The search for truth versus bigotry, Science 114:447.
- 1958 Pseudoscience and Antiscience in an age of science. Ohio Jour. of Sci. 58:261-269. August.

Frederick H. Kreeker Professor of Zoology 1914-28. Fourteen years of service. Assistant Professor 1914. Professor 1923. Acting Director Lake Laboratory 1916-1925. Assistant Director 1926-36. A.B. 1904 Princeton AM. 1906 Cornell. Ph.D. 1909 Princeton. Freiburg, Munich, Germany and Chicago 1906-1908. Professor Biology Marietta College 1909-1914. Resigned in 1928 to become Chairman of the Zoology Department at Ohio University.

Publications by Frederick H. Kreeker

- 1912 Some phenomena of regeneration in Linnodrilus and related forms. Ph.D. Thesis - Zeitschrift fur vissern Schaftliche Zoologie.
- 1915 Filaria cingula parasitic in the skin of Cryptobranchus allegheniensis Jour. of Parasitology. 15:74-79.
- 1915 Phenomena of orientation exhibited by Ephemera Biol. Bull. 29: 381-388.
- 1916 Sunfish nest of Beimiller's Cove. Ohio Jour. Sci. 16:125-134.
- 1919 The fauna of rock bottom ponds. Ohio Jour. Sci. 19:427-474.
- 1920 Caddis-worms as agents in distribution of freshwater sponges. Ohio Journ. Sci. 20:355.
- 1922 Emergence of a mayfly from its nymphal skin. Ohio Jour. Sci 22:155-157.
- 1923 Origin and activities of the neoblasts in the regeneration of micro-dirilous Annelida. Jour. Exper. Zool. 27:27-46.
- 1924 Conditions under which Gonibasis livescens occurs in the islands of Lake Erie. Ohio Jour. of Sci. 24:229-310.
- 1928 Study of the food of the blunt-nosed minnow (Pimephales notatus). Ohio Jour. Sci. 28:86-98.
- 1928 Periodic oscillations in Lake Erie. Ohio State University Press, 22 pp.
- 1931 Vertical oscillations or seiches in lakes as a factor in the aquatic environment. Ecology 12(1):156-163.

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- 1933 Bottom shore fauna of western Lake Erie: A population study to a depth of six feet. Ecology 14(2):79-93. (With L. Y. Lancaster).
- 1934 General Zoology. Holt and Company. N.Y. xi + 634 pp. illus.
- 1939 A comparative study of the animal population of certain submerged aquatic plants. Ecology 20(4):553-562.
- 1943 Wood and trees: philosophical implications of some facts of science. Ohio Jour. Sci 4B, No. 4, July. Reprinted in Annual report. Smithsonian Institution, Washington, D.C. 1944, 307-316.

William B. McIntosh Associate Professor of Genetics. Seven years of service 1956 to 1963. Assistant Professor 1956; Associate Professor 1960, resigned in 1963. Ph.D. University of Michigan 1955. Junior Biologist Inst. of Human Biology. Univ. of Michigan 1954-1955.

Partial List of Publications by William B. McIntosh

- 1951 (Review of) Tanaka, Ryo. A comparative study on Formosan common rats and mice of the genera *Rattus*, *Aposemus* and *Mus* from the standpoint of variation-statistics. *Journ. Mammalogy* 32:477.
- 1954 An evaluation of the applicability of covariance analysis as applied to the comparison of body and skeletal measurements between two races of the deer mouse, *Peromyscus maniculatus*. Pub. No. 6786. Ann Arbor Univ. Microfilms 153 pp.
- 1955 The applicability of covariance analysis for comparison of body and skeletal measurements between two races of the deermouse, *Peromyscus maniculatus*. *Contrib. Lab. Vert. Biol. Univ. Mich.*, 72:1-54.
- 1956 Whiteside, a new mutation in *Peromyscus*. *Journ. Heredity* 47:28-32.
- 1956 Linkage in *Peromyscus*, and sequential tests of independent assortment. *Contrib. Lab. Vert. Biol. Univ. Mich.*, 73:1-27.

Clell L. Metcalf Professor of Entomology 1911-1921. Ten years of service. Assistant 1911-12; Assistant Professor 1914-20; Professor 1920-21. A.B. Ohio State University 1911; A.M. 1912. D.Sc. 1919 Harvard Assistant Entomologist N.C. Experiment Station 1912-14. Resigned in 1921 to become chairman of the Entomology Department at the University of Illinois.

Publications by Clell L. Metcalf

- 1911 Preliminary report on the life-histories of two species of Syrphidae. Ohio Natur. 11:337-346.
- 1911 Life histories of Syrphidae II. Ohio Natur. 12:397-405.
- 1912 Life histories of Syrphidae III. Ohio Natur. 11:477-489.
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- 1913 The Syrphidae of Ohio. Ohio Biol. Survey Bull. 1(1):7-122.
- 1920 A key to the principal orders and families of insects. (with Z.P. Metcalf).
- 1927 A key to the principal orders and families of insects. Second edition 1-41; figs. 1-225b. (with Z. P. Metcalf).
- 1928 A key to the principal orders and families of insects. Third edition 1-23; figs. 1-225b. (with Z. P. Metcalf).
- 1928 Destructive and useful insects, their habits and control. McGraw-Hill Book Co. i-xii, 1-918, figs. 1-561.
- 1929 The mouthparts of insects. Trans. Illinois St. Acad. Sci. 1929:109-135; figs. 1-15. General discussion of the mouthparts of Cicada.
- 1932 Fundamentals of insect life. McGraw-Hill Book Co. i-xi, 1-581; figs. 1-315. (with W. P. Flint).
- 1939 Destructive and useful insects their habits and control. McGraw-Hill Book Co. Second Ed. 1939:i-xvi, 1-981; figs. 1-584. (with W. P. Flint).
- 1951 Destructive and useful insects their habits and control. McGraw-Hill Book Co. (Revised) xiv, 1-107; fig. 1-584. Third Edition (with R. L. Metcalf).
- 1962 Destructive and useful insects (4th Edition). McGraw-Hill Book Company Inc. x-ix, 1087 pp. Illustr. (with R. L. Metcalf) (Revised).

Elton F. Paddock Professor of Genetics. 1941-1969. Seven years of service in the Zoology and Entomology Department. Transferred to Botany Department in 1948. Assistant Professor 1941; Associate Professor 1954; Professor 1968. B.S. Whittier College 1936; M.Sc. University of California 1941; Ph.D. University of California 1941.

Publications by Elton F. Paddock

- 1941 Natural and experimental polyploidy in Solanum Douglasii Dunel and its relatives. Amer. J. Bot. 28; 727 (Abstract).
- 1942 Polyploidy in Solanum Douglassi Dunal and its relatives. Univ. Calif. Ph.D. Thesis.
- 1942 The backcross transmission of an inversion in an interspecific hybrid of Solanum. Genetics 28: 85 (Abstract). Biol. Absts. 17: 12774 (1943). Rec. Gen. Soc. Amer. 11:85.
- 1942 A cytogenetic analysis of pollen abortion in a species, an interspecific hybrid, and a polyploid of Solanum. Ohio J. Sci. 42:147-148.
- 1943 On the number of chromosomes in Hevea. Chron. Bot. 7:412-413.
- 1946 A theoretical advantage of using autotetraploids in crop plant breeding. Amer. Jour. Bot. 33:222.
- 1948 Effects on tomatoes of field application of two hormone-insecticide-fungicide mixtures. Proc. Amer. Soc. Hort. Sci. 52:365-367.
- 1948 Triploidy in Rhoeo discolor Hance. Rec. Gen. Soc. Amer. 17:44-45.
- 1949 The Solanum nigrum complex in Pacific North America. Madrono 10: 70-81. (with G. Ledyard Stebbins, Jr.).
- 1950 A tentative assignment of the Fusarium-immunity locus to linkage group 5 in tomato. Rec. Gen. Soc. Amer. 19:117-118.
- 1952 Cauliflower, a new recessive mutation in tomato. Ohio Jour. Sci. 52:327-334. (with L. J. Alexander).
- 1954 The myth of the melting pot. Eugenics Quarterly 1:248-251. (with D. C. Rife).
- 1955 Horticultural character and reaction to two diseases of the Lycopersicon accessions in the North Central Region. O.A.E.S. Res. Bull. 765:1-19. (with M.M. Hoover, L.J. Alexander, and A.P. Dodge).



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- 1966 Mendel could have, your students can. Science Teacher. Vol. 33, (February):21-23.
- 1967 Testing one of Mendel's Assumptions. Carolina Tips Vol. 33(6): 21.
- 1967 A computer program to calculate expected frequencies and to estimate per cent recombination in a dihybrid  $F_2$  with linkage in the coupling phase and various types of lethal inheritance. Ohio Jour. Sci. 67(5):289-290. (with R. V. Skavaril).
- 1968  $^3H$ -thymidine-induced chromosome aberrations in human leukocytes. Cytogenetics 7:189-195. (with B. K. Vig, and Stella B. Kontras).
- 1968 Daunomycin induced chromosomal aberrations and the influence of arginine in modifying the effect of the drug. Mutation Research 5:279-287. (with B. K. Vig, Stella B. Kontras, and L. D. Samuels).
- 1968 Alterations by mitomycin C of spot frequencies in soybean leaves. Jour. Hered. 59(4):225-229. (with B. K. Vig).

Rendell Rhoades Instructor of Zoology. Eight years of service 1954-1962.  
Instructor 1954. B.S. and B.Sc. in Edu. 1936. Wilmington Col.; M.Sc.  
1937, Ph.D. 1960. Ohio State University. Fisheries Tech. Ohio Div.  
Wildlife 1937-45. Res. Assoc. Stone Lab. 1943-44. Curator Clev. Mus.  
Hist. 1950-54. Professor Biology, Ashland College since 1962.

Publications by Rendell Rhoades

- 1937 Studies on Ohio crayfishes, M.S. Thesis, O.S.U., Columbus.
- 1941 The distribution of Cambarus sloani Brundy in Ohio. Ohio J. Sci. 41(2):93-98.
- 1943 A list of the crayfishes of Ohio. Ohio Conserv. Bull. 7(1):14.
- 1944 Further studies on distribution and taxonomy of Ohio crayfish and the description of a new subspecies. Ohio J. Sci. 44(2):95-99.
- 1944 The crayfishes of Kentucky with notes on variations, distribution and descriptions of new species and subspecies. Amer. Midland Natur. 31(1):111-149.
- 1949 Stream crayfishes in southern Ohio. Ohio Div. Wildl. Res. Rept. 44, 11 p.
- 1950 Lake Erie crayfishes and the origin of the Lake Erie crayfish fauna. Manuscript, Stone Inst. Hydrobiol. Put-in-Bay, Ohio.
- 1960 Evolution of the crayfish genus Orconectes section l imosus. Ph.D. Thesis, O.S.U. Columbus.
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- 1962 The evolution of crayfishes of the genus Orconectes section limosus (Crustacea:Decapoda). Ohio J. Sci. 62(2):65-96.
- 1962 Further studies on Ohio crayfishes. Cases of sympatry of stream species in southern Ohio. Ohio J. Sci. 62(1):27-33.

Jerome G. Rozen Assistant Professor of Entomology, 1958-60. Two years of service; Assistant Professor 1958, resigned to go to Amer. Mus. Nat. History. 1960. B. A. 1950 Kansas, Ph.D. 1955 University of California Assistant Instructor 1950; Inst. 1951; Kans. Assistant 1951-55 Univ. of California. Entomologist U.S.D.A.; U.S.Nat. Mus. 1956-58. Assoc. Curator Hymenoptera 1960-65; Curator Am. Mus. Nat. Hist. and Chairman, Department of Entomology 1965.

Publications by Jerome G. Rozen

- 1951 A preliminary comparative study of the male genitalia of Andrenidae (Hymenoptera:Apoidea). Jour. Kansas Ent. Soc. 24:142-150, figs.
- 1952 Collection branchycistidine females. Pan-Pacific Ent. 23:91-92.
- 1952 A new species of Nomadopsis (Hymenoptera:Andrenidae). J. Kansas Ent. Soc. 25:144-147, 4 figs.
- 1954 Morphological description of the larva of Oreopasites vanduzeei Cockerell (Hymenoptera:Anthophoridae). Pan-Pacific Ent. 30:203-207, 6 figs.
- 1957 External morphological description of the larva of Exomalopsis chionura Cockerell, including a comparison with other anthophorids (Hymenoptera:Apoidea). Ann. Ent. Soc. Amer. 50:468-475. 10 figs.
- 1957 Biological observations on Exomalopsis chionura Cockerell, including a comparison of the biology of Exomalopsis with that of other anthophorid groups. Ann. Ent. Soc. Amer. 50:522-529, 4 figs. (with G. Don MacNeill).
- 1958 Biological notes on Eucrada humeralis (Melsheimer) (Anobiidae). Coleopterists Bull. 11:53-54. 1957.
- 1958 The external anatomy of the larva of Naccerdes melanura (Linnaeus). (Coleoptera:Oedemerifera). Ann. Ent. Soc. Amer. 51:222-229. 17 figs.
- 1958 A study of the comparative effects of various dosages of Malathion, Methoxychlor, and DDT on the arthropod fauna of a Connecticut forest. U.S.D.A., Special report ID-2, 12 pp. (with R. I. Sailer).
- 1958 Monographic study of the genus Nomadopsis Ashmead (Hymenopt:Andrenidae). Univ. of Calif. Pubs. Ent. 15:1-202., 2 figs., 17 maps.

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- 1959 Systematic study of the pupae of the Oedemeridae (Coleoptera).  
Ann. Ent. Soc. Amer. 52:299-303, 34 figs.
- 1959 A new species of Nomadopsis and notes on some previously described ones (Hymenoptera:Andrenidae). Proc. Ent. Soc. Washington 61:255-259, 5 figs.
- 1960 Phylogenetic-systematic study of larval Oedemeridae (Coleoptera).  
Misc. Pubs. Ent. Soc. Amer. 1:35-68, 171 figs.
- 1962 Anatomical and systematic study of the mature larvae of the Nitidulidae (Coleoptera). Ent. Meddel., 31:265-299, 76 figs. (with A. G. Boving).
- 1963 Preliminary systematic study of the pupae of the Nitidulidae (Coleoptera). Amer. Mus. Novitates, No. 2124:1-13, 21 figs.
- 1963 Notes on the biology of Nomadopsis with descriptions of four new species (Apoidea, Andrenidae). Amer. Mus. Novitates, 2142:1-17, 20 figs.
- 1963 Nomadopsis euphorbiae (Cockerell) synonymized with N. helianthi (Svenk and Cockerell) (Hymenoptera:Andrenidae). J. New York Ent. Soc., 71:142-143.
- 1963 Two pupae of the primitive suborder Archostemata (Coleoptera).  
Proc. Ent. Soc. Washington, 65:307-310, 7 figs.
- 1964 The biology of Svastra obliqua obliqua (Say), with a taxonomic description of its larvae (Apoidea, Anthophoridae). Amer. Mus. Novitates 2170:1-13, 15 figs.
- 1965 Phylogenetic-taxonomic significance of last instar of Protoxaea gloriosa Fox, with descriptions of first and last instars (Hymenoptera: Apoidea). J. New York Ent. Soc., 72:223-230, 12 figs. (1964).
- 1965 Biological notes on the cuckoo bee genera Holcopasites and Neolarra (Hymenoptera:Apoidea). Jour. New York Ent. Soc., 73:87-91, 4 figs.
- 1965 The biology and immature stages of Melitturga clavicornis (Latreille) and of Sphecodes albilabris (Kirby) and the recognition of the Oxaeidae at the family level (Hymenoptera: Apoidea). Amer. Mus. Novitates 2224:1-18, 22 figs.
- 1965 The larvae of the Anthophoridae (Hymenoptera:Apoidea). Part 1. Introduction, Eucerini, and Centridini (Anthophorinae). Amer. Mus. Novitates, 2233:1-27, 72 figs.
- 1966 The larvae of the Anthophoridae (Hymenoptera:Apoidea). Part 2. The Nomadinae. Amer. Mus. Novitates 2244:1-38, 83 figs.
- 1966 Systematics of the larvae of North American panurgine bees (Hymenoptera: Apoidea). Amer. Mus. Novitates 2259:1-22, 54 figs.

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- 1966 Preliminary systematic study of the pupae of andrenid bees (Hymenoptera: Apoidea). Amer. Mus. Novitates 2265:1-13, 18 figs. (with Karen Yager).
- 1966 Taxonomic descriptions of the immature stages of the parasitic bee, Stelis (Odontostelis) bilineolata (Sponola) (Hymenoptera:Apoidea: Megachilidae). Jour. N. Y. Ent. Soc. 74:84-91, 18 figs.
- 1966 Mature larvae of the Old World bee genus Panurgus (Hymenoptera: Apoidea). Jour. N. Y. Ent. Soc. 74:92-94, 7 figs. (with Barbara L. Rozen).
- 1967 Review of the biology of panurgine bees, with observations on North American forms (Hymenoptera:Andrenidae). Amer. Mus. Novitates, 2297; 1-44, 18 figs.
- 1967 Biology of Dufourea and of its cleptoparasite, Neopasites (Hymenoptera: Apoidea). Jour. N. Y. Ent. Soc. 75:132-146. (with Philip F. Torchio, George E. Bohart, Marjorie S. Favreau).
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- 1967 The immature instars of the cleptoparasitic genus Dioxys (Hymenoptera: Megachilidae). Jour. N. Y. Ent. Soc. 75:236-248.
- 1968 Biology and immature stages of the aberrant bee' genus Meliturgula (Hymenoptera:Andrenidae). Amer. Mus. Novitates 2331:1-18, 27 figs.
- 1968 The biology of Scapter and its cuckoo bee, Pseudodichroa (Hymenoptera: Colletidae and Anthophoridae). Amer. Mus. Novitates 2335:1-13, 12 figs. (with Charles D. Michener).
- 1968 Biological notes on Colletes compactus compactus and its cuckoo bee, Epeolus pusillus (Hymenoptera:Colletidae and Anthophoridae). Journ. N. Y. Ent. Soc., 76:106-111, 2 figs. (with M. S. Favreau).
- 1968 Review of the South African cuckoo-bee genus Pseudodichroa (Hymenoptera: Apoidea). Amer. Mus. Novitates 2347:1-10, 10 figs.

Laurence H. Snyder Professor Genetics and fifth Chairman of the Department. Seventeen years of service. 1930 to 1947. Associate Professor 1930; Professor 1933. B.S. 1922 Rutgers, M.S. 1924, D.Sc. 1926 Harvard, D.Sc. (Hon) North Carolina State Univ. 1962 Assistant Professor 1925; Associate Professor 1927 North Carolina State College. Dean of Graduate School, Univ. Oklahoma 1947, President Univ. Hawaii 1958 to 1963. Emeritus President 1963 Visiting Professor, Duke 1941, President Amer. Assoc. Advancement of Science 1957.

Publications by Laurence H. Snyder

- 1922 Notes on Some Problems of Adaptation. 9. Ctenidial Variation in Chiton. Biological Bull. XLIII:246-252. (with W. J. Crozier).
- 1922 Selective Pariring in Gammarids. Proceedings of the Society for Experimental Biology and Medicine XIX:327-329. (with W. J. Crozier).
- 1923 Selective Coupling of Gammarids. Biol. Bull. XIV:97-104. (with W. J. Crozier).
- 1924 A Report of a Histological Study of the Eyes and Gonads of Mice Treated with a Light Dosage of X-rays. Amer. Natur. LVIII:383-384. (with M. Schneider and C. C. Little).
- 1924 Iso-Hemagglutins in Rabbits. Journal of Immunology IX:45-48.
- 1924 The Inheritance of the Blood Groups. Genetics IX:465-478.
- 1924 Critical Tests of Blood Group Inheritance. Southern Medicine and Surgery LXXXVI:473-475.
- 1924 Some Biological Aspects of Eugenics. Southern Medicine and Surgery LXXXVI:389-392.
- 1925 The Effect of X-rays on the Fertility of Rats. Amer. Natur. LIX: 87-91.
- 1925 Roentgen Rays, Induced Sterility, and the Production of Genetic Modifications, Amer. Journ. of Reontgenology and Radium Therapy XIV: 241-244.

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- 1925 A State Program for the Care of our Feebleminded. N. C. Agricultural and Industry III.
- 1925 Human Blood Groups and their Bearing on Racial Relationships. Proceedings of the National Academy of Science XI:406-407.
- 1926 Human Blood Groups: Their Inheritance and Racial Significance. Amer. Jour. of Physical Anthropology IX:233-263.
- 1926 Editorial: "Blood Tests for Paternity" Journ. of the Amer. Med. Association OXXXVII:1834.
- 1926 Studies in Human Inheritance. I. The Linkage Relations of the Blood Groups. Zeitschrift fur Immunitasforschung und Experimentelle Therapie XLIX:262-280.
- 1927 Studies in Human Inheritance. II. The Medico-Legal Application of Hereditary Human Characters, with Especial Reference to the Blood Groups Jour. of the Amer. Med. Assoc. LXXXVIII:562-563.
- 1927 Blood Grouping and Its Practical Applications. Archives of Pathology IV:215-257.
- 1928 The Technique of Blood Grouping. Southern Med. and Surgery XC:548-585.
- 1928 Blood Groups in Medicine. Southern Medicine and Surgery XC:630-631.
- 1928 Common Birds of North Carolina Farms, Gardens and Orchards. N. C. Extension Circular 170, October, 1928, 47 pp.
- 1929 Studies in Human Inheritance III. A Recessive Factor for Polydactylism in Man. Jour. of Here. XX:73-77.
- 1929 The Blood Groups of the Jamaicans. Carnegie Institution of Washington Publication 395:277-280.
- 1929 Blood Grouping in Relation to Clinical and Legal Medicine. Baltimore, The Williams and Wilkins Co. xi + 152 pp, 28 figs., 4 plates.
- 1930 Studies in Human Inheritance IV. The "Laws" of Serological Race Classifications. Human Biology II:128-133.
- 1931 Studies in Human Inheritance V. Multiple Allelomorphs as Opposed to Linkage in Blood Group Heredity. Amer. Natur. LXV:332-342.
- 1931 Human Blood Groups. Chapter 15 in Source Book of Anthropology by Kroeber and Waterman. New York, Harcourt, Brace & Co.
- 1931 Inherited Taste Deficiency. Science LXXIV:151-152.

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- 1931 Studies in Human Inheritance VI. A Genetic Refutation of the Principles of "Behavioristic" Psychology. Human Biology III:547-559.
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- 1932 Studies in Human Inheritance VII. Hemophilis. Ohio Journal of Science XXXII:152-157.
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- 1932 Blood Groups. in THE NATIONAL ENCYCLOPEDIA Vol. 2:156-157.
- 1933 The Inheritance of Isohemagglutinogens in Rabbits. Ohio Jour. Sci. XXXIII:50-54. (with R. D. Cameron).
- 1933 Genetics and Medicine. Ohio State Medical Jour. XXIX:705-708.
- 1934 Studies in Human Inheritance X. A Table to Determine the Proportion of Recessives to be Expected in Various Matings Involving a Unit Character. Genetics XIX:1-17.
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- 1934 Studies in Human Inheritance XI. Koilosternia, A New Character Dependent upon a Dominant Autosomal Gene. Jour. of Here. XXV:445-447. (with George M. Curtis).
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Present departmental staff with 25 years or more of service.

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Charles A. Dambach Professor of Zoology and Director of the Institute of Natural Resources. Twenty six years of service 1936 to date. Inst. and Asst. Dir. Ohio Wildlife Res. Unit. 1942-45. Assoc. Prof. and Dir. Cons. Curriculum 1945. Dir. Cons. Lab 1948; Natural Resources Inst. 1955. B.S. 1937, M.S. 1941, Ph.D. 1945. Asst. Biologist, U.S. Soil Cons. Ser. 1937-1939; Assoc. Biologist 1939-1942. Chief Div. Wildlife, State Dept. Natural Resources, Ohio 1955; Executive Dir. Ohio Biological Survey 1958 to date.

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Ralph H. Davidson Professor of Entomology. Thirty nine years of service 1930-1969. Research Assistant 1930; Assistant 1931; Instructor 1935; Asst. Professor 1936; Associate Professor 1946; Professor 1958. Research Associate 1943-46. B.S. 1930, M.S. 1931, Ph.D. 1935 O.S.U. Field Asst. and Agent U.S.D.A. 1930-36. Asst. Extension 1939-43. Visiting Professor Wisconsin Univ. 1949-50.

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Maurice L. Giltz Associate Professor of Zoology. Twenty three-years of service, 1954 to date. Instructor 1946; Assistant Professor, 1954; Associate Professor 1954. B.S. 1937 Capital University, M.S. 1942, Ph.D. 1954 O.S.U. O.A.R.D.C. Project Leader Crop Depredation by Birds.

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James Godfrey Haub Professor of Zoology. Thirty-six years of service. 1932 to date. Grad. Assistant 1932; Assistant 1934; Instructor 1935; Assistant Professor 1944; Associate Professor 1945; Professor 1958. B.S. Capital University 1929. M.S. 1931, Ph.D. 1937 O.S.U. Visiting Professor St. Cloud State Teachers College 1940. North Shore Mosquito Abatement Project, Illinois 1930. U.S.A.F., O.S.U. R.F. 1957

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Joseph N. Miller Professor of Zoology. Forty-four years of service.

Assistant 1925; Instructor 1927; Asst. Professor 1944; Professor 1948.

A.B. 1925 Miami University, A.M. 1926, Ph.D. 1935 O.S.U.

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Ohio Journal of Science.

Willard C. Myser Professor of Zoology. Twenty-four years of service. 1945 to date. Teaching Assistant 1945. Assistant Instructor 1947; Instructor 1948; Assistant Professor 1954; Associate Professor 1960; Assistant Chairman 1961. Professor and Assistant Chairman, 1963. B.S. 1944, Kent State Univ. M.S. 1947, Ph.D. 1952. O.S.U. Research Associate 1956 Argonne National Laboratory. 1964-68 Supervisor U.S. AEC Environ. Sci. Branch.

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John W. Price Professor of Zoology. Forty-three years of service 1926 to date. Teaching Assistant 1926; Instructor 1927; Asst. Professor 1930; Assoc. Professor 1933; Professor 1943. B.S. 1921, M.S. 1923, Ph.D. 1930. O.S.U. Asst. Prof: Biology Kent State Univ. 1933 and 1937.

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Carl R. Reese Professor of Zoology. Twenty-two years of service, 1947 to date. Asst. Instr. 1947; Instructor 1948; Asst. Professor 1952; Assoc. Prof. 1958; Professor 1968 and Associate Chairman, Org. & Dev. Biology. B.S. 1921 Bethany College; B.S. 1927, M.S. 1933, Ph.D. 1952, O.S.U. Coordinator ICA/India Agr. Prog. 1955. Res. U.S.D.A. 1952 and 1955.

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Roy W. Rings Professor of Entomology and Associate Chairman in charge of Entomology, O.A.R.D.C. (Ohio Agricultural Research and Development Center) Wooster, Ohio Twenty-eight years of service. Assistant 1941; Assoc. Prof. 1954; Professor and Associate Chairman O.A.R.D.C. 1961. Asst. Entomologist 1947-53. B.S. 1938; M.S. 1940; Ph.D. 1946. O.S.U.

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Wilbur M. Tidd, Professor of Zoology. Forty two years of service. 1927 to date. Teaching Assistant 1927; Instructor 1930; Assistant Professor 1942; Assoc. Professor 1947; Professor 1956. B.S. 1925, M.S. 1929, Ph.D. 1937, Ohio State University. Asst. Professor Marietta College 1940. Asst. State Biologist Dept. Cons.

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Milton B. Trautman, Professor of Zoology. Twenty nine years of service. 1939 to date. Research Biologist, Stone Laboratory 1939; Univ. of Michigan, Curator 1934; Michigan Conservation Department; Asst. Dir., Inst. Fish Research, Univ. Michigan expedition of Yucatan 1936; Consultant Bur. Commercial Fisheries; Biol. Alaska Salmon 1959, 1961. Ohio State Univ. Inst. Polar Studies, Expedition to Alaska, Muir Inlet 1965.

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Carl E. Venard, Professor of Entomology. Thirty three years of service, 1936 to date. Teaching Asst. 1932; Instructor 1936; Asst. Professor 1942; Assoc. Professor 1947; Professor 1959. B.A. 1931, M.S. 1932, Ohio State University. Ph.D. 1936 New York University. Teaching Asst. 1934-36 New York University.

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C. Richard Weaver, Professor of Entomology and Statistician, Ohio Agr. Res. and Dev. Center. Twenty years of service, 1949 to date. Asst. Ent. 1949; Statistician 1956 to date. B.S. 1942 Akron Univ., M.Sc. 1947, Ph.D. 1950 Ohio State Univ., Visiting Assoc. Prof., Iowa State 1958.

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B. Dean Barry Associate Professor of Entomology. Fours years of service, 1965 to date. Assistant Professor 1965; Associate Professor 1968. B.S. 1960, M.S. 1961 Univ. of Missouri, Ph.D. Texas A. and M. University 1965.

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Billie Blair Associate Professor of Entomology and Extension Entomologist.

Nine years of service , 1960 to date. Instructor 1960-65; Assistant Professor 1965-66; Associate Professor 1966 to date. B.S. 1951, M.S. 1960 Univ. of Arkansas, Ph.D. 1964 Ohio State University.

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Theodore A. Bookhout Associate Professor of Zoology. Four years of service 1964- to date. Assistant Professor, 1964; Associate Professor, 1967. B.A. 1952; M.S. 1954, Southern Illinois University; Ph.D. University of Michigan 1963. Teaching Asst. Univ. of Michigan 1957-1962; Instr. 1963.

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- 1954 Seasonal availability of plant seeds, Southern Zone, Illinois. M.S. Thesis, Southern Illinois University, 122 pp.
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John D. Briggs Professor of Entomology. Seven years of service 1962 to date. Professor 1962. B.S. 1951, Ph.D. 1956, Univ. of Calif.; Assoc. Ent. 111. Nat. Hist. Survey 1955-59. Head, Dept. Ent. International Mineral and Chem. Corporation, Wasco, Calif. 1959-62; Assoc. Dean, Coll. of Biol. Sci. 1967-68, Acting Dean 1968-69. Director Inter. Reference Center for Diagnosis of Diseases of Vectors, World Health Organization 1965 to date.

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Activities of the World Health Organization International Reference Center for Diagnosis of Diseases of Vectors. World Health Organization, Miscellaneous Series.

N. Wilson Britt Associate Professor of Zoology. Twenty-three years service, 1946 to date. Research Assistant 1946; Assistant Professor 1950; Associate Professor 1959. B.S. West. Kentucky 1939. State College M.S. 1947; Ph.D. 1950 Ohio State University.

Publications by N. Wilson Britt

- 1948 Observations on the life history of the collembolan Achorutes armatus. Abstracts of Masters Theses, No. 55, The Ohio State University Press.
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Thomas J. Byers Associate Professor of Zoology. Five years of service, 1964 to present. Assistant Professor 1964; Associate Professor 1968. B.S. 1958, Cornell; Ph.D. 1962, University of Pennsylvania. NIH Postdoctoral Fellow, Carnegie Institution of Washington, 1962-64.

Publications by Thomas J. Byers

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Walter E. Carey Assistant Professor of Zoology. Thirteen years of service 1956 to date. Graduate Assistant 1955; Research Assistant 1956; Research Associate 1959; Research Supervisor 1962; Assistant Professor 1968. A.B. 1954 Kenyon College, M.Sc. 1958, Ph.D. 1968 Ohio State University.

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Paul A. Colinvaux Associate Professor of Zoology. Five years of service 1964 to date. Assistant Professor 1964; Associate Professor 1967. B.S. 1956, M.S. Cambridge University, Ph.D. 1962 Duke University. Cambridge Nigeria Expedition 1955; Res. Canadian Government 1959; Post Ph.D. Queen's University Belfast 1963; Arctic Institute of N.A. 1963; Res. Biol., Yale University 1964; Nat. Sci. Foundation 1965.

Publications by Paul A. Colinvaux

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Dr. Colinvaux has published 7 other articles in technical journals between 1949-1964.

William J. Collins Assistant Professor of Entomology. Two years of service, 1967 to date. Assistant Professor 1967. B.S. 1956, Juniata College, Pennsylvania. Ph.D. Rutgers 1965. Asst. Res. Professor , Rutgers 1965-67.

Publications by W. J. Collins

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1969 Mechanisms of Insecticide resistance in Musca domestica. Carboxylesterase and Degradative Enzymes. J. Econ. Ent. (Accepted for publication)

John L. Crites Professor of Zoology. Eighteen years of service, 1951 to date. Teaching Assistant 1951; Assistant Instructor, 1953; Instructor, 1954; Assistant Professor 1957; Associate Professor 1962; Professor 1967; B.S. 1949, M.S. 1951 University of Idaho, Ph.D. 1956 Ohio State University. Res. Investigator, Ohio Division Natural Resources, Duke University Marine Laboratory. Stone Laboratory 1965-67.

Publications by John L. Crites

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- 1967 On the synonymy of Rhigonema nigella Thomas, 1930 and Rhigonema infectum Leidy, 1859 nematode parasites of millipedes, and redescriptive notes on the males of this species. (Nematoda : Rhigonematidae) (In Press)
- 1968 Problems in systematics of parasitic nematodes. In "Problems in systematics of parasites. ed. G. Schmit. AAA Symposium, University Park Press, London.

Frank W. Fisk Professor of Entomology. Twenty years of service. 1949 to date. Assistant Professor 1949; Associate Professor 1955; Professor 1967. B.S. 1936 University of Illinois, M.S. 1939, Ph.D. 1949 University of Minnesota. Jr. Entomologist Sanitarian, Associate Entomologist, U.S. Public Health Service 1938-1946.

Publications by Frank W. Fisk

- 1938 Laboratory studies of methyl bromide as an insect fumigant. Journ. Econ. Ent. 31:79-84. (with H. H. Shepard)
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H. Y. Forsythe, Jr. Associate Professor of Entomology. Seven years of service. Assistant Professor 1962; Associate Professor 1966. B.S. 1958 University of Maine, M.S. 1960, Ph.D. 1962 Cornell University.

Publications by H. Y. Forsythe Jr.

- 1961 Determining the appropriate transformation of data from insect control experiments for use in the analysis of variance. (with G. G. Gyrisco) Journ. Econ. Ent. 54(5):859-861.
- 1961 Long-term effectiveness of soil insecticides on the alfalfa snout beetle larva. Journ. Econ. Ent. 54(3):601. (with D. S. Koehler and G. G. Gyrisco)
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- 1966 A method to screen acaricides in the field for European red mite control. Journ. Econ. Ent. 59(6):1514-1516.

D. Lyle Goleman Professor and Chairman of Entomology. Nine years of service. Extension Specialist in Entomology 1954-1959. Professor of Entomology 1965 to date. B.S. 1949 Eastern Illinois University. M.S. 1952, Ph.D. 1954. Iowa State College. Senior Entomologist, American Cyanamid Company, Princeton, N.J.

Publications by D. Lyle Goleman

- 1956 Biological study of the European corn borer in Boone Co., Iowa, Iowa State Coll., J. Sci. 30:367-369.
- 1956 Insect pests of red clover in Central Iowa in 1950. Iowa Yearbook of Agric. 1955. See Treatment for vegetable crops. Ohio Veg. and Pot. Growers Assoc. Ann. Proc. 41:89.
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Ernest Eugene Good Associate Professor of Zoology. Twenty-one years of service, 1948 to date. Instructor 1948; Assistant Professor 1953; Associate Professor 1959. B.S. 1940, M.S. 1947, Ph.D. 1952 Ohio State University. U.S.D.A. Soil Conservation Service 1935. Indiana Dept. Conservation 1941.

Publications by E. E. Good

- 1940 The effect of certain land use practices on populations of breeding birds in southwestern Ohio. *Journ. Wildl. Mgt.* 4:63-76. (with C. A. Dambach)
- 1943 Life history and habits of the Cicada Killer in Ohio. *Ohio Journ. Sci.* XLIII(1):32-41. (with C. A. Dambach)
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J. Bruce Griffing Professor of Genetics. Four years of service, 1965 to date. Professor 1965 to date. B.S. 1941, M.S. 1947, Ph.D. 1948 Iowa State University. Roosevelt Fellowship, Lima, Peru 1941; Pan American Fellowship, Santiago, Chile 1942; National Research Council Postdoctoral Fellowship, Cambridge University 1953. Instr. 1947, Asst. Prof. 1948, Iowa State University. Principal Research Officer 1956, Senior Research Fellow 1957; Senior Principal Research Scientist 1959; Chairman Genetics Section Plant Industry 1960, C.S.I.R.O., Australia. Mereson Professor of Genetics 1965; Chairman, Faculty of Genetics 1967, College of Biological Sciences, Ohio State University.

#### Publications by Bruce Griffing

- 1950 Analysis of quantitative gene action by constant parent regression and related techniques. *Genetics* 35:303-321.
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- 1969 Selection in reference to biological groups. IV. Application of selection index theory. Aust. J. Biol. Sci. (In press)
- 1969 Selection in reference to biological groups. V. Analyses of random groups exhibiting family structure. Aust. J. Biol. Sci. (In press)

W. Fred Hink Assistant Professor of Entomology. One year of service. 1968 to date. Assistant Professor 1968. B.S. 1961 Ashland College, M.S. 1964, Ph.D. 1966, Ohio State University, Research Entomologist, Inter. Minerals and Chem. Corporation 1967-68.

Publications by W. F. Hink

- Variations in  $\text{Na}$  and  $\text{K}$  in the hemolymph of Galleria mellonella (L.) North Central Branch, Entomol. Soc. Am., Proc. 20:71-72.
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Robert P. Holdsworth Professor of Entomology. Eleven years service, 1958 to date. Assistant Professor 1958; Associate Professor 1959; Professor 1964. B.S. 1937 University of Mass., B.A. 1938, Ph.D. 1941 Harvard. Dupont Chemical Co. 1947-48, U.S.D.A. 1946-47. U.S. Navy 1941-46.

Publications by Robert P. Holdsworth

- 1940 The histology of the wing pads of the early instars of *Pteronareys proteus* Newman. *Psyche* 47:112-120.
- 1941 The life history and growth of *Pteronareys proteus* Newman. *Ann. Entomol. Soc. Amer.* 34:495-502.
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Verl L. House Professor of Genetics. Eleven years of service, 1958 to date. Associate Professor 1958; Professor 1967. A.B. 1941, M.A. 1948, Ph.D. 1950, University of California. Assoc. Zool. Col. Agr. California 1947-48; Inst. Biol. Hopkins 1950-52. Sigma Xi Res. Grant 1953, Asst. Professor 1953-54, Professor Radford Coll. 1954-58. Nat. Sci. Found. Grant. Radford Coll. 1954. Vis. Prof. Biol. Hopkins 1956. Calif. Berkeley 1960-64. Sig. Corp. USA 1943-46.

Publications by Verl L. House

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(with Sally Niederhuber)

Carl S. Johnson Professor of Zoology. Nineteen years of service. 1951 to date. Assistant Professor 1951; Associate Professor 1959; Professor 1967. B.S. 1939, St. Cloud State College; M.S. 1947, Ph.D. 1951, Ohio State University. Captain, U.S. Army, 1942. Director, Ohio Conservation Laboratory, 1957.

Publications by Carl S. Johnson

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Donald E. Johnston Associate Professor of Biology. Eight years of service. 1961 to date. Instructor 1961; Assistant Professor 1965; Associate Professor 1967. B.S. 1957 Wayne State University, M.S. 1961 University of Maryland, Ph.D. 1965 Ohio State University. General Mills Inc. 1954, Res. Asst., Acarology 1960. Curator of Acarology. Maryland Agric. Experiment Station and Ohio Agric. Experiment Station, 1960.

Publications by Donald E. Johnston

- 1957 Observations on Micromegistus bakeri Tragarth, 1948 (Acarina: Mesostigmata: Parantennulidae), an antenno-phoroid mite occurring on Scarites beetles. J. Parasit. 43(5-2):35. (with G. E. Johnston and D. L. DeGuisti)
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- 1964 Comment on: Request for Acarus telarius Linne, 1758, Trombidium tiliarium Joh. Hermann, 1804, Tetranychus urticae Koch, 1836, to be placed on the Official List (Arachnida, Acarina). Z.N.(S.) 1564. Bull. Zool. Nomencl. 20(5):363-366. Bull. Zool. Nomencl. 21(2):107. (with W. Knulle, G. W. Wharton, C. R. Cutright, H.Y. Forsythe, R. B. Neiswander, and R. W. Rings)
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- 1969 Redescription of Pteronyssoides tyrrelli (Canestrini, 1899), a feather mite from the tree swallow (Acari - Acariformes). Acarologia XI(1): 104-120. (with W. A. Bruce)



Francis W. Kessler Associate Professor of Zoology. Fourteen years of service 1955 to date. Assistant 1955; Instructor 1956; Asst. Professor 1961; Associate Professor 1967. B.S. 1952, M.S. 1953, Ph.D. 1959 Ohio State University.

Publications by Francis W. Kessler

- 1960 Egg temperatures of the ring-necked pheasant obtained with a self-recording potentiometer. *The Auk* 77:330-336.
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Willi Knülle Professor of Entomology. Six years of service. Professor  
1963. Dr. rer. nat. University of Kiel, Germany 1951.

Publications by Willi Knülle

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William F. Lyon Instructor in Entomology. County Agent 1959; Survey Entomologist 1962; Extension Entomologist 1966. B.S. 1959, M.Sc. 1962, Ph.D. 1969 Ohio State University.

Publications by William F. Lyon

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- 1966 Instructions for mailing insect specimens. (Revised) Ohio Agricultural Extension Service. (with B. D. Blair)
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- 1967 Control of specific apple pests. (Revised) Ohio Agr. Ext. Serv. 12-2. (with H. Y. Forsythe, B. F. Janson, and D. L. Goleman)
- 1967 Spray chart for peaches. (Revised) Ohio Agr. Ext. Serv. 12-3. (with H. Y. Forsythe, B. F. Janson, and D. L. Goleman)
- 1967 Spray chart for pears. (Revised) Ohio Agr. Ext. Serv. 12-5. (with H. Y. Forsythe, B. F. Janson, and D. L. Goleman)
- 1967 Spray chart for sweet and sour cherries. (Revised) Ohio Agr. Ext. Serv. 12-6. (H. Y. Forsythe, B. F. Janson, and D. L. Goleman)

Lyon (Continued)

- 1967 Spray chart for raspberries and blackberries. (Revised) Ohio Agr. Ext. Serv. 12-7. (with H. Y. Forsythe, B. F. Janson, and D. L. Goleman)
- 1967 Spray chart for strawberries. (Revised) Ohio Agr. Ext. Serv. 12-8. (with H. Y. Forsythe, B. F. Janson, and D. L. Goleman)
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- 1967 Suggestions to Ohio blueberry growers for control of certain insect pests on blueberries. (Revised) Ohio Agr. Ext. Serv. 12-10. (with G. W. Still, R. W. Rings, H. Y. Forsythe, B. F. Janson and D. L. Goleman)
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Robert W. Menefee Associate Professor of Zoology and Assistant Dean.  
College of Biological Sciences. 4 years service 1965 to date; Instructor  
1965; Assistant Professor 1966; Associate Professor and Assistant Dean,  
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1957, Kent State University; Ph.D. 1965, Ohio State University.

Publications by Robert W. Menefee

- 1966 Measuring Ability to use Evidence from Scientific Instruments in  
Decision-making Situations. University Microfilms, Ann Arbor,  
Michigan.
- 1967 That Life may Continue-Investigation of the Vital Process of Re-  
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- 1968 Laboratory Manual for General Biology. D.C. Heath & Co., Boston,  
Mass.
- 1969 General Biology - Student Study Guide. Ohio State Univ. Press.  
(with C. Benjamin Meleca, Phyllis E. Jackson and Roger K. Burnard)

Richard L. Miller Associate Professor of Entomology. Three years of service 1966 to date. Associate Professor 1966. B.S. 1957 Purdue, M.S. 1959, Ph.D. 1962 Iowa State University. Extension Entomologist, University of Kentucky 1962-1966.

Publications by Richard L. Miller

- 1962 Seasonal distribution of the potato leafhopper, Empoasca fabae (Harris), among Solanum clones. Ph.D. dissertation. Iowa State University Library.
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Walter T. Momot Associate Professor of Zoology. Five years of service. 1964 to date. Instructor 1964; Assistant Professor 1965; Associate Professor 1968. B.S. 1960 Wayne State University, M.S. 1961, Ph.D. 1964, University of Michigan. Teaching Assistant 1961, Lecturer 1963, University of Michigan. Assistant Professor 1964, University of Oklahoma. Research Fellow, Institute Fisheries Research 1962.

Publications by Walter T. Momot

- 1964 Population dynamics of the crayfish, Orconectes virilis, in relation to predation by the brook trout, Salvelinus fontinalis. Ph.D. Thesis, Univ. Michigan (Submitted to Ecol. Monograph 12/2/65)
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Lowell R. Nault Assistant Professor. 3 years of service, 1966 to date.

Assistant Professor 1966. B.S. 1962 University of California, Davis.

M.S. Cornell 1964; Ph.D. Cornell 1966.

Publications by Lowell R. Nault

- 1964 Biological relationship between the pea enation mosaic virus and its vector, the pea aphid. *Phytopathology* 54:1269-1272. (with G. G. Gyrisco and W. F. Rochow.)
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H. D. Niemczyk Associate Professor of Entomology. Five years of experience, 1964 to date. Assistant Professor 1964; Associate Professor 1966. A.B. 1957, M.S. 1958, Ph.D. 1961, Michigan State University. Assistant Instructor, Michigan State University 1960-61; Invertebrate Entomology Laboratory, Chatham, Ontario, Canada 1961-64.

Publications by H. D. Niemczyk

- 1958 The distribution and magnitude of injury by the clover root borer, Hylastinus obscurus Marsham, and clover root curculio, Sitona spp., to red and mammoth clover in Michigan. M.S. Thesis. Michigan State Univ. 53 pp.
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Wayne B. Parrish Associate Professor of Zoology. Seven years of service. 1962 to date. Assistant Professor 1962; Associate Professor 1965. B. S. 1948, M.S. 1955, Ph.D. 1958 Ohio State University. Research Biologist, Leukemia Research.

Publications by Wayne B. Parrish

- 1957 Radioisotopes - A possible means for finding defects in logs and trees. *J. Forestry*, (Preliminary publication) (with W. C. Myser and M. L. Pool)
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Tony J. Peterle Professor of Zoology. Ten years of service 1959 to date. Associate Professor 1959; Professor 1964. B.S. 1949 Utah State University, M.S. 1950, Ph.D. 1954 University of Michigan. Michigan Department of Conservation 1950. Fulbright Scholar University Aberdeen Scotland 1955. Oak Ridge Inst. 1961.

Publications by Tony J. Peterle

- 1951 Intergeneric galliform hybrids: a review. *Wilson Bull.* 63(3):219-224.
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- Radioisotopes in Wildlife Techniques Manual. Revised. The Wildlife Society. (in press)

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College of Biological Sciences. 1954-1969. 15 years of service.  
Assistant Professor 1954; Associate Professor 1959; Professor and  
Assistant Dean, College of Biological Sciences 1968. B.A. 1950, Ph.D.  
1954, Johns Hopkins. Instructor 1950, Assistant 1952, Instructor McCoy  
College 1953.

Publications by Henry L. Plaine

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- 1966 Occurrence of the erupt effect in the al b c sp<sup>2</sup> strain of D. melanogaster. Dros. Info. Serv. 41:177.

Walter C. Rothenbuhler Professor of Entomology. Seven years of service 1962 to date. Professor 1962. B.S. 1950, M.S. 1952, Ph.D. 1954 Iowa State University. Assistant Professor 1954; Associate Professor 1957; Professor 1961, Iowa State University.

Publications by Walter C. Rothenbuhler

- 1947 Chances of breeding a better bee. Report of State Apiarist of Iowa for 1946, pp.68-70.
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George F. Shambaugh Associate Professor of Entomology. Seven years of service. 1962 to date. Associate Professor 1962. A.B. 1950 Wilmington College; M.Sc. 1951, Ph.D. 1953 Ohio State University.

Publications by George F. Shambaugh

- 1952 Microinjection technique in mosquitoes. Mosq. News 12:216.
- 1952 Protease activity in adult Aedes aegypti mosquitoes as related to feed. Ohio Journ. Sci. 52:80-86. (with F. W. Fisk)
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- Toxicity and effects of motor coordination of some neurotropic drugs on the cockroach, Nauphoeta cinerea. Ann. Entomol. Soc. Amer. 61(1): (in press)
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Russell V. Skavaril Assistant Professor of Zoology. Five years of service 1964 to date. Assistant Professor 1964 to date. A.B. 1958 Omaha, M.T. 1959 Creighton, M.Sc. 1960 Ohio State University, Ph.D. 1964 Ohio State University.

Publications by Russell V. Skavaril

- 1967 A computer program to calculate expected frequencies and to estimate per cent recombination in a dihybrid  $F_2$  with linkage in the coupling phase and various types of lethal inheritance. Ohio Journ. Sci. 67: 289-290. (with E. F. Paddock)
- 1968 A laboratory investigation of maturation in the Cuban burrowing cockroach Byrsotria fumigata (Guerin). Ohio Journ. Sci. 68(1):11-17.



David H. Stansbery Associate Professor of Zoology. Fourteen years of service 1955 to date. Graduate Assistant 1955. Assistant 1956; Instructor 1957; Assistant Professor 1961; Associate Professor 1966. B.S. 1950, M.S. 1953, Ph.D. 1960 Ohio State University. Curator, Natural History, Ohio State Museum, 1962 to date.

Publications by David H. Stansbery

- 1952 Artificial key for the identification of the adult salamanders of the state of Ohio. Ohio State Univ. Franz T. Stone Inst. Hydrobiol. 6 pp.
- 1953 Caves in the Lake Erie Islands. Ohio Journ. Sci. 53(6):358-362, 5 figs., 2 tables. (with James L. Verber)
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- 1959 A checklist of the crayfish (Decapoda:Astacidae) of Ohio. Ohio State Univ. Dept. Zool. & Entomol., 2 pp.
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- 1962 Artificial key for the identification of the adult salamanders of the state of Ohio. (2nd Revision) Ohio Hist. Soc. Dept. Nat. Hist., 6 pp. (with John M. Condit)
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- 1964 The mussell (muscle) shoals of the Tennessee River revisited. (Abstract) Amer. Malacological Union Ann. Rept. for 1964:25-28.
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- 1964 A translation of "The Natural System of the Naiades" by Hans Kodell, 1942. (translated from the German with the consent of the author) Sterkiana No. 14:1-18, 3 fig. (with Ulf Soehngen)
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- 1966 Observations on the habitat distribution of the naiad Cumberlandia monodonta (Say, 1829). Ann. Rept. Amer. Malac. Union. 1966:29-30.
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Gordon R. Stairs Assistant Professor of Entomology. Four years of service 1965 to date. Asst. Professor 1965. B.S. 1954. University New Brunswick (Canada); M.S. 1958, Ph.D. 1963, McGill University. Res. Officer, Canada Dept. Agr. & Forestry 1954.

Publications by Gordon R. Stairs

- 1960 Infection of the Jack Pine budworm, Choristoneura pinus Freeman with a nuclear-polyhedrosis virus of the spruce budworm Choristoneura fumiferana (Clemens), (Lep:Tortricidae), Canada Ent. 92:906-908.
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- 1964 Changes in the susceptibility of Galleria mellonella (Linnaeus) larvae to nuclear-polyhedrosis virus following blockage of the phagocytes with india ink. J. of Insect. Path. 6:373-376.
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- 1968 Dosage-mortality responses of insects of viruses. *Proc. N. C. Branch Ent. Soc. of America* 18-22.

William A. Stephen Professor of Entomology. Seven years of service, 1963 to date. Professor of Entomology and Extension Apiculture Specialist 1963. B.S. 1935 Ontario Agr. College, M.S. Univ. of Toronto 1941. Canadian Dept. Agr. 1935-1944; U.S.D.A. Apiculturist 1944-46, Madison Wisconsin; Extension Beekeeper, North Carolina State College 1949-63.

Publications by W. A. Stephen

- 1938 Relation of moisture and yeasts to the keeping quality of honey. Can. Bee Journ. 46:93-94, 95; 120-121.
- 1940 How honey varies within the hive. Can. Bee Journ. 48:185-186.
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- 1964 Bee Lines. Ext. Circular No. 334 (Reprint). N. C. State College, Raleigh, N. C.
- 1965 Beekeeping Correspondence Course. Coop. Ext. Serv., Ohio State Univ., Columbus, Ohio.
- 1965 Beekeeping for pre-teens. An Ohio Ext. Serv. 4-H Publ., 10 pp.
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- 1968 Mites, a beekeeping problem in Vietnam and India. Bee World 49(3): 119-120.

Thomas M. Stockdale Assistant Professor of Zoology. Nine years of service 1960 to date. Instructor 1960; Assistant Professor 1968. B.S. 1955, M.S. 1960 Ohio State University.

Publications by T. M. Stockdale

- 1960 Farm pond management. Ohio Ext. Bull. 374, 24 pp.
- 1960 The red-winged blackbird story. Ohio Agr. Expt. Sta., Spec. Circ. 95, 20 pp. (with M. L. Giltz)
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- 1968 Insecticide hazards to non-target organisms. Sec. I. Ohio Mosquito Control Manual. Pg. I-1 thru I-4. (with D. L. Goleman)



Charles P. Stone Instructor of Zoology. Three years of service. 1966 to date. Instructor 1966. B.S. 1960 University of Minnesota. M.S. 1963 Colorado State University.

Publications by C. P. Stone

- 1966 A literature review on mourning dove song as related to the coo-count census. Colorado Dept. Game, Fish and Parks. Spec. Rept. 11, 29 pp.
- 1966 Doves at your door. Colorado Outdoors 15(5):36-37.
- Use of the coo-count census for mourning doves in Larimer County, Colorado. M.S. Thesis. Colorado State Univ., Fort Collins. 102 pp.
- 1965 Intensive blackbird decoy trapping in northeastern Arkansas. Special Report, Work Unit F-31, U.S. Bureau of Sport Fisheries and Wildlife, Section of Animal Depredations Control Studies. 28 pp. (with P. L. O'Halloran)
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Stephen H. Taub Instructor in Zoology. Three years of service 1966 to date. Instructor 1966. B.S. 1958, University of Maine, M.S. 1966 University of Massachusetts. Fish Biologist Conn. State Bd. Fisheries. 1960-64.

Publications by S. H. Taub

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Victor C. Thompson Research Associate and Manager Bee Laboratory. Six years of service 1963 to date. Research Associate 1963. B.S. Kansas State Univ. 1944, M.S. Iowa State University 1955. Commercial Queen Rearing, The Puett Co., 1944; Res. Asst. University of Kansas, 1945-51; Res. Assoc. Dept. of Zoology and Entomology, Iowa State Univ. 1951-1962.

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Robert E. Treece Professor of Entomology. Eleven years of service. 1958 to date. Assistant Professor 1958. B.S. 1951, M.S. 1953, Ohio State University, Ph.D. Cornell 1957. Asst. Extension Specialist, Rutgers University 1956-58.

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Charles A. Triplehorn Professor of Entomology. Twelve years of service. 1957 to date. Assistant Professor 1957; Associate Professor 1962; Professor 1967 to date. B.S. 1949, M.S. 1952 Ohio State University. Ph.D. 1957 Ohio State University. Assistant Professor, Entomology, University of Delaware 1952-54. Teaching Assistant, Cornell University 1954-57.

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Richard A. Tubb Associate Professor of Zoology. Two years service 1967 to date. Assistant Professor 1967; Associate Professor 1968. B.S. 1958, M.S. 1960, Ph.D. 1963 Oklahoma State University.

Publications by Richard Tubb

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Barry D. Valentine Associate Professor of Entomology. Nine years of service. 1960 to date. Assistant Professor 1960; Associate Professor 1966. B.S. 1951, M.S. 1953, University of Alabama. Ph.D. 1960, Cornell. Teaching Assistant 1951 University of Alabama. Teaching Fellow 1953 Harvard; Assistant Professor 1955; Acting Chairman 1957, Mississippi Southern College. Entomologist, Standard Fruit Co. 1956 (Honduras). Exped. Bahama Island, American Museum Natural History 1965. Visiting Assistant Professor, University of Oklahoma 1965, 1967 and 1968.

Publications by Barry D. Valentine

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George W. Wharton Professor of Zoology and seventh chairman of the department. Eight years of service, 1961 to date. Professor 1961; Chairman 1961-1968 when department was dissolved. B.S. 1935, Ph.D. 1939 Duke Univ., Asst. Prof. Duke 1939-53, Professor and Chairman Department of Zoology, Univ. of Maryland 1953-1961, Director of Acarology Institute 1953-to date (1969).

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