

## Entomology museum basic to teaching and research



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A museum of entomology is an information center or "library" of insects and related arthropods. In such a museum, specimens are properly preserved and labeled as a permanent source of information on structures, geographical and seasonal variations, habitats, ecology, host-parasite association, and evolutionary trends of insects. The collection provides a ready reference for entomological research, for prompt and accurate identification of pests and other insects, and also serves as an indispensable backbone for undergraduate and graduate teaching of entomology and insect systematics. Such are the functions of the Frost Entomological Museum located in 302 Patterson Building at the University.

The primary objectives of the Frost Entomological Museum are to accumulate, maintain, and conserve a documented record of insects and related arthropods for research and instruction. Documented records include collections of insects and arthropods, traces and remnants of insects, and associated notes and papers. This museum plays a unique educational role for the public and students on campus and also provides an indispensable service for accurate identification of insects and arthropods for the public, the Cooperative Extension Service, researchers, private industry, and federal and state governments. Prompt and accurate identification of insects are essential for much practical environ-

mental work, such as pollution and agriculture.

Insects and their relatives are the dominant group of living animals on the earth. About a million different species have been known to exist in the world. Many thousands may be found in and around the house. The kinds and diversity of these animals are studied by insect systematists. The major thrusts of such work are identification, classification, and evolutionary studies of insects and their relatives.

The Frost Entomological Museum, Department of Entomology, places emphasis on the fauna of Pennsylvania and North America. The collection is strongest in groups that include pests, parasites, and predators affecting crops, forests, man, and domestic animals in Pennsylvania, and in those groups that are important in ecology, pollution biology, and biological control research. The collections of particular groups are continuously expanded and improved by the special interests of systematists associated with the museum.

**Insect survey planned.** As a part of the museum's activities, a statewide insect survey program has been developed in cooperation with the United States Department of Agriculture and the Pennsylvania Departments of Agriculture and Environmental Resources. This program, known as the Economic and Faunistic Insect Survey of Pennsylvania, collects

and stores pertinent information on the occurrence, relative abundance, distribution, biological association, and economic importance of insects and related arthropods in the Commonwealth. This information is published weekly and is disseminated to federal and state government agencies, research organizations, professional entomologists, Cooperative Extension Service workers, and others. The program assists farmers and other agricultural workers to more adequately protect their crops from insect attack by supplying current information on insect pest activity. The insect collection of the museum is also being expanded through this program.

**Frost original curator.** The insect collection of the University was originated in 1937 and developed by the single-handed effort of Dr. Stuart W. Frost, Professor Emeritus of Entomology, who served as curator until 1957. Dr. W. W. Boyle was in charge of the collection from 1957 to 1968; the author became curator in the summer of 1968. In 1969 this collection was officially designated the Frost Entomological Museum in honor of Dr. Frost.

The major portion of the collection has been accumulated through a project entitled "The Ecological Insect Survey of Pennsylvania." Numerous small collections have been received as gifts or purchased for the museum. Recently, Professor Emeritus John O. Pepper donated his extensive aphid collection. Mrs. Robert E. Carter of Darlington, Beaver County, donated her collection of over 4,000 moths and butterflies collected over a 15-year period. Light trapping of insects, carried out by Dr. Frost for the last 10 years, has provided excellent additions of Florida insects.

The museum now contains approximately 220,000 pinned insect specimens, 5,000 vials and bottles of alcohol-preserved specimens, and a large collection of Arachnida including scorpions, spiders, mites, and related forms. The general collection of pinned insect specimens is housed in approximately 1,200 U.S. National Museum drawers and 100 cabinets. The largest collections include approximately 40,000 beetles (Coleoptera), 25,000 butterflies and moths (Lepidoptera), 20,000 flies (Diptera), 18,000 cicadas, aphids, and related sucking insects (Homoptera), and 11,000 bees and wasps (Hymenoptera).