

FLORIDA'S CENTER FOR ARTHROPOD SYSTEMATICS

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ABSTRACT

The Center for Arthropod Systematics, initially involving an agreement between the University of Florida and the Florida Department of Agriculture and Consumer Services, was established in 1983. Its primary purpose is to encourage research on the diversity, systematics, biology, evolution, and identification of insects and other arthropods. The Center seeks to pursue a unified policy on the collection, acquisition, administration, and curation of the various arthropod systematics collections and libraries and make this a world center for arthropod systematics.

RESUMEN

El Centro para Sistemáticas de Artrópodos el cual estableció un convenio entre la Universidad de la Florida y el Departamento de Agricultura y Servicios al Consumidor de la Florida, fué fundado en el 1983. Su primer propósito es el de fomentar investigaciones científicas sobre, la diversidad, sistemáticas, biología, evolución, e identificación de insectos y otros artrópodos. El Centro aspira a seguir un programa unificado respecto a la colección, adquisición, administración, y curado de as varias colecciones a sistemática de artrópodos y las bibliotecas y asi hacer de éste un centro mundial para a sistemática de artrópodos.

The Center for Arthropod Systematics, designed to provide coordinated institutional support for arthropod systematics in Florida, was established 15 April 1983, with the signatures of Dr. Robert Q. Marston, then President of the University of Florida, and Doyle Conner, Commissioner of the Florida Department of Agriculture and Consumer Services. The founders envisioned that eventually the Center might involve active participation of programs such as those at Florida A & M University, Tall Timbers Research Station, and Archbold Biological Station.

The original Memorandum of Understanding stated that:

"It is proposed that a Center for Insect Systematics" (title subsequently changed) "be developed in the Gainesville area, but not limited to this area, to encourage research on the diversity, systematics, biology, evolution, and identification of insects and other arthropods. To accomplish this, the Center will seek to develop a unified policy on the collection, acquisition, administration, and curation of the various arthropod systematics collections and libraries, a policy which individually will benefit its member units and collectively will make this a world center for arthropod systematics.

"The Center for Insect Systematics shall include the Florida State Collection of Arthropods (FDACS, Division of Plant Industry) and any other organization which has or is interested in developing arthropod collections and taxonomic literature. The center shall have a coordinations council composed of representative from each cooperating organization and shall be chaired on a rotating basis by one of the members of the Coordinating Council.

"In order to make the arthropod collections and their accompanying data available for the greatest possible use and research by the staffs of the Center's member units and by cooperating institutions, departments, agencies, and qualified dependent researchers, the Center will seek to functionally integrate all the Gainesville-based collections into one systematics assemblage rather than encourage their fractionation into competitive or duplicate parts. As part of this effort and to strengthen the programs of the cooperating member units and to develop the strongest possible integrated program, the Center will strive to have all Gainesville-based systematics collections of insects and related groups housed physically near each other.

"Additional members and functions may be added in the future."

Primary resources of the Center at the two charter institutions are the libraries and collections of the Florida State Collection of Arthropods [that part located in Gainesville, mostly in the Doyle Conner Building, headquarters of the Division of Plant Industry (Fig. 1)] and The Allyn Museum of Entomology (currently located in Sarasota). Assets of the latter were given in 1981 to the University of Florida Foundation Inc. The Allyn Museum of Entomology is operated as an extension of the Florida State Museum, which itself is a part of the University of Florida. Plans have been set to move the collections of The Allyn Museum of Entomology to Gainesville as soon as facilities are available, possibly within the next 2 to 3 years.

The world collection of Lepidoptera, primarily butterflies, at the Allyn Museum consists of approximately 560,000 prepared specimens with some 800 primary types plus an additional 250,000 specimens awaiting preparation, housed mainly in an automated compactor storage unit. The Lepidoptera collection of the Florida State Collection of Arthropods, especially rich in New World species, is in excess of 1,000,000 specimens. It would seem logical and in the best of interest of science to house the two collections of Lepidoptera in Gainesville in a planned addition to the north end of the Doyle Conner Building which currently houses the main part of the FSCA. It would then house the third largest collection of Lepidoptera in the New World, comprising the greatest species representation of any New World butterfly collection.

The insect collections of Florida A & M University, where research is concentrated mainly upon aquatic groups, became part of the Florida State Collection of Arthropods via a formal agreement reached in August 1977 and endorsed by Dr. B. L. Perry, Jr., President then of FAMU, Commissioner Doyle Conner of the Florida Department of Agriculture and Consumer Services, and F. C. McArthur, Vice Chancellor then of the Florida Board of Regents. FAMU currently is not a member of the Center for Arthropod Systematics. We hope that in the near future, FAMU, through its Center for Urban and Fresh Water Entomology, will also become a participating institution in the Center for Arthropod Systematics. The Florida A & M aquatic collections, particularly rich in Ephemeroptera, are in excess of 550,000 specimens.

The total resources of the Center and associated institutions include over 7.6 million curated specimens, with many other specimens awaiting processing. Many groups have worldwide representation. The library of the Division of Plant Industry, located in the Doyle Conner Building in Gainesville, comprises over 12,500 volumes and 472 current subscriptions to journals dealing wholly or in part with arthropods, plus several hundred thousand arthropod papers in the reprint files of the Bureau of Entomology and The Allyn Museum of Entomology. The University of Florida libraries house another 5.8 million books and papers on all subjects, including about 800,000 scientific books in the Central Science Library (a new consolidation of all science branch libraries and the Hume Agriculture Library). The University maintains a substantial number of subscrip-

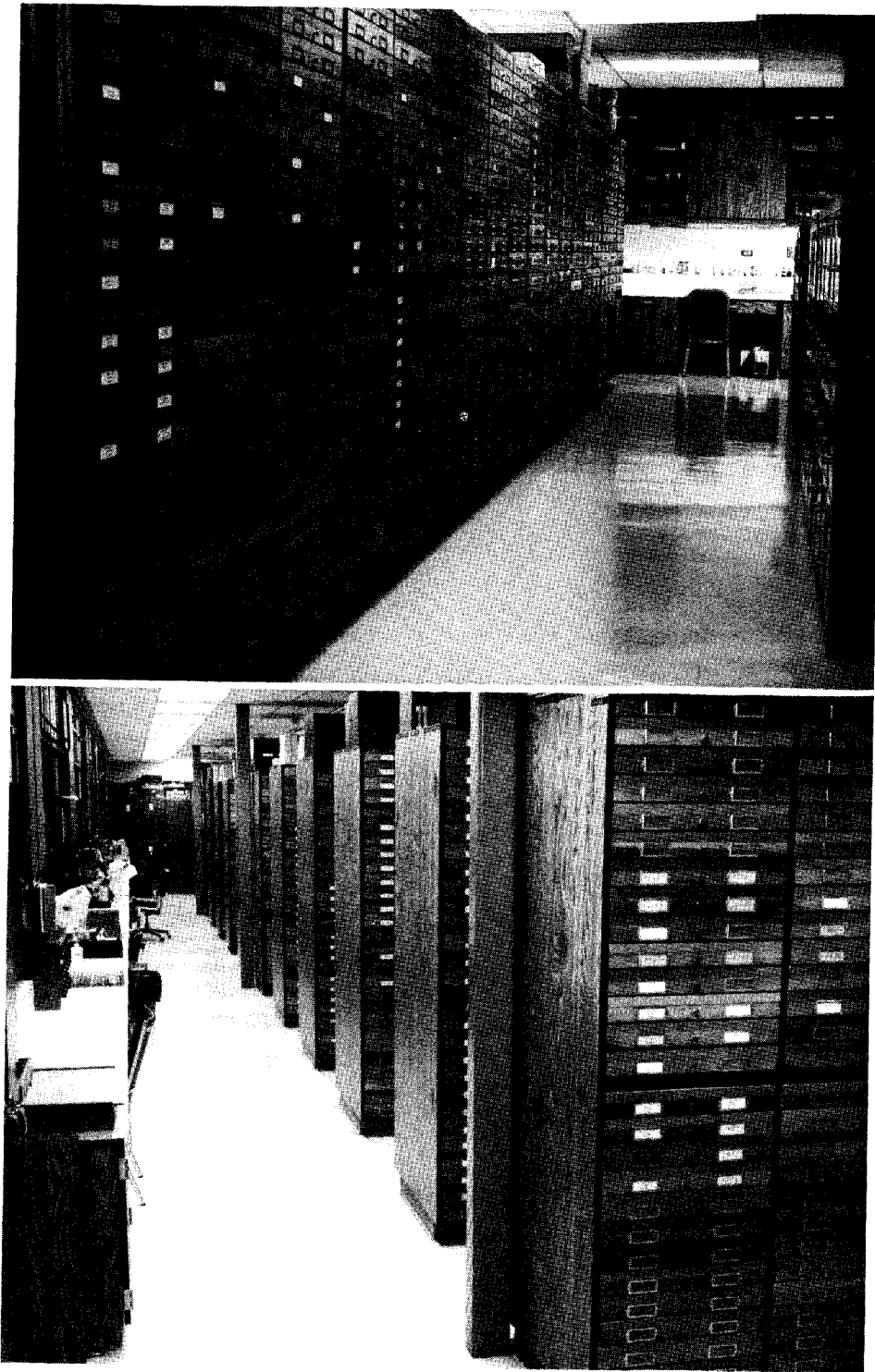


Fig. 1. Views inside one of the museum rooms of the Florida State Collection of Arthropods.

tions for entomological periodicals, primarily in specialties other than taxonomic, which are not duplicated by the Division of Plant Industry library. The entomology library located in Gainesville is the best in the southern United States and one of the leading entomological literature resources in the nation. Correspondingly, with holdings in Gainesville of 5 million specimens and in Tallahassee of over 550,000 specimens, the Florida State Collection of Arthropods, the main asset of the Center, is the largest and finest in the southeastern United States and fifth largest in the United States. This collection is growing at an accelerating rate. Additions to the FSCA in 1983 were evaluated at close to a quarter of a million dollars, those in 1984 in excess of a half million dollars, and those in 1985 at nearly three quarters of a million dollars! The collection and library provide the basis for taxonomic research and for an arthropod identification service which with those of the Illinois Natural History Survey and the California Department of Food and Agriculture have been ranked the three best state programs in the United States.

The Florida State Collection of Arthropods maintains a unique program of Research Associates and Student Associates, currently with 260 members in the United States and other nations around the world, including taxonomic specialists covering many groups of arthropods. This program offers mutual benefits to Associates and the Center and has been responsible to a large degree for the rapid emergence of the FSCA within the last 30 years as one of the major arthropod systematics programs of the world. Affiliated with the FSCA are the collection and library of the American Entomological Institute, housed in two large buildings in Gainesville which were completed in 1985 and donated to the Institute by Drs. Henry and Marjorie Townes. These include the world's largest and most complete library and collection of Ichneumonidae, the largest family of Hymenoptera, as well as a large library and collection of Braconidae and other parasitic wasps; in total over 900,000 specimens. The Parasitic Hymenoptera Laboratory of the Institute will be a great asset to the State of Florida in the development of effective biological control of insect pests and the training of future parasitic Hymenoptera systematists. Another important development in 1985 occurred at the world meeting of Odonata specialists held in Paris, France. There the International Odonata Research Institute was created under the leadership of Dr. Minter J. Westfall, Jr., University of Florida Professor of Zoology and then outgoing President of the *Societas Internationalis Odonatologica*. Headquarters for the new Odonata research institute was established in the facilities of the Division of Plant Industry, in Gainesville, Florida. The Odonata collection of the Florida State Collection of Arthropods includes the world's most complete collection of Odonata immatures and the second most complete Odonata library and collection of adult Odonata, immatures and adult specimens totaling over 250,000. Committed for eventual deposition in the Odonata Institute is the world's finest Odonata library and several major Odonata collections currently in Europe and other areas.

The Florida Department of Agriculture and Consumer Services publishes two taxonomic series: *Occasional Papers of the Florida State Collection of Arthropods* and *Arthropods of Florida and Neighboring Land Areas*. The Florida State Museum also publishes a series on Lepidoptera systematics: *Bulletin of The Allyn Museum*. The American Entomological Institute publishes two memoir series of revisions and monographs, *Contributions of the American Entomological Institute* and *Memoirs of the American Entomological Institute*. Also associated with the Institute and published in Gainesville is the journal, *Oriental Insects*. Through the Gainesville based publisher Flora and Fauna Publications (a division of E. J. Brill of Leiden, Netherlands) five other series associated with the Center also are being published: *Insecta Mundi* (a quarterly journal), *Coleopterorum Catalogus*, *Lepidopterorum Catalogus*, and the *North American Beetle Fauna Series* and *Flora and Fauna Handbook Series*, the latter a series

of monographic works on insects. Also associated with the Center is the Neotropical Lepidoptera Project, producing the series *Atlas of Neotropical Lepidoptera* published directly by E. J. Brill. In cooperation with the Taiwan Museum, in Taipei, the series *Lepidoptera of Taiwan* is also in progress. Staff and research associates of the Division of Plant Industry, Florida Department of Agriculture and Consumer Services and members of associated institutions of the Center either direct or edit all the above publication series.

The Center for Arthropod Systematics promotes educational programs in arthropod systematics and biology through the University of Florida and indirectly through Florida A & M University. Graduate students interested in arthropod systematics or associated fields of study can call upon the expertise of Center associated staff members for guidance in various programs of study leading toward the M.S. and Ph.D. degrees. Research on the biology of insects is pursued also in the Gainesville based laboratories of the University of Florida Institute of Food and Agricultural Sciences, Department of Entomology and Nematology and in the Department of Zoology, and in the Florida State Museum, as well as in the USDA facilities (Insects Affecting Man and Animals Research Laboratory and Insect Attractants Behavior and Basic Biology Research Laboratory).

As international travel and transport of goods increases, the threat of various exotic pests entering Florida increases. Pests from any tropical, or subtropical region potentially can survive in Florida and could cause havoc to our agriculture. A primary goal of the Center is to increase the species representation in the Florida arthropod collections so that more rapid and accurate identification of such pests will be facilitated. The FSCA will continue building species representation from all tropical and subtropical areas of the world, particularly from the New World but also from Africa and the Indo-Australian region.

The future for the continuing development of the Center for Arthropod Systematics looks promising and should provide Florida and the entomological world much information, including a routine identification service, to support applied entomology, agriculture in general, and consumer services for the State of Florida.

ENDNOTE

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