

Project report
CSE grant, Center for Systematic Entomology
03/04/2019

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Project title: Systematics of the mantidfly subfamily Symphrasinae (Neuroptera: Mantispidae)

Project dates: 3 to 24 February of 2019

The present document summarizes the activities performed during my stay at the Florida State Collection of Arthropods:

1. Taxonomic identification of the specimens of Symphrasinae found at the FSCA:

Each specimen was examined and identified to species level, even when the specimens were already identified by other researchers. I found several specimens erroneously identified. It is important to mention that since this group lacks a taxonomic revision, there are still many species to be described. The FSCA holdings account with an important number of new species mostly from Mexico as well as a presumably new genus which is distributed near the boundary of Mexico and United States. These taxa are currently in process of description, so an important number of types will be deposited at FSCA. A representative sample of each species was borrowed to be properly described and illustrated at the Instituto de Biología of the Universidad Nacional Autónoma de México, UNAM. These activities are part of the taxonomic revision of the Subfamily, which is one of the main objectives of my PhD dissertation.

2. Replacement of vials with cork stoppers:

Many mantispid specimens deposited at the FSCA had the genitalia dissected and pinned below the specimen or associated with the respective specimen in other pin. Most of the vials containing genitalia had cork stoppers which had damaged the labels and the pins of specimens because the glycerin dissolved the varnish and the metal of the pins. Also, the cork allows the evaporation of the glycerin; so, many genitalia were nearly completely dried. In view of that potential risk for the Symphrasinae collection of FSCA the majority of the vials were replaced by glass or plastic vials with rubber stoppers and fresh glycerin.

3. Replacement of vials and alcohol of specimens preserved in liquid:

An important amount of mantispid specimens of FSCA are preserved in alcohol. Some samples are very old, so the alcohol became dark and viscous. Some other vials had the rubber stopper completely dissolved, and consequently the samples had dried. In view of that, the liquid of most of the vials was replaced by fresh alcohol, and the vials with damaged stoppers were also replaced.

4. Arrangement of the collection by sex sorting:

The specimens of Symphrasinae of FSCA were not only taxonomically arranged, but also by sex. Each species has males and females separated.

5. Labeling:

Selected specimen that lacked a taxonomic identification were labeled. It is important to mention that an important amount of material was borrowed, so once the material is returned all the specimens will have taxonomic identification labels based on the taxonomic revision and the publication of the new species.



Photo 1: working in the Symphrasinae collection of Florida State Collection of Arthropods.



Photo 2: cabinet with Symphrasinae specimens arranged by species and sex: *Plega banksi* and *Plega dactylota*.