

Ag Awareness Mini-Grant Final Report

Project Title: Development of a CD-ROM of High Quality Images of Parasitoids and Pathogens of Florida's Important Arthropod Pests

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Abstract:

Most of Florida's county extension agents that are responsible for pest control programs are supportive of IPM, and have a keen interest in educating their clientele about the biological control component of IPM. However, many new county agents have limited formal training or practical experience with the predators, parasitoids and pathogens that are responsible for natural regulation or biological pest control in Florida's agricultural, horticultural, public health, urban, and natural resource sectors. An

awareness of the identity and biology of these beneficial organisms is essential for implementing successful biocontrol-based IPM programs at the local level. Except for professionals in the field of biological control, obtaining a working knowledge of the diversity of natural enemies already established in Florida or those that are available commercially can be a daunting task, especially for new county agents and their clientele. This new CD-ROM, which focuses on parasitoids and pathogens of arthropod pests of field, landscape, and fruit crops as well as natural areas, was developed to address this need by providing county extension faculty with a readily available resource to help them educate their clientele about these natural enemies.

Project Goals:

Produce an Image Gallery CD-ROM (Vol. II) for educating county extension faculty and their clientele about parasitoids and pathogens responsible for biological control of important pests impacting Florida's agricultural, horticultural, urban, and natural resource sectors. This CD is a companion to the Predators Image Gallery (Vol. I).

Project Activities:

A species list was compiled of the key pests affecting county extension programs and organic producers. The University of Florida Entomology and Nematology department's slide/image index was then examined to locate relevant images for these pests and natural enemies. Images from the collection were selected for their quality, and then scanned to incorporate them onto a disc. Additional images were solicited from IFAS state and county faculty. Published literature on the organisms incorporated into the CD was reviewed in order to obtain information on their biologies, habitats, distribution, descriptions, life cycles, etc.

Key arthropod hosts/pests representing 5 orders and 18 species were covered in the new Image Gallery CD. In total, 78 associated high quality parasitoid images (3 orders / 20 species), and 22 pathogen images (8 species) for the aforementioned hosts/pests were included. Profiles containing brief descriptions about for the hosts and associated parasitoids / pathogens also were provided.

Recipients/Benefactors:

County Extension Faculty, Master Gardeners, Master Naturalists, State Extension Faculty.

Outcomes and Deliverables:

Exceptional quality, high-resolution images of parasitoids/pathogens and supporting biological descriptions in CD-ROM format was created for use by extension faculty in preparing extension publications, e.g. trade journals, bulletins, pamphlets, fact sheets and EDIS documents.

Impact:

In order to reduce reliance on pesticides through the increased adoption of biological control, growers and land managers need to be educated about the importance of predators, parasitoids and pathogens for pest suppression in Florida's managed and natural ecosystems. A readily available resource in CD-ROM format will improve county extension faculty's understanding and appreciation of biological control as a component of IPM in the farming, gardening, natural resources and urban communities. This CD will make it easier for them educate their clientele about the parasitoids and pathogens that are the basis of many of Florida's successful IPM programs.