RFSR010

UF UNIVERSITY of FLORIDA
IFAS Extension

# Insect Identification Service [1]

Lyle J. Buss[2]

There are thousands of insect species in Florida. Most are harmless or even beneficial, but some are pests. It is very important to correctly identify the insect before deciding which control measures to take, or deciding if control is even needed. The primary goal of the Insect Identification Lab is to identify insects promptly so that management recommendations can be made quickly.

## Diagnosing the Problem

Often the best place to start in getting help with an insect problem is at your local County Extension Office. The Extension agents and Master Gardeners can advise you on management options for pests that occur on plants or around homes. If they are unfamiliar with your insect, they can help you submit a sample to the Insect Identification Lab in Gainesville. To locate the Extension Office in your county, check for "Cooperative Extension Service" in the county government section of your phone book (blue section), or see the University of Florida "Solutions For Your Life" website at http://solutionsforyourlife.ufl.edu/map/index.html.

## Collecting a Sample

The quality of the sample affects the quality of the identification. Generally, the more specimens the better. It is usually best to kill and preserve insects before shipping to prevent damage to the specimens. Most insects can be killed in a freezer or by placing them in a vial containing 70% alcohol (ordinary rubbing alcohol). Mites and small insects like ants can be collected using a Q-tip or a small paint brush dipped in alcohol. Most adult insects can be preserved in alcohol, although moths and butterflies are best kept dry. Dry insects are brittle, so carefully pack them in a container with soft tissue to prevent breaking. For plant-feeding mites, it is often best to send a portion of the sample preserved in a vial of alcohol, and also a live sample of the mites and their host plant in a zip lock bag.

Soft-bodied insects, including immature stages, are best preserved in rubbing alcohol. Most can be placed directly into alcohol, but special care is needed for some insects. Caterpillars placed directly into alcohol often turn black, making them more difficult to identify. Such larvae preserve better when first placed in hot water. Boil some water, remove from heat, and drop the live insects into the water for

1. This document is RFSR010, one of a series of the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date December 1993. Revised March 2010. Visit the EDIS Web Site at http://edis.ifas.ufl.edu.

2. Lyle J. Buss, Entomology and Nematology Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

several minutes. Then transfer the insects into alcohol. This is most important for the larvae/caterpillars of moths, butterflies, beetles, and flies.

For many insects, a species identification can only be made from the adult stage. Sending live immatures along with some host plant material will enable specimens to be reared to the adult stage, if necessary. Samples containing plant material and/or live insects will arrive in better condition when mailed early in the week using a carrier that delivers the package in 1-2 days.

## Packing and Sending Your Sample

Once you have your sample in a vial, plastic bag, or other small container, place it in a crush-resistant container like a mailing tube or small box for mailing. Use bubble wrap, Styrofoam peanuts, or newspaper to pack your sample in the box. Make sure that any vial containing alcohol is **closed tightly** to prevent spilling. Simply sending dry insects in a flat envelope is the **worst** way to submit a sample. Even padded envelopes provide little protection unless the insects are first placed inside a sturdy container. If your insects are feeding on plants, enclose some plant material and damage, if possible. Plant material should be wrapped in a dry paper towel, and placed into a plastic bag. This prevents the leaves from getting too dry, while absorbing excess moisture to prevent molding.

If you have an insect that you suspect could be a new exotic or invasive species, take special care when packaging it. Plant material should be double-bagged to prevent escape of any insects. Contact the Insect ID Lab so that we are expecting the package and can deal with it appropriately. It is best to send such packages using priority mail or an overnight carrier.

## Submission Form

Fill out the submission form as completely as possible. **Write in pencil or permanent ink** that will resist smearing in case the form gets wet, or else place the form in a separate zip lock bag. For each sample, enclose an $8.00 check or money order made payable to the **University of Florida**.

## Service Provided by the Insect ID Lab

The Insect ID Lab strives to provide a species-level identification of the submitted insects. However, depending on the sample, only a genus, family, or order level identification may be possible. Control recommendations are provided upon request. Other arthropods besides insects are also accepted, including mites, ticks, spiders, and millipedes. The University of Florida Insect ID Lab provides this service primarily for Florida residents. If you are not a Florida resident and would like to send a sample, contact the lab prior to sending a specimen. In the event that the lab is willing to receive your sample, only dead arthropod specimens should be sent to the lab from out-of-state.

E-mail is the primary and preferred reporting method for the lab. However, fax, telephone, or regular mail communications can be accommodated upon request.

## Additional Information

For more details or for questions about the Insect Identification Service, contact:

Lyle Buss

Bldg. 970, Natural Area Dr.

PO BOX 110620

University of Florida

Gainesville, FL 32611-0620

(352) 273-3933 - FAX (352) 392-5660

E-Mail: LJBuss@ufl.edu

Website:
http://fpdn.ifas.ufl.edu/ufmain-insect-lab.shtml

# Insect Identification Form

**University of Florida Insect ID Lab**
**Entomology and Nematology Dept.**
http://edis.ifas.ufl.edu/sr010

**FEE: $8.00 per sample - make check payable to University of Florida**

**Mail sample to:**
**Lyle Buss**
**Bldg. 970, Natural Area Dr.**
**P.O. Box 110620**
**Gainesville, FL 32611-0620**

## Collection Information:

Date collected:_____

County:_____

Name:_____

Address:_____

E-mail:_____

Phone:_____

FAX:_____

## Submitted by (if different from collector):

Extension Agent:_____

Name:_____

Company:_____

Address:_____

E-mail:_____

Phone:_____

FAX:_____

---

**Response method:**
____ E-mail (preferred)
____ FAX
____ Telephone
____ Regular mail

**Notify:**
____ Collector
____ Submitter
____ Agent only

**Information requested:**
____ Control information
____ Species identification
____ Other (please explain)

**Priority:**
____ Routine
____ Urgent (explain why)

---

## Household

**Structural**
___ Bathroom
___ Bedroom
___ Kitchen / Pantry
___ Family / Living room
___ Garage
___ Patio / Screened area
___ Other:_____

**Stored Products**
___ Kitchen / Pantry
___ Other:_____

**Type of Damage**
___ Annoyance
___ Wood damage
___ Fabric / Textile
___ Food damage
___ Biting / Stinging
___ Other:_____

## Human/Animal

___ Humans
___ Pets
___ Livestock
___ Poultry
___ Other:_____

**Type of Problem**
___ Animal irritation
___ Neighbor complaints
___ Wounds
___ Other:_____

## Plants

___ Ornamentals
___ Fruit
___ Vegetables
___ Forest / Shade tree
___ Field crop
___ Greenhouse
___ Pasture
___ Turf

**Plant name**:_____
% of plants infested:_____

**Parts where insect located**
___ Leaves
___ Growing tips
___ Buds
___ Blossoms
___ Fruit / Nuts / Seeds
___ Stem / Trunk
___ Branches / Twigs
___ Roots
___ Tubers / Bulbs

**Symptoms**
___ Die back
___ Leaf discoloration
___ Leaf drop
___ Tip burn
___ Fruit damage
___ Abnormal growth
___ Galls
___ Stunting
___ Slow decline
___ Sudden collapse
___ Other:_____

---

**ADDITIONAL INFORMATION ABOUT SAMPLE:**