

University of Missouri Extension

G7555, Reviewed October 1, 1993

Submitting Insect and Mite Specimens for Identification

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University Extension provides an insect identification service to the public. If you properly submit specimens to us, we can promptly identify them and return to you with appropriate biological and control information.

Send all insect specimens submitted for identification to your local University Extension center. If the area specialist cannot solve the problem, or desires verification, the specialist can send the sample to the Columbia campus for diagnosis. Your local University Extension staff can help you package and mail the sample properly.

Send samples to: Insect

Identification

Department of Entomology 1-
87 Agriculture Bldg.
Columbia, MO 65211

Entomologists will identify the sample and prepare a response.

Information needed

Entomologists can readily identify most insects, at least to some degree. Information about the insect's location or host often expedites identification of the specimens. If information about that specimen is lacking, however, the entomologists can do little to assess the potential for damage or recommend an appropriate control method.

Provide the following information on an Insect Identification Form (MP-059):

1. Name, address and phone number of collector (client)
2. Where it was found (home, garden, field)
3. How many were found (one, several, hundreds)
4. Date collected
5. Host plant or animal, and how many plants or animals are infested
6. Other information that you think may help in the identification

Packaging insects for shipment

Submit only **dead** insects for identification; pack them so they arrive unbroken. Badly damaged specimens are often unidentifiable, and a request for additional specimens could cause a great time delay.

If you send two samples in the same shipment, be sure to use two identification forms and number the specimen container and form to avoid confusion.

Insects differ greatly in body form and require two different preservation techniques.

Sending soft-bodied insects. Aphids, thrips, mites, cutworms, caterpillars, fleas, ants, ticks, spiders, grubs and tiny or otherwise soft-bodied insects are best submitted in 70 percent alcohol (Rubbing (isopropyl) alcohol is suitable). Place the specimen in alcohol in a leak-proof container. Do not send specimens in water, formaldehyde or without fluid.

Sending hard-bodied insects. To submit beetles, flies, grasshoppers, cockroaches, wasps, moths, butterflies and other hard-bodied insects, kill them by freezing them or by exposing them to alcohol fumes. Submit them dry in a crush-proof container. Place dead specimens between layers of tissue or cotton in a small pill box or other small container. Identify the box with the client's name, if possible.

Send damaged plant material

You can submit plants showing damage for diagnosis, but in most cases it is difficult to determine exactly which insect caused the damage unless an insect is submitted with the plant. Place the plant in a paper towel in a plastic bag, carefully shaking off most of the soil from the roots. Put this in a crush-proof carton for mailing.

Small amounts of plant leaves often ship better in 70 percent alcohol. Be sure to mail plant material before Thursday afternoon, so it doesn't sit in the post office over the weekend. Don't scotch tape specimens to paper; it ruins them!

Don't ship live insects or mites; it is illegal. Don't send only one specimen if more are available. Don't place insects loose in envelopes; the insects will break. Don't use water or formaldehyde as a preservative.

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