

AGRICULTURAL GUIDE

Published by the University of Missouri-Columbia Extension Division

Insect
Identification

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 office. 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) (see back page):

- 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's 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.

Missouri Cooperative Extension Service

University of Missouri & Lincoln University

INSECT IDENTIFICATION FORM

(For Extension Personnel Use Only)

Date Rec'd _____

I.D. # _____

Entomology Use Only

Mail To: Insect Identification, Extension Entomology, 1-87 Agriculture Bldg., Columbia, MO 65211

SAMPLE FROM: _____
Specialist _____ Address _____ Zip _____

County _____ EMail Number _____ Phone Number _____

Client _____
Name _____ Address _____ Zip _____

Client wants:

- ____ Identification
- ____ Life Cycle or Habits
- ____ If it causes damage
- ____ Control measures
- ____ Other (explain)

Where was Insect found?

- ____ In home
- ____ In yard
- ____ In garden
- ____ On livestock
- ____ On field crop
- ____ Other (explain)

Number of Insects Found

- ____ One
- ____ Several
- ____ 100 or more
- ____ By actual count
- ____ By estimate

Degree of Infestation

- ____ One
- ____ Several
- ____ Spots or patches
- ____ Entire crop

Host Plant or Animal (if applicable)

Number of acres or animal involved

Describe the problem or give additional information on collection site; habits of insect; symptoms on plants or animals; or if you have had this problem before (if so, when).

DATE SENT: _____ Signature _____

IDENTIFICATION AND RECOMMENDATIONS

Date _____ **RETURN ALL COPIES** _____

Extension Entomologist

University of Missouri, Lincoln University, U.S. Department of Agriculture & Local University Extension Councils Cooperating
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Distribution of Completed Forms: **WHITE**—cooperator **YELLOW**—University Extension Center **PINK**—UMC Extension Entomology
MP59 Rev. 2/87 5M

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