

Identifying Insects and Other Arthropods in Oregon

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Why Identification Is Important

Identification is important for anyone trying to manage insects and other arthropods. Proper identification skills help to provide a valuable tool for monitoring the invasion of new pests. When confronted with an unknown or unfamiliar creature, many people will debate what they might need to do. The average person will ask should I kill it or leave it alone? As entomologists (people who study insects), we suggest that you find out what insect or arthropod is present so you can safely and efficiently control the pest or positively manage those that are beneficial. Accurate identification allows for the most effective means of pest control and preservation of beneficial or harmless insects and arthropods.

Identification Services in Oregon

The Oregon State University Extension Service provides identification services for the public and agricultural sectors to help protect and manage their resources. Entomology Extension agents are trained to identify many common insects and their close relatives, spiders, ticks, mites, and centipedes, which are collectively known as arthropods. An Extension agent trained in entomology possesses background knowledge on control methods and general biology, which allows the specialist to suggest information and resources for selection of efficient control measures for common pests.

Identification services are available through the Oregon State University Insect ID Clinic and also through some county Extension Service offices that have Master Gardener programs.

How to Get a Sample Identified

Collect Sample

Be careful when collecting live insects and arthropods; many can bite and/or sting. When collecting can be done safely, obtain several samples of the insect in question. Several different life stages (egg, larva, pupa, nymph, and adult) can occur at the same time; when possible, collect as many as possible. Identification resources known as “keys” are available for most adult insects and arthropods and some immature stages (caterpillars, maggots, grubs, and larvae).

All samples must be killed before being submitted. The shipping of live samples across borders (state and federal) is illegal and can be dangerous.

Small and soft-bodied specimens (including spiders) should be placed in a vial with a tight-fitting lid containing rubbing alcohol or vinegar to kill and preserve the specimen.

Immature insects such as caterpillars and grubs should be placed in a container of boiling water for 20 seconds and then allowed to cool to room temperature before being placed in rubbing alcohol or vinegar. This additional step is needed to preserve the color and shape of the specimens.

Be careful to not overfill vials; air space is necessary for expansion during shipping.

Moderate-to-large hard-bodied arthropods should be killed by placing them in a freezer for at least 48 hours and then be placed in a vial or noncrushable container with a piece of alcohol-saturated paper towel.

Label all samples with your name and date.

It is often helpful to send a sample of the affected plant material along with the sample.

It is also often useful to take a picture of the sample as a backup in case the physical sample is damaged or lost during shipping. Specimens that are crushed or incomplete are often difficult to identify.

Complete Form

Fill out an insect identification submission form with as much pertinent information as possible.

The form is available in some Extension centers/offices and is obtainable online:

http://www.science.oregonstate.edu/bpp/Plant_Clinic/Insect%20ID%20Form.pdf

Include your name, address, phone number, where the problem was observed, the plant, animal, or structure affected, and the type/severity of damage observed. If possible also include when it was first noticed, the length of time it has been present, and whether any control methods have been attempted.

Ship Package

Shipping materials and collection vials are available from many local Extension centers/offices. A full list of offices can be found here:

<http://extension.oregonstate.edu/locations.php>

Vials should be wrapped in paper towels to prevent excess moisture from building up and be placed inside a sealable (e.g., Ziploc) bag to meet U.S. postal regulations. Mail specimens in a sturdy box or container that will prevent them from being crushed during shipping.

Mail samples early in the week to ensure they do not risk being delayed over the weekend.

The U.S. post office requires that all packages that contain alcohol be marked “ground only.”

When sending samples to the Insect ID Clinic, address packages as follows:

Insect ID Clinic

Department of Botany and Plant Pathology

Oregon State University

1089 Cordley Hall

Corvallis, OR 97331-2903

http://www.science.oregonstate.edu/bpp/insect_clinic/index.htm

Identification Process

When a sample and/or image arrives at an identification center, the identifier reviews the information provided and examines the specimen. Insects and arthropods are identified for their order, family,

genus, and species when possible. The identifier provides the scientific name and, when available, the common name.

Identifications that can be done by entomology Extension agents or Master Gardeners are usually completed within 24 hours of receiving the samples. Samples submitted to counties that do not have an identification specialist or that cannot be identified are usually sent to a specialist at the Insect ID Clinic on the Oregon State University campus in Corvallis for identification and may take a week or more to be identified.

Note that all material submitted for identification becomes property of the identifying unit. This material is used to maintain a reference collection to help identify future submissions.

More Information

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