



Managing HOUSE and garden insect pests safely

By Scott Schell

If you grow plants, sooner or later unwelcome insects will arrive.

The first step to managing any insect problem is to identify them and make sure the insects you are seeing are the ones causing the damage. For example, black vine weevils eat at night but are rarely seen feeding when homeowners are gardening during daylight hours (see *Black Vine Weevil and other Root Weevils in Wyoming Gardens*, B-1176, available for viewing or download at <http://ces.uwyo.edu/PUBS/B1176.pdf>).

Harmless insects seen on damaged plants during the day can take the blame for damage they didn't cause. See page 6 for helpful references for identifying insects.

Stressed plants are more attractive or vulnerable to insects and are less able to recover from feeding damage. When a plant is stressed, its natural defenses to insect feeding is reduced, and it can't easily compensate with re-growth to replace the damaged tissue.

Use cultural and physical controls (rather than chemical) whenever possible. Simple changes, such as choosing pest-resistant plant varieties, removal of pest-harboring material at the end of the growing season, using physical barriers such as cardboard trunk collars and row covers, and even handpicking can

be practical for specific pests. For example, I removed more than 40 western tent caterpillar egg masses by hand from one 8-foot tall flowering plum tree last fall; however, if I had 200 very tall chokecherry trees to protect, I would probably chose a different method if they were infested with the same pest.

Investigate biological control options. Some beneficial insects like immature lacewings are available

commercially and can work great for aphid problems. Lady bird beetles (lady bugs) are gardeners' friends but generally disperse rapidly if they don't have a lot of prey, especially aphids, to feed on immediately. Keeping a diverse landscape around your home will help maintain a large assortment of beneficial insect predators around. The adults of the many non-stinging wasp species that play an important role in controlling pests



The drab-colored egg masses of the western tent caterpillar are easy to spot and remove once you know what to look for (top). The off-white color of the tightly packed cylindrical-shaped eggs are visible when the egg sack is removed (bottom).



A variety of a mud dauber wasp is a harmless insect to vegetation.

Photo by Alex Latchininsky

are nectar feeders, so having flowers around your yard helps maintain their populations.

Insect traps with baits, scents, or colors attractive to pest insects can work very well for those such as yellow jackets, house flies, and white-flies, respectively. Traps are a good alternative for inside the house where insecticides are applied as a last resort. Traps for spiders, pantry pest insects,

clothes moths, and many other common house pests are available. They also work as early warning systems and allow you to capture pests before they become established.

Insecticides should be used only when all other methods fail. Insecticides do not have to be manmade. They can be derived from many biological sources. Those derived from plants sources, such as the chrysanthemum flower's pyrethrum, are called botanicals; insect-specific pathogens such as fungal spores of *Beauveria bassiana*, and bacteria, like *Bacillus thuringiensis*, or microbial toxins such as spinosad products, are often called bio-pesticides; insecticidal soaps and oils are made from both plant and mineral sources. All of these products can be safely and effectively used if you follow label directions and apply the pesticide for appropriate pests.

Whatever method of pest control chosen, maximize your knowledge about the pest and the control product to ensure it works for you.

In the references, there are some

books and sources of information on the Web to learn more about pest control for a specific problem. Many of these sources of information are indexed so, if you know the plant species and the type of damage it is suffering, the list of possible pests is dramatically narrowed.

REFERENCES

Helpful resources for insect control

<http://ces.uwyo.edu/Entomology/insectidentification.htm>

For instructions on sending specimens or how to e-mail digital photos and pertinent information, visit <http://ces.uwyo.edu/Entomology/specimenidentification.htm>. The new e-mail address to use is insectid@uwyo.edu

Pests of the West: Prevention and Control for Today's Garden and Small Farm, by W. Cranshaw. ISBN 1-55591-401-2

Complete Guide to Pest Control With and Without Chemicals, 6th Edition, by G. W. Ware & D. M. Whitacre. ISBN 1892829-11-8

Garden Insects of North America – The ultimate guide to backyard bugs, by Whitney Cranshaw.



Identifying insects

Identifying pest insects has been made easier with the publication of excellent books such as *Garden Insects of North America* or *Insects and Diseases of Woody Plants of the Central Rockies*. Consult with your local University of Wyoming Cooperative Extension Service (UW CES) educators or Master Gardeners, or visit the UW CES entomology Web site at <http://ces.uwyo.edu/Entomology.asp>.

ISBN 0-691-09561-2. Princeton University Press.

Resource Guide for Organic Insect and Disease Management. This publication is available online at: www.nysaes.cornell.edu/pp/resourceguide/index.php Sections can be downloaded as PDF files for printing, or hardcopy is available from the New York State Agricultural Experiment Station, Barton Laboratory, 630 W. North St., Geneva, N.Y. 14456. Phone (315) 787-2248, or e-mail gro2@cornell.edu.

University of Wyoming, College of Agriculture, Cooperative Extension Service Web resources:

Pests/Pesticides <http://ces.uwyo.edu/Pest.asp>

Extension Entomology <http://ces.uwyo.edu/Entomology.asp>

Home Horticulture <http://ces.uwyo.edu/HomeHorticulture.asp>

**Insects and Diseases of Woody Plants of the Central Rockies.* Bulletin 506A Colorado State Extension. ISBN 1-889143-04-9

**Insect Management Recommendations for Turf and Ornamentals.* Bulletin XCM-38 Colorado State Extension. (877) 692-9358

*Order from: Bulletin Room, 171Aylesworth SW, Colorado State University, Fort Collins, CO 80523, or telephone (303) 491-6198.

www.barnyardsandbackyards.com

Other Web Resources:

High Plains Integrated Pest Management Guide for Colorado, Western Nebraska, Wyoming, Montana and Western South Dakota www.highplainsipm.org/

Utah State University Extension Small Acreage Web site <http://extension.usu.edu/smac/>

Crop Data Management Systems, Inc. (they also cover turf and ornamental products) <http://www.cdms.net>



Homemade Pest Control

In moist garden environments, slugs can be troublesome plant pests. Gray garden slugs, the most common pest species, feed mainly at night on tender plants with their rasping tongues called radulas. Their feeding damage looks very similar to the chewing damage of caterpillars, but the presence of dried or wet slime paths on the damaged leaves means slugs were the culprits

One homemade solution for this pest is putting out shallow pans with either beer or a mixture of sugar water and yeast in your garden in the evening. Overnight, the slugs will be attracted to the smell and drown in the pans. A popular recipe for slug bait is two tablespoons of flour, one-half teaspoon of brewer's yeast, and one teaspoon of sugar mixed in two cups of warm water.

Putting down wide boards or wet newspapers on the soil in garden areas favored by slugs will concentrate them when they seek shelter during the day. Just check the traps once a day to kill the slugs hiding there. Selecting plant types that can survive drying out in between waterings so you can keep a dryer garden that is unfavorable for slugs is a good strategy.

Ants are an important component of the ecosystem, but they are a nuisance when they invade your home. Boric acid powder sold as a disinfectant ingredient can be used to make ant baits at home. Cheap jelly mixed 1:1 with peanut butter and then spiked with a little boric acid powder (2 percent by weight) can be effective against many species of ants. Although boric acid is not very toxic to mammals, be sure to put bait stations where pets and children can't disturb them.

Two-percent solutions of liquid soaps can be effective insecticides for aphids and other small, soft-bodied, plant-feeding insects. Remember, not all soaps are good for this, and there are even types of soaps sold as herbicides. Soaps labeled as "pure and mild" and lacking germicidal ingredients are good candidates to try if you can't find commercial insecticidal soaps. After making a soap solution, test a leaf of the infested plant first for sensitivity before spraying the whole thing. The insects must be coated by the soap solution to be killed. Once the spray dries, it is no longer active, so applying during the cooler times of the day to prolong the activity is a good strategy. If your water is very hard and readily forms soap scum, the effectiveness of the spray will be limited.

Here is UW's bulletin on slugs: <http://ces.uwyo.edu/PUBS/B1050-3.pdf>, and the UW Horticulture site, <http://ces.uwyo.edu/Horticulture.asp>. Here is a helpful Web site at Colorado State University: <http://www.colostate.edu/Depts/CoopExt/4DMG/PHC/integrat.htm>.

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