

## Slugs

We have all encountered these slimy, legless, boneless creatures while working in our Pacific Northwest gardens. They eat tender plants, whether young seedlings or mature. What are they, and how can we manage them?

Slugs are members of the *Mollusca* Phylum, and are therefore related to snails, although they have no shell. Instead, slugs have a raised mantle on the back. They are one-quarter inch to ten inches in length, depending upon the species. Some species life span is six years. They lay small eggs (usually less than one-quarter inch) which are deposited in batches of one to several dozen under debris, stones, or in the soil. One individual slug can produce up to 500 eggs. The eggs usually hatch in the spring or early summer. They get around on one foot which runs the entire length of the slugs under surface.

Three slug families dominate our attention in the Pacific Northwest: the Limacidae (which includes the gray garden slug, *Limax maximus* and the milky slug, *Derocera reticulatum*); the Arionidae (which includes the banana slug, *Ariolimax columbianus*, and the European black slug, *Arion ater*); and the Milacidae (the often referred to greenhouse slugs of the genus *Milax*).

The European black slug is the most common and most destructive in this area. Despite its name, it comes in many different colors. The many ridges and furrows behind the mantle are better identifiers than its color. It can range up to five and one-quarter inches when in motion, and will hump itself into a much smaller mass when at rest. It will also curl itself into a ball and rock back and forth when under attack.

The gray garden slug sports a spotted or tiger-striped mantle, while the majority of its body is smooth. It is common on the West Coast. It can range up to four inches in length, and is faster moving than other slugs.

The milky slug is about two inches long, generally light brown or gray, with darker mottling on the mantle. Some species are almost pure white. The distinctive feature of this species is its milky slime.

The banana slug can grow to ten inches in length, and its color ranges from white to black, with many intermediate colors – lemon yellow, light tan, and dark brown – often with black spots. It is almost exclusively found in forested habitats. It is known for aiding in the decomposition of decaying plant matter.

The greenhouse slug is found world-wide. It probably came to the Northwest from Mediterranean areas, and prefers a warm, moist stable environment. Often it can be found burrowed under a few inches of soil in your greenhouse, feasting on the roots of tender young plants. It grows to two and three-quarter inches in length.

Most slugs feed at night. The exception is the banana slug which feeds by day in spring and fall. So, to observe them in action, you need to dig out your flashlight, and venture out into the garden after dark. Start at the base of your plants, looking for large, irregular holes in the leaves. Or, failing to find any, follow the slime trail to where

they may be hiding. During the day, be sure to look in debris piles, under shrubs and stones, or near stacked firewood.

## Management

Some non-chemical options are as follows:

- Clean up debris and weeds which may provide shelter for slugs. Keep tall weeds and grasses around the garden cut, and clean up any rocks and boards.
- Hand-pick and kill slugs when you see them.
- Trap slugs with cans of stale beer sunk into the ground.
- Encourage predators such as frogs, garter snakes, and birds.
- The use of copper banding around vegetable or flower beds is an effective way to keep slugs from crawling into the bed and devouring the plants.

Chemical options generally contain the active ingredient metaldehyde. These are poisonous to cats and dogs so should not be used around pets. Another snail and slug bait uses iron phosphate which is safely used around domestic animals and children. You may find it at your local nursery, under the trade names of Sluggo and Escar-Go or Worry-free. As in using any chemical, be sure to read the label carefully. Do not use salt on slugs, as it can be bad for your garden, causing dead patches and contaminating the soil.

## Resources

Gordon, David George, *Field Guide to the Slug*, Sasquatch Books, Seattle. 1994.

[Slugs](#), GreenShare factsheets, retrieved 8/25/2005.

[Snails and Slugs](#), UC IPM Online. retrieved 12/2/2005.

Editors of Sunset Books and Sunset Magazine, *Western Garden Problem Solver*, Sunset Books, Inc., Menlo Park, CA, 1998.