

Community Horticulture Fact Sheet # 92 Slugs

Few Northwest gardeners have escaped the damage done by those gluttonous garden inhabitants, slugs. They can quickly devour newly planted marigolds and lettuce. Ideal living conditions make Western Washington a veritable slug paradise. Our wet climate provides slugs with the moisture they need to survive and an abundance of plants to eat. Combine this with the slug's ability to reproduce in large numbers, and it's a wonder we aren't ankle deep in slug slime!

Slugs are soft-bodied animals without a backbone. Their heads contain a concentration of nerve cells and sport tentacles tipped by small, light-sensitive eyes. Slugs move on a muscular foot over a mucous trail (slime) which is secreted by a gland beneath the head. They can live from one to six years and can lay 500 eggs per year. They are primarily herbivorous, avidly consuming green plants as well as fungi, lichens, worms, centipedes, insects, animal feces and carrion.

Common Slugs found in this area:

•Banana Slug - *Ariolimax columbianus*, *A. dolichophallus*, and *A. Californicus*. Their size, color and preference for wooded areas easily identify the only slugs native to the Northwest, banana slugs. Up to 8 inches long, they are the second largest slugs in the world. Banana slugs can be white, yellow, tan, or brown and they usually have black spots. They prefer to feed in forests, but, if humans build within their habitat, they may continue to feed in gardens.

•European Black Slug - *Arion ater*. Not always black, these slugs can be identified by the ridges and furrows behind their mantle, the

fleshy lobe just behind the head. They reach 5 to 6 inches, but when resting or under attack, European black slugs curl into a ball.

•Great Gray Garden Slug - *Limax maximus*. Native to Europe and Asia Minor, gray garden slugs have a spotted or striped mantle. They are about 4 inches long, but can move four times faster than a banana slug. These cannibalistic slugs are a serious threat to the native banana slugs.

•Milky Slug - *Deroceras reticulatum*. Imported from northern Europe and Asia, milky slugs get their name from the milky slime they produce, especially when irritated. About 2 inches long, they are usually light brown or gray with darker mottling. The concentric folds on the mantle and a ridge running down the back help identify milky slugs. They are a major pest, responsible for damage to grain fields, strawberries and vegetable crops.

•Greenhouse Slug - *Milax gagates*. Introduced from the Mediterranean area, greenhouse slugs are gray and 2 to 3 inches long with a sharp ridge running along the back from mantle to tail. They prefer living in greenhouses, burrowing into the soil and eating the roots of greenhouse plants.

Slug Control:

Slugs play an important role in the complex interrelationships of the natural world, so elimination of all slugs would be both unwise and unjustifiable. We must maintain our gardens by keeping destructive slug populations down in an environmentally responsible manner. Try these suggestions:

Change the environment:

1. Make your garden less alluring to slugs by growing plants that slugs ignore and avoiding plants that slugs like.
2. Plant a “sacrificial garden” full of plants that slugs love and eliminate the slugs you attract to it.
3. Start keeping slug-eating ducks, geese or chickens, realizing that they may prove equally damaging to your garden. Encourage natural slug predators, such as garter snakes, birds, frogs and ground beetles.
4. Eliminate places for slugs to hide: low-branched shrubs; ivy or other ground covers; stacked wood; rock piles; tall grass and weeds; and piles of leaves.
5. Do not overwater. Remember that slugs need moisture to survive.
6. Cultivate garden soil frequently to destroy slug eggs before they hatch.
7. Garden in wood-framed beds surrounded with 3-inch wide solid copper bands. When they touch the copper, slugs receive an electrical shock. Copper banding is expensive, but it is also effective and permanent. Copper foils are much less expensive, but will need replacing every year or two.
8. Have a slug hunt. Pay children to catch slugs or arm yourself with a flashlight and venture into the garden at night to pick slugs off plants. Drop them into a jar of soapy water.
9. Make slug traps. In the sides of a plastic margarine tub, cut several one-inch-square holes near the top. Put in bait, snap on the lid and put a rock on top, so it doesn't tip over. Alternatively, make a trap using a 2-liter pop bottle. Remove the cap and cut the top off the bottle at the shoulder. Put the cut piece into the bottle with the neck pointing in and duct tape the two parts together.
10. Bait either trap with beer, a mixture of 2 Tbsp. flour, ½ tsp. brewer's yeast and 1 tsp. sugar dissolved in 2 cups warm water, or commercial bait. When full, dump the trap in the garbage and make a new one.

Commercial slug baits:

As with any pesticide, ***use slug bait responsibly***. Read the entire label and follow all directions carefully.

Until recently, most commercial slug baits were a combination of a bait ingredient like apple meal or bran and the molluscicide, **metaldehyde**. Such products must include the following statement on the label: **“This pesticide may be fatal to dogs or other pets if eaten. Keep pets out of treated areas.”** Although you can apply it to the soil around plants (being careful not to contaminate the edible parts of plants), it is best to put it into a slug trap. (See above.)

If ingested by humans, metaldehyde can cause serious (even lethal) damage. Birds and other wildlife, especially small mammals, may die from feeding in metaldehyde areas.

New slug baits are now on the market that are considerably safer for you, your pets and the environment. Under such brand names as Sluggo, Worryfree and Escargo, they contain iron phosphate as the active ingredient. These baits work best if slightly moist, so apply them directly to the soil. They break down into elements that act as a fertilizer in your soil.

Plants Slugs Love

Gentians
Lettuce
Lilies
Lobelia
Marigolds
Narcissus
Primroses
Strawberries
Trillium
Tuberous begonias
Violas

Plants Slugs Do Not Like

Anemone
Baby's Tears
Bamboo
Bleeding heart
Coral bells
Cyclamen
Evergreen candytuft
Foxglove
Impatiens
Sedum
Wax begonias

Sources: The Western Society of Malacologists Field Guide to the Slug by David George Gordon
The Banana Slug by Alice Bryant Harper