



SNAILS AND SLUGS IN YOUR GARDEN

CONTROL SNAILS IN YOUR GARDEN WITH THESE ECO-FRIENDLY PRODUCTS

Copper barrier	Corry's Slug and Snail Copper Tape Barrier
Horticultural fabric (row cover)	Easy Gardener Plant and Seed Blanket
Baits containing iron phosphate	Bayer Advanced Natria Snail & Slug Killer Bait, Bonide Slug Magic, Escar-Go!, Lilly Miller Worry Free, Miracle-Gro Nature's Care Slug and Snail Control, Monterey Sluggo, Natural Guard by Ferti-lome Slug & Snail Bait

WHAT'S EATING YOUR PLANTS?

Are your vegetable and flower seedlings being devoured overnight? Are you finding large ragged holes in your prized ornamentals? Do slime trails cross your walkways? If so, your garden is probably harboring snails and/or slugs.

Snails and slugs are active mostly at night and on dark, cloudy days. On sunny days they can be found in moist, shady spots. If potted plants are being eaten, look for eggs and young snails around the inside edges of the pots, and find slugs under pots. Eggs resemble small pearls and are laid in masses of up to 100. When you find eggs, crush them or scoop them into a plastic bag, seal it, and put the bag in the garbage.



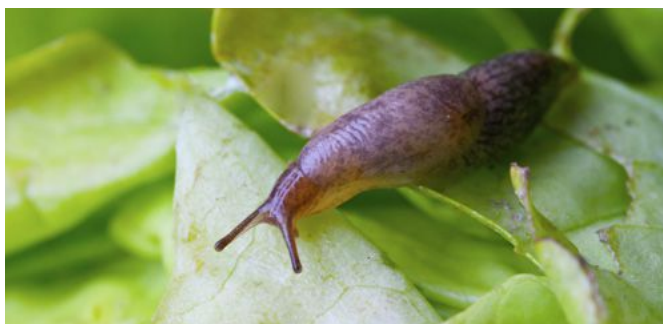
While Californians treat snails as pests, our pesky garden mollusks were actually imported from France during the Gold Rush—for French restaurants in San Francisco. Unfortunately, a few escaped... and the rest is horticultural and agricultural history. Snails and slugs are closely related. They both have soft, oblong bodies and produce quantities of slime to help them move around. The most obvious difference is that snails have shells.

LESS-TOXIC CONTROLS

Once snails or slugs invade your garden, it may take time to keep their numbers down. Try two or more of the following control strategies.

Hand-pick snails and slugs at night

- To be effective, hand-picking must be done thoroughly and regularly. Collect nightly until it's hard to find snails and slugs, then check once a week.
- During dry weather, the best time for hand-picking is before dawn or after 10 or 11pm when snails and slugs come out to feed. Use a flashlight and gloves or tongs. You can check earlier, but you won't find as many. On damp days they may be out earlier.
- Crush snails and slugs completely or drown them in a pail of soapy water (they survive in plain water).



Protect plants with barriers

Before using barriers, pick snails and slugs by hand for a few nights.

- Wrap a strip of copper tape around a tree trunk, flower pot, or the sides of wooden garden beds or fences. Snails and slugs are repelled by the unpleasant reaction between their bodies and the copper.
- Cover seedlings with small cages made from plastic or galvanized metal window screen. Push the cages into the soil so snails and slugs can't squeeze under. Check to make sure that no snails or slugs are caught inside the cage.
- Cover rows of vegetables with special horticultural fabric that lets in light and water but excludes snails and slugs.



Row covers keep snails out.

Trap slugs and snails

- You can trap snails and slugs under upside-down flower pots, dark-colored plastic sheeting, and wooden boards. Place these traps around the garden and collect snails and slugs in early morning.
- Homemade or commercial traps that use beer or yeast mixtures to lure snails and slugs to death by drowning and/or intoxication may help, but hand-picking will probably still be necessary.

Encourage natural predators

Many species of ground beetles kill snails and slugs. Most of these beetles are large (1 to 2 inches), black, tank-like creatures. They are found in the same moist habitats as their prey: under rocks, boards, leaves, etc. Avoid killing these helpful bugs.

Use iron phosphate bait

- Iron phosphate baits are less toxic than other formulations. After eating iron phosphate, snails and

WHAT TO DO WITH CRUSHED, DEAD SNAILS?

Leave a few dead snail and slug bodies on the soil surface to attract more snails and slugs and make your collecting easier. (Large piles will breed flies.) Or, bury crushed mollusks three or four inches underground to add nutrients to the soil and avoid fly problems.

slugs stop feeding and die within three to six days. They often crawl into secluded places, so you may not see dead bodies.

- Reapply iron phosphate baits every two weeks if needed.
- Keep iron phosphate baits and all other pesticides out of the reach of children and pets.
- Read the label before you buy a snail bait product. Avoid baits containing methiocarb, which kills earthworms and beneficial insects. Baits containing metaldehyde are more toxic than iron phosphate baits, and metaldehyde is very toxic to dogs.

PREVENTION

- Snails and slugs are attracted to large areas of ivy, nasturtiums, and succulent ground covers. They also hide in clumps of agapanthus, lilies, daffodils, alstroemeria, and iris. They are less attracted to plants with dry, hard leaves like rhododendrons, junipers, and bamboo. Regularly search their preferred plants for snails and slugs when you're hand-picking.
- Moisture makes any area much more attractive to snails and slugs. Avoid over-watering and use drip emitters to deliver water only where it is needed. Water early in the day to allow the area to dry out before nightfall. You may need to remove mulch from areas with severe slug or snail problems.
- Remove any boards and flower pots that you aren't using as traps.



WWW.OURWATEROURWORLD.ORG

Common home and garden pesticides are found in stormwater runoff, treated wastewater, and in local waterways, sometimes at levels that can harm sensitive aquatic life. **Our Water Our World** is a joint effort by water pollution prevention agencies, participating retail stores, and pesticide distributors and manufacturers—working together to reduce the risks associated with pesticide use.

Our Water Our World fact sheets and store displays educate residents about less-toxic pest management. For the rest of the series of fact sheets, visit www.OurWaterOurWorld.org. Look for the **Eco-friendly** tag next to less-toxic products in participating stores and nurseries. See the **Pesticides and Water Quality** fact sheet for information on active ingredients in common pesticides that may cause water quality problems.

Pest control strategies and methods described in this publication are consistent with integrated pest management (IPM) concepts, and are based on scientific studies and tests in actual home and garden settings. Use suggested products according to label directions and dispose of unwanted or leftover pesticides at a household hazardous waste collection facility or event. For more information on pesticide disposal, visit www.earth911.com. No endorsement of specific brand name products is intended, nor is criticism implied of similar products that are not mentioned.

For more information, contact:

Bio-Integral Resource Center (BIRC), 510.524.2567, www.birc.org
University of California Cooperative Extension Master Gardeners in your area
University of California IPM website, www.ipm.ucanr.edu