

AS SEEN IN THE SAN DIEGO UNION TRIBUNE
HOMESCAPE SECTION
PLANTS & PESTS
By VINCENT LAZANEO
JUNE 17, 2001

Stop the Slime: you don't have to put up with snails

It's not unusual to hear people say their gardens are overrun with snails this time of year. Snails are continually active throughout the year in our moderate climate but their activity peaks during spring and early summer.

People also are more active in their gardens at the same time and readily notice the damage that snails cause.

An irrigated garden looks like a big salad bar to hungry snails. They completely devour sprout-like seedlings and succulent shoot tips on older plants. Snails also chew irregular holes with smooth edges in leaves on a variety of plants and occasionally damage fruit and young bark on stems.

The snail seen most often in our gardens is the brown garden snail, *Helix aspersa*. The tasty mollusk was originally brought to California from Europe in the 1850s for culinary use and has since become a pest of many edible and ornamental plants in much of the state.

Parts of San Diego County are now also infested with the white garden snail, *Theba pisana*, a native of the Mediterranean region. Adult white garden snails are about the size of a nickel with a dirty white shell. During hot, dry weather, they have a habit of climbing high up on trees, fences and walls where they remain clustered until there is sufficient rain or irrigation.

Both snails are active at night or on cloudy or foggy days. When the sun comes out they seek shelter in cool shady places. Snails remain hidden during the day and the only clues to their presence are their silvery trails of dried slime and plant damage.

Snails move slowly but they multiply faster than rabbits.

Adult brown garden snails dig holes in moist soil and lay up to 80 eggs at a time, as often as six times a year. Each new generation of snails matures in about two years and snails of all ages continue to feed on plants until something or someone stops them.

Bait basics

When snails become numerous and cause too much damage people often use toxic bait to control them. Snail baits are easy to use and may seem harmless but they can

poison children and pets and should not be used if they have access to them. Baits that contain metaldehyde are very attractive and toxic to dogs.

Recently registered baits containing iron phosphate sold as Sluggo and Worryfree slug and snail bait are safer for domestic animals and wildlife. When bait is used never pile it in mounds or clumps because this makes it more attractive to children and animals.

Metaldehyde does not kill snails directly unless they eat substantial amount of it. Snails that have eaten metaldehyde excrete a large quantity of mucus in an attempt to detoxify the chemical.

When the weather is sunny and warm snails quickly die from loss of water. When it is cool and wet though, snails may recover if they have eaten a sub-lethal dose.

Metaldehyde breaks down quickly when exposed to sunlight; however, Deadline, a thick liquid formulation, does not. Deadline also holds up well in wet weather and does not have a problem with sub-lethal doses.

To improve the effectiveness of metaldehyde bait, water during the day to promote snail activity, then apply bait in the late afternoon and do not water again for three or four days. Scatter bait lightly on open ground along the edges of ground cover and near other plants where snails hide. Snails that feed on bait in open areas will be paralyzed and die when exposed to sunlight the next day. Iron phosphate baits break down much slower than metaldehyde and may remain effective for several weeks even after irrigation. Snails that have eaten even a small amount of iron phosphate will stop feeding although it may take several days for them to die.

Enemy attack

Bait quickly kills snails but it does not provide long-term control unless it is reapplied periodically. A more sustainable and less costly alternative is to control snails with a natural enemy, the decollate snail, *Rumina decollata*.

This predatory snail feeds on the eggs and young of the brown garden snail. Decollate snails do not feed on adult brown garden snails but they prevent their reproduction, which effectively controls their

population. [I have pictures showing that they do feed on adults--Mary's GoodSnails]

Decollate snails have a conical shell that ends in a blunt tip. The snail grows about 1 inch long and lives about two years.

Under favorable conditions each snail can lay up to 2,000 eggs during its life. Even with this high reproductive potential it can take two to four years from the time decollates are released in a landscape for them to completely control brown garden snails.

Gardeners can buy decollate snails at some local nurseries and from mail order sources including Mary's Decollates, (760) 744-9233 or e-mail Mary@goodsnails.com (www.goodsnails.com), and Rincon-Vitova Insectaries, (800) 248-2847.

Because the decollate snails may kill some endangered mollusks they cannot be released north of Santa Barbara County.

Snail bait is lethal to decollates so wait 45 to 60 days after baiting before releasing decollates.

Before shipping, the predatory snails are deprived of water to put them in an inactive state. To wake them up, place them in a shallow pan with about an eighth-inch of water. They should become active within 30 minutes. Be careful not to submerge them or they will drown.

Put 50 to 100 decollate snails at one or several places in ground covers infested with brown garden snails. Decollates can also be released in other landscape plantings and under citrus trees where accumulated leaf litter and regular irrigation provide favorable habitat.

Don't release decollates near newly planted annuals or vegetables since they may munch very young seedlings.

Water the area first. Make sure the snails have some leaf litter to eat and hide under. Regular sprinkling or drip irrigation will provide optimum conditions. You can put out food initially to ensure a high survival rate; try discarded lettuce leaves or other vegetable and fruit scraps.

While decollates are becoming established do not apply snail bait in areas where they have been released. To control problem snails, handpick them at night or crush and leave them for decollates to eat. Snails can also be collected during the day from traps made with flat pieces of lumber raised off the ground with 1-inch runners.

Copper block

Several types of barriers will keep snails out of planting beds. The easiest to maintain are those made with copper flashing and screens.

Copper barriers are effective because copper reacts with the slime that the snail secretes, causing a flow of electricity.

Vertical copper screens can be erected around planting beds. The screen should be 6 inches tall and buried several inches below the soil to prevent slugs from crawling beneath the soil.

Copper foil (for example, Snail-Barr) [sold by Mary's GoodSnails] can be wrapped around planting boxes, headers, or trunks to repel snails for several years. When banding trunks, wrap the copper foil around the trunk, tab side down, and cut it to allow an 8-inch overlap. Attach one end or the middle of the band to the trunk with one staple oriented parallel to the trunk. Overlap and fasten the ends with one or two larger paper clips to allow the copper band to slide as the trunk grows. Bend the tabs out at a 90-degree angle from the trunk.

The bands need to be cleaned occasionally with steel wool. [I did not find this necessary--Mary's GoodSnails] When using copper bands on planter boxes, be sure the soil within the boxes is snail-free before applying bands. If it is not, handpick the snails from the soil after applying the band until the box is free of these pests.

Vincent Lazaneo is a farm adviser with the University of California Cooperative Extension Service. **Printed by:**

**Mary's GoodSnails
912 Cassou Road
San Marcos, CA 92069-9715
760-744-9233
e-mail: mary@goodsnails.com
www.goodsnails.com**