

In the Garden

BY GREG RUBIN

Q: How do I manage insect pests in my native garden?

Featured expert:
Greg Rubin



Greg Rubin, president and co-founder of California's Own Native Landscape Design, Inc.

A: It really depends on the type of pest, and what you might be calling a pest. One of the frequent questions we get is, "What's eating my plants?" Much of the time, it's a native caterpillar on its way to becoming a beautiful native butterfly. Rather than being concerned, I encourage people to look at a native garden as habitat, an ecosystem that helps to support and attract native organisms as a part of a complete community. Most larval plants are adapted to being eaten. Even milkweeds (*Asclepias* spp.) eaten to the ground by Monarch caterpillars usually return from their very fleshy roots. Planting something like false indigo (*Amorpha fruticosa*) could even attract the larvae from our breathtaking yet elusive state butterfly, the dogface.

Many types of buckwheat (*Eriogonum* spp.) and coyote brush (*Baccharis* spp.) attract the weirdest bugs you've never seen before! They are often native solitary bees and wasps that should not frighten you away; they are important pollinators that are usually stingerless and quite fascinating.

Other pests like leaf miners and some grubs may cause incidental damage, but these are more symptomatic of over-watering and fertilization, controlled by avoiding soil amendments and fertilizer, while using appropriate, minimal supplemental irrigation. Native leaf-cutter bees leave harmless "C" shaped cuts in plants like western redbud (*Cercis occidentalis*) as they harvest material to create their nests.

There are, however, some common interrelated pests that can create extreme damage in suburban native gardens and may even be a significant cause of death in plants

historically classified as "short-lived" or "difficult." Much of the damage occurs unseen in the root system, the only apparent symptom being the death of all or part of the plant. Argentine ants (*Linepithema humile*) have now spread throughout most of the state. They have a symbiotic relationship with sucking insects (hemipterans, like scale and aphids) from which they gather a sugary waste product called honeydew.

Argentine ants nest in the roots of plants like California lilac (*Ceanothus* spp.), flannel bush (*Fremontodendron* spp.), and manzanita (*Arctostaphylos* spp.), excavating soil from the root ball, then transporting and adhering hemipterans to the upper root system. The plants often feel "loose" in the soil, while the sucking insects directly appropriate root moisture and sugars (cracked, exfoliating bark may be related to this dehydration). It also appears that diseases may spread from plant to plant through direct root inoculation. Ants will often drive off pollinators who compete for nectar on infested plants. In addition, Argentine ants plant weeds as they eat only the attachment points of the seeds, which sprout to form more plants for the



Favorite weeds like *Ehrharta* spp. bunched around the root crown of this dead Bee's Bliss sage are often an indicator of Argentine ant root infestation. At this point it's not clear whether mortality is caused solely by the hemipteran appropriation of moisture and sugar, or their possible transmission of a disease like fusarium wilt.

ants to colonize. They give themselves away by the myriad weeds often seen following their trails and tightly bunched around the base of the plant.

Long-term control of Argentine ants is accomplished with sugar and protein baits containing 1% or less boric acid. (Higher concentrations kill workers before the bait makes it back to the queens deep in the nest.) Baits will not save infested plants, however. Best to soak the roots with solutions containing the natural insecticide pyrethrin (or synthetic pyrethroid) combined with Neem oil (a natural fungicide/miticide) and Superthrive to assist root recovery. NEVER spray flowers or buds! Plants like dying ceanothus or flannel bush, previously written off as unrecoverable, have been saved using the combination of baits and soaking.

Learn more about Argentine ants and best management practices at www.cnps.org/stories.

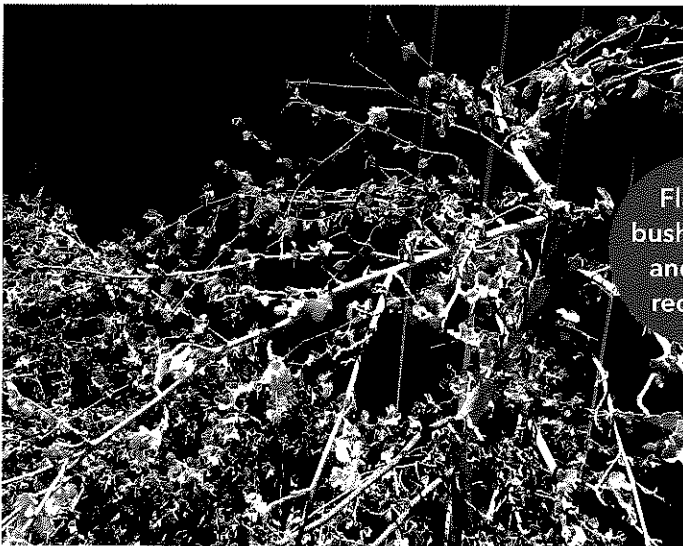
Greg Rubin is the president and co-founder of California's Own Native Landscape Design, Inc., and is a licensed landscape contractor who has been working with California native plants since 1985. His company has designed over 700 residential, commercial, and institutional native landscapes in Southern California. Greg regularly gives presentations and workshops on native plants, and is the co-author of two books, "The California Native Landscape: The Homeowner's Design Guide to Restoring Its Beauty and Balance" and "The Drought-Defying California Garden." He is also recognized as the authority on Argentine ant infestation management in California native landscapes.



A root from a *Lavatera assurgentiflora* killed by the scale covering it and placed there by Argentine ants.



What do you want to see next in the Garden Q&A? Submit your topic ideas to kwernick@cnps.org.



Flannel bush before and after recovery



Photo of a flannel bush dying as a result of Argentine ants nesting in its root ball. This has proved to be a main source of landscape mortality in plants often thought to be "difficult."

Photo of same flannel bush approximately two months later showing full recovery after treatment.