

Autumn Pest Alert by Kelly Young

September brought heavy rain and cooler temperatures to the parched desert. The succulent growth of our landscape plants and the warm season weeds have provided plenty of food for a diversity of creatures, vertebrate and invertebrate. Most notably, a few of our old and new caterpillar friends showed up for dinner and are causing distress among some of our public clients.

To review: "Caterpillars" are larvae of insects in the order Lepidoptera, which includes moths and butterflies. Winged adults lay eggs on a host plant; the eggs hatch and first instar larvae emerge and begin feeding. The larvae will shed its skin as it passes through five instars. Once they have eaten all that they can, the larvae will sometimes leave the food source and "march" away to find a suitable location to molt again and enter the pupal stage. Although there is not much activity visible externally during pupation, radical transformations are occurring. After some time interval (weeks to months, usually) the adult emerges through one last molt and goes about the business that grown and sexy moths and caterpillars do. When caterpillars damage garden and landscape plants, management may become necessary. Early detection through rigorous scouting is the best way to successfully manage all of these plant pests. If the egg clusters can be found before they hatch, the leaf can simply be removed and the eggs destroyed, thereby averting feeding damage. The biological toxin *Bacillus thuringiensis var. kurstaki* (Bt) can be quite effective in managing caterpillars if applied correctly. Bt denatures at high temperatures, so applications when the mercury rises above 95°F will not work. The larvae have to ingest the toxin, so be sure to apply Bt where it is likely to be encountered and consumed. This may be challenging when it comes to some of the leaf roller or leaf tier caterpillars, such as those that feed on Bougainvillea and Tecoma. Let's talk about three common caterpillars and how we can educate the public about them.

Genista Caterpillar on Texas Mountain Laurel



Photo taken at the Maricopa County Cooperative Extension office on 9/22/14 by K. Young.

Each spring and fall, the terminal shoots of our Texas mountain laurels (*Sophora secundiflora*) host the genista caterpillar, *Uresiphita reversalis*. The genista caterpillars feed during the day among the silken webbing they produce. During ideal conditions, there may be several generations each year. The feeding damage caused by these insects gives a ragged appearance to the plant and can stunt growth. The genista larvae tend to stay close to their food source when they are done feeding, so the pupae can sometimes be found on older leaves on the plant or on structures nearby. The adult genista moth lays her eggs in clusters on the underside of the leaves at the tips of the branches. Regular scouting for eggs in early spring and late summer is the most effective strategy for managing this pest. Since genista tends to

feed during the day and in plain sight, a soapy water solution can be sprayed directly on the caterpillars to kill them on contact. For residual control, Bt can be applied generously to the leaves every few days; or try the newer spinosads, which have longer residual activity and are also approved for use in organic agriculture.

Sesame Leaf-tier on Tecoma



The sesame leaf tier, *Antigastracatalaunalis*, is a new insect in Arizona. Considered a serious pest in commercial sesame production in Asia, larval *Antigastra* prefer young shoots of various *Tecoma spp.*, such as yellow bells and orange jubilee. As the name "leaf-tier" implies, the caterpillars cover themselves with leaves of their host plant and tie their private feeding chamber closed with silk. This behavior makes it difficult to directly observe the caterpillars feeding and impossible to spray them with insecticidal soap. Damaged leaves and black droppings indicate an infestation. Bt and spinosads are effective against these pests. As with any pesticide, organic or not, always follow the instructions on the label.

White-lined Sphinx Moth on Everything

At the end of each summer, the larvae of the white-lined sphinx moth, *Hyleslineata*, make their appearance. Most people don't notice them until they are in their fifth instar and marching across their yards, driveways and streets in huge numbers. The larvae feed on a diversity of host plants, including some garden varieties like tomatoes, apples and grapes but rarely cause problems to ornamentals. They also feed on several weed species, such as red spiderling, *Boerhaviacoccinea*. In fact, the spiderling in my neighborhood was mowed down in a matter of days by an army of hungry caterpillars. I consider that to be integrated pest management (IPM) at its best! The adult moth is striking, with a wingspan several inches across. Some people call them "hummingbird moths" because they feed on nectar at night. The white-lined sphinx moth is an important pollinator of evening primrose, among other night-blooming plants. Other than the nuisance factor of hundreds of determined insects crawling everywhere for a few days, they are not considered significant pests and do not warrant chemical management.



Adult *Hyleslineata*
Irvine, Orange County, CA. 3/17/09. © Peter J. Bryant



5th instar larva of *Hyleslineata* feeding on red spiderling in my yard in Phoenix on September 21, 2014. Photo by K. Young.