For Agribusinesses, Applicators, Consultants and Extension Personnel



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Hollyhock Weevil

An insect pest that is presently feeding on hollyhock (*Althea rosea*) plants is the hollyhock weevil, *Apion longirostre*. In fact, I saw many feeding on hollyhocks at the Manhattan Community Garden (Manhattan, KS). This insect pest, which is native of Europe, feeds on seeds, leaves, and buds before they open causing bud abortion or flower distortion. Feeding on leaves may result in a tattered appearance when leaves fully develop. Adults are small, being 1/8 inch or 3.0 mm in length, gray to black in color with orange legs, and are primarily located around developing flower buds. Larvae feed on the seeds. Hollyhock weevil overwinters as an adult in protected locations near hollyhocks or in seeds. Adults emerge in spring and chew small holes in buds. In addition, weevils can be observed mating on flower buds with the smaller males mounted on the back of females. Females tend to have a much longer snout or beak than males because of their feeding behavior. During feeding, females chew deep pits (indentations) in the buds in which they lay eggs. The cream-colored grub or larval stage feeds on the developing embryo of the seed. After larvae have completed feeding, they pupate within the seed. Most adults typically emerge in August through September with some remaining in the seed that will emerge the following spring. There is usually one generation per year.

Hollyhock weevil management involves simply "knocking," "shaking," or dislodging adults from flower buds into a container of soapy water, which should immediately kill them. This method is most effective in preventing damage to hollyhock flowers when conducted twice per week. Routinely removing and disposing of seed pods will kill any developing larvae. Contact insecticides that can be used to suppress or regulate hollyhock weevil populations include acephate (Orthene), malathion, carbaryl (Sevin), and pyrethroid-based compounds (e.g., bifenthrin, permethrin, and lambda-cyhalothrin); however, these materials are harmful to natural enemies (e.g., parasitoids and predators) and bees (e.g., honey and bumble bees) so they should only be used if absolutely necessary.







Raymond Cloyd

POOPS UNDER MY MARIGOLD or, OPENING A CAN OF WORMS

I cannot be accused of "potty talk". Read on.

Every year, the lower tier in one of my flower beds is planted to marigolds (Figure 1).



Figure 1

This year, there were quite a few volunteer marigolds which I thought deserved their space. Upon closer look, I noticed "seeds" lying atop the ground beneath some of the plants (Figure 2).



Figure 2

Of course the "seeds" were recognizable as the fecal matter/poop of a caterpillar. The ragged appearance of the plant (Figure 3A) attested to the presence of a "worm" lurking close by. After a bit of searching, the worm was exposed (Figure 3B).





So that explains "the poops". Now comes, "OPENING A CAN OF WORMS"! Not being a systematist, I grabbed a copy of <u>Caterpillars of Eastern North America</u> to compare my caterpillar against those represented in the book (and I suspect some "true systematists" might have done the same). Lots and lots and lots of green caterpillars. As I flipped over Page 417, I blinked ----- there on page 418 was "my baby": a speckled green fruitworm, (*Orthosia hibisci*).

Hmmmm ---- I had heard about green fruitworms ----- and so I checked my copy of the **ESA's Common Names** of Insects & Related Organisms. And the green fruitworm was *Lithophane antennata*. Back to my <u>Caterpillars of Eastern North America</u> ----- only to find that *Lithophane antennata* is called the Ashen Pinion. I then pulled out a copy of a paper (dated 1974) entitled: <u>Green Fruitworms</u>. In it, speckled green fruitworm was the same as listed in <u>Caterpillars of Eastern North America</u>. But *Lithophane antennata* (again, called the Ashen Pinion in <u>Caterpillars of Eastern North America</u>'s) was listed as the widestriped green fruitworm. As indicated in <u>Caterpillars of Eastern North America</u>, "green fruitworm" is applied to various species of green caterpillars in different subfamilies and tribes under the taxonomic family Noctuidae. Now that my head and eyes are spinning (and no doubt the same for you), does it really make any difference whether my green caterpillar specifically is a speckled green fruitworm? Not really.

Side note: although the listed hosts for "green fruitworms" are woody shrubs and trees (including conifers for some), at least one speckled green fruitworm has found marigolds to its liking (and which now, in its special cage, receives a fresh leaf on a daily basis).

Five grasshoppers in 1-inch?

Scattered on the soil surface in the marigold bed, I noted noticed some light colored debris. A clue as to the identity of that material "jumped" into view – a tiny grasshopper. And upon closer examination, what may have been my first thought (chewed bits of plant material) were the empty egg shells of grasshopper hatchlings (Figure 4).



Figure 4

I noticed several additional "baby grasshoppers" ---- all first instar (developmental stage) nymphs of either twostriped or differential grasshoppers. Although now small, they will grow into adult grasshoppers measuring 1 ¹/₄ inches in length (Figure 5).



Figure 5

This is an ideal time to apply an insecticide to minimize/eliminate grasshoppers. Given their current small size, relatively soft integument, confinement to the immediate hatching area, at least this portion of the egg hatch can easily and efficiently be controlled.

Elimination of early hatchlings does not mean that a person will be free-of-grasshoppers for the remainder of 2012. In all likelihood, there are eggs that have yet to hatch. Also, even if one is able to (let us say) control 100% of a "local population", as the season progresses, highly mobile winged grasshoppers from adjacent or more distant areas may eventually enter yards, gardens and flower beds in search of new food sources. One can never predict grasshopper population levels or their movements. Diligence in being aware of the presence and numbers of grasshopper is a season-long commitment if one hopes to escape damage from marauding grasshoppers.

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Sincerely,

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