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Hibiscus Sawfly, *Atomacera decepta* **HYMENOPTERA: ARGIDAE**

Rose mallow, *Hibiscus moscheutos*, a southern native, along with related hybrids and cultivars are valued in Northeast gardens for their many mid- to late summer blooms and strong stems that rarely need staking. Their white, pink or red flowers, some as large as dinner plates, can have a darker eye. Until recently, they have been relatively free of insect and disease pests in home landscapes. In 2004 and 2005, however, larvae of the hibiscus sawfly defoliated many rose mallow plants in Connecticut landscapes. This sawfly is more commonly found in the Mid-Atlantic and Midwest states. It also feeds on hollyhock and other mallows. If left untreated for several seasons, populations can build up and kill an otherwise healthy plant.

Description:

Sawflies are close relatives of bees and wasps. Hibiscus sawfly adults are dark-winged, fat-waisted and 3/16" long. They are entirely black with an orange spot on the upper thorax (Figure 1). Females lay multiple rows of six disc-like eggs in leaf tissue near the margins causing brown blisters near the leaf tip (Figure 2). Dark-headed larvae are yellowish-green with transverse rows of six or eight short, thick, black tubular glands on each body segment

(Figure 3). The larvae look like moth or butterfly caterpillars but can be distinguished from them by the number of short, fleshy prolegs found on the abdomen. Moth and butterfly larvae have five or fewer pairs of prolegs, while sawflies have none or more than five pairs of prolegs. The hibiscus sawfly larva has six pairs of prolegs. Mature larvae, up to 1/2" long, form straw-colored fibrous cocoons (Figure 4).

Life Cycle and Damage:

Not much is known of the life cycle of this pest in the Northeast. Adult activity and egg laying may take place from late May through the growing season until the first frost. Eggs are laid in older leaves and hatch in about a week. Well-camouflaged larvae feed in groups on the undersides of leaves but leave the upper epidermis intact. As they get larger, all leaf tissue except the veins is consumed, which gives the leaf a lacy appearance. With large infestations, the accumulation of small black fecal droppings is apparent. Mature larvae form cocoons, often in groups, on the lower stems or in the soil. With a life cycle of 28 days, multiple generations are possible in Connecticut and plants can be completely defoliated in a matter of days. It is not known how or if this sawfly passes the winter in Connecticut.

Hosts:

Larvae feed voraciously on rose mallow, *Hibiscus moscheutos*, and the hybrids of *H. palustris*, *H. militaris*, and *H. lasiocarpus* such as “Lord Baltimore” and “Lady Baltimore”. The popular “Luna” and “Belle” series available in many garden centers are very susceptible to attack by this insect. It feeds somewhat less on hollyhock, *Alcea rosea*. There is a hollyhock sawfly, *Neoptilia malvacearum*, which may be confused with the hibiscus sawfly. The hibiscus sawfly does not feed on woody hibiscus such as Rose of Sharon, *Hibiscus syriacus*, or the tender *Hibiscus rosa-sinensis*. It will feed on other ornamental mallows, as well as cotton and okra, but usually will not complete its life cycle on them.

Management:

As soon as leaves emerge, begin scouting the lower leaf surfaces of older leaves on susceptible plants. Handpicking larvae initially may be difficult because of their small size and how well they are camouflaged, but it is a non-chemical option for the small garden. Foliar sprays can be effective. In Connecticut, effective insecticides include acephate, pyrethrins, pyrethroids (eg. bifenthrin, permethrin or cyfluthrin) and spinosad. Spray must cover all infested plant parts for good control. All of these products, with the exception of spinosad, can be toxic to beneficial predatory mites and can induce secondary outbreaks of spider mites. An alternative is to use an early season soil drench of imidacloprid. This insecticide is translocated up from the roots through the plant and will provide season-long control with one application. Another alternative would be foliar applications of horticultural oil or insecticidal soap, which may be used on small larvae, but the spray must coat all

the sawflies as they kill by suffocation and disruption of the insect membranes respectively. Do not apply foliar insecticides during bloom while bees or hummingbirds are present. Be sure to read and follow all label directions.

Cultivars that are resistant to hibiscus sawfly attack may be available in the future. Three species of hardy herbaceous hibiscus that are resistant to the sawfly have been found by researchers in Mississippi. Hopefully, breeders will be able to get this trait into horticulturally viable cultivars soon.



Figure 1. Hibiscus sawfly adult, magnified



Figure 2. Hibiscus sawfly egg sites, magnified



Figure 3. Hibiscus sawfly larvae, magnified



Figure 4. Hibiscus sawfly cocoons, magnified

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