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Leaf- Footed Bugs

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Order: Hemiptera

Family: Coreidae

Species: *Leptoglossus phyllopus* (L.) and *L. opposites* (Say)

Fig. 1. Adult *Leptoglossus opposites*.

Introduction: Leaf-footed bugs are moderately large bugs in the genus *Leptoglossus* (Family: Coreidae); which are distinguished by the unusual flattening of the hind tibia which resembles a leaf, hence the common name. There are two common species of leaf-footed bugs found in Virginia, *Leptoglossus opposites* (Fig. 1) and *L. phyllopus* (Fig 2). Both species are similar in their biology, and both are considered a pest of many types of crops, including fruit, fruiting vegetables, nuts, and ornamentals. The piercing sucking injury caused by their feeding is very similar to that of stink bugs (Hemiptera: Pentatomidae). Under heavy pest infestations, serious injury can occur to the fruiting bodies of crops, often resulting in an unmarketable product.

Fig. 2. Adult *Leptoglossus phyllopus*.

Description: The adults of both *L. opposites* and *L. phyllopus* have a flat, chocolate to dark brown body with grey to medium brown sides, and range in size from ⅝ to ¾ inches in length. The body is V-shaped in cross section. *L. phyllopus* has a white to pale yellow straight broad band across the wing covers (Fig 2). While *L. oppositus* lacks the band, small white spots may appear on some individuals (Fig 1). Both of these species will exude a foul smelling liquid if disturbed.

Fig. 3. Leaf-footed bug egg mass.

The eggs are a golden brown and are laid in a single row along a stem or leaf midrib (Fig. 3). They are somewhat cylindrical, flattened on the undersides and at the ends, and are laid closely end-to-end. The nymphs have black legs while their bodies range in color from orange to reddish brown (Fig. 4). They have 5 instars in development. The leaf-like hind tibia does not develop until the latter instars at which time they also develop their adult coloration.

Fig. 4. Leaf-footed bug nymphs on corn.

Distribution and Life Cycle: Both *L. opposites* and *L. phyllopus* are common in the eastern and southeastern states, and will extend as far north as New York and as far west as Missouri. There are several generations per year. The adults overwinter in the woods or in leaf debris, emerging in late spring to feed on various weed hosts. They lay eggs, which hatch in 5-7 days. Leaf-footed bug nymphs have commonly been found on thistle, *Cirsium* spp., or other succulent plants. In Virginia, the nymphs have been observed on nightshade, *Atropa* spp., corn, and trees. The nymphs usually require 25-30 days to mature.

Damage: *Leptoglossus* species feed on foliar tissue and fruit by piercing the selected plant tissue with their proboscis and sucking the juices. The saliva of leaf-footed bugs contains a toxic secretion, which further injures plant tissue. They may cause wilting and death of leaves and deformation and loss of fruit. Feeding on fruit with piercing-sucking mouthparts causes pitting, distortion and discoloration. Puncturing of fruit also allows secondary pathogens to enter and cause rotting. Some of the crops which may be affected are citrus fruits, pecans, apple, beans, bell pepper, blueberry, blackberry, corn, cucurbits, eggplant, peach, pear, plum, squash, and tomato among others.

Although leaf-footed bugs feed on a large number of fruits and crop plants, they are seldom considered a major pest in the southeast because of normally low concentrations of insects. However on occasion, these insects will migrate in mass to immature crops or fruits and cause significant damage. They also display a habit of aggregating into large colonies, which will result in huge numbers on one tree while none may appear on the adjoining tree.

Fig. 5. Leaf-footed bug feeding injury to tomato.

Fig. 6. Leaf-footed bug feeding injury to blueberry. Photos by Jerry A. Payne, USDA Agricultural Research Service, Bugwood.org.

Management

Chemical control: Insecticides should target the nymph and adult stages. Very few insecticides will kill the eggs of this pest. For most fruit and vegetable crops, a wide range of insecticides provide control including pyrethroids (i.e., cyfluthin, bifenthrin, lambda-cyhalothrin, cypermethrin, permethrin, esfenvalerate, etc.), carbamates (carbaryl, methomyl, oxamyl), organophosphates (such as acephate), and neonicotinoids (i.e., imidacloprid, thiamethoxam, dinotefuran, acetamiprid, and clothianidin). Additionally, a number of insecticide products are available as mixtures of some of these different materials.

Cultural control: Mowing weeds and maintaining vegetation in and around fields and destroying crop debris will help reduce leaf-footed bug nymphal survival as well as reduce overwintering sites for adults. In home garden settings, the insects and egg masses can be removed manually and destroyed.

Biological control: Compared with soft-bodied pests such as aphids and caterpillars, relatively few natural enemies attack this bug. However, adult leaf-footed bugs are parasitized by certain tachinid flies such as *Trichopoda pennipes* (Fabricus), *T.plumipes* (Fabricus).

References

Capinera, J. L. 2001. *Handbook of Vegetable Pests*. Academic Press, New York.

Mead, F.W. (2010, August) *Featured creatures*, Circular 107. EENY-72. Retrieved Nov. 3, 2010 from http://entnemdept.ufl.edu/creatures/orn/leaffooted-bug.htm