

Pest Alert

FDACS-P-01683

Florida Department of Agriculture and Consumer Services, Division of Plant Industry
Charles H. Bronson, Commissioner of Agriculture

Leptoglossus zonatus - A New Leaffooted Bug in Florida (Hemiptera: Coreidae)

Lyle J. Buss, LJBuss@ifas.ufl.edu, Entomology and Nematology Department, University of Florida, Gainesville

Susan E. Halbert, Susan.Halbert@FreshFromFlorida.com Taxonomic Entomologist, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville

Seth J. Johnson, SJohnson@agcenter.lsu.edu, Department of Entomology, Louisiana State University Agricultural Center, Baton Rouge, Louisiana

INTRODUCTION: A new leaffooted bug, *Leptoglossus zonatus* (Dallas) (Fig. 1) was collected by the first author on 6 June 2005 in Gainesville, Florida. After the initial identification was made on 17 June, further searching in the vicinity yielded about ten specimens on tomato plants. Two mating pairs (Fig. 2) were found, and one individual was observed feeding on a tomato fruit (Fig. 3).

IDENTIFICATION: Baranowski and Slater (1986) reported eight species of *Leptoglossus* in Florida. *L. zonatus* is most easily distinguished from other Florida *Leptoglossus* spp. by the presence of two large whitish-yellow spots on the anterior portion of the pronotum (Figs. 4-5). Another notable feature is the zigzag white band across the hemelytra (Figs. 4-5). The most common *Leptoglossus* in Florida, *L. phyllopus* (L.), lacks the spots and has a straight white band (Fig. 6). As with other species in this genus, the common name of leaffooted bug for *L. zonatus* is descriptive of the leaf-like expansions on the hind tibia (Fig. 7). Total body length is about 19-21 mm.

DISTRIBUTION: Florida represents the easternmost U.S. record for this coreid. In some literature it is called the western leaffooted bug since it is found in the southwestern US, including California, Arizona, Texas, and Louisiana. Its range extends south through Mexico and Central America into the northern half of South America (Allen 1969; Henne and Johnson 2003). *L. zonatus* first appeared in Louisiana in 1996 (Johnson and Allain 1998) and became the dominant species of leaffooted bug in Satsuma oranges by 2001, accounting for 97% of the total leaffooted bugs (Henne and Johnson 2003).

COMMON HOSTS AND DAMAGE: *L. zonatus* is very polyphagous, and can damage many fruit, vegetable, and field crops. It feeds on the flowers and fruit of its host plants, which include oranges, limes, guava, avocado, pomegranate, melons, cotton, sorghum, corn, tomato, cucurbits, eggplant, and Chinese tallow (Schaefer and Panizzi 2000). Their feeding can cause discolored spots on fruit, aborted fruit and malformed seeds.

L. zonatus and *L. phyllopus* are economic pests of Satsuma oranges in Louisiana. Henne and Johnson (2003) found that these bugs transmit a yeast, *Nematospora coryli*, that causes staining, collapsing, and dry rot of the internal juice sacs. This hidden damage can make the fruit unpalatable. Their feeding also can cause external damage to the rind in the form of green spots that remain for a time after the rind has turned orange. In Louisiana, adults of *L. zonatus* can be found all year while the weather is warm, and can live for two or three months. They appear on the early maturing cultivars in August, and later move to the late maturing cultivars where they can be found into November and even December on warm days.

Leptoglossus zonatus has been reported in Brazil to transmit protozoan plant pathogens known as trypanosomatids. These organisms are very similar to the trypanosomes that cause Chagas' disease and sleeping sickness, but they are



Florida Department of Agriculture and Consumer Services
Adam H. Putnam, Commissioner

pathogenic to plants and are not known to cause any human illness. Trypanosomatids in the genus *Phytomonas* cause disease in coffee, coconut, oil palms, and cassava (Sbravate *et al* 1989).

ACKNOWLEDGEMENTS: We would like to thank Dr. Harry Brailovsky of the Instituto de Biología, UNAM, Mexico City, and Dr. Thomas Henry of the Systematic Entomology Laboratory, USDA-ARS, Washington D.C., for confirmation of the identification.

REFERENCES:

- Allen, R.C.** 1969. A revision of the genus *Leptoglossus* Guerin (Hemiptera: Coreidae). *Entomologica Americana* 45: 35-140.
- Baranowski, R.M. and J. A. Slater.** 1986. *Coreidae of Florida (Hemiptera: Heteroptera)*. *Arthropods of Florida and Neighboring Land Areas, Volume 12. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville.* 82 p.
- Henne, D.C., S.J. Johnson and W.J. Bourgeois.** 2003. Pest status of leaf-footed bugs (Heteroptera: Coreidae) on citrus in Louisiana. *Proceedings of the Annual Meeting of the Florida State Horticultural Society* 116: 240-241.
- Johnson, S.R. and L.K. Allain.** 1998. Observations on insect use of Chinese tallow (*Sapium sebiferum* (L.) Roxb.) in Louisiana and Texas. *Castanea* 63: 188-189.
- Mead, F.W.** 1971. Annotated key to leaf-footed bugs, *Leptoglossus* spp., in Florida (Hemiptera: Coreidae). Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville. *Entomology Circular No. 113.* 4 p.
- Sbravate, C. M. Campaner, L.E.A. Camargo, I. Conchon, M.M.G. Teixeira, and E.P. Camargo.** 1989. Culture and generic identification of Trypanosomatids of phytophagous Hemiptera in Brazil. *Journal of Protozoology* 36: 543-547.
- Schaefer, C.W. and A.R. Panizzi.** 2000. *Heteroptera of Economic Importance.* CRC Press, Boca Raton. 828 p.



Fig. 2. *Leptoglossus zonatus* mating on tomato plant.



Fig. 1. *Leptoglossus zonatus* (the new state record specimen).



Fig. 3. *Leptoglossus zonatus* feeding on tomato fruit.
Photo credit: Lyle Buss, UF/IFAS

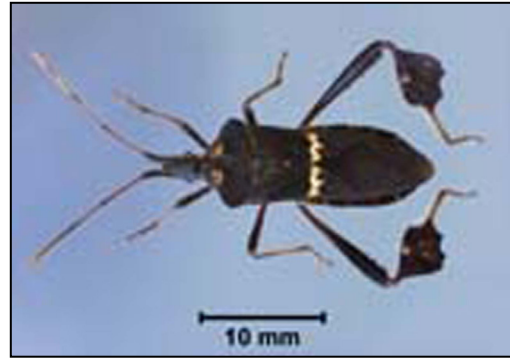


Fig. 4. *Leptoglossus zonatus*, dorsal view
Photo credit: Lyle Buss, UF/IFAS



Fig. 5. *Leptoglossus zonatus*: close-up showing white transverse band and yellow pronotal spots.
Photo credit: Lyle Buss, UF/IFAS



Fig. 6. *Leptoglossus phyllopus*, a common species in Florida.
Photo credit: Lyle Buss, UF/IFAS



Fig. 7. *Leptoglossus zonatus*: close-up of hind tibia.
Photo credit: Lyle Buss, UF/IFAS