

Pest Alert

FDACS-P-01605

Pest Alert created February 2017

Florida Department of Agriculture and Consumer Services Division of Plant Industry

Fulmekiola serrata (Kobus), sugarcane thrips

Felipe N. Soto-Adames, Taxonomic Entomologist, Bureau of Entomology, Nematology, and Plant Pathology
DPIHelpline@FreshFromFlorida.com or 1-888-397-1517

INTRODUCTION: On January 26, 2017, FDACS-DPI received a request from Dr. Julien Beuzelin (UF/IFAS Belle Glade) for information concerning the identity of a thrips found on sugarcane in Glades and Hendry counties in South Florida. The leaves on which the thrips were collected showed evidence of damage, and the question was whether the damage could have been caused by the thrips. Samples of thrips were received at FDACS-DPI in Gainesville on January 31, 2017, and on February 2, 2017, the insects were identified as the sugarcane thrips *Fulmekiola serrata*. The sugarcane thrips is native to East Asia, but has been introduced into South Africa, Madagascar and some of the West Indies, including Cuba and Puerto Rico. The species completes its life cycle in a number of grass species, but most frequently it is found on sugarcane. About half of the individuals submitted to FDACS-DPI for identification were larvae or pupae, indicating that the species is actively reproducing. This is an important pest of sugarcane that under some conditions may reduce sugarcane sucrose yield by up to 24 percent (Way et al. 2010).

DAMAGE: Damage is caused directly by thrips feeding on leaves. The leaves of heavily infested plants have brown, dried leaf tips (Fig. 1) and margins (Fig. 2), whereas other parts of the leaves may show multiple yellowish blotches and streaks (Fig. 3).

IDENTIFICATION: The sugarcane thrips is a small but very distinctive species. Adult females grow to 1.1 mm, whereas males are around 0.9 mm long. Both sexes are brown, although males (Fig. 4) tend to be darker than females (Fig. 5); the ocelli are orange (Fig. 6) and the antennae are dark brown or black, except for the third, fourth and sometimes fifth segments, which are light brown or white (Fig. 6); wings are mostly dusky black, with a light or white base. The dark first and second antennal segments distinguish *F. serrata* from the superficially similar *Frankliniella williamsi* (Hood), in which the first two antennal segments are light instead of dark. Additional information on the sugarcane thrips can be found in Moritz et al. (2017) at: <http://thripsnet.zoologie.uni-halle.de/key-server-neu/data/0a0b0a0e-0d03-4106-8306-08060a080902/media/Html/Fulmekiola%20serrata.html>

MONITORING: Sugarcane thrips can be sampled using either blue or clear sticky traps and by direct examination of leaf spindles. Traps set 50 to 120 cm above ground may be used for monitoring. The presence of a few individuals on the traps may indicate an infestation and should be followed by direct examination of leaf spindles (Way et al 2011).

REFERENCES:

- Moritz, G., S. Brandt, S. Triapitsyn, and S. Subraiman. 2017. Identification and information tools for thrips in East Africa. <http://thripsnet.zoologie.uni-halle.de/key-server-neu/data/0a0b0a0e-0d03-4106-8306-08060a080902/media/Html/Fulmekiola%20serrata.html> [accessed 9 February 2017].
- Way, M.J., R.S. Rutherford and V. Harraca. 2011. Sugarcane thrips, *Fulmekiola serrata*, (Thysanoptera: Thripidae) dispersal studies. Proceedings of the South Africa Sugar Technologists' Association, 84: 306-309.
- Way, M.J., R.S. Rutherford, C. Sewpersand, G.W. Lesllie, and M.G. Keeping. 2010. Impact of sugarcane thrips, *Fulmekiola serrata* (Kobus) (Thysanoptera: Thripidae) on sugarcane yield in field trials. Proceedings of the South Africa Sugar Technologists' Association, 83: 244-256.



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



Figure 1. Sugarcane thrips infested field showing leaf damage (arrows).
Photo Credit: Julien Beuzelin, UF/IFAS



Figure 2. Damaged leaf with brown dry margins.
Photo Credit: Julien Beuzelin, UF/IFAS



Figure 3. Damaged leaf with yellowish streaks.
Photo Credit: Julien Beuzelin, UF/IFAS



Figure 4. Adult male sugarcane thrips.
Photo Credit: Felipe Soto-Adames, FDACS-DPI



Figure 5. Adult female sugarcane thrips.
Photo Credit: Felipe Soto-Adames, FDACS-DPI

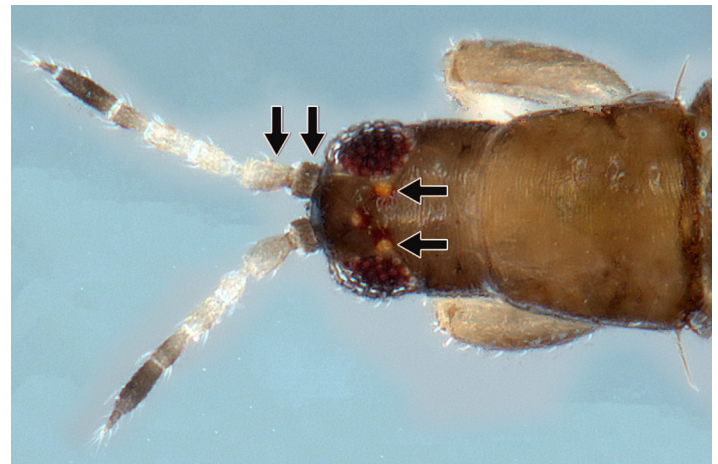


Figure 6. Adult female, antennae, head and first thoracic segment. Arrows point at first and second antennal segments and ocelli.
Photo Credit: Felipe Soto-Adames, FDACS-DPI