

Pest Alert

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***Aclerda takahashii* Kuwana (Hemiptera: Aclerdidae), The flat grass scale, a new pest of sugarcane in Florida**

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INTRODUCTION: On 16 September 2016, Division of Plant Industry inspector Janie Echols collected two scale insect species infesting high-fiber sugarcane (*Saccharum officinarum* and hybrids; Poaceae) fields in Hamilton County (Fig. 1). High-fiber sugarcane, also known as energy cane, is one of several grass species grown primarily as biomass for energy production. Pink sugarcane mealybug (PSMB), *Saccharicoccus sacchari* (Cockerell), has been a minor pest of sugarcane (*Saccharum officinarum*) in Florida since the 1980s, but the flat grass scale, *Aclerda takahashii* Kuwana, is a New Continental Record (Figs 2–5). In the New World, this species has been present in Brazil since the 1930s (as *Aclerda sacchari* Hempel, junior synonym; Culik et al. 2011), and was identified from samples collected in Haitian sugarcane fields in 2015. Very little is known or published about the economic impact caused by this species elsewhere in sugarcane growing regions, even though it occurs in India, Egypt and China, and numerous islands in the Indian and Pacific oceans.

IDENTIFICATION: Flat grass scales are not common in the United States and are likely to be confused with other scale or mealybug species, such as *Antonina pretiosa* Ferris (noxious bamboo mealybug) and *Chaetococcus bambusae* (Maskell), that infest bamboo and other poaceous species (Hodges and Hodges 2004; Hodges et al. 2008). Of the aclerdid species for which information is available, many are reported to develop near or below ground level, but in the population of *A. takahashii* examined in Hamilton County, all stages were on the above-ground stem but hidden beneath the leaf petiole (sheath). When the sheath was peeled back, crawlers to late adult females were seen commingled, often in abundance. Immature through the early adult stage are a light-yellow or beige color and elongate-oval in outline. Late adult females become progressively darker (dark reddish-brown) and elongate as they mature, and the body outline may become quite deformed. They produce very little wax, which is bright white, slightly 'woolly', and more-or-less restricted to a small fringe around the body. The process of darkening and hardening changes as the adult female ages; in early adult females the posterior abdomen becomes heavily sclerotized and dark prior to the remainder of the body. Late adult females somewhat resemble small watermelon seeds in color and shape.

HOSTS: *Aclerda takahashii* is associated primarily with *Saccharum* species, but has been collected on ornamental grasses such as tiger grass, *Thysanolaena latifolia* (Roxb. ex Hornem.) Honda, and an unidentified species of *Miscanthus*. Because the females are relatively large when mature, presumably only hosts with rather wide stems will be suitable.

NOTES: Populations of *A. takahashii* co-occurred with populations of PSMB, occasionally side-by-side, but the species are easy to tell apart: PSMB is light pink in color and lightly 'dusted' with powdery wax and more clearly resembles a typical mealybug. Both *A. takahashii* and PSMB benefit from ants that associate with them for honey-dew, and ants seen on stems and leaves may indicate that scale insects are present.

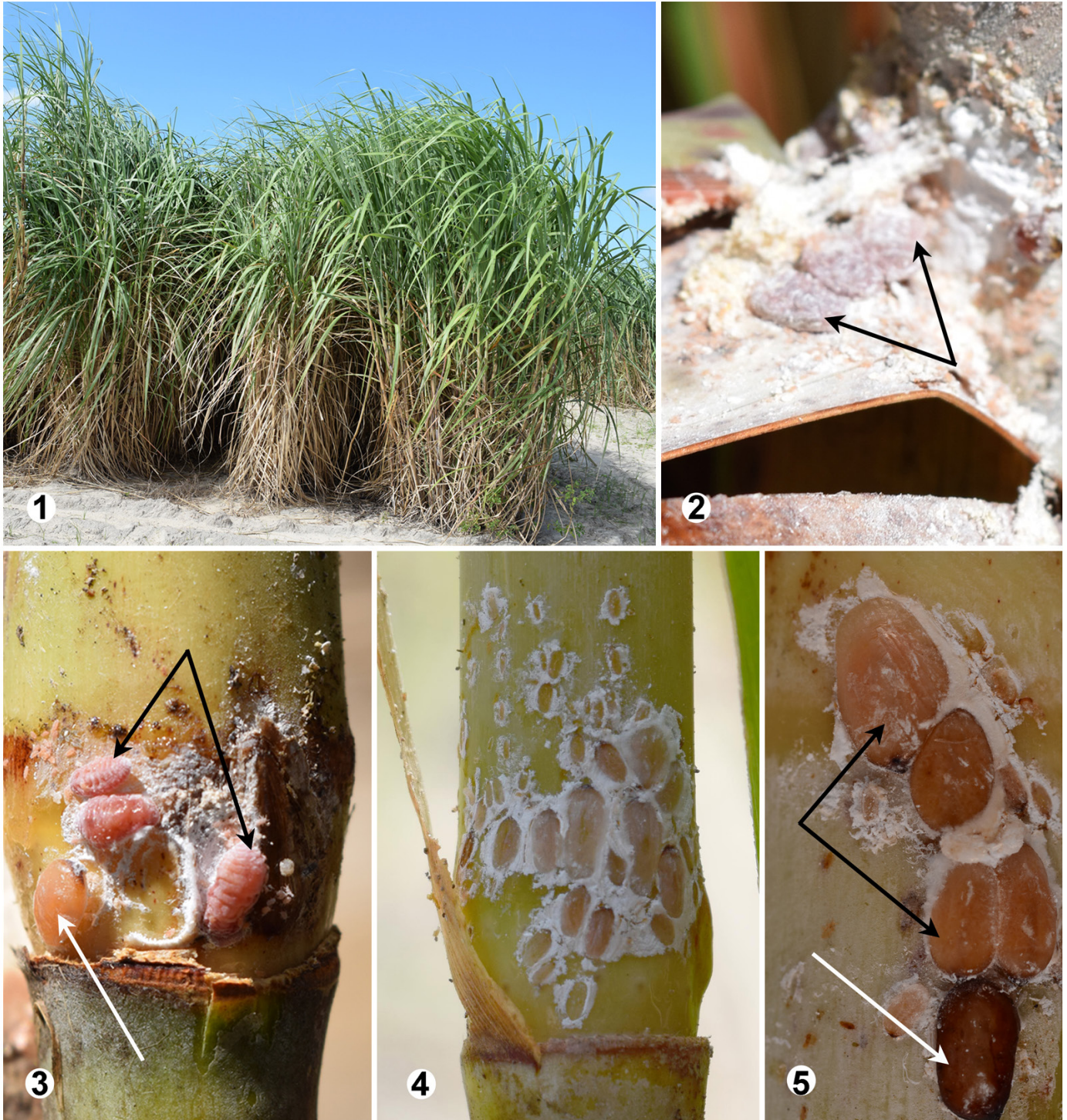
Several other grass-infesting *Aclerda* species occur in the United States, Mexico and the Caribbean region, and some may be native to southern states, including Florida. *Aclerda sacchari* Teague (not *A. sacchari* Hempel, a junior synonym of *A. takahashii*) was described from Puerto Rico and occurs in Cuba (McConnell 1954). *Aclerda sacchari* is recorded on not only sugarcane, but sour paspalum, *Paspalum conjugatum* P.J. Bergius (also known as buffalo grass and hilograss), lemon grass, *Cymbopogon citratus* (DC. ex Nees) Stapf, and para grass, *Urochloa mutica* (Forssk.) T.Q. Nguyen, all of which grow in Florida. *Aclerda sacchari* also develops under the sheath and will be impossible to distinguish from *A. takahashii* in the field; thus far, it is not known to occur in Florida.



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

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Figs. 1–5. Sugarcane (**Fig. 1**) and sugarcane scale insects (**Figs. 2–5**). **Fig. 2.** *Saccharicoccus sacchari*, pink sugarcane mealybug, adult females (arrows). **Fig. 3.** *Aclerda takahashii* (white arrow) and *S. sacchari* (black arrows) on cane stem beneath leaf sheath (removed). **Fig. 4.** *Aclerda takahashii* mixed-age populations. **Fig. 5.** *Aclerda takahashii* adult (black arrows) and late adult (white arrow) females.

Photo credit: Ian Stocks, DPI (Figs. 1–4) and Lyle Buss, UF (Fig. 5).