

PEST ALERT

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Florida Department of Agriculture and Consumer Services Division of Plant Industry

***Anthonomus testaceosquamosus* Linell, the hibiscus bud weevil, new in Florida**

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INTRODUCTION: Samples of a weevil belonging to the diverse genus *Anthonomus* were collected recently in Miami-Dade (May 2017), Broward (January 2018) and Hernando (May 2018) counties. Samples sent to DPI have been identified as *Anthonomus testaceosquamosus* Linell (Coleoptera, Curculionidae), a native to northeastern Mexico and southern Texas, and have the potential to cause significant loss of hibiscus flower buds. This a new state record for Florida.

IDENTIFICATION: The body of this weevil is 2.5-3.0 mm in length, including the beak up to 5 mm, elongate pear-shaped and entirely covered with dense gray scale-like setae (Figs. 1-3). It belongs to a North American group of *Anthonomus*, the squamosus group, and is distinguished from others by its size, dense dorsal scale-like setae covering entire surface, lack of distinct color pattern, male genitalia strongly narrowed apically with slight apicolateral expansions and having different host plants.

HOSTS: This weevil is reported to feed on malvaceous flower buds in several genera: *Abutilon abutiloides* (Jacq.) Garcke ex Hochr. [shrubby Indian mallow], *Hibiscus martianus* Zucc. [= *H. cardiophyllus* Baill., heart-leaf hibiscus], *Malvastrum americanum* (L.) Torr. [Indian valley false mallow], *Malvastrum corchorifolium* (Desr.) Britton [false mallow], *Malvastrum spicatum* (L.) A. Gray [false mallow], *Pseudabutilon lozanii* (Rose) R. E. Fries [Lozano's false Indianmallow], *Wissadula holosericea* (Scheele) Gke. [Chisos Mountain false Indianmallow], and *Sida* sp. (Ahmad and Burke 1972, Burke and Gates 1974). Florida collections have been on varieties of *Hibiscus rosa-sinensis* L. [Chinese hibiscus].

DAMAGE: In South Florida, *A. testaceosquamosus* has been found feeding on hibiscus flower buds (Fig. 4). Adults lay eggs on young flower buds, and the immature weevils feed on the developing pollen. The hibiscus plant responds by dropping the buds. Growers initially thought the additional bud drop was caused by midges (Gagné 1995, Manion et al. 2006, Osborne et al. 2018), which have been causing bud drop since the early 1990s. Adult beetles were eventually noticed by growers and larvae were found. Larvae of *A. testaceosquamosus* (a weevil) are 4-5 mm in length at maturity, have a distinct head capsule, and there will be only one larva in the bud cavity (Fig. 5). In contrast, larvae of the midge (a fly) are only 1 mm in length at maturity, lack a head capsule, and there can be many in a single bud.

SURVEY: Look on foliage and around developing flower buds for the adult weevil or bud drop. Cut open dropped flower buds and inspect for larvae. If suspect specimens are found, please contact the DPI Helpline for instructions how to submit specimens for verification.



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

LITERATURE CITED

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Fig 1. *Anthonomus testaceosquamosus* Linell dorsal view.
Photograph credit: Paul Skelley, FDACS-DPI



Fig 2. *Anthonomus testaceosquamosus* Linell lateral view.
Photograph credit: Paul Skelley, FDACS-DPI



Fig 3. *Anthonomus testaceosquamosus* Linell on hibiscus bud.
Photograph credit: Paul Skelley, FDACS-DPI



Fig 4. Bud drop caused by *Anthonomus testaceosquamosus* Linell.
Photograph courtesy an anonymous hibiscus grower



Fig 5. Larva of *Anthonomus testaceosquamosus* Linell in bud cavity feeding on developing anthers of hibiscus flower.
Photograph credit: Paul Skelley, FDACS-DPI