

California Pest Rating Profile

***Anthonomus testaceosquamosus* Linell: Hibiscus bud weevil**

Coleoptera: Curculionidae

Pest Rating: A

Comment Period: 08/22/2025-10/06/2025

Initiating Event:

This weevil was found on a hibiscus plant during a nursery inspection in San Diego County in July, 2025. It has not been assessed with the pest rating system. Therefore, a pest rating proposal is needed.

History & Status:

Background:

Anthonomus testaceosquamosus is a weevil that is reported to be limited to plants in the Malvaceae family. Adults feed on buds, stems, and leaves. Larvae feed inside the bud, causing bud drop before flowering. Pupation occurs in the bud (Revynti et al., 2021). Based on collection and rearing reports, hosts appear to include six genera of Malvaceae: *Abutilon*, *Hibiscus*, *Malvaviscus*, *Pseudabutilon*, *Sida*, *Wissadula* (Burke and Gates, 1974; Clark et al., 2019). This weevil is not known to feed on cotton.

Experiments by Revynti et al. (2022) suggest that this weevil may have a relatively narrow range of temperature tolerance for development (egg to adult). 27 °C was suitable but not 10, 15, or 34 °C. Persistence of the weevil in Florida suggests tolerance to higher (i.e., than 27 °C) temperatures, possibly in the adult stage.

This weevil is considered a pest of hibiscus. Within two years of the first detection of this weevil in Florida, “large economic losses” to hibiscus were reported in that state. Compliance agreements were developed to limit spread of the pest from infested nurseries in Florida (Revynti et al., 2022).

Research suggests sanitation (removal of fallen, infested buds) may be useful in management of this pest. It should be noted that, in experiments, plants without sanitation had a larger number of growing buds and flowers than the plants that were sanitized, suggesting that the plants compensated for the losses of infested (dropped) buds (Vargas et al., 2024).

Worldwide Distribution: *Anthonomus testaceosquamosus* is presumed to be native to Mexico and Texas. It was introduced to Florida. It is reported from **North America:** Mexico, United States (Florida and Texas) (Clark et al., 2019; Revynti et al., 2021).

Official Control: *Anthonomus testaceosquamosus* is not known to be under official control.

California Distribution: *Anthonomus testaceosquamosus* is not known to be established in California.

California Interceptions: *Anthonomus testaceosquamosus* was found on hibiscus plants during nursery inspections in Los Angeles and San Diego counties in July and August, 2025.

The risk *Anthonomus testaceosquamosus* poses to California is evaluated below.

Consequences of Introduction:

- 1) **Climate/Host Interaction:** *Anthonomus testaceosquamosus* is reported to be limited to plants in the family Malvaceae. California likely has suitable host plants, including ornamental hibiscus as well as wild plants, over much of the state. This weevil appears to be tropical and subtropical in

distribution, and therefore, it may only be capable of establishing in a limited part of California. Therefore, it receives a **Medium (2)** in this category.

- Low (1) Not likely to establish in California; or likely to establish in very limited areas.
- **Medium (2) may be able to establish in a larger but limited part of California.**
- High (3) likely to establish a widespread distribution in California.

2) **Known Pest Host Range:** *Anthonomus testaceosquamosus* is reported to be limited to plants in the family Malvaceae. Therefore, it receives a **Low (1)** in this category.

- **Low (1) has a very limited host range.**
- Medium (2) has a moderate host range.
- High (3) has a wide host range.

3) **Pest Reproductive and Dispersal Potential:** *Anthonomus testaceosquamosus* is assumed to be capable of flight. It is also likely to be spread with infested nursery stock. Therefore, it receives a **Medium (2)** in this category.

- Low (1) does not have high reproductive or dispersal potential.
- **Medium (2) has either high reproductive or dispersal potential.**
- High (3) has both high reproduction and dispersal potential.

4) **Economic Impact.** *Anthonomus testaceosquamosus* is reported to cause bud drop in hibiscus. Research also suggests that this may promote production of additional buds by the infested plant, but it is not known if this would negate the impacts of the weevil. Control may involve sanitation (i.e., removal of dropped buds). Therefore, it receives a **High (3)** in this category.

Economic Impact: A, B, D

A. The pest could lower crop yield.

B. The pest could lower crop value (includes increasing crop production costs).

C. The pest could trigger the loss of markets (includes quarantines).

D. The pest could negatively change normal cultural practices.

E. The pest can vector, or is vectored, by another pestiferous organism.

F. The organism is injurious or poisonous to agriculturally important animals.

G. The organism can interfere with the delivery or supply of water for agricultural uses.

Economic Impact Score: High

– Low (1) causes 0 or 1 of these impacts.

– Medium (2) causes 2 of these impacts.

– **High (3) causes 3 or more of these impacts.**

- 5) **Environmental Impact.** *Anthonomus testaceosquamosus* infests a variety of Malvaceae, and it is likely that some native plants in this family in California could be attacked. Infestations in ornamental plants could trigger treatments. Therefore, this weevil receives a **High (3)** in this category.

Environmental Impact: A, D, E

A. The pest could have a significant environmental impact such as lowering biodiversity, disrupting natural communities, or changing ecosystem processes.

B. The pest could directly affect threatened or endangered species.

C. The pest could impact threatened or endangered species by disrupting critical habitats.

D. The pest could trigger additional official or private treatment programs.

E. The pest significantly impacts cultural practices, home/urban gardening or ornamental plantings.

Environmental Impact Score: High (3)

- Low (1) causes none of the above to occur.
- Medium (2) causes one of the above to occur.
- High (3) causes two or more of the above to occur.

Consequences of Introduction to California for *Anthonomus testaceosquamosus*:

Medium (11)

Add up the total score and include it here.

- Low = 5-8 points
- Medium = 9-12 points**
- High = 13-15 points

6) **Post Entry Distribution and Survey Information:** *Anthonomus testaceosquamosus* is not known to be established in California. It receives a **Not established (0)** in this category.

–**Not established (0) Pest never detected in California, or known only from incursions.**

–Low (-1) Pest has a localized distribution in California, or is established in one suitable climate/host area (region).

–Medium (-2) Pest is widespread in California but not fully established in the endangered area, or pest established in two contiguous suitable climate/host areas.

–High (-3) Pest has fully established in the endangered area, or pest is reported in more than two contiguous or non-contiguous suitable climate/host areas.

Final Score:

7) The final score is the consequences of introduction score minus the post entry distribution and survey information score: Medium (11)

Uncertainty:

This weevil could be established in California. It may be able to establish in only a very small portion of the state or not at all for climate reasons. Its impacts to hibiscus could be different in California from what is reported elsewhere.

Conclusion and Rating Justification:

Anthonomus testaceosquamosus is a known pest of hibiscus, an important ornamental plant in California. This weevil could also have environmental impacts. It is not known to be established in the state. For these reasons, an “A” rating is justified.

References:

Burke, H. R., and Gates, D. B. 1974. Bionomics of several North American species of *Anthonomus* (Coleoptera: Curculionidae). The Southwestern Naturalist 19:313-327.

California Department of Food and Agriculture. Pest and damage record database. Accessed July 24, 2025:

<https://pdr.cdfa.ca.gov/PDR/pdrmainmenu.aspx>

Clark, W. E., Burke, H. R., Jones, R. W., and Anderson, R. 2019. The North American species of the *Anthonomus squamosus* species-group (Coleoptera: Curculionidae: Curculioninae: Anthonomini). The Coleopterists Bulletin 73:773-827.

Revynthi, A. M., Hernandez, Y. V., Canon, M. A., Greene, A. D., Vargas, G., Kendra, P. E., and Mannion, C. M. 2022. Biology of *Anthonomus testaceosquamosus* Linell, 1897 (Coleoptera: Curculionidae): A New Pest of Tropical Hibiscus. Insects 13 <https://doi.org/10.3390/insects13010013>

Revynthi, A. M., Hernandez, Y. V., Rodriguez, J., Kendra, P. E., Carrillo, D., and Mannion, C. M. 2021. The hibiscus bud weevil (*Anthonomus testaceosquamosus* Linell, Coleoptera: Curculionidae). Accessed July 29, 2025: <https://edis.ifas.ufl.edu/publication/IN1328>

Vargas, G., Greene, A. D., Velazquez-Hernandez, Y., Latty, L., and Revynthi, A. M. 2024. Implementing sanitation practices against the hibiscus bud weevil. Florida Entomologist 107:1-11.

Responsible Party:

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***Comment Period: 08/22/2025-10/06/2025**

***NOTE:**

You must be registered and logged in to post a comment. If you have registered and have not received the registration confirmation, please contact us at [permits\[@\]cdfa.ca.gov](mailto:permits[@]cdfa.ca.gov).

Comment Format:

- ❖ Comments should refer to the appropriate California Pest Rating Proposal Form subsection(s) being commented on, as shown below.

Example Comment:

Consequences of Introduction: 1. Climate/Host Interaction: [Your comment that relates to “Climate/Host Interaction” here.]

- ❖ Posted comments will not be able to be viewed immediately.

- ❖ Comments may not be posted if they:

Contain inappropriate language which is not germane to the pest rating proposal;
Contains defamatory, false, inaccurate, abusive, obscene, pornographic, sexually oriented, threatening, racially offensive, discriminatory or illegal material;

Violates agency regulations prohibiting sexual harassment or other forms of discrimination;
Violates agency regulations prohibiting workplace violence, including threats.

- ❖ Comments may be edited prior to posting to ensure they are entirely germane.
- ❖ Posted comments shall be those which have been approved in content and posted to the website to be viewed, not just submitted.

Pest Rating: A