CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

California Pest Rating Profile

Neosilba batesi (Curran): Lonchaeid fly Diptera: Lonchaeidae

Pest Rating: A

Comment Period: 03/12/2026 – 04/26/2026

Initiating Event:

Neosilba batesi was intercepted on fruit smuggled from Florida in 2025. It has not been through the pest rating system. Therefore, a pest rating proposal is needed.

History & Status:

Background: Larvae of *Neosilba batesi* feed on a wide variety of fruit. This fly has been found in and reared from fruits of *Annona* species (at least six, including *A*. *muricata*), *Bactris gasipaes*, *Carica papaya*, *Citrus sinensis*, *Ficus carica*, *Inga* sp., *Mangifera indica*, *Persea americana*, *Psidium guajava*, and *Singlea glutinosa* (Curran, 1932; Herrera-M. et al., 2022; Lasa et al., 2025a, b; McAlpine, 1982; Riquelme et al., 2015).

Some reports suggest this fly may be, in many cases, a secondary invader and not a pest of intact fruit. Although it was reared from fig fruits collected in Mexico, it was only found in figs with emergence holes that may have been caused by another fly, *Silba adipata*; figs without emergence holes contained only *S*. *adipata*. This suggests that *N*. *batesi* may have only infested previously-damaged (in this case, by emergence of *S*. *adipata*) fruit (Lasa et al., 2025b). Reports of *N*. *batesi* in avocadoes suggest dependence on damage to fruit that was caused by weevils of the genus *Conotrachelus* (Lasa et al.,2025a) or from unidentified causes, possibly including falling from the tree

(Ahlmark and Steck, 1997; Lemus-Soriano et al., 2025). Curran (1932) reported rearing *N. batesi* from mango and *Inga* sp. pods, both in association with tephritid fruit flies of the genus *Anastrepha*, in Guatemala. McAlpine and Steyskal (1982) note that *N. batesi* as well as other species of *Neosilba* are often found in fruit that is also infested with flies in the genus *Anastrepha*.

On the other hand, Riquelme et al. (2015) reared this fly from fruits of six species of *Annona* in Mexico and noted "Observations showed oviposition directly on the epidermis of apparently undamaged fruit." Caires et al. (2009) reared 1,522 flies in the genus *Neosilba* from fruits of *Psittacanthus plagiophyllus* (Loranthaceae) collected in Brazil. These authors considered them primary infestations.

Phylogenetic research conducted by Lasa et al. (2025b) using molecular data suggests that *N. batesi* may be a species complex.

Worldwide Distribution: *Neosilba batesi* is reported from: **Central America:** Costa Rica, El Salvador, Guatemala, Panama; **North America:** Mexico, United States (Florida); **South America:** Colombia, Peru (Ahlmark and Steck, 1997; Curran, 1932; Herrera-M. et al., 2022; Lasa et al., 2025a; MacGowan, 2023). Riquelme et al. (2015): Veracruz, Mexico. Apparently tropical.

Official Control: *Neosilba batesi* is an A1 pest in Brazil and Chile (EPPO Global Database).

California Distribution: *Neosilba batesi* is not known to be present in California.

California Interceptions: *Neosilba batesi* was intercepted twice in California in 2025 on smuggled fruit shipped from Florida; in one case, the interception was associated with wax apple (*Syzygium samarangense*) (Santa Clara County), and in the other case, it was associated with sugar apple (*Annona squamosa*) (Sacramento County) (California Department of Food and Agriculture).

The risk *Neosilba batesi* poses to California is evaluated below.

Consequences of Introduction:

1) **Climate/Host Interaction:** *Neosilba batesi* feeds on a wide variety of fruit. The known distribution of this fly suggests it may require a tropical or subtropical climate. Therefore, this fly 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:** *Neosilba batesi* is polyphagous. Therefore, it receives a **High (3)** 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:** *Neosilba batesi* can fly. 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**. *Neosilba batesi* feeds on fruit. Although there is significant uncertainty (see Uncertainty, below), if it is able to attack intact or even slightly damaged fruit, it could decrease yield and increase production costs of fruits such as figs in California. This fly is regulated by Brazil and Chile. Therefore, it receives a **High (3)** in this category.

   Economic Impact: A, B, C

   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**. *Neosilba batesi* could impact fruit trees in California. The same uncertainty regarding potential to attack intact or slightly damaged fruit applies here. Therefore, it receives a **Medium (2)** in this category.

Evaluate the environmental impact of the pest on California using the criteria below.

Environmental Impact: 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: Medium (2)

– 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 *Neosilba batesi*: Medium (12)

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:** *Neosilba batesi* is not known to be 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 the introduction score minus the post-entry distribution and survey information score: Medium (12)

Uncertainty:

There is significant uncertainty regarding the potential for *N*. *batesi* to attack intact (or perhaps slightly damaged) fruit. For example, could thin-skinned fruits such as figs (which also have an ostiole that may be a likely oviposition site) be at risk in California? Varieties of fruits within a given plant species can vary in vulnerability to insect attack. Therefore, reports of this fly infesting apparently intact fruit (or lack of such reports) may not provide a complete picture of the host status of that species of plant. Lastly, if *N*. *batesi* is a species complex, the host range could differ across its species.

Conclusion and Rating Justification:

Neosilba batesi is a fly that feeds on fruits. Although there is significant uncertainty regarding its potential to utilize intact fruit, a cautious approach seems justified, in part given that it is not known to be in California. For these reasons, an "A" rating is justified.

References:

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Responsible Party:

Kyle Beucke, 1220 N Street, Sacramento, CA 95814, 916-654-1017, permits[@]cdfa.ca.gov

***Comment Period: 03/12/2026 – 04/26/2026**

***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.

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.

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