

## California Pest Rating Proposal

### *Remaudiereana nigriceps* (Dallas): a bug

#### Hemiptera: Rhyparochromidae

Current Rating: Q

Proposed Rating: A

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Comment Period: **02/25/2022 – 04/11/2022**

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#### Initiating Event:

*Remaudiereana nigriceps* been intercepted in the past on herbs and other plant material from Hawaii. It has not been rated. A pest rating proposal is needed.

#### History & Status:

**Background:** *Remaudiereana nigriceps* is considered a seed-feeder (as is the entire tribe Myodichini, which includes *R. nigriceps*), although reports of this species feeding were not found (Harrington, 1980; Larivière and Laroche, 2004). This bug has been collected from various plants. In Guam, it was found on *Styphelia* (Ericaceae), *Tournefortia* (Boraginaceae), *Euphorbia hirta* (Euphorbiaceae), and an unspecified heliotrope (Heliotropiaceae). Eggs were reported to be laid on heliotrope flowers (Usinger, 1946). It was found associated with *Fimbristylis cymosa* (Cyperaceae) on the Marshall Islands (Usinger, 1951). It was collected from *Metrosideros polymorpha* (Myrtaceae) trees in Hawaii with fogging, but the level of association of this insect with this tree was not reported (Gruner, 2004). Malipatil (1979) indicated that *R. nigriceps* is “frequently found on the seed heads of plants” and uses flight rather than walking to move to these sites. These observations suggest *R. nigriceps* feeds on seeds while they are still on the plant. It was also found on corn in New Zealand but was considered “unlikely to prove of importance on fodder crops” (Eyles, 1960).

**Worldwide Distribution:** **Asia:** India, Indonesia, Japan, Malaysia, and Thailand; **Oceania:** Widespread, including Australia, Fiji, Gilbert Islands, Guam, Hawaii, and New Zealand (Beardsley, 1979; Catala, 1957; Cumber, 1959; Gruner, 2004; Larivière and Larochelle, 2004; Malipatil, 1978; Usinger, 1946).

**Official Control:** *Remaudiereana nigriceps* is not known to be under official control anywhere.

**California Distribution:** *Remaudiereana nigriceps* is not known to be established in California.

**California Interceptions:** *Remaudiereana nigriceps* has been intercepted in the past on herbs and other plant material from Hawaii (California Department of Food and Agriculture).

The risk *Remaudiereana nigriceps* poses to California is evaluated below.

### **Consequences of Introduction:**

1) **Climate/Host Interaction:** *Remaudiereana nigriceps* appears to mostly be reported from areas with a subtropical or tropical climate. Literature suggests it may feed on the seeds of a wide variety of plants. Climate, not food, is likely to be a factor that limits this species in California. It seems likely that establishment would be limited to coastal central and southern regions 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:** Although reports of feeding were not found, the association of this insect with plants in at least seven families suggests it 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:** *Remaudiereana nigriceps* can be moved with infested plant material and 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.** *Remaudiereana nigriceps* is widely distributed and no reports were found of it having any economic impacts. It is not known to be under official control anywhere. Therefore, *R. nigriceps* receives a **Low (1)** in this category.

**Economic Impact:**

- 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: Low**

- **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.** It does not seem likely that *R. nigriceps* would trigger treatments because it does not appear to be reported to cause damage. Although impacts have not been reported on crop or wild plants, it is possible that *R. nigriceps* seed predation could impact threatened or endangered plant species in California. Therefore, *R. nigriceps* receives a **Medium (2)** in this category.

**Environmental Impact: B**

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 *Remaudiereana nigriceps*: Medium (10)**

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:** *Remaudiereana nigriceps* 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 (10)

### **Uncertainty:**

There are no ongoing surveys for *R. nigriceps*, so it is possible that this bug is already established in California. There is a high degree of uncertainty regarding the potential for this bug to have impacts in California. No reports of economic or environmental damage resulting from this species were found. The impact of seed predator insects on plants is poorly understood and is likely to vary widely across the plant and insect species involved. However, in some cases it may be an important limiting factor in the reproduction of a plant. In the case of *R. nigriceps*, although this species appears to be polyphagous, it apparently feeds on seeds when they are on the plant, which suggests that this insect exhibits some type of searching behavior and may tend to concentrate on or prefer particular plants. If a rare plant species happens to be “targeted,” this insect could impact its reproductive capacity.

## Conclusion and Rating Justification:

*Remaudiereana nigriceps* is unlikely to impact crops in California and it does not appear to be under official control anywhere. However, its habits suggest it could threaten rare plants in California. It is not known to be established in this state. For these reasons, an “A” rating is justified.

## References:

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### **Responsible Party:**

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**\*Comment Period: 02/25/2022 – 04/11/2022**

### **\*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.

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**Proposed Pest Rating: A**