CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

California Pest Rating Profile

Oryctes rhinoceros (L.): Coconut rhinoceros beetle

Coleoptera: Scarabaeidae

Pest Rating: A

Comment Period: 02/25/2026-04/11/2026

Initiating Event:

This beetle was reported in 2025 to be established in Mexico. It appears to pose a threat to palm trees in California. It has not been assessed with the pest rating system. Therefore, a pest rating proposal is needed.

History & Status:

Background: *Oryctes rhinoceros* feeds on palm trees as an adult and on organic matter, which can include rotting palm wood and compost, as a larva. The adult burrows down between folded, emerging fronds (palm leaves) and chews them, feeding on liquids that emerge. The chewing damage is evident as V-shaped notches in unfolded fronds. Attacks on palm trees, especially young ones, are often lethal to the palm, and tree death on a large scale has been reported for coconut palms. Damage is both through the direct damage from the beetle to the growing leaves as well as through secondary infections of bacteria and fungi. Tree death is not necessary for impacts; coconut production is reported to decrease in response to by the damage. The availability of larval food is an important determinant of abundance of this beetle. For example, storms can increase availability of dead wood. The life cycle (egg to ovipositing adult) can be as short as 20 weeks (Hinckley, 1973; Jackson et al., 2020; Paudel et al., 2023).

Reported hosts include coconut (*Cocos nucifera*) and oil palm (*Elais guineensis*) (Manjeri et al., 2014). Many other palms, including fan palms, and some other plants, including *Agave*, are reported as hosts (Molet, 2013), but the primary sources were not available. A dynastine scarab that may be *O. rhinoceros* was reported to feed on and damage *Agave* species in Indonesia in a similar way as palms are damaged (Sujak et al., 2020).

Worldwide Distribution: *Oryctes rhinoceros* is reported from: **Asia:** Malaysia, Philippines; North **America:** Mexico (Bahía de Banderas; besides published report, there are numerous reports on iNaturalist; this is approximately 1000 miles from the border with California)); **Oceania:** Widespread, including Samoa and Vanuatu (Del Rosario, 2023; iNaturalist, 2026; Jackson et al., 2020; Jackson et al., 2025; Manjeri et al., 2014; Paudel et al., 2023).

Official Control: *Oryctes rhinoceros* is considered reportable by the USDA and it is an A1 pest in Argentina, Brazil, and Chile (EPPO Global Database; U.S. regulated plant pest table, 2026).

California Distribution: *Oryctes rhinoceros* is not known to be in California (California Department of Food and Agriculture, 2026).

California Interceptions: *Oryctes rhinoceros* has not been intercepted in California.

The risk *Oryctes rhinoceros* poses to California is evaluated below.

Consequences of Introduction:

1) **Climate/Host Interaction:** Palm trees are grown widely in California and decaying organic matter, the food of *O. rhinoceros* larvae, is widespread in the state. The known distribution of *O. rhinoceros* appears limited to areas with a tropical climate. Climate may limit the distribution of

this beetle in California or prevent it from becoming established here. 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:** Adult, rather than larval, host range is assessed here, as this section is more relevant to impacts. This beetle is reported to feed on palm trees as an adult. Primary sources to support other plants as hosts were not available and therefore could not be assessed. Therefore, *O*. *rhinoceros* 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:** *Oryctes rhinoceros* can fly. This beetle has been intercepted in Australia and New Zealand (mostly as adults) on various articles: Bananas, baggage, garden soil (larvae), palm wood products, etc. (Hoffmann et al., 2024). 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**. Palm trees are important ornamental plants in California. This beetle could damage and kill palm trees and increase production costs. Although the primary source is not available, date palm is reported as a host by Molet (2013), so date production could also be impacted. This beetle is USDA-reportable. 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**. *Oryctes rhinoceros* damages and kills palm trees. It could trigger treatment. If it is able to establish in a desert environment, it could impact the native *Washingtonia filifera*. Therefore, it 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 *Oryctes rhinoceros*: 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:** *Oryctes rhinoceros* is not known to be present 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 is 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:

There is significant uncertainty regarding the potential for this beetle to establish in the predominantly Mediterranean climate of the warmer portion of the state, and a high degree of uncertainty regarding its ability to live in the desert (where date palm and the native *Washingtonia filifera* occur). There is also uncertainty regard the potential for the adult beetle to feed on and

damage or kill the palm tree species common in California. The number of non-palm host plants reported, including *Agave*, suggests that many other plants, including *Agave*, could be impacted in California. However, as noted, primary sources to allow assessment of these reports are not available.

Conclusion and Rating Justification:

Oryctes rhinoceros could damage and kill palm trees in California. It is not known to be present in the state. For these reasons, a "A" rating is justified.

References:

California Department of Food and Agriculture. Pest and Damage Record Database. Accessed February 9, 2026: https://pdr.cdfa.ca.gov/PDR/pdrmainmenu.aspx

EPPO Global Database. Accessed February 9, 2026: https://gd.eppo.int/taxon/ORYCRH/categorization

Hinckley, A. D. 1973. Ecology of the coconut rhinoceros beetle, *Oryctes rhinoceros* (L.) (Coleoptera: Dynastidae). Biotropica 5:111-116.

Hoffmann, B. D., Tay, W. T., and Blas, A. L. 2024. Biosecurity interceptions of coconut rhinoceros beetle *Oryctes rhinoceros*. Management of Biological Invasions 15:437–443

Jackson, T., Marshall, S., Mansfield, S., Atumurirava, F. 2020. Coconut rhinoceros beetle (*Oryctes rhinoceros*): A manual for control and management of the pest in Pacific Island countries and territories. Pacific Community.

Manjeri, G., Muhamad, R., and Tan, S. G. 2014. *Oryctes rhinoceros* beetles, an oil palm pest in Malaysia. Annual Research & Review in Biology 4:3429-3439.

Molet, T. 2013. CPHST Pest Datasheet for *Oryctes rhinoceros*. Accessed February 9, 2026: https://caps.ceris.purdue.edu/wp-content/uploads/2025/07/Oryctes-rhinoceros-datasheet_Palm_2014_Rev_July-2014.pdf

Paudel, S., Jackson, J. A., Boulekouran, S., Tasale, J., Garae, B., Allanson, P., Ero, M., and Marshall, S. D. G. 2023. The coconut rhinoceros beetle (*Oryctes rhinoceros*) outbreak is well established on Efate, Vanuatu. EPPO Bulletin 53:404-410.

Sujak, Sunarto, D. A., and Nurindah. 2020. Association of rhinoceros beetle (Coleoptera: Scarabaeidae) with three agave plant species. Advances in Biological Sciences Research 8:41-46.

U.S. regulated plant pest table. Accessed February 9, 2026: https://www.aphis.usda.gov/plant-imports/regulated-pest-list

Responsible Party:

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***Comment Period: 02/25/2026-04/11/2026**

***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.

Pest Rating: A