

# PEST rivia!

 [cpmd@buplant.da.gov.ph](mailto:cpmd@buplant.da.gov.ph)

 (8)-236-0598





# COCONUT LEAF BEETLE

**Scientific name:** *Brontispa longissima* (Gestro) (Coleoptera: Chrysomellidae)

**English name:** Coconut leaf beetle

**Alternate hosts:** Royal palm, Foxtail palm, Red palm, Manila palm, Velvet palm, Golden Veitcha, Palmera, Pygmy date palm, Fish tail palm, Betel nut palm, Sago palm, Raffled fan palm, Nipa palm, Ivory nut palm, Mexican fan palm

*Brontispa longissima* (Gestro) or coconut leaf beetle (CLB) presence in the Philippines was reported in 2005, suspected to have entered into the country through the shipments of ornamentals.

- DA Special Order No. 256 (June 27, 2005) - issued to stop the spread and to control CLB and its impact
- Over three million coconut trees have been affected by *B. longissima* infestation from August 2007 to March 2011.

Source: Navasero et al., 2008; DOST-PCAARRD



Photo credit: Pacific Pests, Pathogens & Weeds



Photo credit: CABI



cpmd@buplant.da.gov.ph



(8)-236-0598



# COCONUT LEAF BEETLE

## Damage

### Adults and larvae CLB

- damage the leaflets of young unopened fronds grazing away the leaf surface in streaks, parallel to the midrib.
- irregular, brown blotches are formed as the frond opens.
- brown areas shrivel and curl, giving the leaf a characteristic scorched, ragged appearance.
- large areas of the leaflets break off leaving the foliage partially skeletonized leading to decrease in photosynthetic capabilities.



Photo credit: Navasero et al., 2008



Photo credit: Pacific Pests, Pathogens & Weeds



Photo credit: Pacific Pests, Pathogens & Weeds

Source: CABI Digital Library



cpmd@buplant.da.gov.ph



(8)-236-0598



# COCONUT LEAF BEETLE

## Identifiable features and characteristics

### EGG

- brown, elliptical, and about 1.5 mm long and 1 mm wide, with each end broadly rounded.



### LARVA

- first instar larva - can grow up to 2mm, having a large head compared with the body
- second instar grub - slightly larger
- final instar - has a more segmented appearance



### PUPA

- light yellow-brown in color; 9-10 mm long and 2 mm wide; exhibit U-shaped hooks extending from the end of their body
- lasts for 4-6 days



### ADULT

- 8.5-9.5 mm long and 2.00-2.25 mm wide; length of antenna is 2.75 mm.
- males are slightly smaller than females
- females lay an average of 120 eggs each
- total life cycle ranges from 5 to 9 weeks



Photo credit: <https://www.projectnoah.org/spottings/378446007>  
<https://www.fao.org/forestry/13374-0bba732bf9dfa85a4f0cd036b5a26f6d0.pdf>



cpmd@buplant.da.gov.ph



(8)-236-0598



# PEST MANAGEMENT RECOMMENDATIONS

## **Preventive and Cultural Control**

- Quarantine measures
- Phytosanitary measures
- Use of pest-free healthy plants
- Checking of nurseries for obvious signs of infestations
- Blockading and cutting of coconut palms up to three kilometers from the infestation spot
- Old and dead plantation fronds should be removed and destroyed at regular intervals to destroy adult beetles

## **Biological Control**

- Parasitoid (*Trichogramma*)
- Predator (Earwig)
- Entomopathogenic fungi (*Metarhizium anisopliae*)

## **Chemical Control**

- Application of FPA-registered pesticides





# References/Photo credits

- Rethinam P and Singh SP. (n.d). Current status of the coconut beetle outbreaks in the Asia-Pacific region. Accessed on October 11, 2023 at <https://www.fao.org/3/ag117e/AG117E04.htm>
- Navasero, Mario & MT, Zipagan & NT, Saavedra. (2008). The Coconut Leaf Beetle, *Brontispa longissima* (Gestro) (Chrysomellidae, Coleoptera), a serious threat to the Philippine coconut industry. Proceedings. 39th PMCP Anniversary and Annual Scientific Conference. 16-25.
- CABI Digital Library. *Brontispa longissima* (coconut hispine beetle). Accessed on October 11, 2023 from <https://doi.org/10.1079/cabicompendium.10059>
- Coconut Pests and Diseases Toolkit. Coconut Hispine Beetle - *Brontispa*. Accessed October 11, 2023 at <http://coconutpests.org/pests-and-diseases-of-coconut/coconut-hispine-beetle>
- Comia-Yebbron R & Batalon JT. 2011. The battle against *Brontispa* continues. Accessed October 12, 2023 at <https://www.pcaarrd.dost.gov.ph/index.php/quick-information-dispatch-qid-articles/the-battle-against-brontispa-continues>
- Pacific Pests, Pathogens & Weeds. Accessed October 12, 2023 at [https://apps.lucidcentral.org/pppw\\_v10/text/web\\_full/entities/coconut\\_hispine\\_beetle\\_059.htm](https://apps.lucidcentral.org/pppw_v10/text/web_full/entities/coconut_hispine_beetle_059.htm).
- Dr. K.V. Sankaran, APFISN Coordinator ([sankaran@kfri.org](mailto:sankaran@kfri.org)), Kerala Forest Research Institute, Peechi, Kerala, India on behalf of the Asia-Pacific Forest Invasive Species Network. Accessed October 12, 2023 at <https://www.fao.org/forestry/13374-0bba732bf9dfa85a4f0cd036b5a26f6d0.pdf>
- Hispine leaf beetle *Brontispa* sp. Retrived from <https://www.projectnoah.org/spottings/378446007> on october 12, 2023.

