Vedalia (Rodolia) ladybird beetle (397)

Relates to: Biocontrol

Photo 1. Adult *Rodolia cardinalis*. Note colour patterns and white short hairs over the body.

Photo 2. Adult citrus cushion scale, *Icerya purchasi*. Note that the fluted part is the eggsac.

Photo 3. Larva of *Rodolia cardinalis*.

Photo 4. The ladybird beetle, *Rodolia cardinalis*, feeding on a colony of the citrus cushion scale, *Icerya purchasi*.

Summary

- Worldwide distribition. In Oceania. Australia (native), American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, New Caledonia, New Zealand, Palau, Tuvalu, Vanuatu. Preys on *Icerya* species.
- Eggs, red, laid on or under scales. Larvae (greyish with black spots) feed on scale eggs (in eggsac), crawlers, larvae; adults red-brown, black behind the head, covered in short white hairs.
- Important biocontrol beetle.
- Biosecurity: Need to assess risk before introduction. Icerya may be food for native species, and non-target insects may be attacked, although host range is narrow.
- Management: iii) avoid use of organophosphates, carbamates and synthetic pyrethroids; possible to use spinosad and abamectin if insecticides required to enhance control ; ii) use sleeve cages to protect populations initially; control ants: a) stomach poisons (fibronil, Amdro borax), b) growth regulators (methoprene, pyriproxyfen), c) nerve poisons (bifenthrin, fipronil, imidacloprid). See (http://piat.org.nz/getting-rid-of-ants).

Common Name

Vedalia beetle, cardinal ladybird

Scientific Name

Rodolia cardinalis; previously known as *Vedalia cardinalis*

AUTHOR Grahame Jackson

[1]Swaine G (1971) *Agricultural Zoology in Fiji*. Her Majesty's Stationery Office. London; and *Rodolia cardinalis*. Wikipedia. (https://en.wikipedia.org/wiki/Rodolia_cardinalis); and Martin NA (2016) Cardinal ladybird - *Rodolia cardinalis*. (https://nzacfactsheets.landcareresearch.co.nz/factsheet/InterestingInsects/Cardinal-ladybird---Rodolia-cardinalis.html); and Hoddle M (2013) Biocontrol of *Icerya* with *Rodolia* in the Galapagos. UC Riverside. (https://biocontrol.ucr.edu/rodolia/rodolia_icerya_biocontrol_galapagos.html); and from Pacific Invasive Ant Toolkit. (http://piat.org.nz/getting-rid-of-ants). Photo 1 Katja Schulz, *Rodolia cardinalis*. Els Poblets, Alicante, Spain. (https://commons.wikimedia.org/wiki/File:Vedalia_Beetle_(15959056801).jpg). Photo2 Vijay Cavale, *Icerya purchasi*, found on a lemon tree in our garden in Bangalore City, India. (https://commons.wikimedia.org/wiki/File:Scale_insect.jpg#file). Photo 3 Hectonichus, A larva of *Rodolia cardinalis*. Genova, Italy. (https://commons.wikimedia.org/wiki/File:Coccinellidae_-_Rodolia_cardinalis.JPG). Photo 4 Jeffrey W. Lotz, Florida Department of Agriculture and Consumer Services, Bugwood.org.

Produced with support from the Australian Centre for International Agricultural Research under project HORT/2016/18: *Responding to emerging pest and disease threats to horticulture in the Pacific islands*, implemented by the University of Queensland and the Pacific Community.

This mini fact sheet is a part of the app *Pacific Pests, Pathogens & Weeds*

The mobile application is available from the Google Play Store and Apple iTunes.