



Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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Varroa (destructor) mite (327)



Photo 1. Mass of adult varroa mites, *Varroa destructor*.

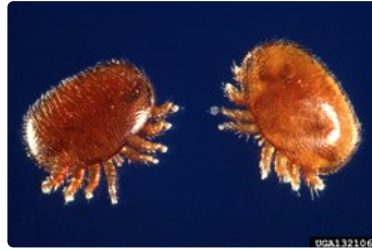


Photo 2. Adult female varroa mites, *Varroa destructor*.



Photo 3. An adult female varroa mite, *Varroa destructor*, feeds on the midsection of a developing worker bee.



Photo 4. European honeybee with varroa mite, *Varroa destructor*, on its thorax.



Photo 5. Bee emerging from a brood cell with a varroa mite, *Varroa destructor*, on its back. Another mite is to the right.

Summary

- Worldwide distribution. On European and Asian honeybees. Important.
- Infestations cause: i) empty brood cells - infested larvae removed by workers; ii) weak bees that spread the mite as they rob food from nearby hives; iii) spread of virus and bacterial diseases; iv) crippled bees, prone to infections; v) death of colony in 1-3 years.
- Adult females, reddish-brown (males white), flat, oval, up to 1.8 mm long, 2 mm wide, on the thorax or in abdominal folds. Mites enter brood cells, lay eggs, nymphs feed on bee larvae and pupae, mate, males die, and females attach and feed on bees. See full fact sheets for monitoring.
- Spread: i) within hive - they are mobile; ii) infested bees enter nearby hives to rob nectar, or by mistake; iii) swarming; iv) infested combs put in healthy hives.
- Cultural control: use open-screen floor hives; avoid using combs from brood area in honey area; hygiene: i) queen bees and equipment from trusted sources; ii) clean and sterilise borrowed, second-hand equipment, tools, gloves, pallets, boxes; iii) inspect brood combs regularly; iv) replace brood combs every 3 years.
- Chemical control: see full fact sheet for details of treating hives, equipment, and mite infestations on bees.

Common Name

Varroa mite

Scientific Name

Varroa destructor; previously the mite was known as *Varroa jacobsoni*, but in 2000 molecular analysis discovered that there were two species (see **Fact Sheet no. 326**). The effect of the mite on the European honeybee is referred to as 'varroosis of honey bees'.

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Information from CABI (2015) *Varroosis of honey bees*. Crop Protection Compendium (www.cabi.org/cpc); and *BeeAware*. Plant Health Australia. <http://beeaware.org.au/archive-pest/varroa-mites/#ad-image-0>; and *Biosecurity manual for beekeepers*. (<http://www.planthealthaustralia.com.au/wp-content/uploads/2016/02/Biosecurity-Manual-for-Beekeepers.pdf>); and Varroa mite detection in Townsville. Department of Agriculture and Fisheries. Queensland Government. (<https://www.daf.qld.gov.au/animal-industries/bees/diseases-and-pests/asian-honey-bees/general-information-on-varroa-mites>); and from Varroa mite. Entomology & Nematology. UF/IFAS. University of Florida. (http://entomology.ifas.ufl.edu/creatures/misc/bees/varroa_mite.htm). Photos 2-4 Scott Bauer, USDA Agricultural Research Service, Bugwood.org. Photo 1 Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Bugwood.org. Photo 5 Stephen Ausmus, USDA Agricultural Research Service, Bugwood.org

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