

Varroa mite

Varroa mites (*Varroa destructor* and *V. jacobsoni*) are external parasites of adult honey bees, and drone and worker bee brood. They are one of the world's most destructive pests of honey bees.

Varroa mites are considered exotic in some parts of Australia. For the latest information on the status of varroa mite in your region, visit your relevant State or Territory agriculture agency website.

What do varroa mites look like?

Adult female mites are oval, flat, red-brown and around 1.1 mm long and 1.5 mm wide. Adult male mites are a lighter colour and smaller than females. Both sexes have eight legs.



Varroa mite.



Varroa mite on honey bee pupa.

What can they be confused with?

Varroa mites can sometimes be confused with braula fly (*Braula coeca*), pollen mites (*Mellitiphis alvearius*) and tropilaelaps mites (*Tropilaelaps clareae* and *T. mercedesae*) a concerning exotic pest.

How is it spread?

Varroa mites can be spread through the movement of carriers such as bees, swarms, bee nests or hives, apiary equipment and hive products.

What are the potential impacts of varroa mites?

The presence of varroa mites in Australian populations of European honey bees will have significant adverse effects. These include compromised honey bee colony health and a negative impact on a wide range of pollination-dependent crops used for food and fodder production.

What can beekeepers do?

Beekeepers are encouraged to regularly inspect their hives for signs of varroa mites.

Techniques such as alcohol washing can quickly and effectively detect the presence of varroa mites and assist with monitoring their level within a honey bee colony.

Factsheets and a training video that provides information on alcohol washing are available on the [Bee Pest Blitz website](https://www.beepestblitz.com.au).

What should I do if I suspect varroa mite?

If you see anything unusual, keep the sample and report the finding immediately to the relevant state/territory agriculture agency through the **Exotic Plant Pest Hotline on 1800 084 881**.

Varroa mite

Where in the hive would you find varroa mites?

Varroa mites complete their entire life cycle within a honey bee colony and can be observed at all honey bee life stages, including drone and worker brood, adult nurse, forager and drone bees, and on occasion queen bees.

Methods for inspecting a colony for varroa mites can include alcohol or soapy water washing and brood uncapping. Varroa mites prefer drone brood, but alcohol washing adult bees taken from brood frames, is ideal for monitoring for mites.

What are the signs and symptoms of infestation?

Varroa mites can build up to heavy infestations if left unmanaged. Colonies with low infestation generally show very few symptoms.

As an infestation grows, varroa mites can cause:

- loss of coordinated social behaviour
- malformed bees with distorted abdomens
- stubby wings
- deformed or missing legs
- poor overall colony health
- increased susceptibility to chemical exposure.

Symptoms of parasitic mite syndrome can also be observed such as:

- irregular brood patterns
- dead brood remaining partially uncapped in cells
- superseding of queens or
- perforated cappings as a result of hygienic behaviour of worker bees.

This ultimately can cause a reduction in the honey bee health and population, superseding of queen bees, absconding swarms and eventually colony breakdown and death.

The mites can also transmit bee viruses that impact honey bee health.



A mother varroa mite with offspring in a honey bee brood cell.



Worker bee with severe wing deformities as a result of varroa mite infestation.



Varroa mite on honey bee worker.

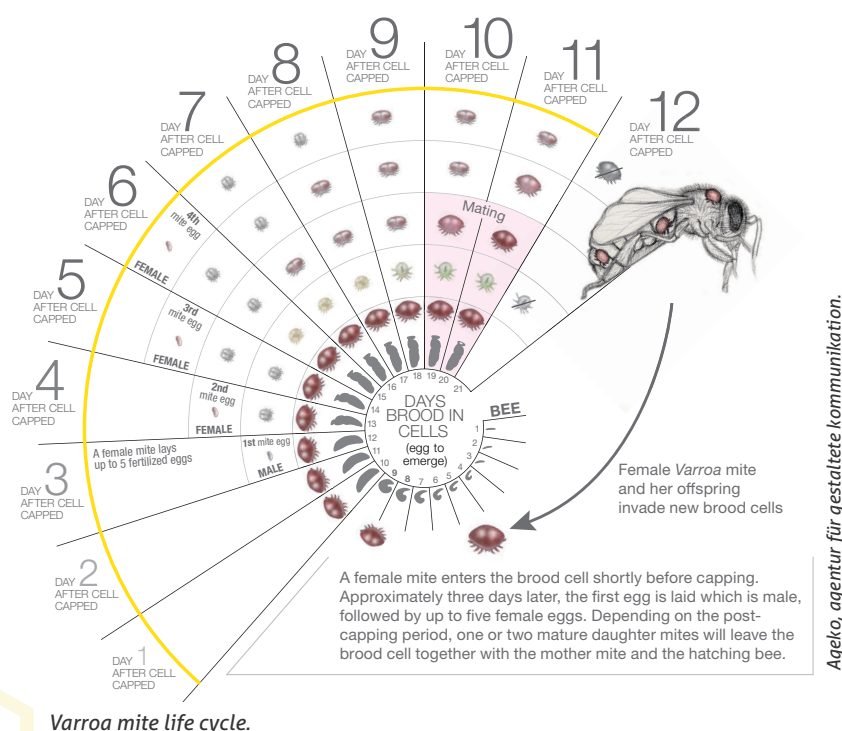
Varroa mite

Life cycle

The entire life cycle of varroa mite occurs within the honey bee colony. The mites are only able to reproduce in the honey bee brood cells with adult female mites laying eggs in the brood cells and feeding on the developing honey bees.

Female varroa mites enter the honey bee brood cell at the pre-capping stage and begin laying from 2-5 eggs once the brood cell is capped. It takes about 5-6 days for male and 7-8 days for female mites to develop.

Mating occurs in the brood cell, and the male mite dies inside the cells shortly afterwards. Young pregnant females and the mother varroa mite emerge from the brood cell with the emerging young adult bee after 11-12 days.



Ageko, agentur für gestaltete kommunikation.

**Biosecurity is everyone's responsibility,
play your part and check your hives.**

**It's time
to bee aware**



**If you see anything unusual,
call the Exotic Plant Pest Hotline**

