

Greater and lesser wax moth

What are wax moths?

There are two species of wax moth, the greater wax moth (*Galleria mellonella*), and the lesser wax moth (*Achroia grisella*). Both species are pests of active hives, however they most commonly cause damage to unattended combs in storage, especially in areas that are dark, warm and poorly ventilated. Both species will eat beeswax, particularly unprocessed wax, pollen, remains of larval honey bees, honey bee cocoon silk and enclosed honey bee faeces found on walls of brood cells.

What do they look like?

The greater wax moth is a small grey coloured moth with some mottling on its wings and about 13-19 mm long. The lesser wax moth has similar colouration but is only 10-13 mm long.

Eggs are laid by the adult wax moths in dark cracks and crevices around the hive or in unattended combs. The resulting larvae burrow and eat into the combs, leaving behind webbing and tunnels of silk. Fully grown larvae spin dense and tough white silk cocoons that are commonly found firmly attached to the frame or hive body. The cocoon is cemented into a boat shaped cavity that the larvae chew in the wood. This damage persists in equipment long after the wax moth emerges. Once the cocoon is spun, the larvae change to the pupal stage, and then develop into an adult wax moth.

What can they be confused with?

Wax moth larvae are similar to small hive beetle (SHB) larvae, however there are two simple distinguishing characteristics between the two pests. Firstly, SHB larvae cause the honey to ferment and the hive to become 'slimed out', which is not present when only wax moth are present. Secondly, wax moth larvae leave behind webbing mass and tough white cocoons on the frames and hive body, which are not present when only small hive beetle larvae are present.



Lesser wax moth: note wings are spread for identification purposes, they would usually be closed over body

Simon Hinkley and Ken Walker Museum Victoria, PADIL



Greater wax moth: note wings are spread for identification purposes, they would usually be closed over body

Simon Hinkley and Ken Walker Museum Victoria, PADIL



Greater wax moth larva

Susan Ellis, USDA APHIS PPQ, www.Bugwood.org

What should beekeepers look for?

Beekeepers should look for tunnels of silk throughout combs, cocoons stuck to frames and hive body parts as well as a disintegrating comb which is caused by larvae burrowing in the comb. Beekeepers should also specifically look through weak, stressed or queenless colonies, as well as unattended combs as these are the most susceptible to wax moth infestation.

How do they spread?

Wax moths mainly fly at night and are able to fly between hives and cause new infestations. The pest can also be spread between apiaries by the movement of infested hives.

Where are they now?

Both species of wax moth are present in all states and territories of Australia.

How can beekeepers protect their hives and products from wax moths?

The honey bees themselves are the best method of protection against wax moth. Beekeepers should always try to keep strong colonies with a high bee-to-comb ratio and a young and healthy queen bee. Beekeepers should also keep their apiary clean from weak or stressed colonies, dead out colonies, or old unattended combs which provide a perfect breeding environment for wax moth.

Beekeepers should store empty combs, supers and any wax moth affected material that has been cleaned to be reused in low temperature control rooms. Cool rooms maintained at 10°C or less will prevent wax moth reproduction and living larvae from becoming active. Freezing frames and hive parts at -7°C will kill all stages of wax moth within 4-5 hours.



Wax moth larvae and webbing in stored combs

Kathy Keatley Garvey, UC Davis Department of Entomology



Wax moth cocoons stuck onto frames

Chantal Forster

For more information about wax moth, go to www.beeaware.org.au/wax-moth. The BeeAware website contains extensive information on wax moth, including:

- Life cycle
- Appearance
- Detection methods
- Spread and distribution
- Similar pests
- Management options
- Additional fact sheets and videos

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