

# TRACHEAL MITE

The tracheal mite (*Acarapis woodi*) is a microscopic parasite that infests honey bee colonies. It targets the tracheae or breathing tubes of the bee to develop, feed, and reproduce. Infestations can severely impede the bee's ability to feed and respire.

## Quick facts

- Unknown until the 1920s, they were initially found in the Isle of Wight.
- Brother Adam developed Buckfast bees in response to these mites.
- The mite lives in most countries globally.
- Mites die within 24 hours if they fail to find a bee to live in.



## What are the symptoms of tracheal mites?

The signs of tracheal mites are often difficult to recognize as symptoms are not unique to tracheal mites. Beekeepers usually notice them in fall and winter, when they peak.

- One of the most noticeable signs is bees wandering on the ground or at the hive's entrance.
- Infested bees often display abnormal behavior, seeming disoriented, lethargic, and aimless.
- Bees may not cluster on cold days, instead forming disorganized patterns.
- Disjointed Wings (K-Wing).

## How do tracheal mites spread?

Female tracheal mites exit the thoracic spiracle and transfer to a nearby healthy bee by clasping onto its hairs. They rely on bees to help them spread to uninfested colonies. Drifting, swarming, and robbing bees are significant causes of distribution. Standard beekeeping practices like offering pollination services, splits, and combining hives also contribute to the problem.

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## Prevention

Proactive beekeepers can take steps to keep their hives free from tracheal mites. Regular inspections during summer and fall and maintaining clean tools and equipment will reduce the spread.

Some strains of honey bee breeds have excellent resistance to tracheal mites. Buckfast bees were bred specifically to cope with this pest. Other strains, such as Russians and Carniolans, are also fastidious housekeepers. They swiftly deal with mite infestations.

Before introducing new colonies to an apiary, quarantine and monitor them for signs of mites.

## How to treat mites

Treating tracheal mites is one of the easier honey bee pests to control. Some popular, safe methods of control include menthol pellets and grease patties.

Research has shown that some essential oils, like thymol, will manage mite levels. Seek specific application advice before proceeding.