

The UH Honeybee Project: Threats to Honeybee Health

Farmers and beekeepers alike rely on the abundance and health of honeybee colonies. There are, however, a number of biological and man made threats that are causing a global decline in bee populations. Among the most important threats to honeybee pests are:

- parasites and diseases
- pesticides
- reduction in floral diversity in agricultural landscapes

New Bee Pests found in Hawaii

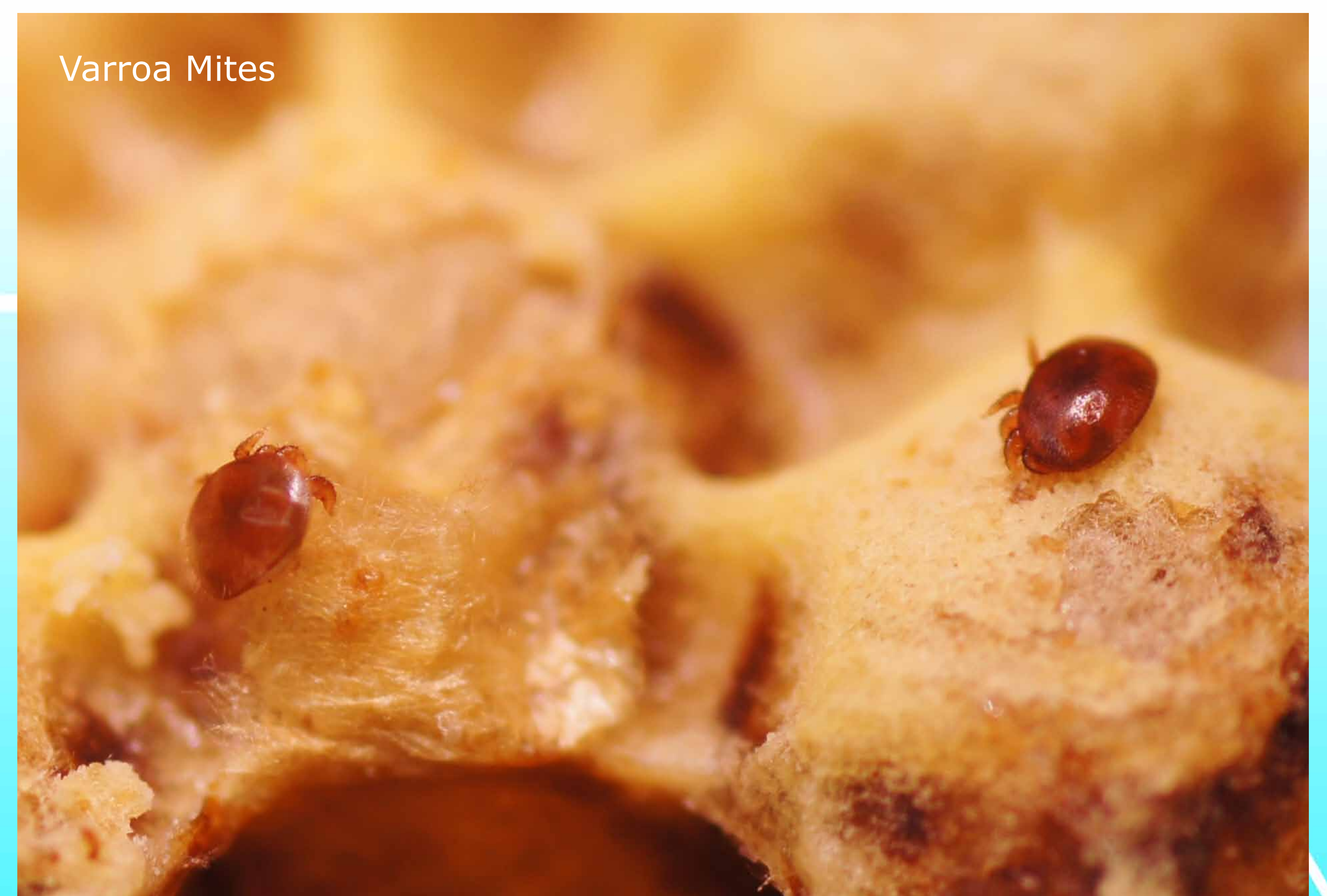
In 2007 the Varroa mite arrived to Hawaii and its impact on managed and feral bees has been severe. The Varroa mite (*Varroa destructor*), a relatively large parasitic mite feeds on the haemolymph (blood) of developing larvae and adult bees. Parasitized larvae are weakened or may die of the impacts of being parasitized. But most importantly, the mites transmit deformed wing virus, a potentially lethal virus which increases in prevalence and virulence when the mite is involved.

In the winter of 2011 the research conducted by CTAHR's Honeybee Project helped bring good news to the local beekeepers and farmers: a new formic acid based miticide MAQS™ (produced by a NOD Apiary Products) was tested in Hawaii and now has been approved for national use. This bio-pesticide will contribute to safeguard the health of Hawaii's honeybee colonies and to the sustainability of food production in the islands.

In 2010, another bee parasite, the small hive beetle (*Aethina tumida*), has now invaded the islands and is contributing to large colony losses among the local beekeepers. The warm, humid weather seems to favor beetle reproduction and may be contributing to the explosive beetle population levels recorded on the Hawaiian Islands. We are working directly with beekeepers and small scale farmers to promote management strategies to reduce colony collapse due to beetle infestation, and to promote pesticide free control against this new parasite.



Small hive beetle



Varroa Mites

