

Exotic Pests and Diseases of Honey Bees

Wisconsin Department of Agriculture, Trade &
Consumer Protection

November 2014

National Honey Bee Health Survey

- Began in 2009
- Document which bee diseases, parasites, or pests of honey bees are present and/or likely absent in the U.S.
- Establishes a baseline on existing pest and disease levels



Tropilaelaps mites

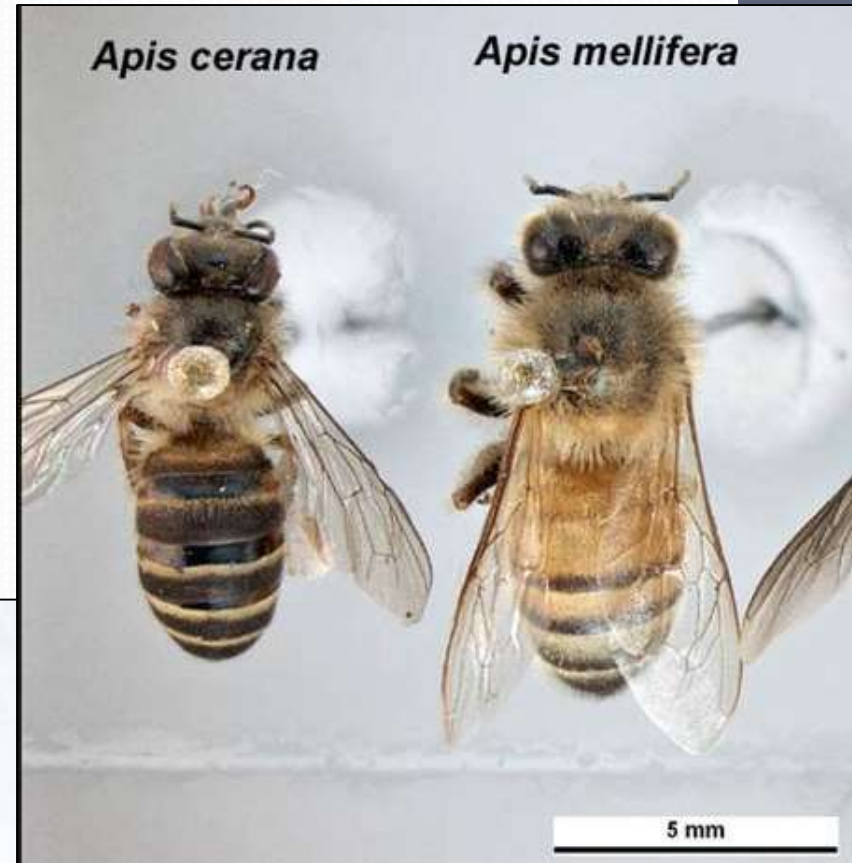
Has not been
found
in the U.S.

- Exotic parasitic mite found in Asia and Indonesia
- Feeds on honey bee brood; does not feed on adult bees
- Reproduces faster than varroa
- Moves very quickly on brood combs
- 1/3 the size of Varroa mites



Asian honey bee (*Apis cerana*)

- Smaller, more prominent abdominal stripes
- Smaller colonies
- Natural host of varroa



Has not been
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in the U.S.

Asian honey bee (*Apis cerana*)

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- Swarms many times during the year
- Outcompetes *A. mellifera* in nectar and pollen gathering
- Propensity for robbing European honey bee stores



Cape honey bee (*Apis mellifera capensis*)

- Native to South Africa
- Referred to as “black bees”
- Ability to parasitize other colonies



Has not been
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Cape honey bee (*Apis mellifera capensis*)

- **Specialized foragers
of regional flora**



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Slow Bee Paralysis Virus (SBPV)

- characterised by the paralysis of the front two pairs of legs of adult bees a few days before dying.
- SBPV can also be detected in larvae and pupae, but produces no symptoms in these.
- The virus is associated with, and transmitted by, *V. destructor*

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Other viruses tested for

- **IAPV** - Israeli Acute Paralysis Virus, common in some regions, has been associated with colony losses
- **KBV** - Kashmir Bee Virus, uncommon, has been associated with colony losses
- **DWV** - Deformed Wing Virus, very common, associated with varroa mites
- **ABPV** - Acute Bee Paralysis Virus, rare, has been associated with colony losses
- **CBPV** - Chronic Bee Paralysis Virus, rare in U.S.
- **LSV-2** - Lake Sinai Virus-2 newly discovered found at high levels in some bees and in the same family as CBPV.
- **BQCV** - Black Queen Cell Virus, very common, may be associated with nosema disease.

How to collect a sample

- **Place samples into a container, covering them with 70% ethyl, methyl, or isopropyl alcohol, or even hand sanitizer, as soon as possible after collection.**
- **Label each container with:**
 - **Location**
 - **colony number**
 - **date the samples were collected**

Who to contact:

- **Wisconsin State Apiarist**
 - **Liz Meils**
 - **608-224-4572**
 - **elizabeth.meils@wisconsin.gov**

Other Resources

www.BeeInformed.org

- Annual online survey available the month of April
- Completely anonymous
 - Winter loss survey (5 minutes)
 - Management survey (15 minutes)
- State-specific report opportunity
 - 142 participants in 2014



www.DriftWatch.org

- An online registry that helps pesticide applicators, specialty crop growers (beekeepers), and stewards of at-risk habitats communicate more effectively to protect pesticide-sensitive areas.
- Register your apiary online anytime



