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

- 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

Zachary Huang photo, http://cyberbee.net/gallery
Asian honey bee
(*Apis cerana*)

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

Has not been found in the U.S.
Asian honey bee
(*Apis cerana*)

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

**Has not been found in the U.S.**
Cape honey bee
(*Apis mellifera capensis*)

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

Has not been found in the U.S.
Cape honey bee
(*Apis mellifera capensis*)

- Specialized foragers of regional flora

**Has not been found in the U.S.**
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

Has not been found in the U.S.
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