Background on bee pests, sampling techniques and specimen preservation

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Presentation outline

• Background to bee pests of Africa
• Materials and Equipment
• Sampling
• Specimen Preservation and Storage
Bee pests - Introduction
Bee pests – Introduction 2
Bee pests – Varroa mite

- *Varroa destructor* (Parasitiformes: Varroidae) (Oval in shape, with 8 legs – 4 pairs)
- Native to Asia (*Apis cerana*)
- Present on all continents
- Cause deformity on immature bees
- Transmits various bee viruses
- Implicated in CCD
Bee pests – Large hive beetles

- *Oplostomus* species (Coleoptera: Scarabaeidae: Cetoninae)
- (Oblong in shape, with 6 legs – 3 pairs, 1.3 - 1.8 cm long, 1.0 - 1.2 cm wide)
- Native to Africa
- Restricted to Africa
- Damage brood, pollen and honey by adults
Bee pests – small hive beetle

- *Aethina tumida* Coleoptera: Nitiduliidae)
  - (Oblong in shape, brown – black colorations, 6 legs, 2 – 4 mm long)
- Native to Africa
- Invasive in the US and Australia
- Damage brood, pollen and honey by adults and larvae
Bee pests – Greater Wax moth

- *Galleria mellonella* (Lepidoptera: Pyralidae)
- (reddish brown coloration, yellow head, 15 mm long)
- Found on all continents (especially in very warm areas)
- comb structure, web spinning and fecal matter
- Damaging stage is larva
Bee pests – Lesser Wax moth

- Achroia grisella (Lepidoptera: Pyralidae)
- (silver brown coloration, yellow head, 10 – 13 mm long)
- Found on all continents (especially in very warm areas)
- Comb structure, web spinning and fecal matter
- Damaging stage is larva
Bee pests – Bee louse

- *Braula species* (Diptera: Braulidae)
- reddish-brown coloration, reduced eyes & antennae head, < 1.5 mm long, hairy
- Found attached to adult bees
- Found on all continents (especially in very warm areas)
- Damaging stage is larva
- Feeds on wax and pollen
Bee pests – Phorid fly

- *Apocephalus borealis* (Diptera: Phoridae)
- hump back, 0.5 – 0.6 mm long, endoparasitoid
- Found in the tropics continents (especially in very warm areas)
- Damaging stage is larva

Core et al. 2012
Bee pests – Pseudoscorpion

- *Ellingsenius* species (Pseudoscorpionida)
- reddish-brown coloration, reduced eyes & antennae head, < 0.6 mm long, striped light & dark brown abdomen
- Found at the bottom of hives
- Found in the tropics Africa, Asia, South America
- Not considered a pest
Bee pests – Hornets

- *Vespa species* (Hymenoptera: Vespidae)
- reddish-brown/yellow body coloration, 50 mm long
- Adults Prey on honey bees
- Found in temperate Asia and middle East

http://www.youtube.com/watch?v=EZ1eAM8CChc
Bee pests – Ants

- Various species (Hymenoptera: Formicidae)
- Seasonal in their occurrence
- Adults prey on honey bees and hive products
- Found in tropics
Important Information Sources

www.coloss.org
THANK YOU FOR YOUR ATTENTION