Class Preparation

- Topics – Bee Diseases and Pests, Preventions, Medications and Alternatives
- Roll sheet
- Agenda
- Handouts
  - Drone Brood Removal for the Management of Varroa destructor
  - Integrated Pest Management for Varroa Destructor
  - Life Cycle of the Varroa Mite
  - Shaking for American Foulbrood
  - Bee Medications
  - Spares from previous classes
- Display
  - Screened bottom board
  - Sticky board
  - Plastic frame with hiding spaces
  - Drone frame
  - Beetle trap
  - Terramycin patties
  - Para-Moth

Iron County 4-H

Beekeeping

www.IronBeekeeper.org

Status Reports

- Hives?
- Bees?
- Protective equipment?
- Tools?
- Working on workbook?
- Reading a book?
- Essay contest?

4-H Pledge

I Pledge
My Head to clearer thinking,
My Heart to greater loyalty,
My Hands to larger service,
and,
My Health to better living,
For my Club, my Community,
my Country and my World.

Pledge of Allegiance

[American Flag]
Questions?

- Last month’s lesson
- Workbook

Bee Diseases

- American Foulbrood
- European Foulbrood
- Nosema

Bee Pests

- Varroa Mites
- Tracheal Mites
- Small Hive Beetles
- Greater Wax Moth
- Hornets; yellow jackets, and wasps
- Mice
- Skunks
- Cattle

Foulbrood and Nosema
Chalkbrood, Sacbrood, Moths, Tracheal Mites

Waxmoth

Varroa Mites

Small Hive Beetles

Small Hive Beetles

Phorid Fly

Agapostemon borealis is a species of North American parasitoid fly that parasitizes bumblebees, honeybees, and paper wasps.

Female flies lay their eggs in the bees, and as the larvae develop they attack the bees' brains and cause the bees to become disoriented, fly at night, and exhibit other unusual behaviors. These behaviors eventually result in the death of the bee, but increase the survival and spread of the phorid flies when they emerge from the join of the head and thorax of the dead bee.

The occurrence of A. borealis has been associated with colony collapse disorder.
**Prevention Better Than Cure**

- Prevention
  - Never buy used equipment (including nucs) unless you know and trust the seller
  - Keep strong colonies
  - Disease resistant stock
  - Replace queen every 2 years
  - Clean tools between hives
  - Replace frames every 2-3 years
  - Adequate hive ventilation
  - Avoid damp locations

- Antibiotic treatment

**Bee Disease Treatments**

- AFB
  - Do not feed honey to other colonies or allow robbing
  - Burn the hive
  - Irradiation
  - Shaking
  - Other diseases:
    - Requeen
    - Reinforce colony with brood from a strong hive
    - Replace old frames

**Bee Pest Treatments**

- Varroa Mites
  - Screened bottom boards
  - Cell size (5.4mm vs 4.9mm)
  - Powdered sugar dusting
  - Mite strips (Aptisan, etc.)
  - Freeze drone brood
  - Chickens

**Bee Pest Treatments**

- Wax Moth
  - Keep strong colonies
  - Never store supers and frames when sticky with honey
  - Freeze or use Para-Moth crystals on stored supers and frames
  - Chickens

**Bee Pest Treatments**

- Small Hive Beetles
  - Keep strong colonies
  - Traps
  - Avoid spaces too small for bees to enter
  - Chickens

- Hornets, yellow jackets, & wasps
  - Pan of mineral oil with mirror in bottom

**Bee Pest Treatments**

- Mice
  - Elevate hive so mice can’t reach entrance
  - Reduce entrance with metal guards

- Skunks and raccoons
  - Elevate hive so animals can’t reach entrance

- Cattle
  - Fence

- Birds

*10-Jan-12*
One More pest

- Follow label directions
- Notify nearby beekeepers before spraying
- Never spray blooming plants, including weeds
- Never spray on windy days or allow insecticides to drift onto blooming plants or weeds
- Spray in late afternoon
- Avoid powder insecticides
  - Sevin
  - Ant bait

One More pest

- Study the workbook
- Study a beekeeping book
- Decide how many hives you want
- Buy equipment
- Buy bees
- Apply for a beekeeper’s license
- Next meeting – 10 January, 6 pm
  - Melting beeswax
  - Making candles

Questions?