High Land Beekeeping Club

A 501(c)3 non-profit organization

Welcome

January 15, 2026 EPIC Campus, Littleton CO
Meetings are the third Thursday of each month
Club Website: https://highlandbeekeeping.com/

High Land Beekeeping Club

Board Members
President: Ellen McClurkin
Vice President: Marc Pomeroy
Secretary: Sandy Barrett
Treasurer: Gary McKenna
Swarm List Manager: Susan Slomski
Club email: hlbkc1@gmail.com

Annual Dues

$25 per year (Jan-Dec)

- Includes membership to Colorado State Beekeeping Association
- Participation on the Swarm List
- In Apiary Activities
- Reimbursement for Master Beekeeping Program

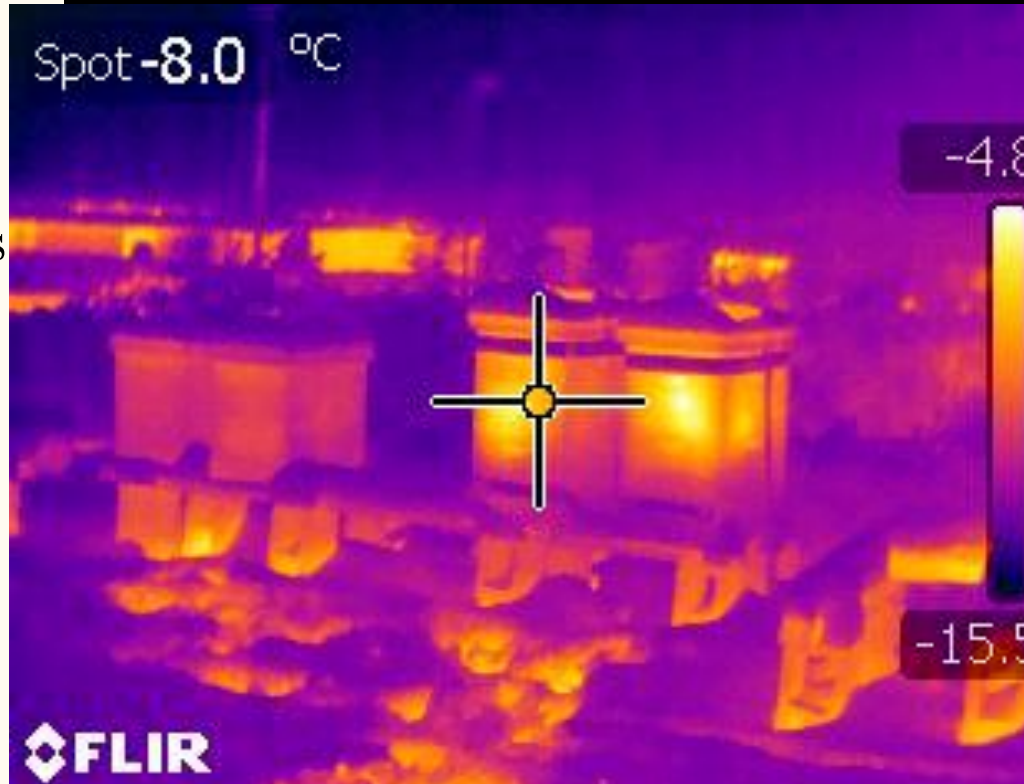
Payment Options:

- Zelle: highlandbee2020@gmail.com
- Check: Payable to HLBKC c/o Gary McKenna 6250 E. Euclid Place, Centennial, CO 80111
- PayPal

In The Hive
-January-

Typically Bees are Clustering in the cold weather - Not this Year

- Clear Snow/Ice from Entrance as needed
- May see dead bees on bottom board or in front of hive - This is Normal but keep entrance clear
- Complete a “Heft Check” to see how food resources are holding up



Beekeeping Tasks -January-

- Set your goals for the year
  - Expand or contract your apiary?
  - Sell Bees?
- Purchase and Repair Equipment Do you have enough for swarm season?
- Check your bee suits for holes
- Order any Bees now
- Check on wind breaks
- Education

Bee Diseases

Types of Disease

Symptoms in
Brood
Or
Adult

- Fungal
- Virus
- Bacterial
- Protozoan

Chalkbrood -Fungal

Ascosphaera apis

Stonebrood -Fungal

Aspergillus fungi (A. flavus, A. fumigatus)

1. Affects Brood causing chalky mummy
2. Transmitted when fungal spores are ingested with food
3. Seen more in Spring with fluctuating temps and higher humidity
4. Caused especially when brood buildup exceeds worker capacity and not all brood can be managed at adequate temp and humidity

Chalk/Stonebrood - Treatment

Ascosphaera apis / Aspergillus fungi (A. flavus, A. fumigatus)

1. With good hive management will typically self resolve

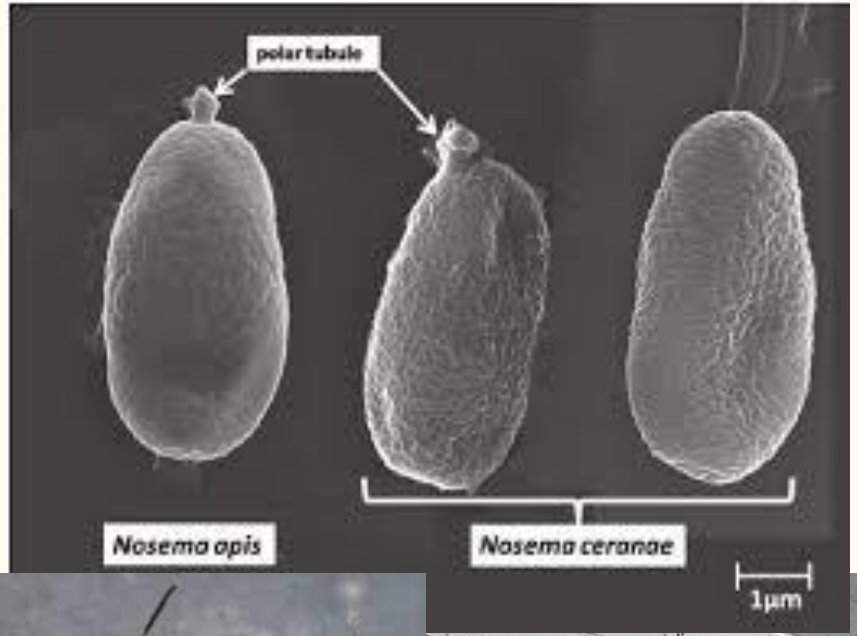
2. Can replace contaminated wax with new foundation to remove reservoir of spores. Typically do not share resources to other hives

3. Clean away dead mummies from entrance. May want to wear a mask as Stonebrood spores can infect some humans

4. Provide good nutrition

Nosema - Fungal

Nosema apis and *Nosema ceranae*



- *N. apis* Manifested in mid-gut in adults
- *N. ceranae* infects multiple structures
- spreads usually when confined such as in winter
- Fecal staining on hive
- K-wing (not only caused by Nosema)
- Bees wandering in front of hive on ground
- Slow spring buildup and lethargic
- Determine infection microscopically

Nosema - Fungal

Nosema apis and *Nosema ceranae*

Treatment

Fumagilan B in sugar syrup and nutritional support. More effective against *N. apis*

Some beekeepers treat prophylactically in fall but this is falling out of favor

Banned in Europe as is a Teratogen so pregnant beekeepers should avoid.

Can also rotate comb every 3-5 years and have hives in sun especially during winter

European Foulbrood Bacterial *Melissococcus plutonius*

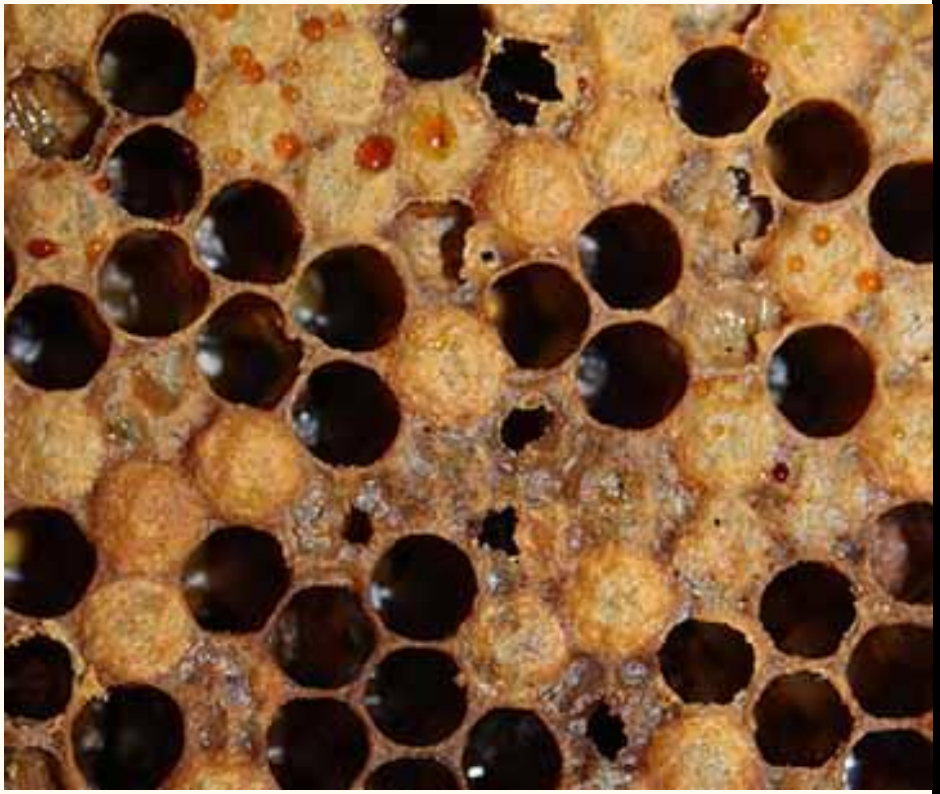
- Affects Brood infected during feeding and reproduces quickly in the gut actually causing starvation in the larvae
- Patchy brood pattern with uncapped brood curling or corkscrew shape and dying looking brown or yellow like they melted in the cell
- Dark rubbery scale usually on bottom of cell
- May have sunken or perforated cappings
- Sour Smell
- Short string with “matchstick test”
- Negative Holt Milk Test

- Test Kits may be available to confirm EFB
- Affects weaker colonies more

European Foulbrood Bacterial *Melissococcus plutonius*

- Can be treated with antibiotics under a veterinarian's care
- Replace brood frames regularly and do not share frames or resources with other colonies
- Requeen
- Supportive nutrition to reduce colony stress
- Clean and sterilize all tools between hives or dedicate equipment to hives
- Wash suit between apiaries

- Highly contagious and, although not spore forming, may remain infectious in wax, honey, and equipment for several years



American Foulbrood

Bacterial Spore former

Paenibacillus

- Affects strong and weak colonies and is not stress related
- Spores may last 50-100 years
- Similar appearance to EFB
- Rotten Meat or sulfur smell
- Scale is more brittle than rubbery
- Match stick test is stringy rope
- ~~Holst~~ Milk test results in clear liquid

American Foulbrood

Bacterial Spore former

Paenibacillus

- Vaccination available from Dalan but has considerations
- Antibiotics not as effective but may be used on other colonies to minimize spread in apiary
- Usually affected colony is euthanized and all bees and hive components are burned. Some states mandate this

Bee Viruses - Viral

- Most viruses are mite born vectored so keeping mite levels low are critical in virus control
- Most Bee viruses don’t have a treatment beyond nutrition, isolation, and sometimes genetic resistance

Sacbrood - Viral

Iflavirus genus

- Can infect both brood and adults but symptoms are observed in brood
- Uneven brood with sunken caps or holes
- Dead larvae in banana shape
- Skin turns yellow or brown and fills with liquid
- Dead larvae turn to scale that can easily be removed

Sacbrood - Viral

Iflavirus genus

- As with many viral diseases, colonies may be able to manage with good nutrition
- Can consider re-queening especially utilizing hygienic genetics
- Affected wax can be stored for more than 2 months as this virus is short-lived

Bee Paralysis Viruses - Viral

- Many different viral strains but symptoms and treatments are similar affecting adults. Often 40-50% chance of colony loss. May appear as pesticide poisoning with piles of dead bees outside colony
- Dark hairless “greasy’ looking bees often on entrance or tops of frames as healthy bees are pushing them out of the colonies
- More likely on large strong colonies as spreads quickly between adults. Healthy bees nip at diseased bees and become infected as well as fecal material, queen to egg,
- Bees are “Jittery” and often rubbing head
- Can remove bottom board so affected bees drop out of colony to ground more quickly
- Supplemental nutrition may help a surviving colony

Black Queen Cell Virus - Viral *Cripavirus* genus

- Most common bee virus detected and may be associated with *N.apis*
- Provide good nutrition as this may also help with undiagnosed Nosema
- Only affects developing queens
- May not affect all developing queens

Deformed Wing Viruses - Viral Iflaviridae family

- Early developing brood usually die with white eyed stage emerging as adults with deformed wings, twisted shriveled legs, bloated abdomens, small body size, and may be discolored
- Adults infected by mites after normal development do not show symptoms but can pass virus to others especially through mites
- Proper mite management and good nutrition are best course of action

References

Bee Aware Consortium https://beeaware.org.au/

University of Florida Bee Lab
https://entnemdept.ufl.edu/honey-bee/beekeeper-resources/pest-and-disease-resources/

Texas A&M https://txbeeinspection.tamu.edu/deformed-wing-virus/

Auburn University https://agriculture.auburn.edu/research/enpp/bee-lab/

USDA ARS Bee Lab
https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/bee-research-laboratory/docs/precautions-against-the-spread-of-brood-diseases/

Questions?