

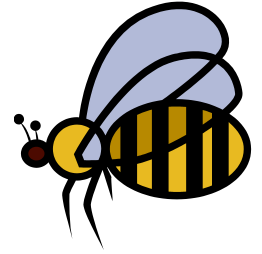
# Beginning Beekeeping

Jennifer Gagnon

Beginning Beekeeper



# Why?



- Pollination (1/3)
- Helping honey bee populations\*
- Honey production
- Outdoor family activity



# Bee Facts



- Not native to the US
- European in origin
- Not aggressive by nature, and will not sting unless protecting their hive from an intruder or are unduly provoked
- Have a highly organized society
- The practice of honey collection and beekeeping dates back to the stone-age, as evidenced by cave paintings
- The honeybee hive is perennial. Although quite inactive during the winter, the honeybee survives the winter months by clustering for warmth. By self-regulating the internal temperature of the cluster, the bees maintain 93 degrees Fahrenheit in the center of the winter cluster

# Bee Behavior

- Only fly when it's >55 degrees
- Don't fly in the rain
- Forage 5 mile flight radius (organic?)
- Bring in pollen, nectar and water
- Waggle dance
- Defecate outside hive
- Fan wings to cool/  
heat hive



# Getting Started



- Check local ordinances and neighbors
- Decide how many hives you want to begin with
- Find a reputable company for bees and equipment (local if possible)
- Find a local bee club
- Learn all you can before the bees arrive
- Know what to do **when** you are stung



# Getting Started

- Order fully-assembled hives or
- Partially assembled
- Shipping is expensive
- Assembling frames is time-consuming



# Hive Location



- Well-ventilated
- Sheltered from the wind (trees on N and W)
- Level, firm, dry land
- Sunny
- Face opening S
- Near a reliable water supply
  - Natural or artificial
- Near food



# Basic Hive Equipment

- Hive stand
- Bottom board
- Brood chamber(s)
- Super(s)
- Frames
- Wax foundation
- Inner cover
- Telescoping cover
- Feeder(s)
- Bee brush
- Smoker
- Fuel/lighter
- Entrance reducer
- Cinder blocks
- **\*\*\*Hive tool\*\*\***





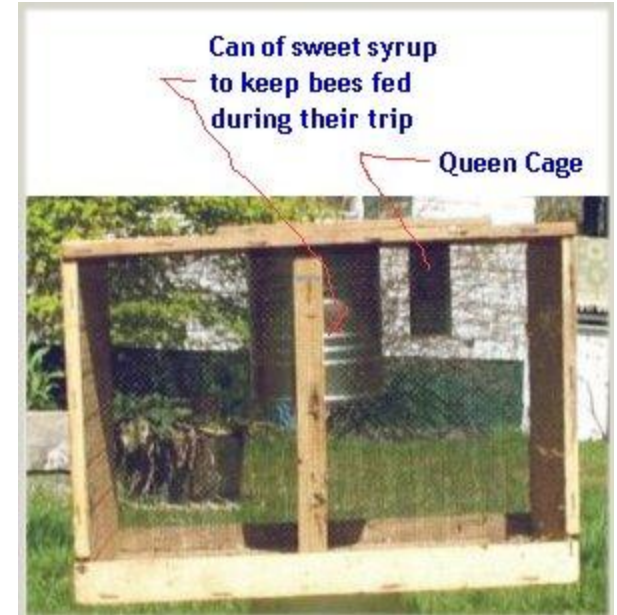
# Bee Keeping Fashion

- Bee bonnet
- Bee suit/Tyvek suit/bug jackets
- Rubber gloves
- Light colored clothing
- Smooth materials
- Closed-toed shoes



# The Bees

- Bee Packages
  - Pick up
  - Available in early spring
  - Order early
  - 3lb package ~12,000 bees
  - Queen cage



# Hiving the Bees

- Hive them quickly (in April)
- Spray with sugar water
- Dump them in
- Replace frames
- Hang up queen
- Cover
- Feed
- Do not disturb











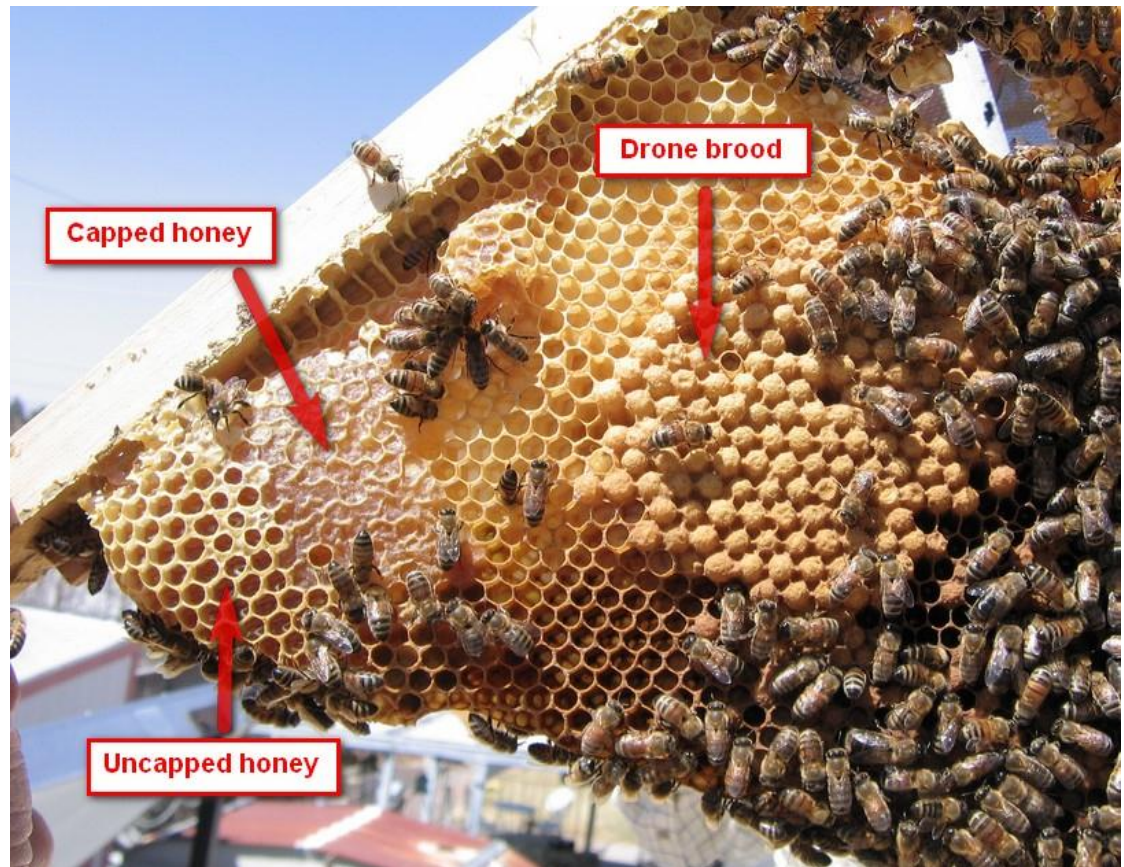






# What Can Go Wrong

- Poorly mated queen – drone layer
- Weak queen
- Dead queen
- Laying workers
- Starvation
- Disease
- Swarming



# Queen Cells

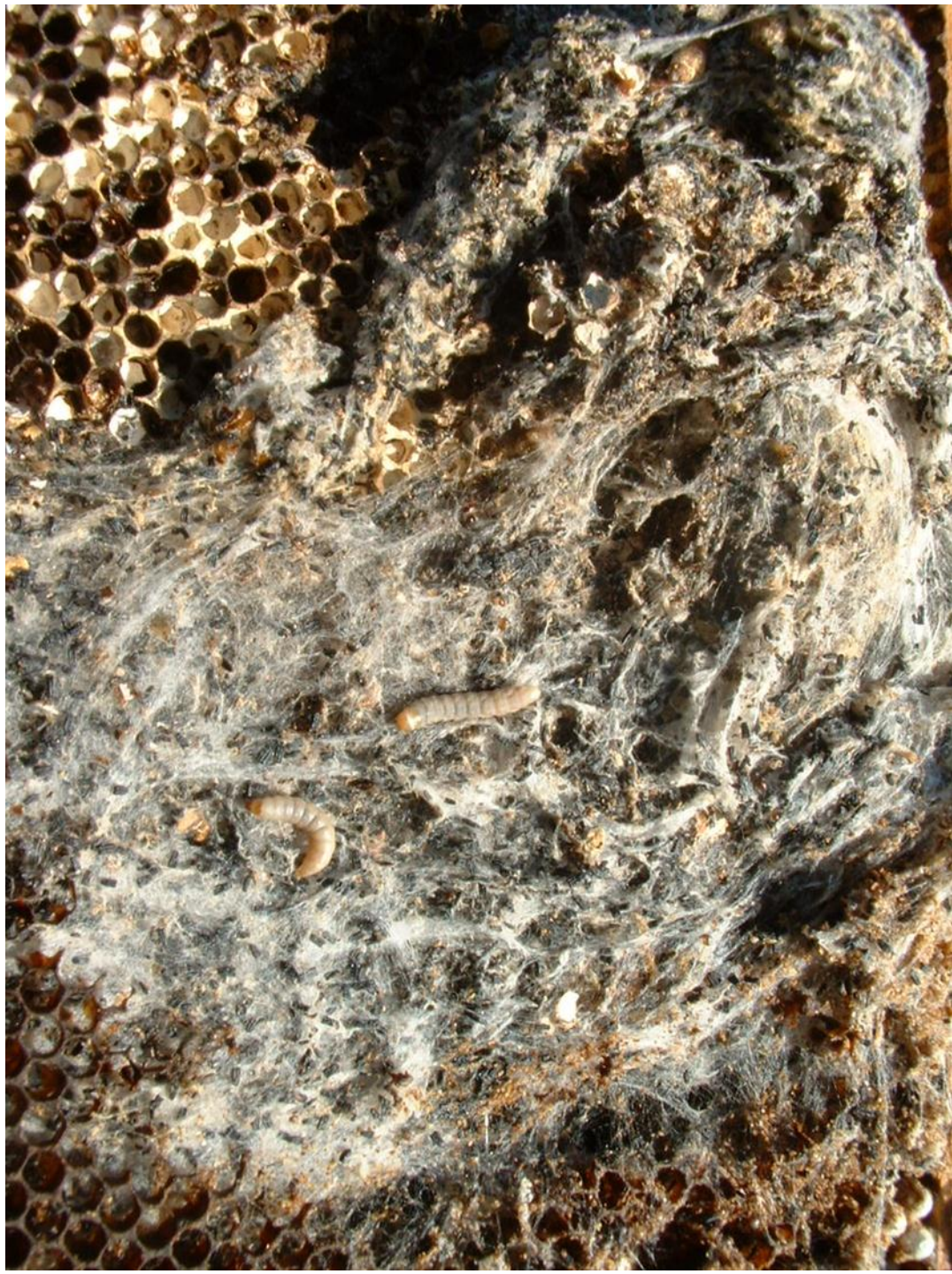
- Dead/weak queen – supercedure cells
- Strong, overcrowded hive – swarm cells



# Diseases

- Foulbrood
- Nosema
- Colony Collapse Disorder
- Hive beetles
- Varroa mites









# Bee Food

- Pay attention to nectar flows (what's blooming)
  - Early spring
  - Late summer/early fall (unless it's very dry)
- May need to supplement food
  - 1 bee = 1/10 tsp honey
  - 40lbs nectar = 8 lbs honey
  - 8lbs honey = 1lb wax
- Don't be embarrassed to buy the 20lb bag of sugar
- Pollen patties for protein
- But don't feed if nectar is flowing



















# Bee Types



# Bee Types

- **Workers**
  - Smallest bees
  - Make up most of the hive population
  - Multiple duties:
    - Clean the hive
    - Take care of the brood (eggs and larvae)
    - Attend the queen
    - Maintain the temperature of the hive by fanning their wings
    - Secret wax and build combs
    - Guard the hive (stingers)
    - Forage
  - It takes 21 days for a worker to develop
  - During late spring, summer and fall, will live only about 6 weeks. During winter, they live 4-5 months



# Bee Types

- Drones
  - The males of the species
  - 200-300 per hive
  - Large eyes, no stingers
  - Duty
    - Mate with a queen
  - They die when they mate
  - If they have not mated by the beginning of winter, the workers kick them out of the hive where they are left to die.
  - It takes a drone 24 days to develop



# Bee Types

- Queen

- Usually only one per hive
- Largest bee in the hive.
- Produces a pheromone used to hold the colony together and to stimulate the workers to maintain the hive
- Mate one time with 6-8 drones over a 2-7 day period
- Lays her own weight in eggs every day in summer, from 1,500 to 2,400 eggs per day
- Can live more up to 6 years, but usual lifespan is 2 years.
- Fed by the worker bees, and eats up to 80 times her weight daily
- It takes 16 days for a queen to develop









# Wild Hives





# Wild Hives



# Bee Law



## § 3.2-4403. Duties of beekeepers.

Beekeepers shall:

1. Provide movable frames with combs or foundation in all hives used by them to contain bees, except for short periods, not to exceed the first spring honey flow, and to cause the bees in such hives to construct brood combs in such frames so that any of the frames may be removed from the hive without injuring other combs in such hive; and
2. Securely and tightly close the entrance of any hive in apiaries not free from disease and make the hive tight so that robber bees cannot enter, leave, or obtain honey from the hives as long as the hives remain in a location accessible by honeybees.

## § 3.2-4404. Duty to notify the State Apiarist of diseased bees.

- Any person in the Commonwealth who is aware of diseased bees in his or other apiaries shall immediately notify the State Apiarist, giving the exact location of the diseased bees and other information as requested.

## § 3.2-4405. Entry permit required to bring bees and used bee equipment into Commonwealth; inspection.

- A. No person shall bring any bees on combs, empty used combs, used hives, or other used apiary appliances into the Commonwealth without first receiving an entry permit to do so from the State Apiarist. Entry permits shall be issued only upon receipt of satisfactory proof that the bees and other items are free from bee diseases. Specifically identifiable colonies must be brought into the Commonwealth within 60 days from the issuance of the entry permit.
- **B. Bees brought into the Commonwealth shall be subject to inspection at any time.**



# Bee Law



- § 3.2-4406. Certificate of health to accompany bees in combless packages brought into Commonwealth.
- All bees in combless packages transported into the Commonwealth shall be accompanied by a certificate of health issued by the proper official of the place of origin. § 3.2-4409. Right of entry for inspection and enforcement.
- The Commissioner may enter any private or public premises during business hours, except private dwellings. The Commissioner shall have access to all apiaries and other places where bees, combs, beekeeping equipment, and appliances may be kept. § 3.2-4410. Measures to eradicate and control bee diseases; appeal.
  - A. The State Apiarist shall examine or inspect the bees in the Commonwealth whenever they are suspected of being infected with bee diseases and, on request, shall inspect bees to be sold or to be transported interstate.
  - B. If bees are found to be infected with bee diseases, the State Apiarist shall take suitable measures to eradicate or control such diseases.
  - C. If the owner of such diseased bees fails to take such steps as may be prescribed by the State Apiarist to eradicate or control the disease, the State Apiarist shall destroy or treat the bees, hives, and honey.
  - D. The State Apiarist may prohibit the removal of bees, honey, wax, combs, hives, or other used beekeeping equipment from any place where bees are known to be infected with bee diseases, until he issues a certificate of health for such place.
  - E. Within 10 days from the receipt of an order from the State Apiarist to destroy or treat his diseased bees, hives, honey, or appliances, any owner of diseased bees may file a written appeal with the Commissioner. Upon timely receipt of a written appeal under this section, the Commissioner shall act upon the appeal in accordance with the provisions of the Administrative Process Act (§ 2.2-4000 et seq.). § 3.2-4411. Abandoned apiaries.
- The State Apiarist may deem an apiary to be abandoned if: (i) the bees and hives show evidence of a period of neglect exceeding one year; and (ii) the owner of the apiary has not been identified through a reasonable search of available records. If the State Apiarist deems an apiary to be abandoned, he shall certify his findings in a declaration of abandonment to the treasurer of the locality where the apiary is located. The treasurer shall give notice of such certification to the last known owner of the apiary and the owner of the land upon which the apiary is located by personal service, by posting at last known residence, or by publication. If after 60 days, the owner or landowner has not laid claim to the apiary, the treasurer may hold a sheriff's sale, issue a treasurer's deed to the successful bidder, and deposit any proceeds into the general fund of the locality. If disposition is not made within 90 days of the date of the declaration of abandonment, the State Apiarist may take possession of the apiary and destroy the related bees, hives, and equipment.

# Honey





# Bee Resources

- Bee Culture magazine
  - <http://www.beeculture.com/>
- Virginia State Beekeepers Association (VSBA)
  - <http://www.virginiabeekeepers.org/>
- VSBA Spring Conference
  - June 14-15 2013
  - Chesapeake
- Webinars
  - Brushy Mountain
  - [www.brushymountainbeefarm.com](http://www.brushymountainbeefarm.com)

