



Caste system

- Queen
- Workers
- Drones



Drone

- Mate with queen



Worker

- Queen and brood rearing
- Construction
- Defense
- Foraging
- Thermoregulation
- Cleaning



Queen

- Egg laying machine – lay between 175,000 to 200,000 eggs annually
- Produces pheromones – chemicals that control and organize many colony functions
- Mother and central authority figure in the nest but performs little or no work

Complete metamorphosis

- Egg
- Larva
- Pupa
- Adult

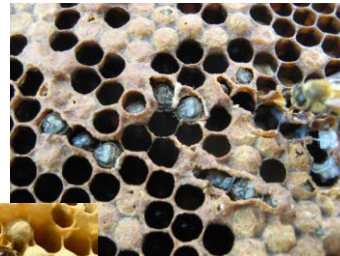
16 days for queens
 21 days for workers
 24 days for drones



Eggs and Larvae



capped worker brood and larvae



worker bees emerging



drones emerging from their cells



Queen cells

- Swarm
 - Made from queen cup
 - Along bottom of frame
 - 6-12 or more
- Supersedure
 - Made from queen cup
 - Replacement for failing queen
 - Middle of same frame
 - 1-3
- Emergency queen
 - Something has happened to the queen
 - Regular worker eggs fed royal jelly
 - Cell goes first horizontally and then down





Varroa Mites



Small Hive Beetles



January

- Bees in a cluster around their queen
- Sometimes on a warm day (45-50°), workers will take cleansing flights
- Make sure entrance is clear for ventilation
- Build and repair equipment, attend bee meetings, order bees

February

- Queen still in cluster will begin to lay a few more eggs each day
- More worker cleansing flights
- Can add pollen patties to hive to promote brood production and feeding might be necessary
- For the beekeeper, get equipment ready and attend bee meeting



March

- Many colonies can die of starvation
- Queen increases her rate of egg laying
- Can peek inside the hive -- if you do not see sealed honey in top frames, may need to begin some emergency feeding



April

- Bees begin bringing pollen back to hive
- Queen busy laying eggs
- Drones begin to appear
- Beekeeper should do an inspection
- Consider reversing the hive deeps



- Add honey supers and excluders if you see “two dandelions blooming”
- If you add a new package, feed them sugar water to get them off to a good start



May

- Activity at hive hopping - nectar and pollen coming in
- Queen will be reaching her greatest rate of egg laying
- Add a queen excluder and honey supers if you did not do it in April
- Watch for swarm cells



June

- Unswarmed colonies will have lots of bees
- Main honey flow should happen this month
- Inspect hive to make sure the hive is healthy and queen is present



July

- Nectar flow may continue this month if weather is good
- Look for worker brood
- Watch for drone layer and failing queens
- If you have capped honey you may be able to pull it this month



August

- Colony's growth is diminishing
- Nectar flow slows so less outside activity
- Watch for honey robbing by wasps or other bees
- Reduce entrance on weak hives



September

- Drones may begin to disappear this month
- Queen's egg laying dramatically reduced
- Feed until bees stop taking any more syrup

October

- Not much activity from the bees
- Install inner cover wedges for ventilation
- Mouse guard at entrance to the hive
- Wind break if necessary around hive
- Finish winter feeding



November

- Cold weather has made the bees cluster
- Store extra equipment for the winter



December

- No peeking in hive
- Attend the WCBA Christmas party
- Read a good beekeeping book and enjoy the holidays



Questions?

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Some pictures from Laura Rittenhouse, Roland Praker, and talkingwithbees.com

