



## Master Beekeeping Program

### Lesson 1- The Honeybee and her products



#### Biological Classification of the Honey Bee

Kingdom..... Animal  
 Phylum.....Arthropods  
 Class.....Hexapoda or Insecta  
 Order.....Hymenoptera  
 Family.....Apidae  
 Genus.....Apis  
 Species.....mellifera  
 Subspecies (Races)...  
     ligustic – Italians  
     carnica – Carniolans  
     caucasica – Caucasian

#### Honeybee development

		Egg	Larvae	Pupae	Total Days to adulthood
Fertilized Egg	Queen	3 Days	5.5 Days	7.5 Days	16
	Worker	3 Days	6 Days	12 Days	21
Non-fertilized Egg	Drone	3 Days	6.5 Days	14.5 Days	24

#### Functions of Honeybees

	Queen	Worker	Drone
Main Job	Lays 1,500 to 3,000 eggs per day, releases pheromones to maintain hive order, mates 5 to 10 days after emerging from queen cell Several mating flights/average 12 Drones	Nursing, Feeding, Wax, Nectar, Pollen, Propolis, Cleaning, Guarding, Cooling, Heating, Building,	Mate with a virgin Queen  (dies in the process)
Food	Royal Jelly	Royal Jelly for first 3 days as a larvae then honey and pollen	Royal Jelly for first 3 days as a larvae then honey and pollen
Glands	No wax glands No brood food glands	Glands in head and thorax: royal jelly, enzymes, Wax	No Wax glands
Stinger	Curved, Uses it on other queens doesn't lose her stinger	Barbed, dies after losing stinger	None
Life Span	Can live up to 5 years (however, re-queening annually is a modern practice)	Six weeks (spring/summer) to 3 months (fall/winter)	Varies (dies after mating/is evicted in the fall)

**Reference materials:**

**Books:**

*ABC & XYZ of Beekeeper*, published by A.I. Root Co.  
*The Hive and the Honey Bee*, published by Dadant & Sons  
*American Honey Plants*, by Orange Judd Publishing Co.  
*Queen Rearing*, by Dadant & Sons, by Walter T. Kelly Co.  
*How to Keep Bees and Sell Honey*, by Walter T. Kelly Co.  
*Honeybee Democracy*, Thomas D. Seeley

**Periodicals:**

American Bee Journal - Hamilton, Illinois, 62431  
Bee Culture – Medina, Ohio 44258  
The Speedy Bee – Jessup, Georgia 31545

**Online:**

PSBA website: [www.pugetsoundbees.org](http://www.pugetsoundbees.org)  
WSBA website: [www.wasba.org](http://www.wasba.org)  
National Honey Board: [www.nhb.org](http://www.nhb.org)  
Bee Informed: <http://beeinformed.org/>  
Honey Bee Suite - Rusty Burlew: <http://www.honeybeesuite.com/>  
The Practical Beekeeper - Michael Bush: <http://www.bushfarms.com/bees.htm>  
Scientific Beekeeping - Randy Oliver: <http://scientificbeekeeping.com/>  
WSU Diagnostics lab: <http://entomology.wsu.edu/apis/diagnostic-lab/>  
Apiary Registration form: <http://agr.wa.gov/PlantsInsects/Apiary/docs/ApiaryRegistrationForm.pdf>