



BEE A BEE GUARDIAN



Created by
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42Hub.life



Welcome

Welcome to Bee a Bee Guardian,

As an avid nature lover, beekeeper, and Herbologist, it has been such a privilege to be able to earn a living dabbling in all the things I love.



This event and course was created with the intention to share some of that passion and knowledge with you, instill a curiosity in what else is out there, and create safe spaces for our bee friends and community.

This is by no means intended to be a complete book or course on gardening, beekeeping, or herbology, but simply an introduction to bees, beekeeping, and bee-friendly gardens that bees will love to visit :)

I would love to encourage you to attend this course and join our membership with a mindset of curiosity and openness to the possibilities of how to create a safer environment for our bee friends, to engage more fully with nature (in appreciation for all she provides for us), and also with a sense of fun.

I hope that you will enjoy this journey and that your curiosity and passion will be inspired to look deeper and search for even more while having lots of fun along the way.

Warm Regards,
Annanie & Matt
Beekeepers and Course Creators



Worker – Female



Queen – Female



Drone – Male



Queen Bee



- **Role:** The queen bee is the mother of the hive, and her primary role is to lay eggs—up to 2,000 a day during peak season! She also produces pheromones that help regulate the hive's activities and maintain social order. The queen is essential for the survival and productivity of the hive.
- **Complete Role Description:**
 - Lays eggs to ensure the continuation of the hive.
 - Produces pheromones that help maintain hive harmony and signal her presence.
 - Mates with drones to fertilize eggs and ensure genetic diversity.
 - Is attended by worker bees who feed and groom her.
 - Can live up to 5 years, significantly longer than other bees in the hive.
- **Fun Facts:**
 - a. **Royal Treatment:** The queen bee has her own retinue of worker bees who cater to her every need.
 - b. **Long Live the Queen:** While worker bees live for a few weeks to a few months, the queen can live for several years.
 - c. **Queen's Duel:** When a new queen emerges, she may have to fight other potential queens to the death to secure her position.
 - d. **Fertile Queen:** The queen mates with multiple drones during her nuptial flight, storing enough sperm to fertilize eggs for years.
 - e. **Signal Power:** Her pheromones can suppress the development of ovaries in worker bees, ensuring she remains the sole egg-layer.



Drone Bees



- **Role:** Drones are the male bees of the hive, and their primary role is to mate with a virgin queen. They do not participate in nectar gathering, hive maintenance, or defense.
- **Complete Role Description:**
 - **Mating:** Drones fly out to drone congregation areas in search of queens to mate with.
 - **Genetic Contribution:** By mating with queens from other hives, drones help ensure genetic diversity.
 - **Life Cycle:** After mating, drones die immediately. Those that do not mate may be expelled from the hive before winter.
- **Fun Facts:**
 - a. **Easy Life:** Drones don't have stingers and don't gather food or contribute to hive chores.
 - b. **Single Purpose:** Their only purpose is to mate with a queen, and they die shortly after successful mating.
 - c. **Seasonal Presence:** Drones are typically only present in the hive during the mating season (spring and summer).
 - d. **Drone Congregation Areas:** Drones gather in specific areas away from the hive, known as drone congregation areas, waiting for queens.
 - e. **Expulsion:** Drones are often kicked out of the hive by worker bees in the fall to conserve resources for the winter.



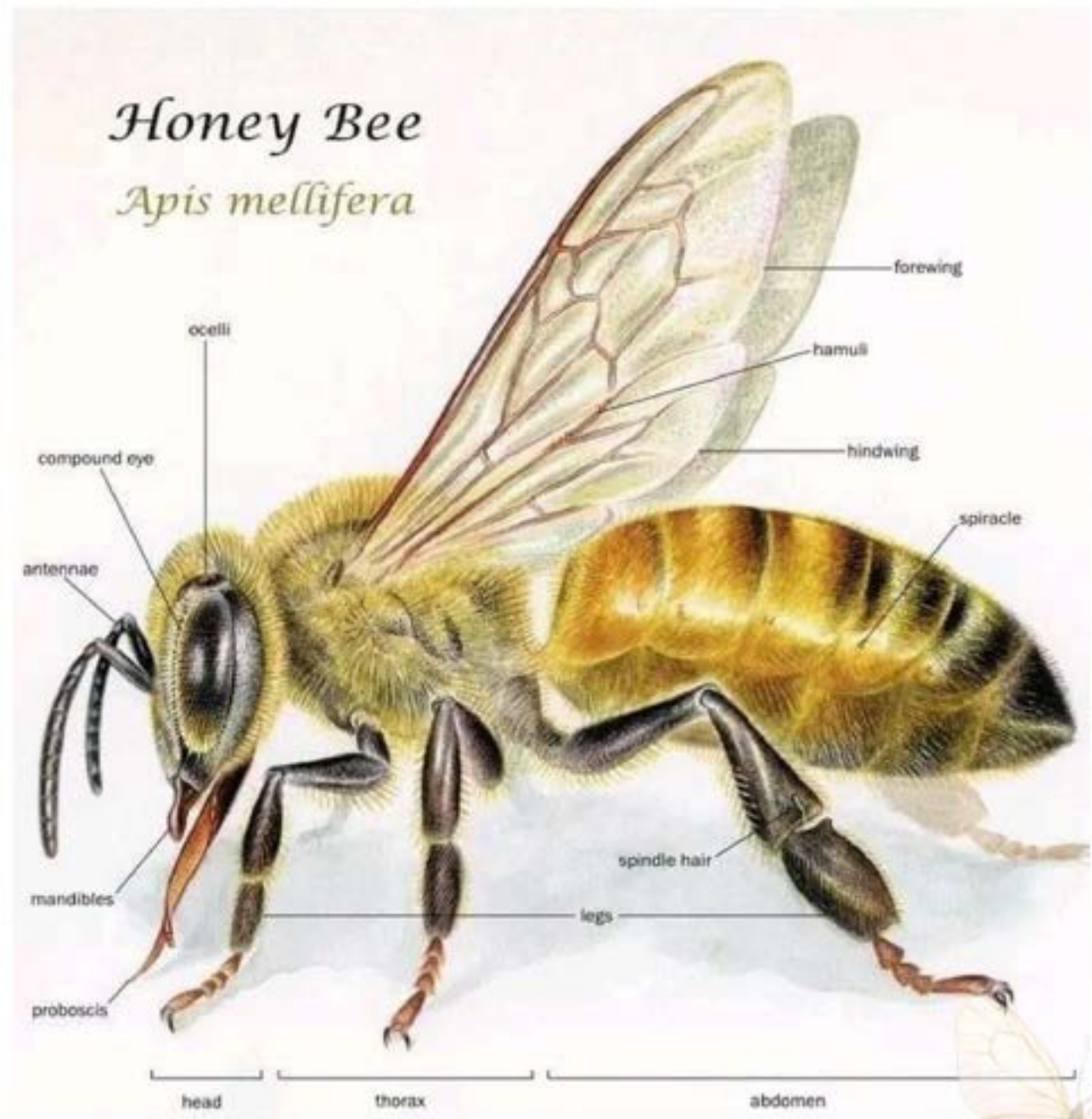
Worker Bees



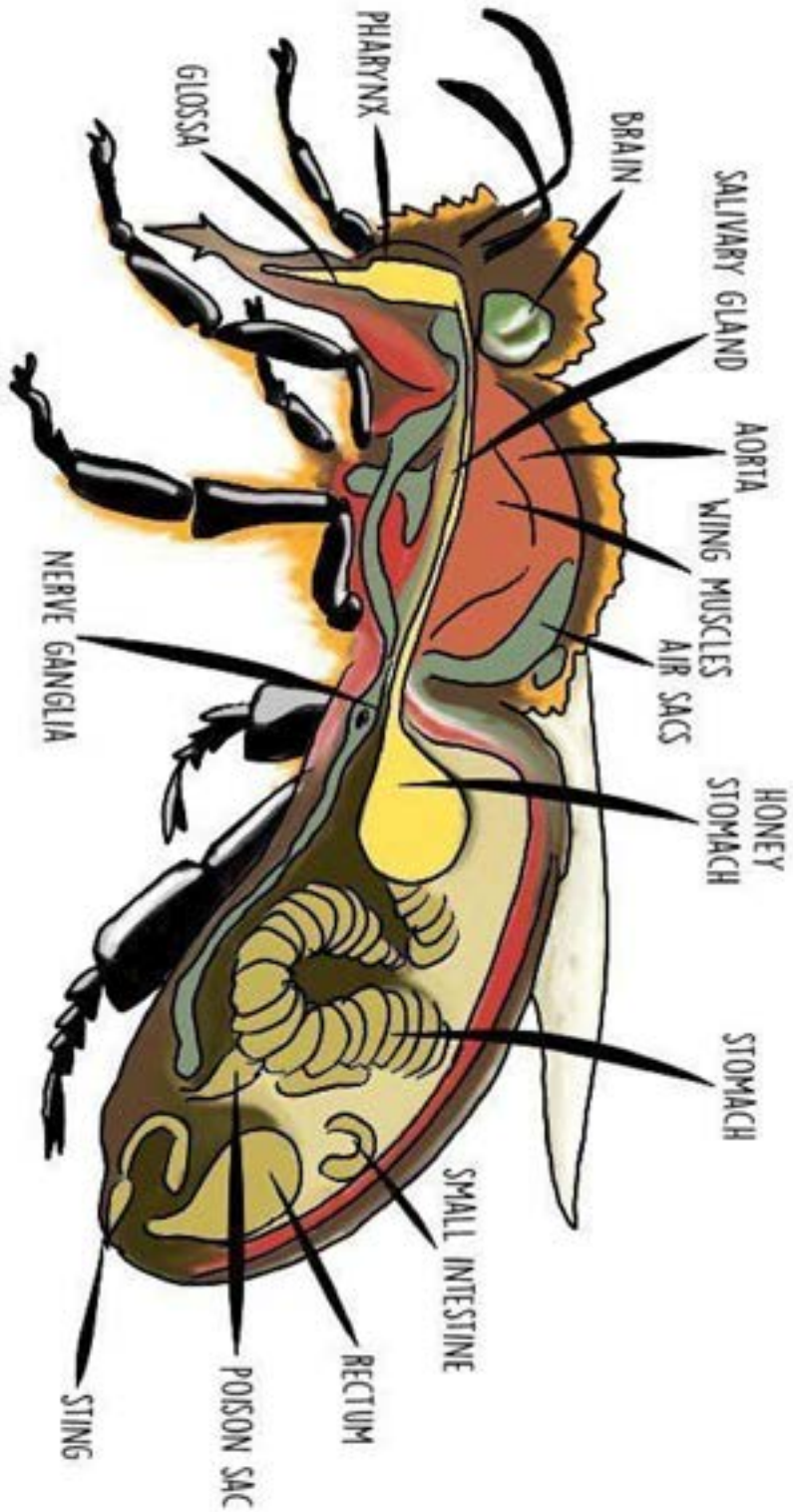
- **Role:** Worker bees are the female bees that perform a variety of essential tasks to keep the hive running smoothly. They are responsible for foraging, nursing the young, cleaning and maintaining the hive, producing honey, and defending the hive from intruders.
- **Complete Role Description:**
 - **Nurse Bees:** Take care of the larvae, feeding them and cleaning their cells.
 - **Foragers:** Collect nectar, pollen, water, and propolis (a resin-like substance) from outside the hive.
 - **Housekeepers:** Maintain the cleanliness of the hive, removing debris and dead bees.
 - **Architects:** Build and repair the wax comb where honey, pollen, and brood are stored.
 - **Guard Bees:** Protect the hive entrance from intruders and potential threats.
- **Fun Facts:**
 - a. **Short but Busy Life:** Worker bees typically live for about 6 weeks in the summer, spending the first half of their life working inside the hive and the second half foraging.
 - b. **Wing Wear:** A worker bee's wings get worn out from constant foraging flights, limiting her lifespan.
 - c. **Communication Dance:** They perform the famous "waggle dance" to communicate the location of food sources to their hive mates.
 - d. **Jacks of All Trades:** Worker bees shift roles as they age, starting as nurse bees and eventually becoming foragers.
 - e. **Temperature Control:** They can regulate the hive's temperature by fanning their wings to cool it or clustering to generate heat.



External Anatomy



Internal Anatomy



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Bee Friendly Flowers



Companion planting is a great way to build sustainable gardens while also creating colour, fragrance and bee food throughout the growing season :)

Early Spring :

Crocus
(purple, white, yellow)
Snowdrops (white)
Hellebore (various colors)
Lungwort (pink, blue)
Primrose
(various colors)



Spring/Summer :

Sunflowers
(orange, yellow)
Bachelor's Button
(pink, blue, white)
Catmint (purple)
Lavender (purple)
Bee Balm
(red, pink)




Mid-Summer:

Black-eyed Susan (yellow)
Echinacea (purple, pink, white)
Coneflowers
(purple, pink, white)
Cosmos (various colors)
Zinnias (various colors)



Late Summer/ Fall :

Sedum (pink, red)
Aster (blue, purple, pink)
Goldenrod (yellow)
Joe-Pye Weed (pink, purple)
Russian Sage (purple)



A Bee-Friendly Garden



Learn more about bee-friendly gardens



Have a water source in my garden



Build/Buy a bee hotel



Plant bee-friendly flowers



Set out fruit-water or fruit occasionally



Plant Clover instead of grass



Join bee-friendly communities



Build a Bee Hotel

Materials Needed:

- Wooden block or frame (approximately 6-8 inches long)
- Bamboo or reed stems, hollow plant stems, or drilled wooden blocks
- Saw
- Drill with various drill bit sizes (or use pre-drilled blocks)
- Twine or wire for hanging (optional)
- Waterproof sealant (optional)
- Scissors



Build a Bee Hotel

Instructions:

1. **Choose a Location:** Select a sunny spot sheltered from wind and rain. Ideally, it should be mounted at least three feet off the ground.
2. **Prepare the Wooden Block:** If you're using a wooden block as the base of your bee hotel, cut it to the desired length using a saw.
3. **Prepare the Nesting Materials:** Gather bamboo or reed stems, Cut these materials into lengths slightly shorter than the depth of the wooden block.
4. **Drill Holes:** Using a drill with various drill bit sizes, create holes in the wooden block or frame. The holes should range in diameter from 1/8 inch to 3/8 inch to accommodate different types of solitary bees. Space the holes at least 3/4 inch apart and avoid drilling all the way through the block.
5. **Insert Nesting Materials:** Fit the nesting material snugly into the frame. Trim the ends of the stems to create a flat surface.
6. **Hang or Mount the Bee Hotel:** If desired, attach twine or wire to the top of the bee hotel for hanging. Alternatively, you can mount the bee hotel directly onto a fence, post, or wall using screws or nails.
7. **Place in Garden:** Hang or mount the bee hotel in the selected location in your garden. Make sure it is secure and stable, with the nesting materials facing outward.
8. **Maintenance:** Check the bee hotel regularly for signs of damage or wear. Replace any damaged nesting materials as needed. In the fall, you can remove and clean the nesting materials to prevent the buildup of pests or diseases.

By following these easy instructions, you can create a welcoming habitat for solitary bees in your garden, helping to support their populations and enhance pollination in your local ecosystem.



Be part of a vibrant community dedicated to empowering each other with earth-friendly, hands-on beekeeping knowledge!

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Comprehensive, Self-guided video training

Where to place your hives?
What equipment to buy and where do you get it?
Clean, feed, medicate and take care of your beehive.
Harvest your honey.



Workbook and Journal

A handy workbook to keep notes of all the valuable information you are learning.
A beekeeping journal for practical use in the field.



Exclusive Facebook Group

Gain access to an exclusive Facebook group where you can ask questions, share with others, and be part of an engaging community of like-minded people.