

Why do we need to know what bees look like?

Why does it matter how they live?

Isn't enough that we know they are important?

Why do we need to know what bees look like?

Why does it matter how they live?

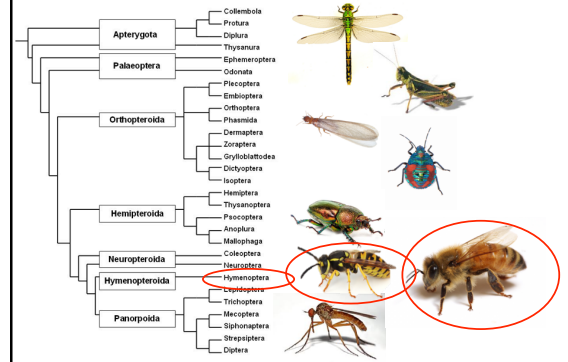
Isn't enough that we know they are important?

**NO: Because bees are not all the same, and different bees have different needs.**

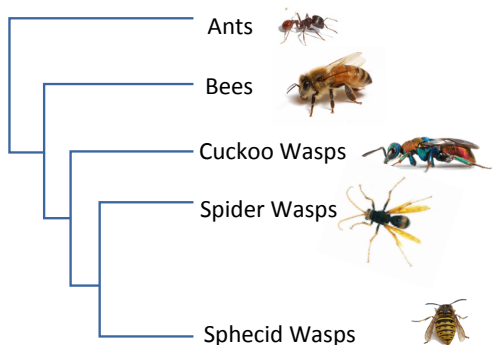
### What is a bee?



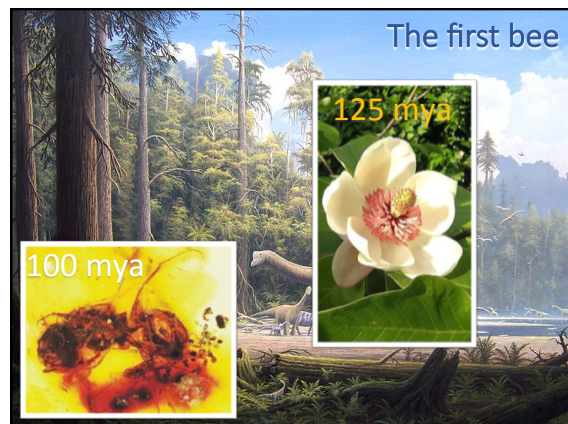
### What is a bee?



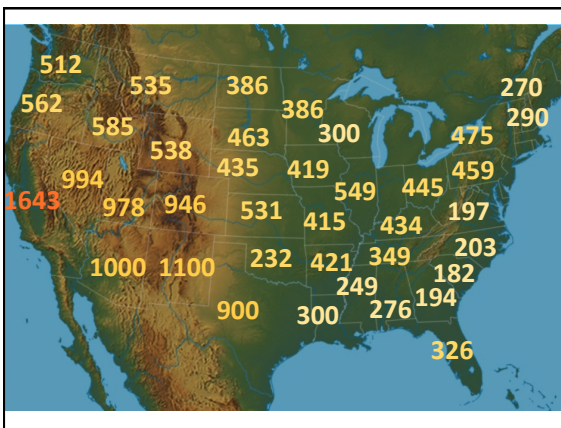
### What is a bee?



### The first bee







## How To Identify A Bee

Bees vs. Flies



## How To Identify A Bee

Bees vs. Flies

- Look for pollen collecting hairs



## How To Identify A Bee

Bees vs. Flies

- Look for pollen collecting hairs
- Look for longer antennae


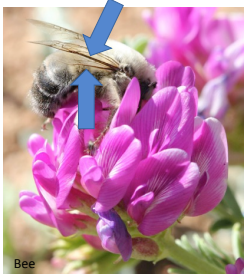




### How To Identify A Bee

#### Bees vs. Flies

- Look for pollen collecting hairs
- Look for longer antennae
- Look for the number of wings





Fly

Bee


### How To Identify A Bee

#### Bees vs. Wasps



### How To Identify A Bee



#### Bees vs. Wasps



### How To Identify A Bee

#### Bees vs. Wasps

- Bees have 'split ends'



Wasp

Bee

### How To Identify A Bee

#### Bees vs. Wasps

- Bees have 'split ends'
- Bees don't have silver on face



Wasp

Bee

### How To Identify A Bee

#### Bees vs. Wasps

- Bees have 'split ends'
- Bees don't have silver on face
- Bees eat pollen, wasps eat meat

Wasp

Bee



## North America's Bees

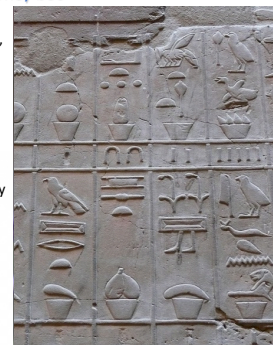
- Most are solitary ground-nesters. Many are specialists.



## *Apis mellifera*

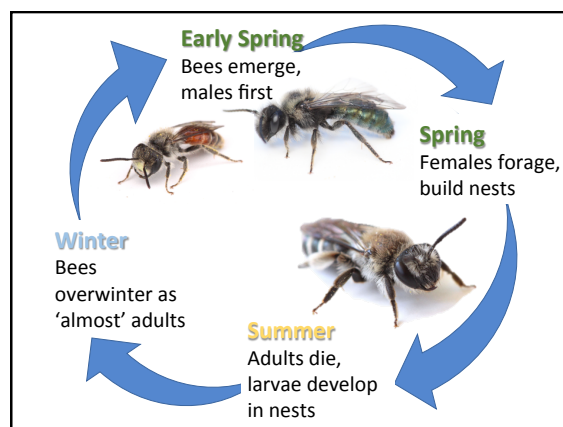
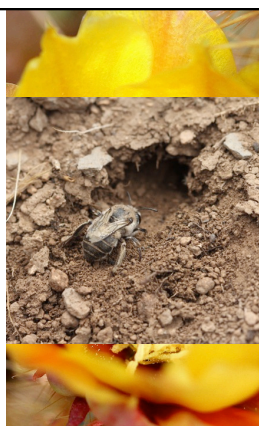
Western honey bee

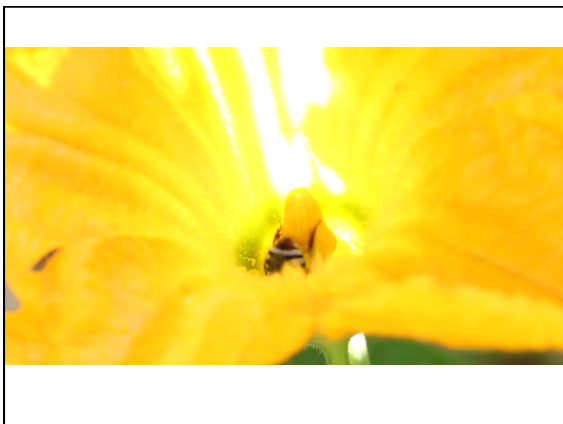
- Highly social
  - Division of labor between queens, workers, drones
  - Multiple generations living together.
- Long-lived
  - Same species can be seen from February through November
- Generalists
  - Collect pollen and nectar from any number of flowering plants.
- Live in hives
  - Colonies of 30,000
  - Make and eat honey
- Semi-domesticated



## Native Bees

- Solitary
  - Each female builds her nest, lays the eggs, and gathers all pollen.
  - She doesn't usually meet her offspring.
- Short-lived
  - Fly for about five to eight weeks of the year
- Many specialists
  - Collect pollen from one genus or family of plants.
- Most are ground-nesting.
  - Others live in pre-existing cavities, often in wood.
- Manipulated for pollination, but not domesticated.





Why do we need to know what bees look like?

Why does it matter how they live?

Isn't enough that we know they are important?

**NO: Because bees are not all the same, and different bees have different needs.**

### Attracting bees to your backyard

- Food
- Nesting Habitat

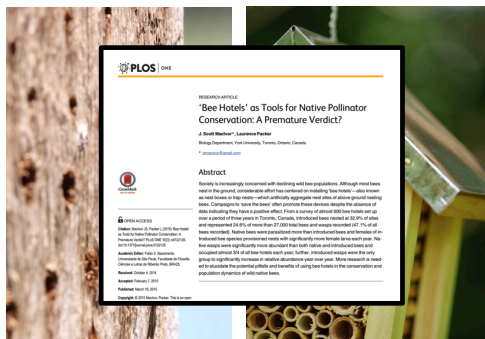


### Providing habitat for ground-nesting bees



### Providing habitat for wood-nesting bees

Bee block or nest box



### Providing plants for backyard bees





## Providing plants for backyard bees

### Natives vs. Nonnatives?

Bees will visit either, but pollinator webs will be less altered by planting natives.

### Cultivars?

Avoid them. They tend to produce poorer quality nectar and pollen.

### Try to include:

A diversity of colors, shapes, sizes, plant families, and flowers that bloom across the season.

### Gardens are great for bees!

Solanaceae, Cucurbitaceae, Brassicaceae, Menthaceae, Asteraceae are well-loved. Mix vegetables and other flowers together.

### Native bees don't necessarily require a water source.

Many native bees don't travel more than a couple football fields in their lifetime.

Keep distance between plants relatively small or 'connect' the areas around your house.

