

## Bee Identification for Ohio

### How to Identify A Bee:

- Two ways:
  - Gut feeling (gestalt)
    - Faster, perhaps more prone to error
  - Characters that are used by taxonomists to ID a species
    - Slower, more certain that you are correct at the end.
- A combination of the two is ideal
  - Get a sense of which be it might be, narrow it down to one or two.
  - Verify with trickier features.

### The Grim Reality:

Identifying many bees to species is difficult, even for trained experts.

Be happy with genus in most cases.

The goal of today is to develop the gestalt, and introduce some of the easier characters.

Words you find in bee identification keys



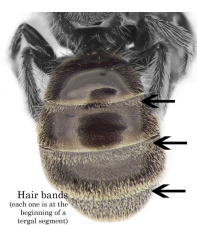
Dorsal: Topside



Ventral: Under side

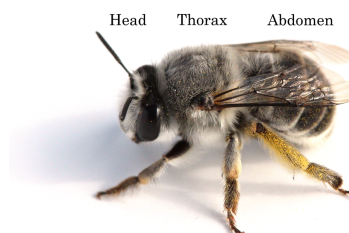


Apical:  
At the end, or tip



Basal:  
At the beginning

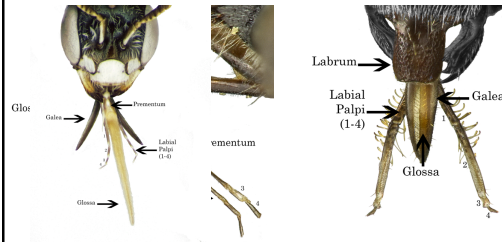
A bee body has three main sections



A bee antenna is made up of a pedicel, scape, and 11 or 12 segments after that.



Bees are grouped by whether they have 'short' or long tongues.



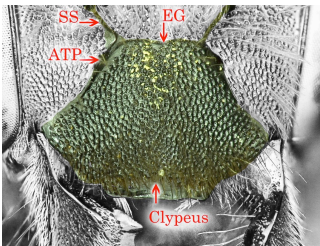
Bees have mandibles instead of jaws, with teeth.



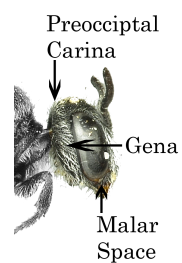
Bees have five eyes, three on top (simple), two on the side (compound)



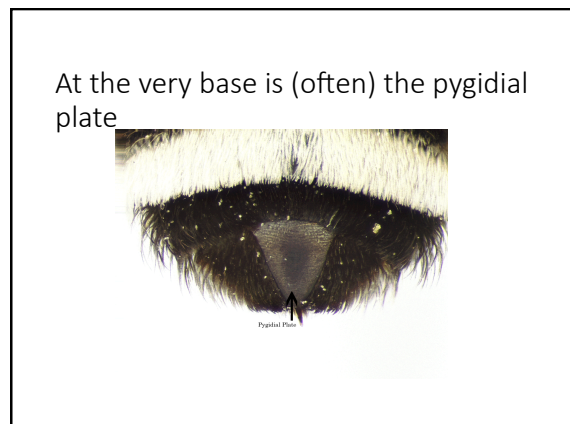
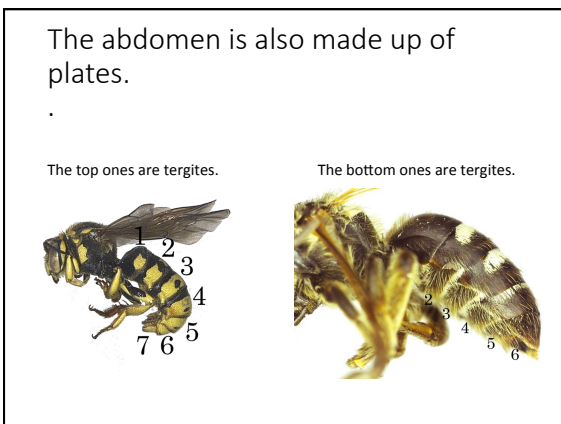
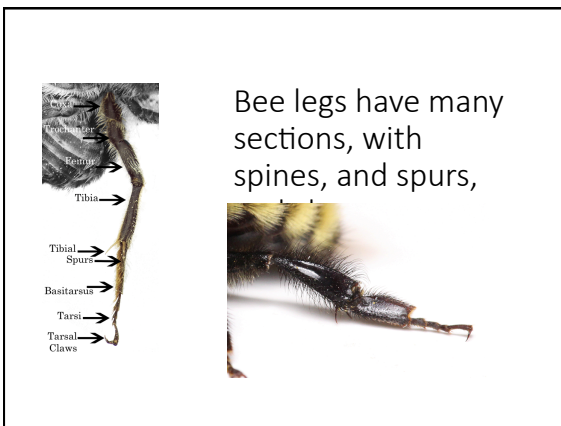
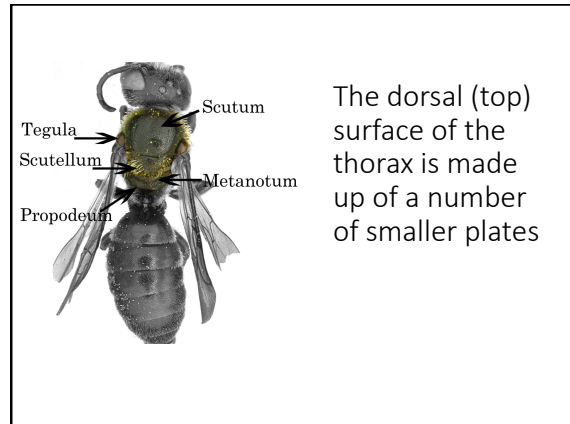
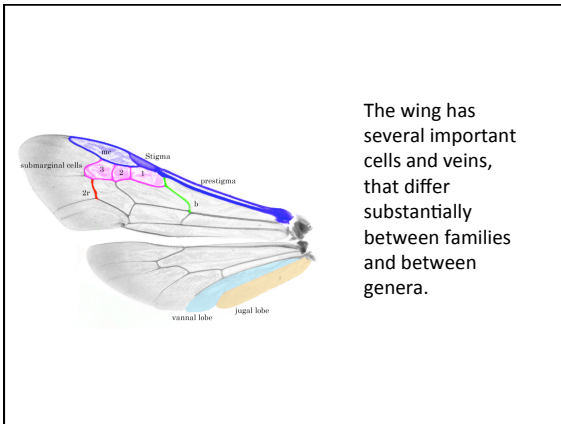
A bee face has a big plate called the clypeus



SS = Subantennal suture  
ATP = Anterior tentorial pits  
EG = Epistomal groove



Bees have cheeks (malar space), and jawlines (gena), and a back to their heads (preoccipital carina).



Bees also differ in the types of hairs, or type of 'punctation' they have on their bodies



## A final note on classification

- Bees (and all living organisms) are classified like Russian Nesting Dolls into smaller, narrower categories.
- All organisms in the same category share some unifying characters.

