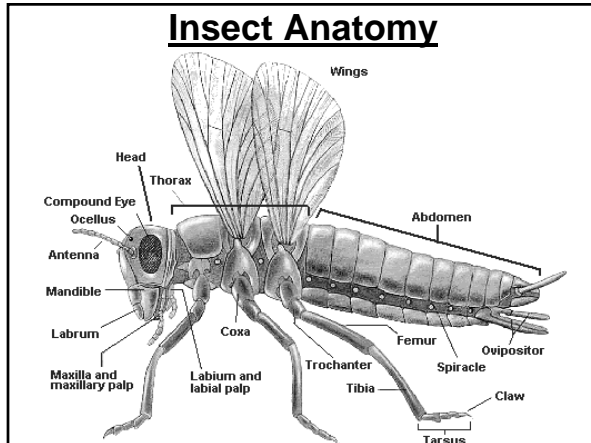


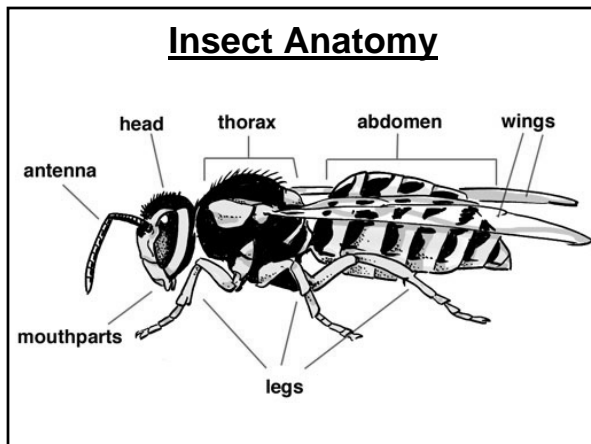
Lab 7. Overview

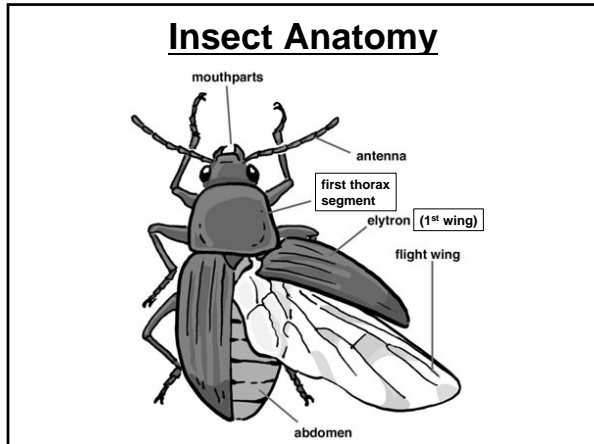
- **Collect Lab. Exercises and Check Pre-Labs. in Lab Notebook**
- **Discussion of Exercises**
 - Simulation Study
- **Insect Anatomy & Life Cycle**
- **Phylogeny Reconstruction**
- **Examine cultures.**
- **Discussion of Next Lab Session's Examination**

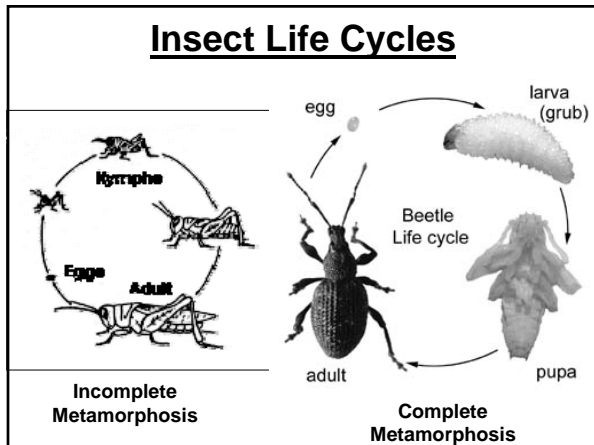
Insect Anatomy



Insect Anatomy







Phylogeny

- **Phylogeny / Phylogenetic Tree** = diagram showing the pattern of evolut. descent of a group of species derived from an ancestral species.
- **Monophyletic group (Clade)** = a group composed of an ancestor and all of its descendants
- **Speciation and microevolution** cause a **pattern of characteristics** that reflects their descent.

Phylogeny Reconstruction

- Uniquely derived characteristics identify monophyletic groups.
- **Derived trait** - a newly evolved characteristic;
synapomorphy - shared derived trait;
evidence of shared ancestry.
- **Ancestral trait** - the trait that changed to a derived trait; ***NOT*** evidence of shared ancestry

Phylogeny Reconstruction

	molting	legs	wings	flagella on sperm	symmetry
Fly	present	present	present	absent	bilatera
Bee	present	present	present	absent	bilatera
Spider	present	present	absent	absent	bilatera
Round-worm	present	absent	absent	absent	bilatera
Earth-worm	absent	absent	absent	present	bilatera
Jellyfish-OG	absent	absent	absent	present	radial

Phylogeny Reconstruction

