

# ZOO 353: Entomology

## Classification of Arthropoda: Diagnostic Features

Phyla Onychophora and Annelida

**Phylum Arthropoda: see p. 101 for list of "diagnostic features"**

**sP-Trilobita:** Figure 6-1 BTJ for terms

Extinct Taxon found in Cambrian and Ordovician Marine Environments

Dorsoventrally flattened

three distinct longitudinal body divisions

**1 pair of antennae**

Anterior body covered in a carapace

**Biramous Appendages:**

Exite lobe (epipodite) at base of legs served as a gill

Endite on anterior most legs served as jaws

**sP Crustacea:**

Marine, Fresh, Terrestrial

**2 Pair Antennae**

**BIRAMOUS** Appendages-All have endites/exopodites

2 body sections cephalothorax and abdomen (telson)

Abdominal legs are only 1 pair/segment (except Malacostraca)

**sP Chelicerata:** Classes- Merostomata, Arachnida

Marine, Fresh, Terrestrial

**No Antennae**

**SIX Pair of Appendages: Mix Biramous/Uniramous**

First Pair of Apps= **Chelicerae**

Second Pair of Apps = **Pedipalps with exite** acting as a jaw

3-6th (4 pair) = walking legs and have NO exites=UNIRAMOUS

Most have a **PATELLA** Between the femur and tibia

**2 distinct body segments:** Cephalothorax, Abdomen

**Class- Merostomata:** Horseshoe Crabs-show specimens

**Class-Arachnida:**

**O:Scorpiones**

**O:Uropygi** (whip scorpions or vinegaroons)

**O:Amblypygi** (tail-less whip scorpions)

**O:Araneae** (spiders)

SO: Orthognatha: chelicerae move up and down (vertically), e.g. tarantulas

SO: Labidognatha: chelicerae move laterally: horizontally, e.g. true spiders

**O:Opiliones** (daddy long legs or harvestmen)

**O:Acari** (ticks and mites)

**O:Pseudoscorpiones**

**O:Solifugae** (Sun Spiders, Wind Scorpions)

**sP Atelocerata:** Classes-Diplopoda, Chilopoda, Hexapoda

**1 Pair Antennae**

**UniRAMOUS** Appendages-All

**True Mandibles** -well differentiated (entire apps, not just endites on legs, not chelicerae)

**Class Diplopoda:** Millipedes: 2 pr legs/segment:

Short Antennae-7 segments

External Reprod. openings between leg pairs 2-3

Some produce Hydrogen Cyanide!! Do Not Bite.

**Class Chilopoda:** Centipedes: 1pr legs/segment

Long Antennae-14 segments

External Reprod. openings Posteriorly

1st body seg apps = POISON Jaws!

**Class Hexapoda: All Insects and 3 Entognatha Orders**