Class: Diplopoda

- Millipeds
- One pair of short antennae
- Two pairs of walking legs per segment
- Most have between 36 and 400 legs
- Head, chewing mouthparts & cylindrical trunk
- Important soil churners, slow moving
- Rarely feed on horticultural crops
Millepeds

Arthropod Classes
Class: Chilopoda

- Centipedes
- One pair of antennae
- One pair of walking legs per segment
- Most have 24 - 36 legs on long flattened trunk
- First pair of “legs” are venomous fangs
- Posterior legs longer & thicker
- Predaceous (beneficial), fast moving
Centipedes
Arthropod Classes
Class*: Crustacea > Order: Isopoda

- Sow bugs & pill bugs
- Two pairs of antennae – one pair short
- Cephalothorax & flattened abdomen
- 7 pairs of walking legs
- Terrestrial in damp places

* Currently classified as Subphylum: Crustacea > Class: Malacostraca > Order: Isopoda
Sow & pill bugs

Arthropod Classes

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Class: Arachnida > Order: Araneae

- Spiders
- Cephalothorax with fangs or pincers
- Abdomen not segmented
- Abdomen narrowly joined to rest of body
- 8 legged (usually long)
- Predaceous but often unwanted
- Most > 5 mm long when mature

Arachnida: Araneae
Arthropod Classes
Spiders

Arthropod Classes
Class: Arachnida > Subclass: Acari

- Mites
- Cephalothorax (head & thorax combined)
- Abdomen not segmented
- Abdomen broadly joined to rest of body
- 4, 6, or 8 legged; forward legs modified
- Pests, predators, or benign to hort. Crops
- Most < 1 mm long
Mites
Arthropod Classes
Mite damage on bamboo

Arthropod Classes
Mite damage: two-spotted spider mite on miniature rose
**Predatory mites**

*Hypoaspis miles* for fungus gnats

*Amblyseius cucumeris* for thrips

*Phytoseiulus persimilis* for spidermites
Erineum mite causing blistering and trichome hypertrophy on grape
Eriophyid mite spindle galls on basswood (*Tilia*)
Eriophyid mite spindle galls on maple and hazelnut

0.3 mm long
Eriophyid mite damage to yew buds (Taxus ‘Hicksii’) and subsequent distorted growth
Class: Insecta

- Head + thorax + abdomen
- One pair of antennae
- Adults may have wings on thorax
- Thorax with 6 walking legs
- Pests, predators, or benign to hort. Crops
- Insect orders covered (on separate lab review): Coleoptera*, Collembola, Dermaptera*, Diptera, Ephemeroptera, Hemiptera, Homoptera, Hymenoptera*, Isoptera, Lepidoptera*, Orthoptera, and Thysanoptera

* be able to distinguish between larvae of these orders with complete metamorphosis
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