

Lecture #11 – Spiders & Scorpions

I. Ecdysozoans - Molting Invertebrates

II. Arthropoda

A. Synapomorphies

1. **Compound eyes**
2. **Chitinous Exoskeleton**
3. **Jointed Appendages**
4. **Segmented Body**

B. Classification

1. Chelicerata - Scorpions, spiders, mites, sea-spiders, and horseshoe crabs
2. Trilobita - Extinct trilobites
3. Crustacea - Barnacles, lobsters & crabs
4. Uniramia - Insects, centipedes, & millipedes

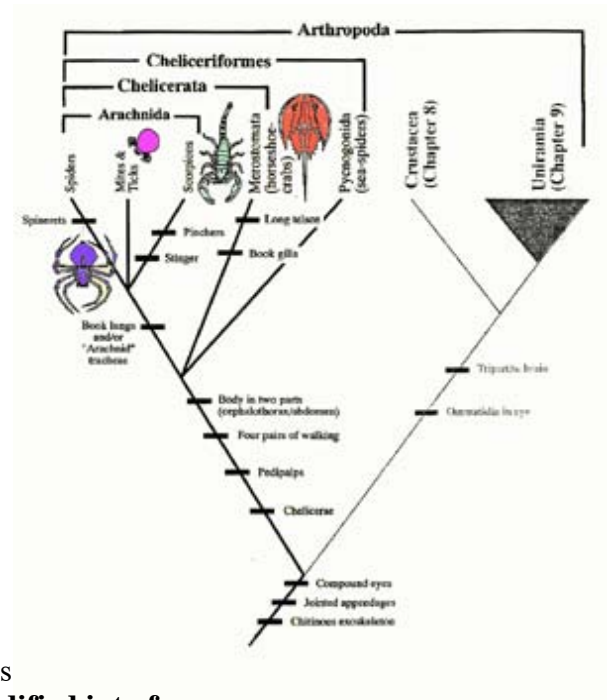
III. Chelicerata

A. Synapomorphies

1. Body divided into two parts
 - a. **Cephalothorax**
 - b. **Abdomen**
2. Four pair of walking legs
3. **Pedipalps**
4. **Chelicerae**

B. Classification

1. Merostomata - Horseshoe Crabs
 - a. Atlantic coast in shallow marine water
 - b. Book gills
 - c. Shell or carapace
 - d. **Telson**
2. Pycnogonida - Sea-spiders
 - a. Long, thin walking legs
 - b. Marine
3. Arachnida - Spiders, Scorpions, Ticks & Mites
 - a. Spiders: Predators with **chelicerae modified into fangs**
 - b. Scorpions: **Pedipalps modified into pinchers**, elongate tail with venom
 - c. Mites and ticks: Mouth parts on **capitulum**, some parasitic



Reading: Chapter 13 – pages 235-245.

Questions: Page 277 – 1, 2, 3, 4, 5, 6, 7 (feeding, webspinning), 8, and 9.