

Outline for Arthropods 2: The Chelicerates

I. Representatives and diversity

II. Features that unite them

a. Segmentation and tagmosis

1. Prosoma

2. Opisthosoma

b. Structures associated with prosoma

1. Chelicerae

2. Pedipalps

3. Walking legs

4. Eyes

5. Mouth

c. Structures associated with opisthosoma

1. Book lungs
2. Gonopore
3. Spinnerets
4. Anus

d. Internal structures

1. Digestive system
2. Circulatory system
3. Book lungs
4. Nervous system
5. Sex organs
6. Silk glands / spinnerets
7. Poison glands

III. Diversity – Orders

- a. Araneae
- b. Acari
- c. Opiliones
- d. Scorpions
- e. Horseshoe crabs

Questions:

1. What is the difference between the prosoma and the opisthosoma?
2. What are chelicerae and pedipalps?
3. How do eyes of spiders differ from those of an insect like a grasshopper?
4. What are book lungs, and how do they function?

5. How does the structure of the digestive system relate to the food that Chelicerates eat?

6. What are spinnerets, and how are they important?

7. Are all chelicerates spiders? Explain.

8. What is unique about the blood of horseshoe crabs?