

Study Guide for Arthropods 3: The Crustaceans

I. Introduction

A. Representatives

B. Species diversity

II. Uniting features

A. Body regions

B. Appendages

1. Sensory

2. Feeding

3. Walking legs

4. Abdominal

5. Uropods and telson

6. How different from chelicerates

7. Biramous nature

C. Eyes

D. Nitrogen removal

E. Carapace and rostrum

III. Internal structures

A. Digestive system

1. Mouth and esophagus

2. Stomachs with gastric mill and hepatopancreas

3. Intestine (sand vein)

B. Circulatory system

1. Heart

2. Arteries

3. Hemocoel

C. Gas exchange

D. Nervous system

E. Reproduction

1. Testes and ovaries

2. Parthenogenesis

3. Nauplius larvae

IV. Diversity

- A. Decapods

- B. Isopods

- C. Amphipods

- D. Cladocerans

- E. Barnacles

- F. Copepods

V. Evolution

- A. Fossil record

- B. Paraphyletic nature

Questions:

1. How do the mouthparts of the crustaceans differ from those of the chelicerates?
2. What is a gastric mill and why is it important?
3. What are the chelipeds and how are they important?
4. How does parthenogenesis relate to the crustaceans
5. What is a nauplius and how is it significant to the crustaceans?
6. Why are the crustaceans paraphyletic?
7. Contrast the isopods and amphipods.
8. How are *Daphnia* important scientifically?
9. How are barnacles different from other crustaceans?
10. Compare the pattern of blood circulation in crustaceans to that of the chelicerates.