

Biology 15.2

Class Crustacea

1. Crayfish, lobster, crabs, Pill bugs (roly polies), Barnacles, etc.
2. Habitat: ubiquitous, mostly salt and fresh water. Some burrow in mud.
3. Organization: Arthropoda body plan: usually with fused head-thorax (Carapace).
 - a. The abdomen is divided into six segments
 - b. legs: 1 pair per body segment
 1. walking legs
 2. swimmerets
 3. uropods (flipper shaped tail)
4. Symmetry: bilateral
5. Integument: exoskeleton of chitin and salts
6. Skeletal system: exoskeleton invertebrate. jointed appendages.
7. Muscle system: mostly striated muscle cells.
8. Movement: swim and/or crawl
9. Nervous system/ Senses: Paired ventral nerve cord, paired ganglions for a brain, Two pairs antennas (smell, touch, taste), Compound eyes, Balance organ (statocyst requires sand grains). Eyes: compound and simple. Regeneration of limbs possible.
10. Behavior/activity: interactive
11. Nutrition: Heterotrophic.
12. Digestive system: Undirectional, Mouth appendages operate horizontally
13. Respiratory system: Gills for respiration
14. Circulatory system: Open circulatory system with an autonomic, single chambered tube heart.
15. Immune system: Innate non-specific and specific to antigen recognition humoral & cellular
16. Excretory system: green glands (nephridia) near the antennae
17. Reproductive system: most are dioecious. Female carries male gametes for 6 months until spring.
18. Life cycle: Larval stages of development from egg to adult.
19. Interesting fact
 - a. The Japanese spider crab has the longest leg span of 13 feet and can weigh up to 45 pounds. The American lobster, though smaller in size, can weigh up to 48 pounds.
 - b. The coconut crab (hermit crab species) is the world's largest terrestrial arthropod. They will drown if submersed in water for too long.
 - c. "Sea-Monkeys" kept as pets are Branchiopods.
 - d. Crustacea are the only arthropods with two pairs of antennae.
 - e. Some have blue blood because of hemocyanin instead of hemoglobin (red).