Life Science 7

Ch 15-2

p388-391

"The Mollusks and Annelid Worms"

Objectives

- Describe the body parts of a mollusk.
- Identify the four main groups of mollusks.
- Describe segmentation.
- Identify the three main groups of annelids.

Phylum Mollusca- general characteristics

- _____ largest animal phylum (100,000 sp)
- Mostly marine, some FW and land sp.
- _____ symmetrical

Phylum Mollusca- general characteristics

- Common structures:
  - _____- composed of calcium carbonate (not present, or reduced in cephalopods)
  - _____- a thick tissue which covers the body, usually secretes the shell
  - _____- "body" of mollusk- contains most of the organs
  - _____- large muscular organ used for locomotion
  - _____- a tongue-like structure with rasping teeth (not present in bivalves)
  - open circulatory system- blood flows through _____

    _____

Advancements of the mollusks

- **true** _____ **present**- usually reduced to cavities surrounding the heart, excretory structures
  - allows separate muscle control of food and body
  - allows space for circulatory system
  - gives support to organism (_____)
  - most of the organs and organ systems present in complex animals present in mollusks

Chitons (Class Polyplacophora)

- chitons- primitive mollusks, segmented shells, lack eyes and tentacles

- _____

The _____ (Class Gastropoda)

- includes _____
- undergo _____- twisting of the body during development
- most have dorsal shell, well developed head and sensory structures
- may be herbivores, parasites, or predators

The _____ (Class Bivalvia)

- includes _____
- possess two-part shell
- usually do not have a head, but do possess a well developed foot
- usually filter feeders (some herbivores)
- rudimentary sense organs present
- some capable of movement (scallops)

The _____ (Class Cephalopoda)

- includes _____
- shell absent in octopus, reduced in squids, present in nautilus
- Well developed sensory system, locomotion
- _____
- predatory
- only mollusks to have _____ **system**- blood is moved through series of vessels
- can change colors to blend in with environment through use of specialized cells (**chromatophores**)

Phylum Annelida-Advancements

- true coelom- similar to molluscs
- *_____- division of the body into repeating segments (= **metamerism**)
  - allows independent _____ control for each segment
  - allows specialization of segments for particular functions

Biology of Annelids

- Locomotion
  - bristle-like **setae**, or projections of body wall called **parapodia**
  - muscles able to work by flexing against the hydrostatic skeleton (fluid filled coelom)

Biology of Annelids

- Nervous System
  - Nerve ganglia (brain) located anteriorly
  - nerves run ventrally and laterally
  - Sensory systems vary among the classes
- Reproductive system
  - typically sexual reproduction
  - some hermaphroditic, others gonochoristic

Biology of Annelids

- Digestive system
  - well developed, complete digestive system
  - may possess specialized organs for more efficient digestion (_____)
- Respiratory system
  - respiration through gills (polychaetes), or through skin (oligochaetes, hirudinians)

Biology of Annelids

- Excretory system
  - each septa contains a pair of _____- excretory structures
- Circulatory System
  - closed circulatory system- blood carried by vessels

Class Polychaeta

- Marine worms (_____)
- possess parapods and setae for locomotion
- well developed heads, eyes, antennae, feelers, etc.

Class Oligochaeta

- _____ some FW worms
- lack parapods, but do have setae (locomotion)
- hermaphroditic
- head not as well developed

Class Hirudinea

- _____
- parasitic, use suckers for attachment to host
- lack setae and parapods
- saliva contains anticoagulants, used for medicinal purposes