6.3 Defining Animals

**Animals distinguished from protozoans by**
- Presence of contractile muscles
- Signal-conducting neurons
- Multicellular bodies
- Collagen

Another distinguishing feature—sexual reproduction
- Many animals sexually reproduce.
  - More energetically costly
  - Meiosis and producing gametes uses energy!

**6.3 Defining Animals**

**Characteristics Used to Distinguish Phyla**
- Symmetry
- Locomotion
- Reproductive methods
- Feeding methods
- Appendages
- Habitat preferences
- Size
- Skeletal characteristics (has one or not, and what kind)
- Symbiotic relationships

I.D. the basic traits of animals
Address different types of body cavities in animals.
Orient to the subcategories of the benthic zone.
Compare and contrast all of the worm-like phyla to be examined.
Recognize the different types of fauna that live on and in sediment in the offshore areas/neritic benthos.
6.5 Marine Acoelomates and Pseudocoelomates

Coelom - Fluid filled body cavity

Categorized as:
- **Acoelomates**—no internal body cavity between body wall and digestive tract
- **Pseudocoelomates**—poorly developed cavity
- **Coelomates**—internal body cavity between body wall and digestive tract; distinct compartmentalization of body cavity

Marine Acoelomates and Pseudocoelomates

**Representative worm-like phyla**

A. Flatworm
B. Ribbon worm
C. Gastrotrich
D. Kinorhynch
E. Round worm

**Spatial Distribution**

**Benthic** organisms
> **Epifaunal:** often move on the sea bottom:
> **Infaunal:** beneath its surface
> **Benthic:** remain just above the bottom
Meiofauna* pg (150-151 HW)
Some of the most abundant organisms in the sea.

…………….Live between the sand grains

- 45 μm to 1.0 mm, so very tiny
- Susceptible to pollution that settles into the sediments where they live.
- Under your feet when you go to the beach, or just off shore.

* Also known as Interstitial animals. Intermediate between megafauna and microfauna

Marine Coelomates
Phylum Annelida
- Worms—earthworms, leeches, polychaetes
- Large, diverse group
- Most common in terrestrial environment (earthworms)
- Commonly known in the marine environment as *polychaete* worms

Ready for weird?
OSEDAX WORM
INN KEEPER WORM
https://youtu.be/vqQhdCszsnpY

How about beautiful?
CHRISTMAS TREE WORMS
Outrageous worms
Hold onto your goggles!

https://www.mnn.com/earth-matters/animals/blogs/lady-gaga-has-nothing-on-these-bizarre-marine-worms