Invertebrates I

Marine Biology - LBCC

- 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.

6.3 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

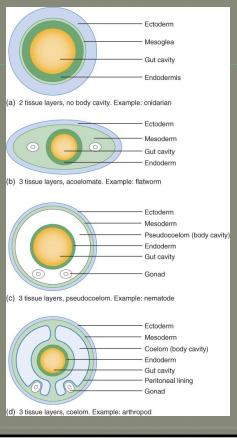
6.5 Marine Acoelomates and Pseudocoelomates

Coelom - Fluid filled body cavity

Categorized as

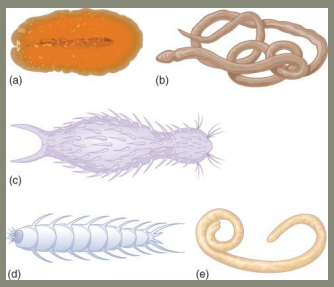
- **Acoelomates**—no internal body cavity between body wall and digestive tract
- **Pseudocoelomates**—poorly developed cavity
- **Coelomates**—internal body cavity between body wall and digestive tract; distinct compartmentalization of body cavity

Coelom Types



Marine Acoelomates and Pseudocoelomates

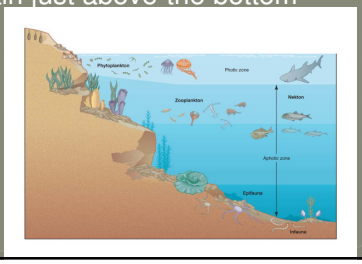
Representative worm-like phyla



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

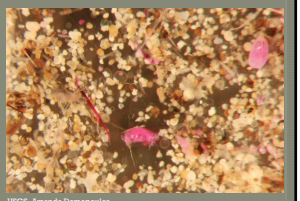


Meiofauna* pg (150-151 HW)

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.



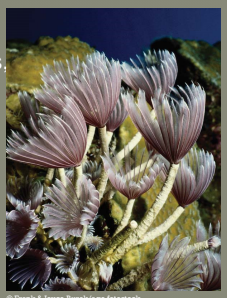
USGS, Amanda Demopoulos

* 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



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Ready for weird?

OSEDAX WORM

INN KEEPER WORM

https://youtu.be/vqQhdCssnpY

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