

Animal Kingdom Classification

As we know biological kingdom **Animalia** are multicellular eukaryotic organisms that consume organic material, breathe oxygen, are able to move, reproduce sexually, and grow from a hollow sphere of cells. This kingdom consists of **eight** phylum and they are as follow:

1-Phylum Porifera

Characteristics of Phylum Porifera:

- a) They have pores
- b) Are marine
- c) Some live in fresh water or the ocean
- d) Non-motile, meaning they are "attached"
- e) They filter feed
- f) Asymmetrical (radial)
- g) Diploblastic containing 2 germ layers: endoderm and ectoderm
- h) Reproduce sexually and asexually
- i) Have collar cells (choanocytes)
- j) Possess spicule - make up the skeleton
- k) Have one opening
- l) Cell level organization

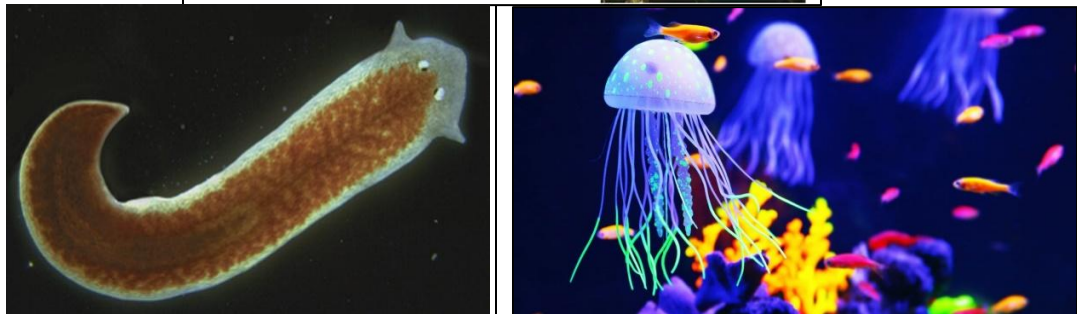
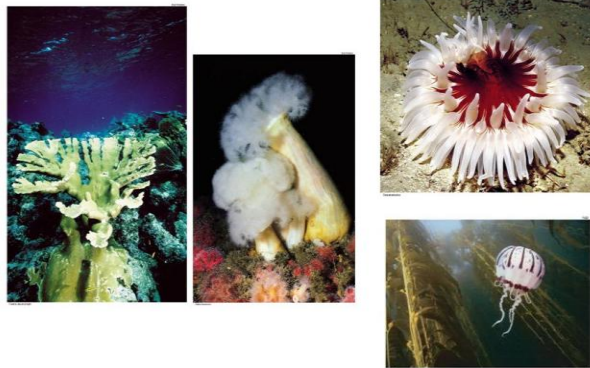


Examples: bath sponge, finger sponge, basket sponge, grantia

2-Characteristics of Phylum Coelenterata (Cnidaria)

- a) Live in ocean water
- b) Radial symmetry
- c) Diploblastic
- d) Possess stinging cells (nematocysts)
- e) non-motile
- f) Extracellular digestion
- g) Tissue level organization
- h) Examples of the Hydrozoa class would be Hydra, Obelia, and Portugese Man-O-War
- i) Example of the class Scyphozoa would be the Jellyfish.
- j) Examples of the class Anthozoa would include the sea fan, sea anemone, and the coral

Corals, Anemones, Sea Fans, and Jellyfish -
Aquatic Stinging Nettles



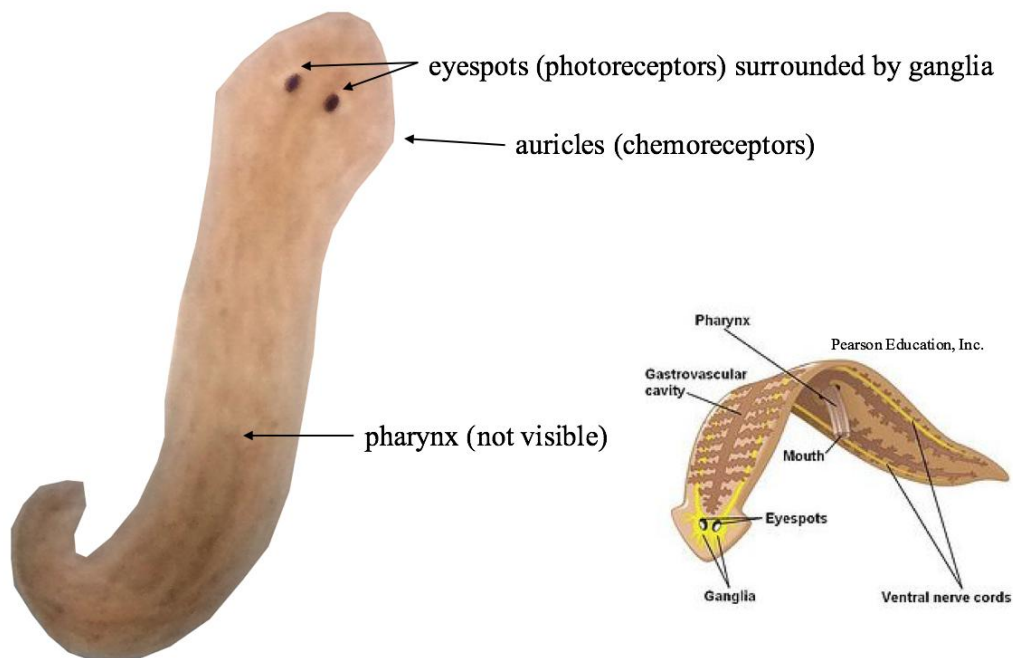
3-Characteristics of the Phylum Platyhelminthes---> Flat Worms

- a) Bilateral Symmetry
- b) Triploblastic
- c) Flattened dorso ventrally
- d) Excretory system with flame cells (protonephridia)
- e) Most forms are parasitic
- f) Most species are hermaphroditic-male and female sex organs present

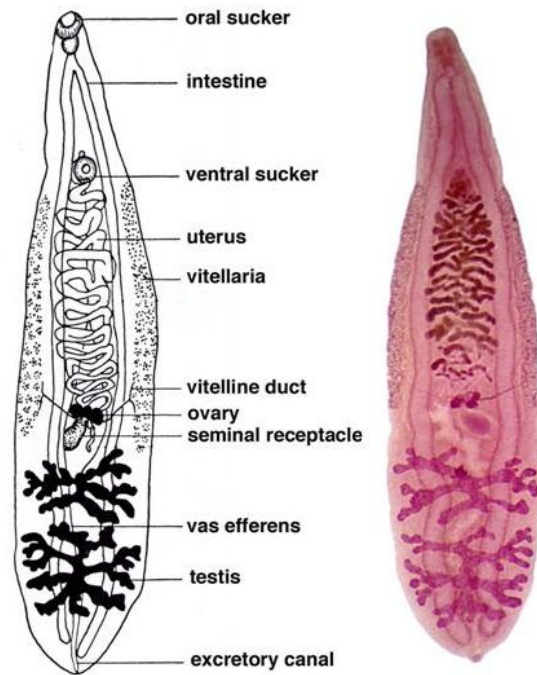
Planaria

3 classes to know:

1. An example of class Turbellaria is the Planaria.



2. Examples of the Class Trematoda, which are **parasitic**, are flukes & liver flukes.

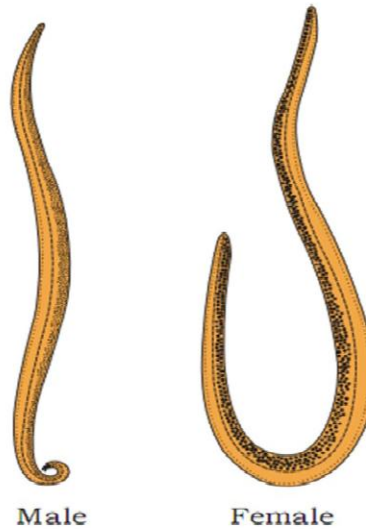


3. Examples of Class Cestoda, which are **parasitic**, are the tapeworms.



4-Characteristics of the Phylum Nematode(Nemathelminthes)---> Round Worms

- a) Pseudocoelom present
- b) Bilateral Symmetry
- c) Triploblastic
- d) Non metameric (no segments)
- e) Dieocious- male or female sex organs present
- f) Examples: Horse Hair Round Worm, Ascaris (Round worm).



Ascaris

5-Characteristics of Phylum Annelida--> The Segmented Worms

- a) tube within a tube body plan
- b) live in water and on land
- c) Segmented with repetitive parts
- d) Bilateral symmetry
- e) Triploblastic
- f) Several well developed systems: digestive, nervous, excretory, circulatory, and reproductive

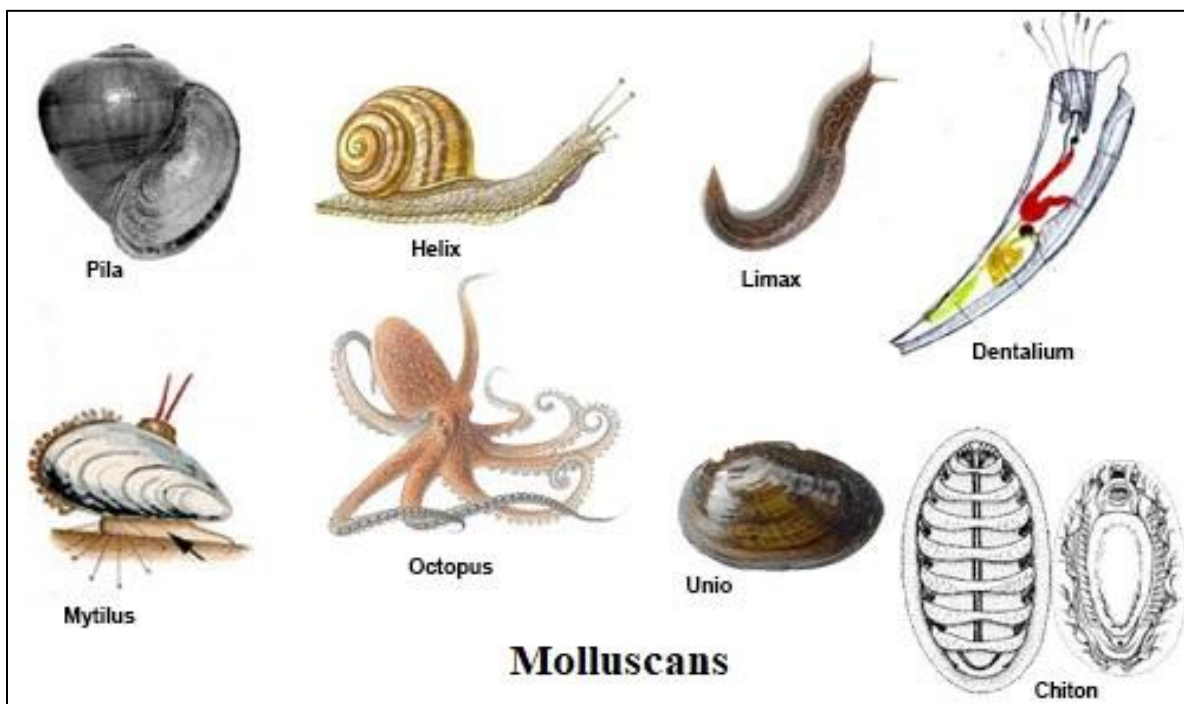
g) Examples in the Phylum Annelida include the Earthworm, Leech.



Leech

6-Characteristics of the Phylum Mollusca--Soft Body Animals

- a) A soft body usually covered by a dorsal calcareous shell.
- b) A broad flat muscular foot located ventrally which can be used for locomotion.
- c) Has a mantle to protect the visceral mass
- d) Examples include Chiton, Snails, Slugs (without shells), clams, mussels, oysters, octopus (without shell), squid (without shell), chamber nautilus, conch, abalone







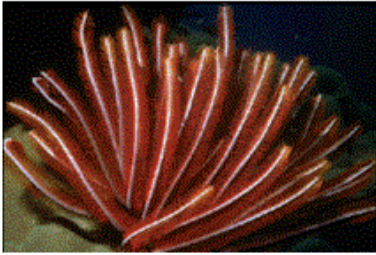
7- Characteristics of the Phylum Arthropoda

- a) Joint footed
- b) Body is segment
- c) Exoskeleton (made of chiton)
- d) Specialized mouth parts
- e) Simple (single image)/compound (multiple images) eyes
- f) Gas exchange (Respiration)
- g) Excretory glands
- h) **Examples of the class Crustacea** include the Lobster, Crayfish, Shrimp, Crab, and Sow bug
- i) Examples of the class Insecta include the Grasshopper, Flies, Bees, Wasps, Hornets, Butterfly, Beetles, Praying Mantis, and Waterbug.
- j) Examples of the class Arachnida are the Spiders, Ticks, Scorpions, and Brown Recluse (spider).



8- Characteristics of the Phylum Echinodermata:

- a) Pentaradially symmetry
- b) All live in water (marine) ocean
- c) Possess a water vascular system (madreporite)
- d) Spiny Skin
- e) Examples in the phylum Echinodermata are Starfish (sea star), Brittle star, Sand Dollar, Sea Urchin, and Sea cucumber.

 <p style="text-align: center;">starfish</p>	 <p style="text-align: center;">sea urchin</p>	 <p style="text-align: center;">sand dollar</p>
 <p style="text-align: center;">sea cucumbers</p>	 <p style="text-align: center;">sea lilies</p>	<p style="text-align: center;">*Echinoderms means “hedgehog skin.”</p>