


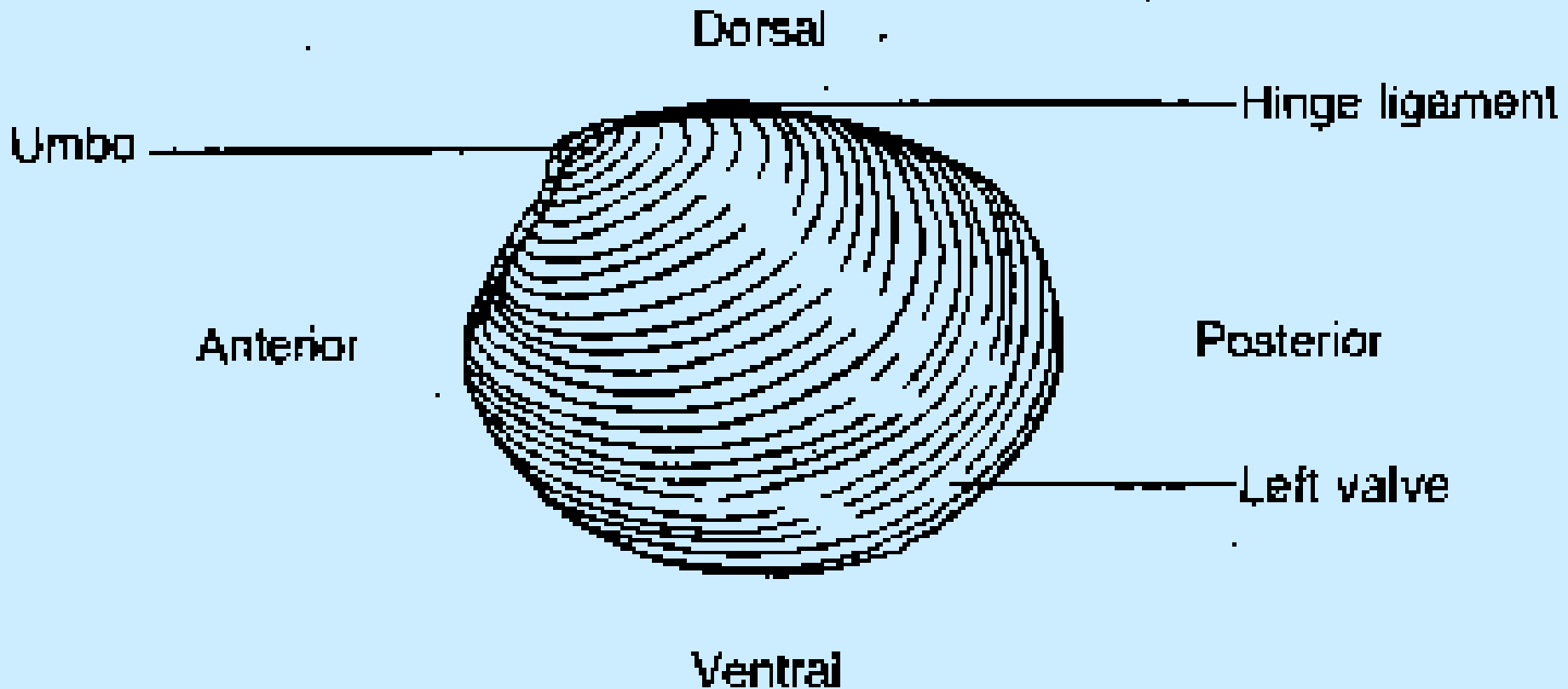
# The Clam Dissection

A close-up photograph of a clam resting on a vibrant pink, porous coral structure. The clam's shell is light-colored with distinct concentric growth lines. The background is dark and out of focus, showing more of the coral reef environment. The text "The Clam Dissection" is overlaid in white, centered on the image.

# Taxonomy and General Info

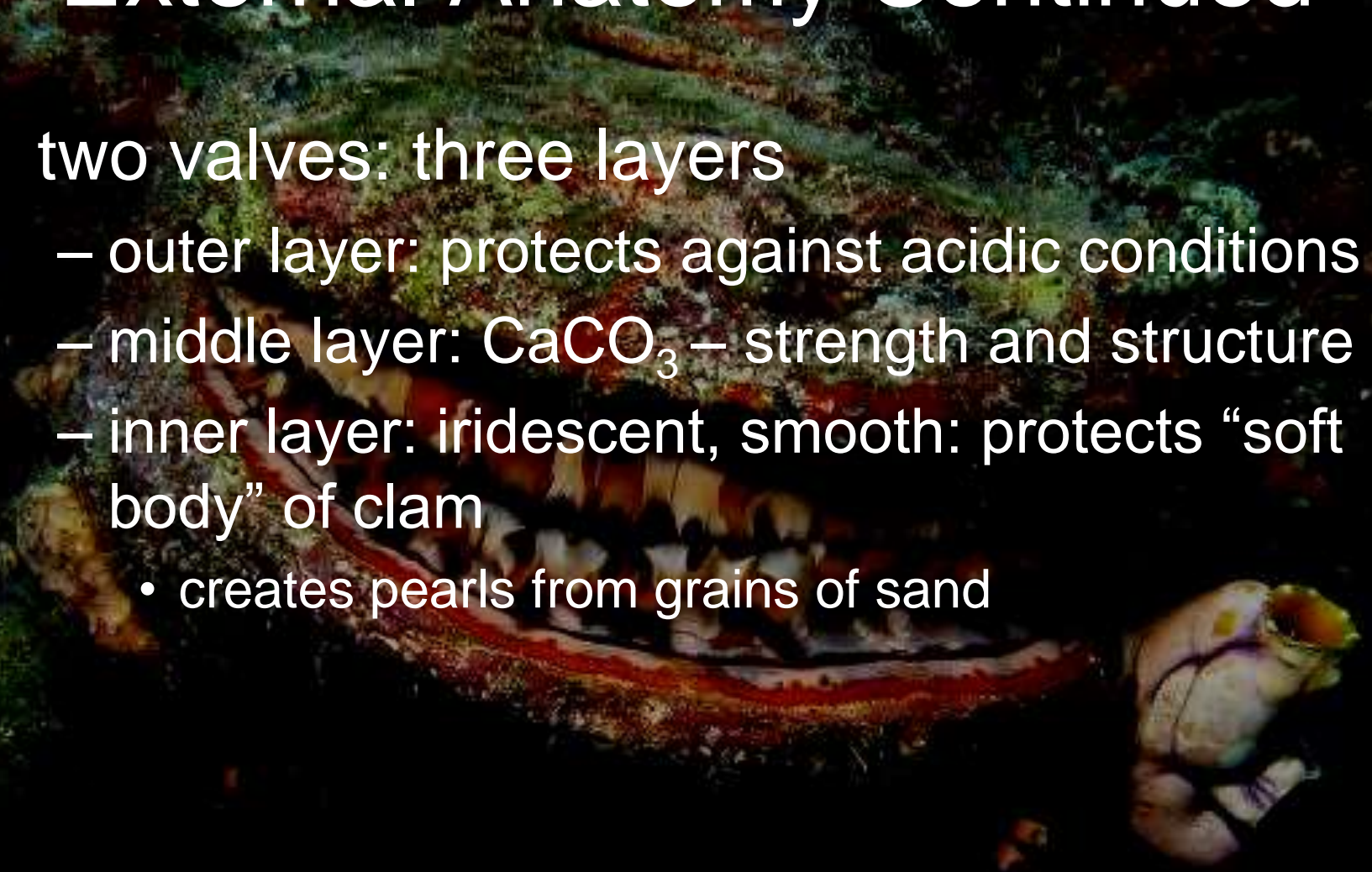
- Kingdom Animalia
    - Phylum Mollusca – “soft body”
      - Class Bivalvia – “two valves”
  - Clams are sessile
  - Clams are filter feeders
- 
- A large, brown, conical clam shell is shown resting on a sandy beach. The shell has a distinct, darker, concentric band near the top. The background is a textured, light-colored sand surface.

# External Anatomy

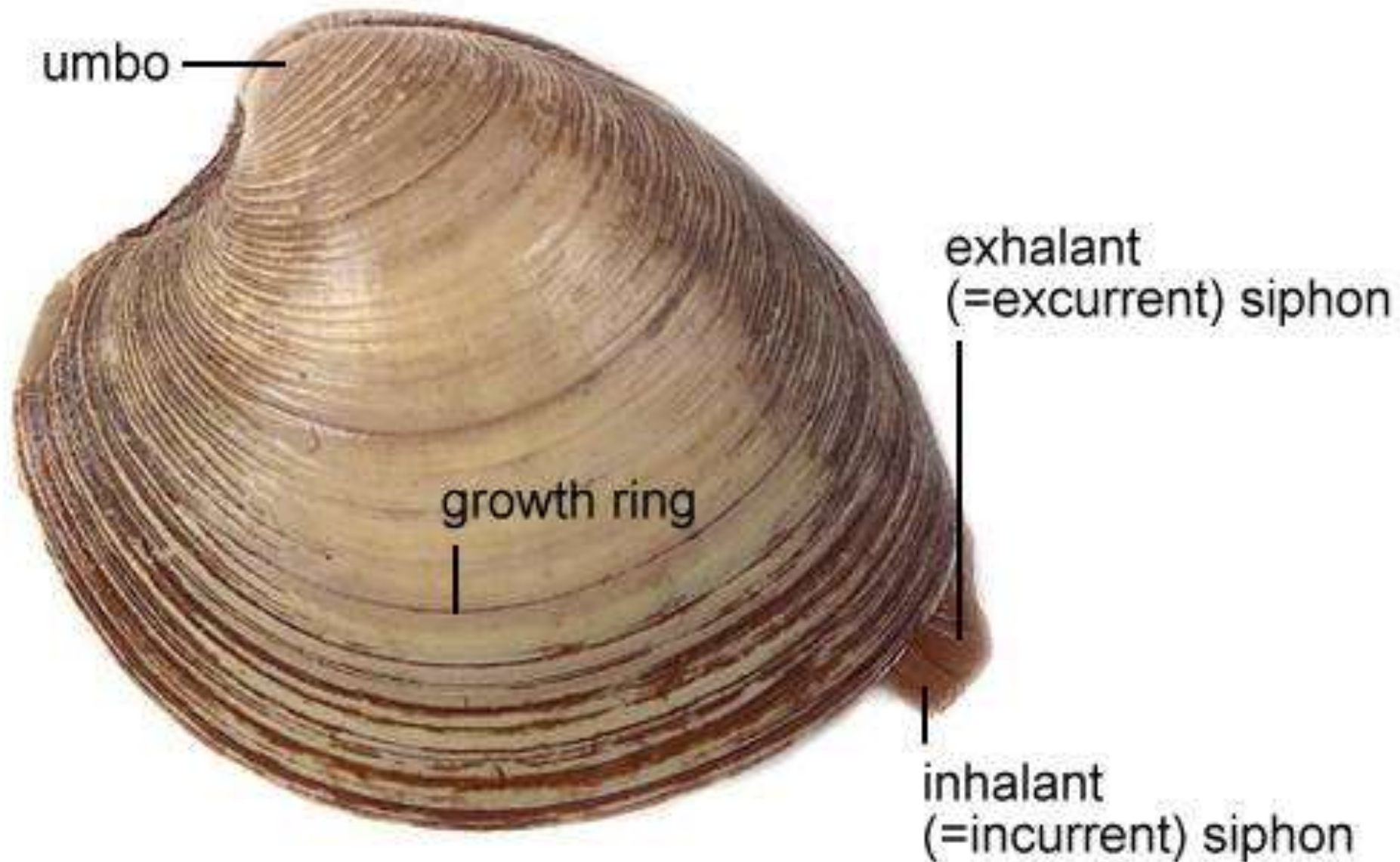


# External Anatomy Continued

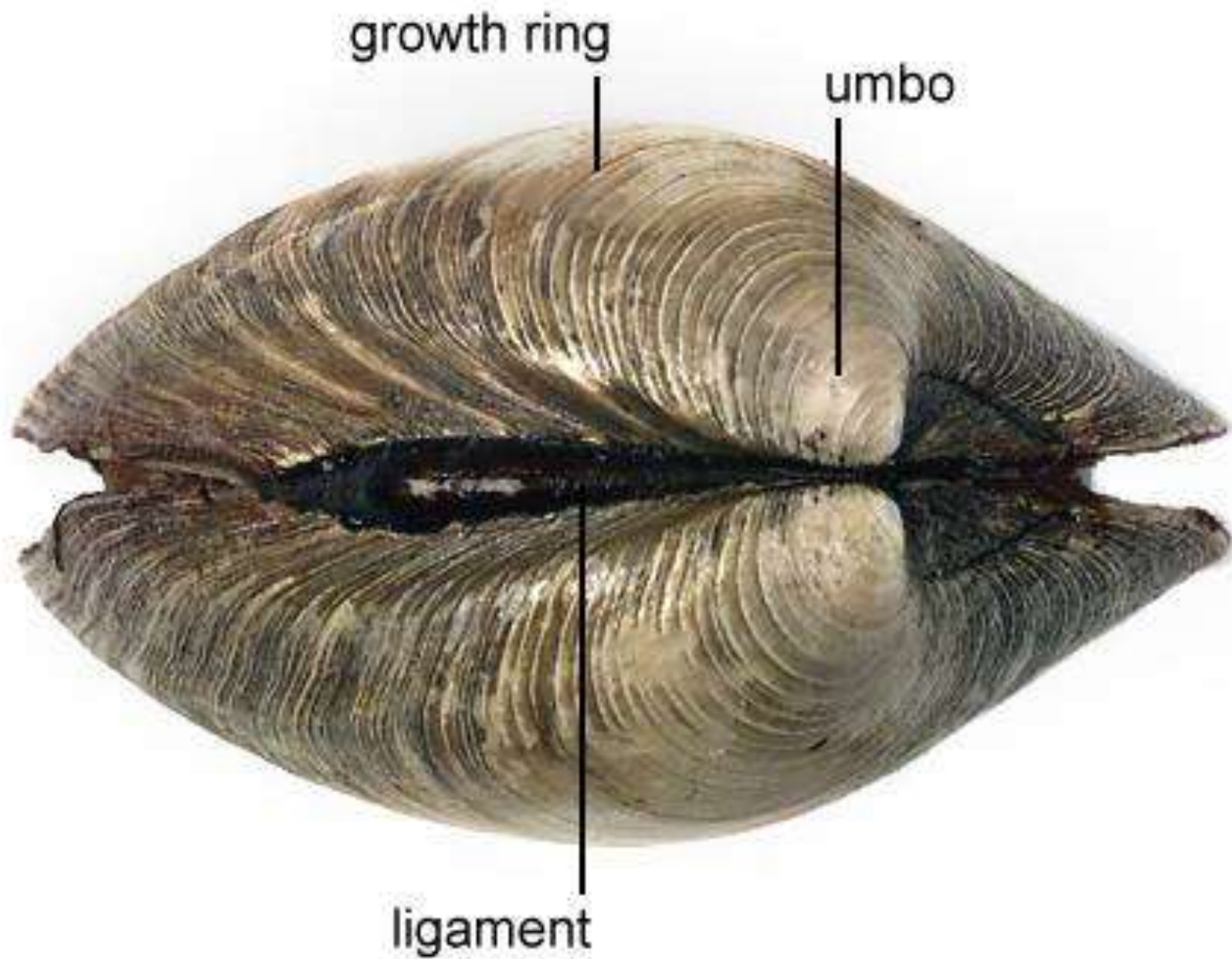
- two valves: three layers
  - outer layer: protects against acidic conditions
  - middle layer:  $\text{CaCO}_3$  – strength and structure
  - inner layer: iridescent, smooth: protects “soft body” of clam
    - creates pearls from grains of sand



# Clam - External Features



# Clam - External Features

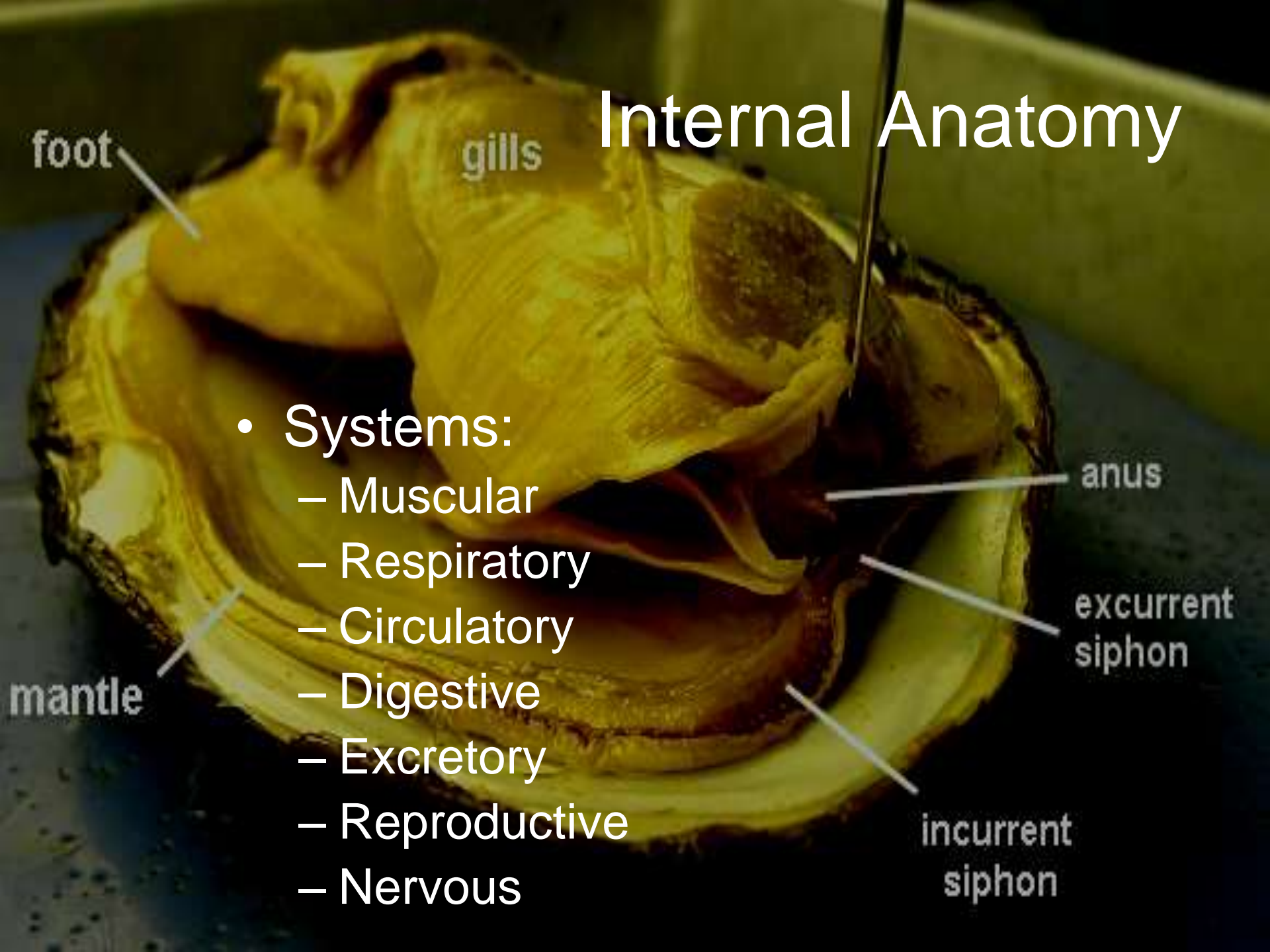


# Open Sesame



- use scissors to cut connection of posterior and anterior adductor muscles
- pull open with fingers

# Internal Anatomy



- **Systems:**

- Muscular
- Respiratory
- Circulatory
- Digestive
- Excretory
- Reproductive
- Nervous

anus

excurrent  
siphon

incurrent  
siphon

foot

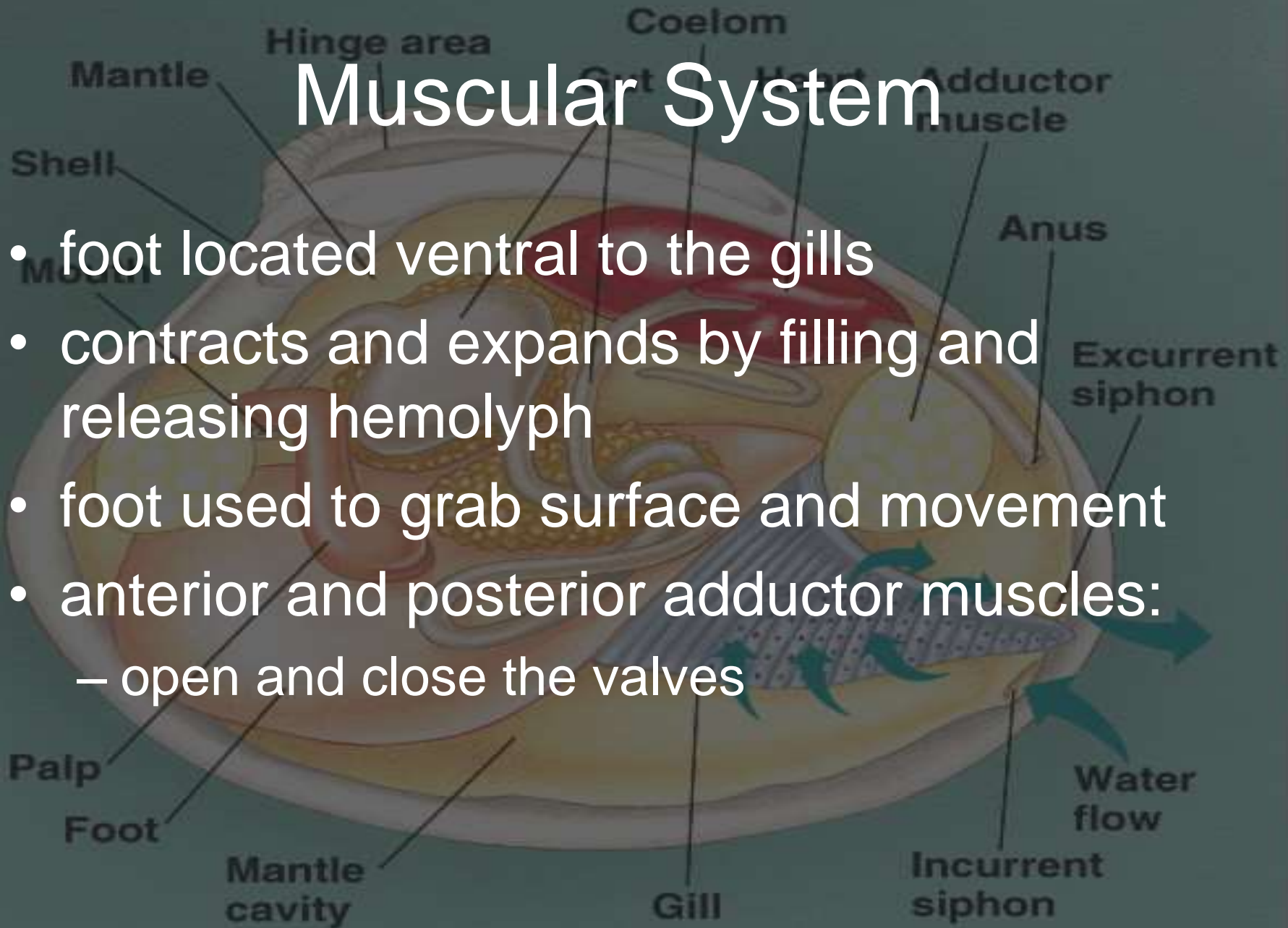
gills

mantle



# Muscular System

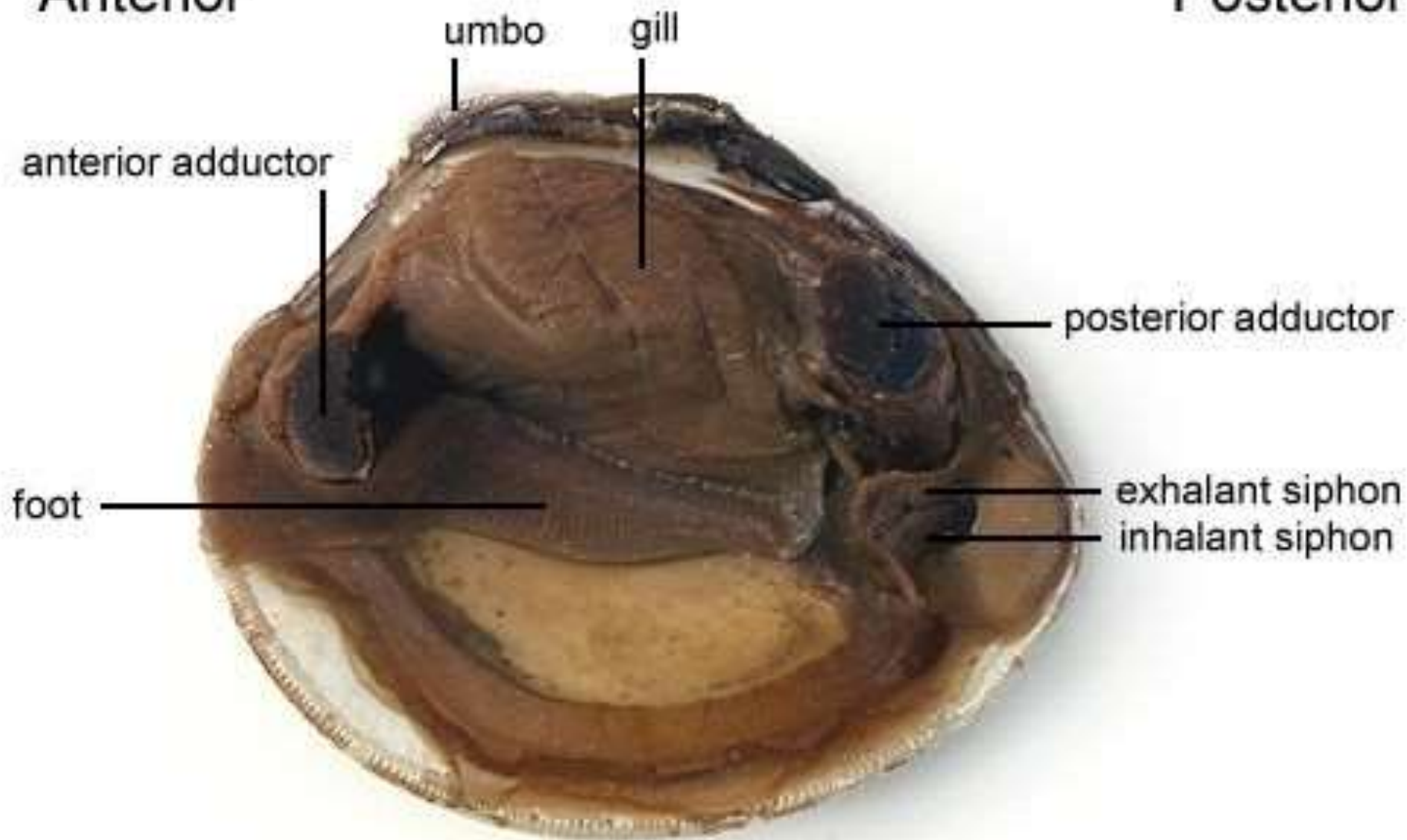
- foot located ventral to the gills
- contracts and expands by filling and releasing hemolymph
- foot used to grab surface and movement
- anterior and posterior adductor muscles:
  - open and close the valves



# Clam - Left Valve Removed

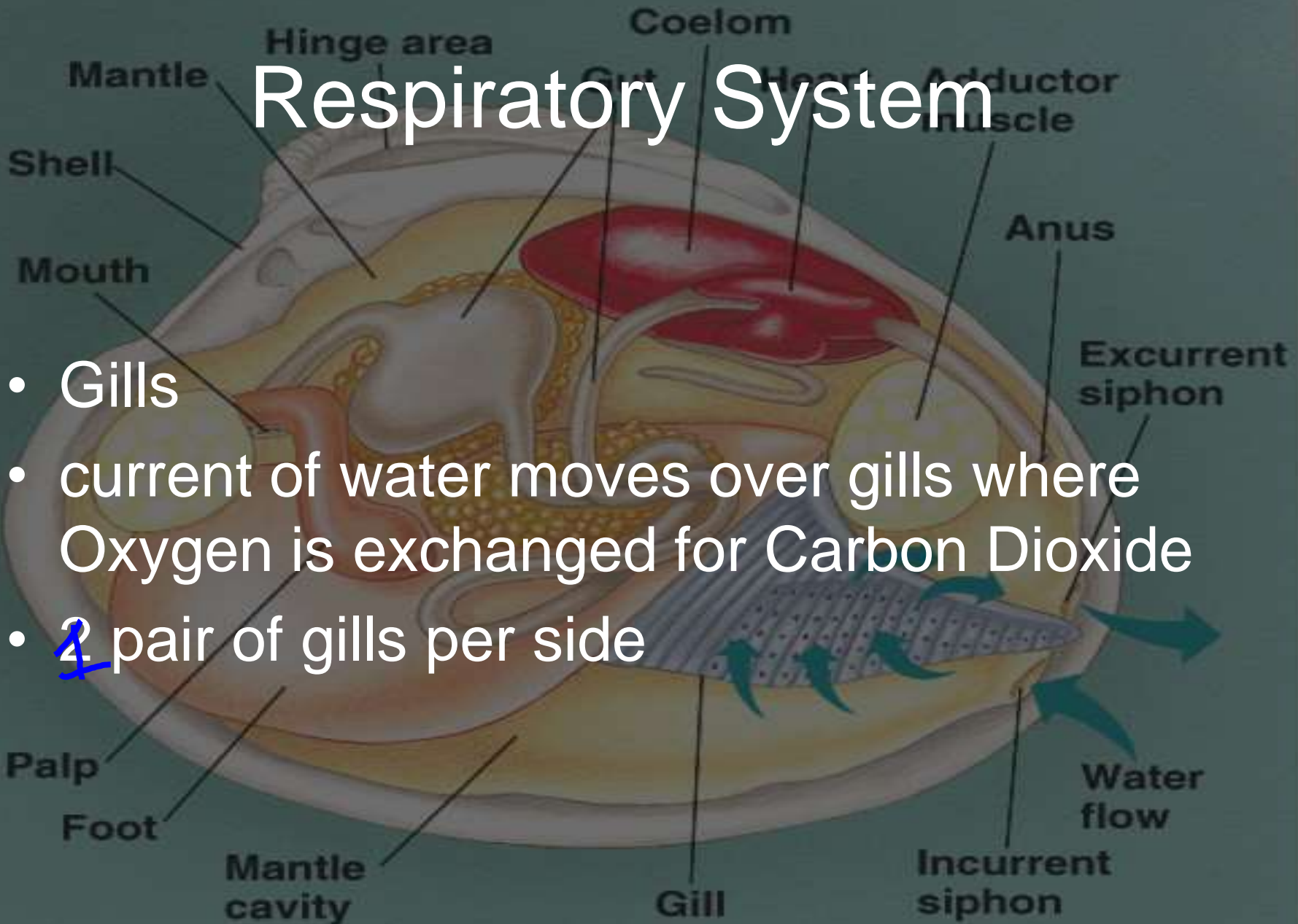
Anterior

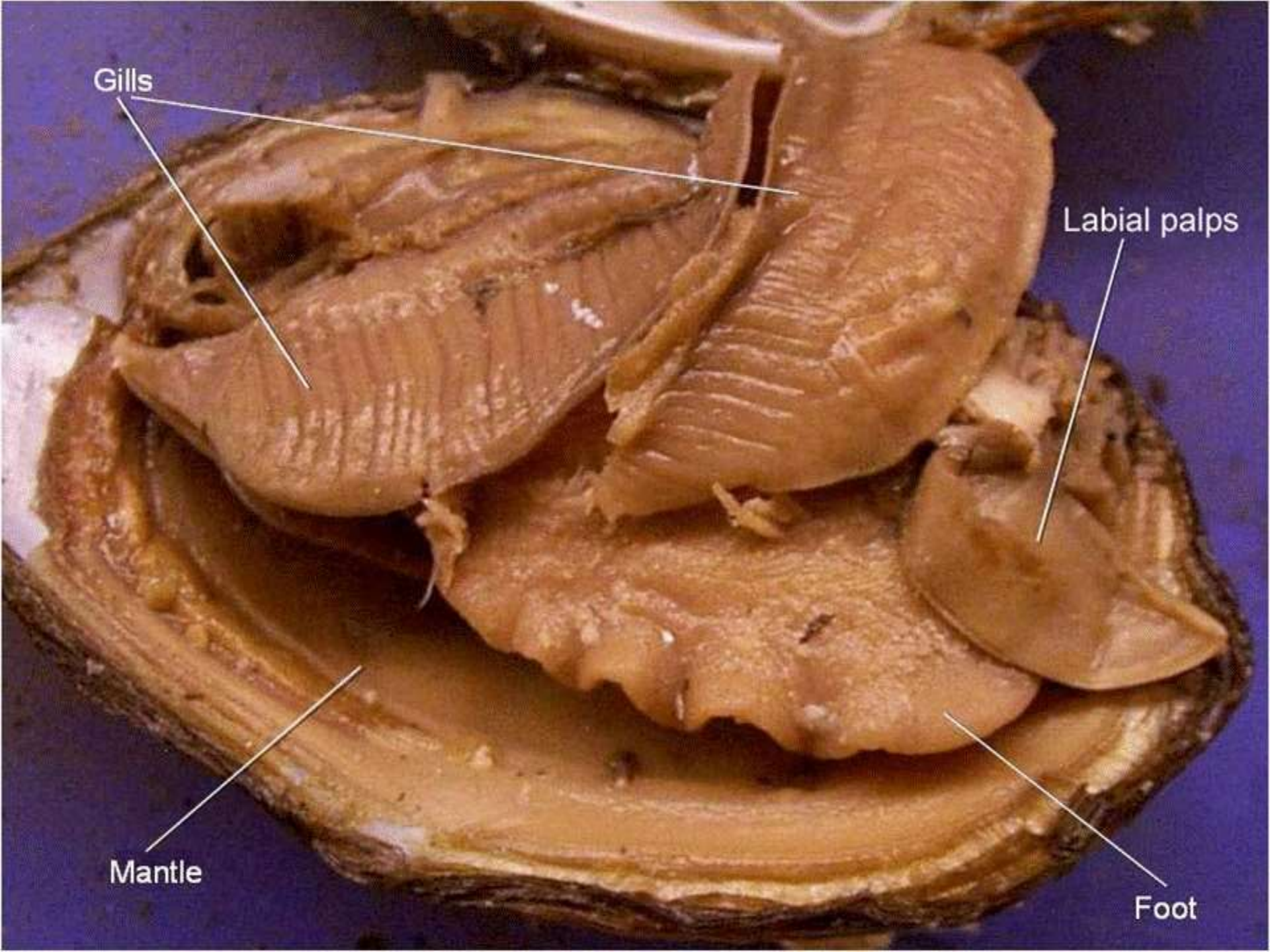
Posterior



# Respiratory System

- Gills
- current of water moves over gills where Oxygen is exchanged for Carbon Dioxide
- 2 pair of gills per side





Gills

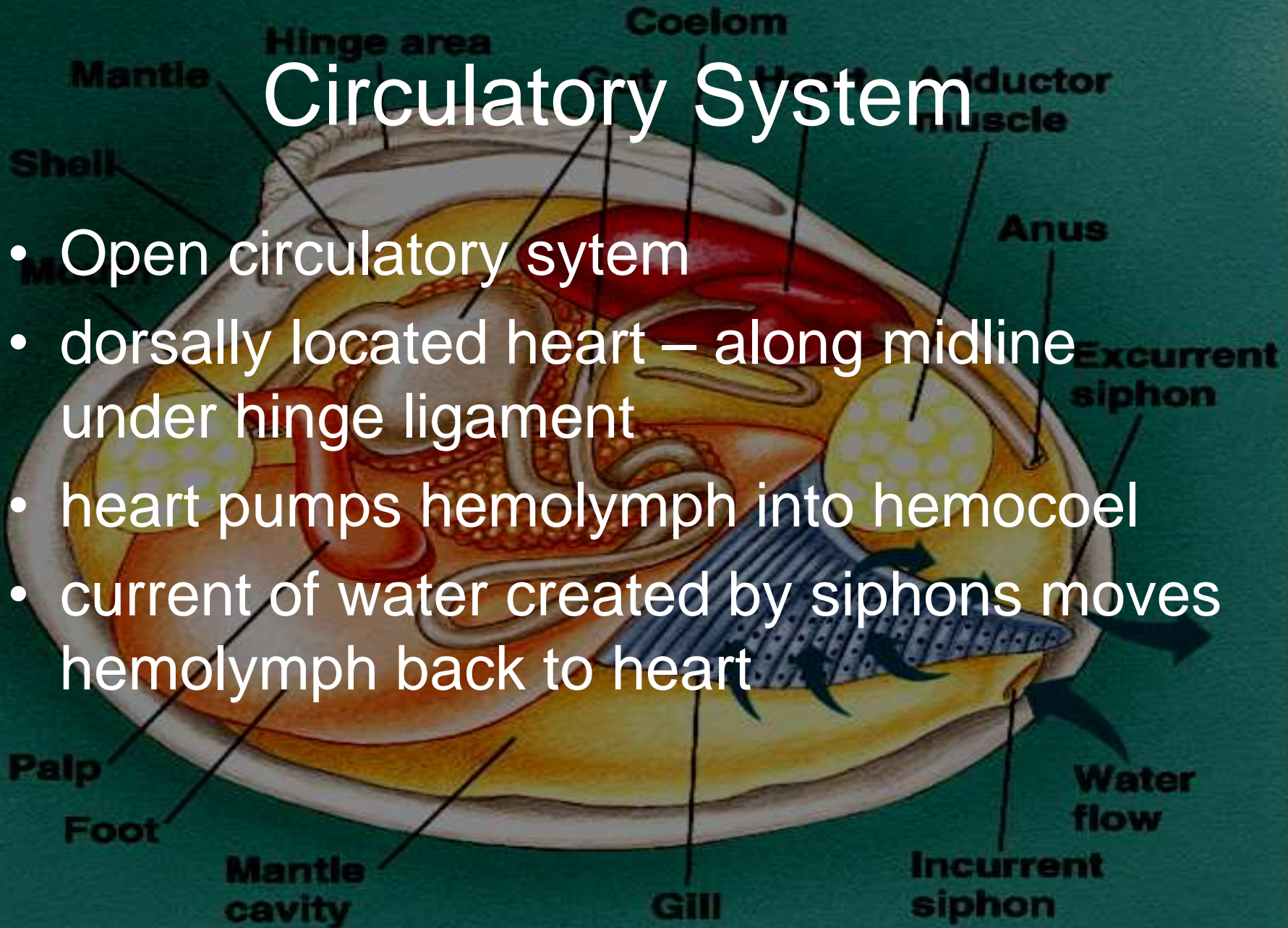
Labial palps

Mantle

Foot

# Circulatory System

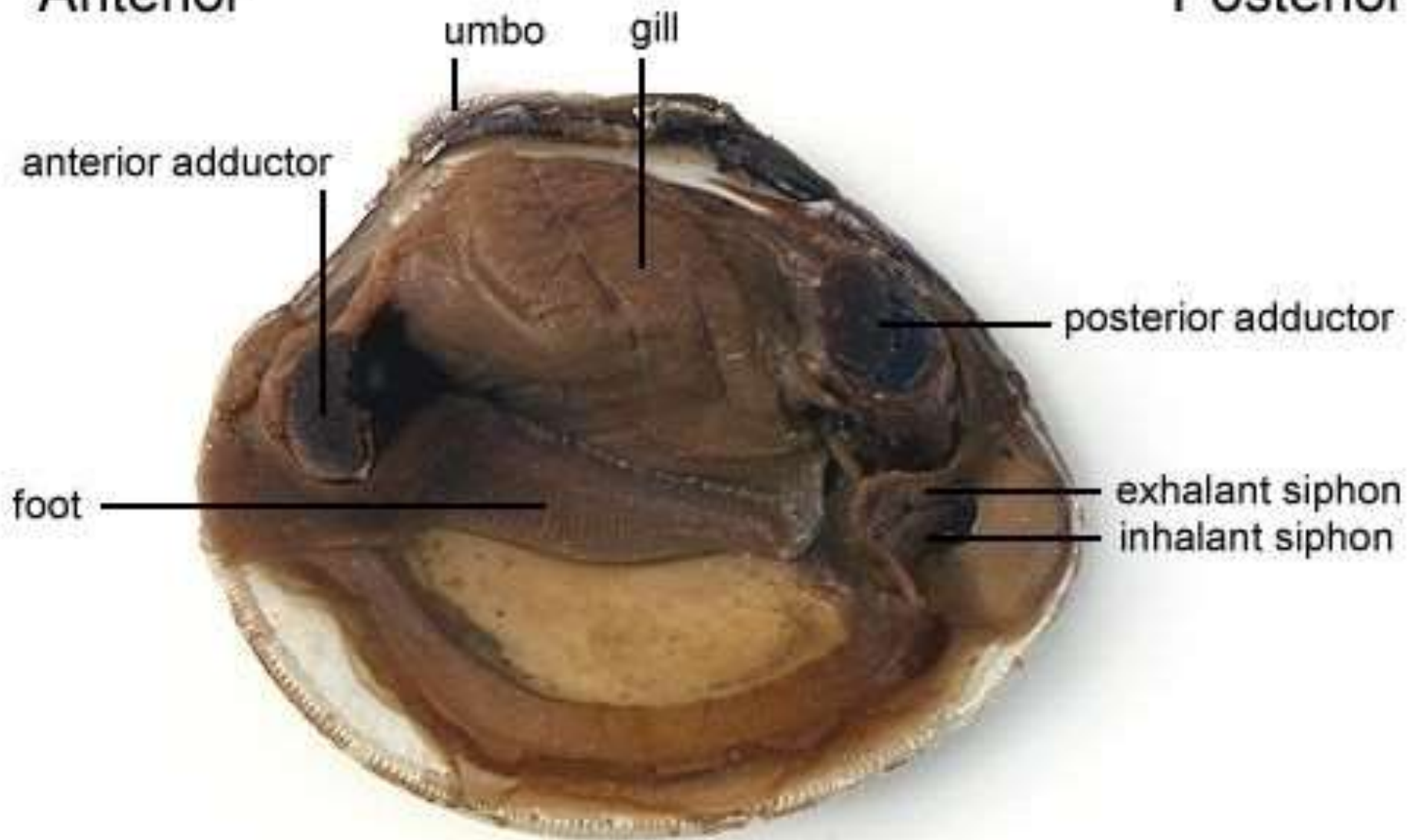
- Open circulatory system
- dorsally located heart – along midline under hinge ligament
- heart pumps hemolymph into hemocoel
- current of water created by siphons moves hemolymph back to heart

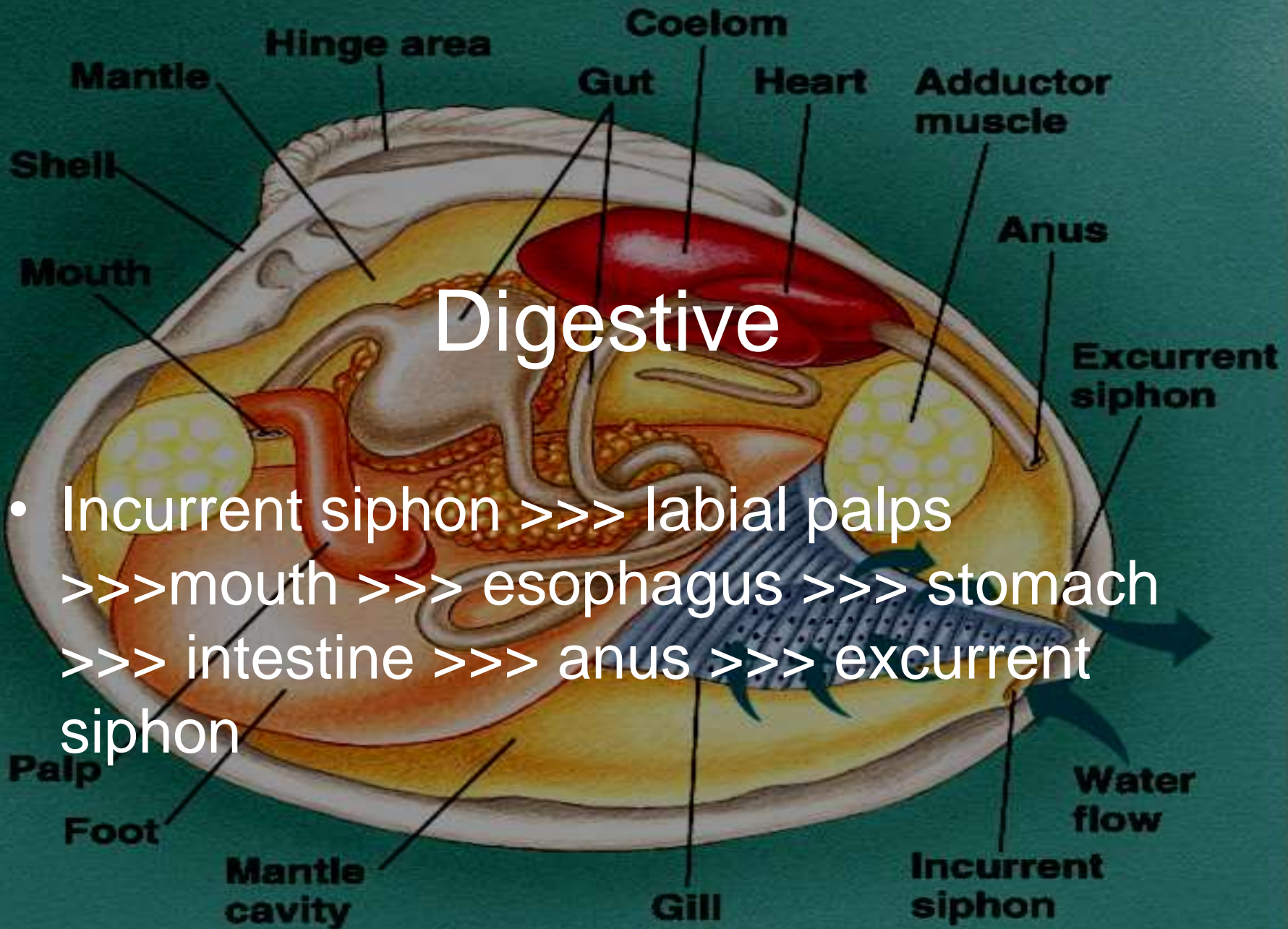


# Clam - Left Valve Removed

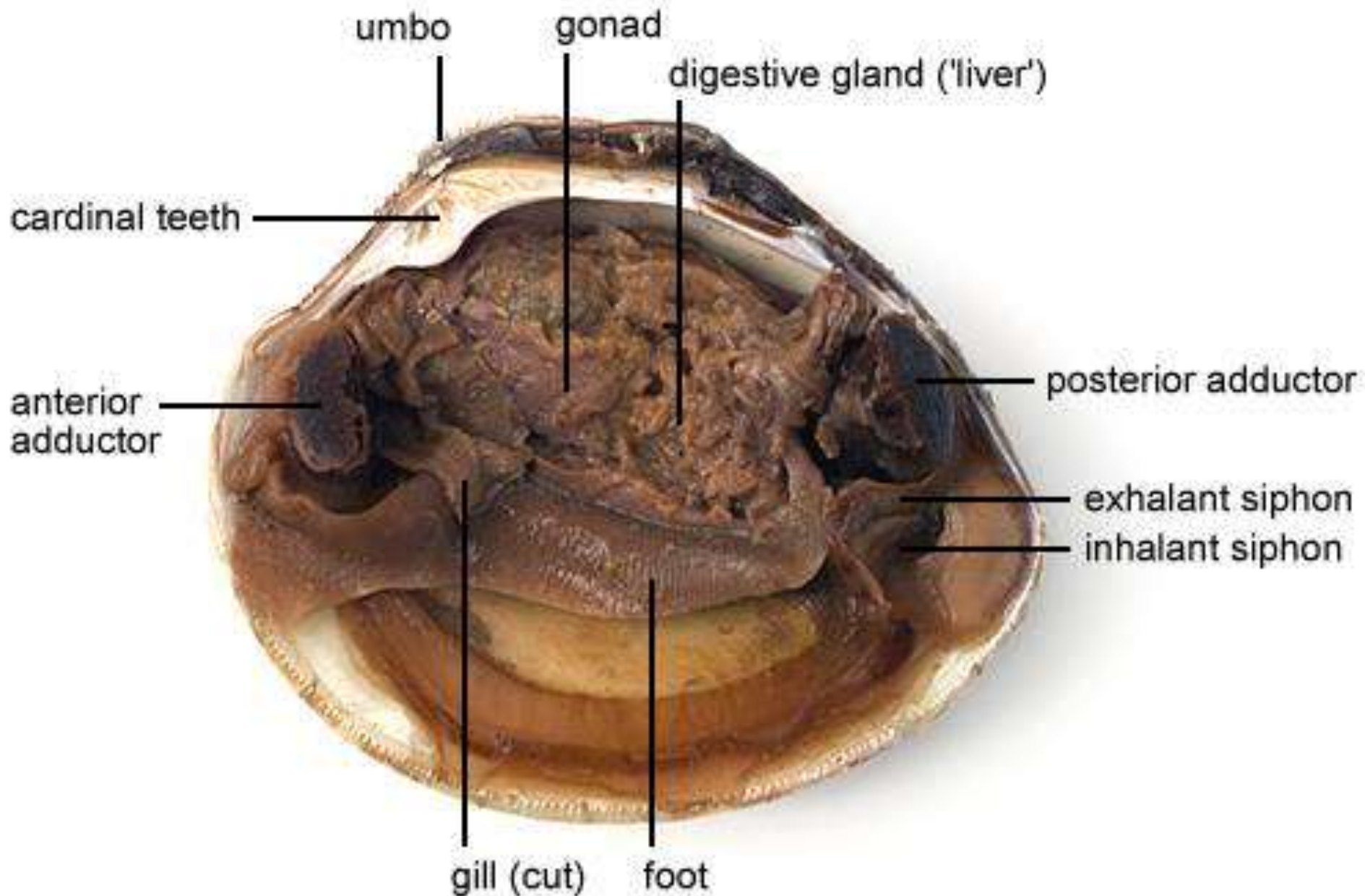
Anterior

Posterior





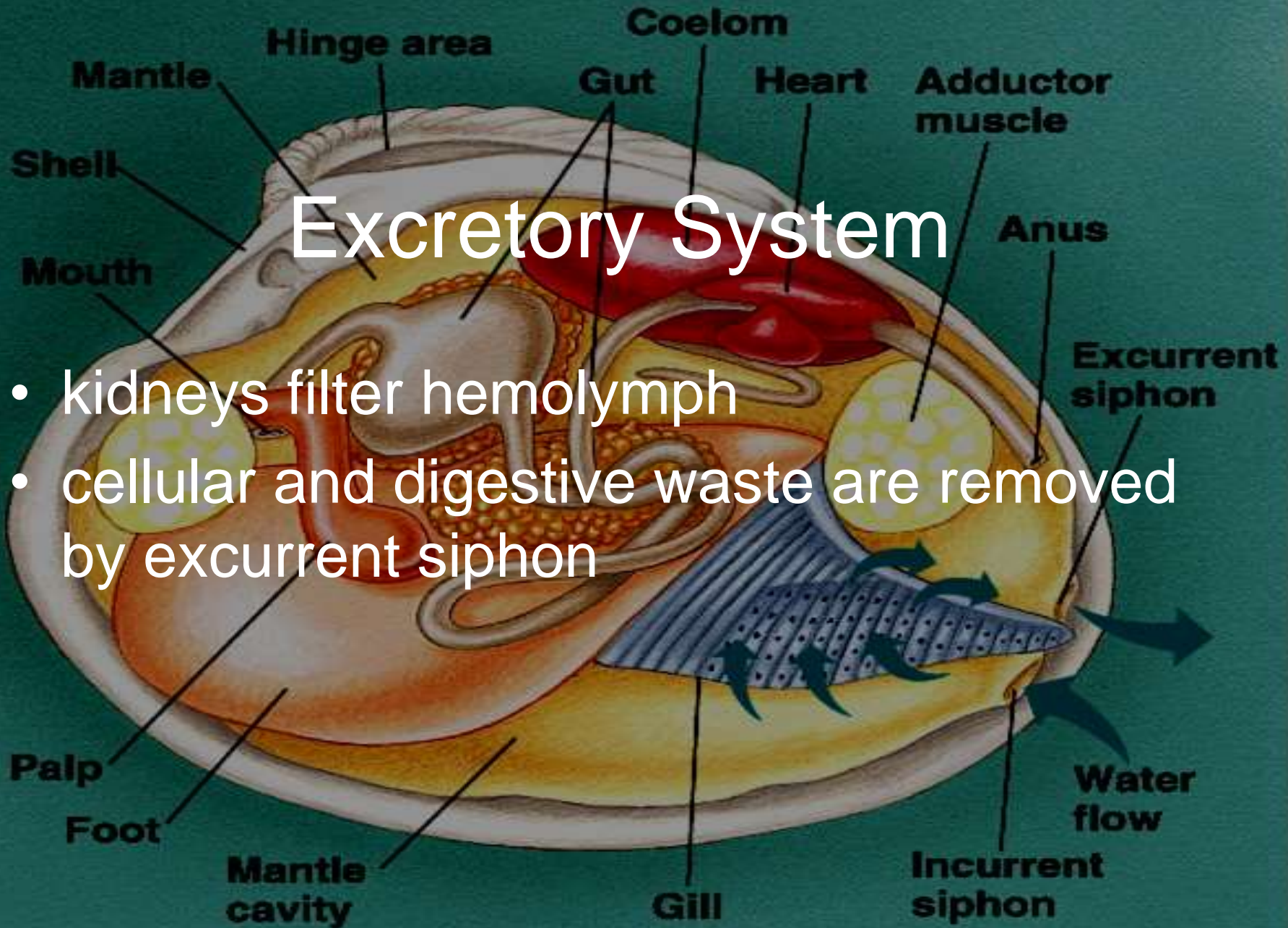
# Clam - Internal Features



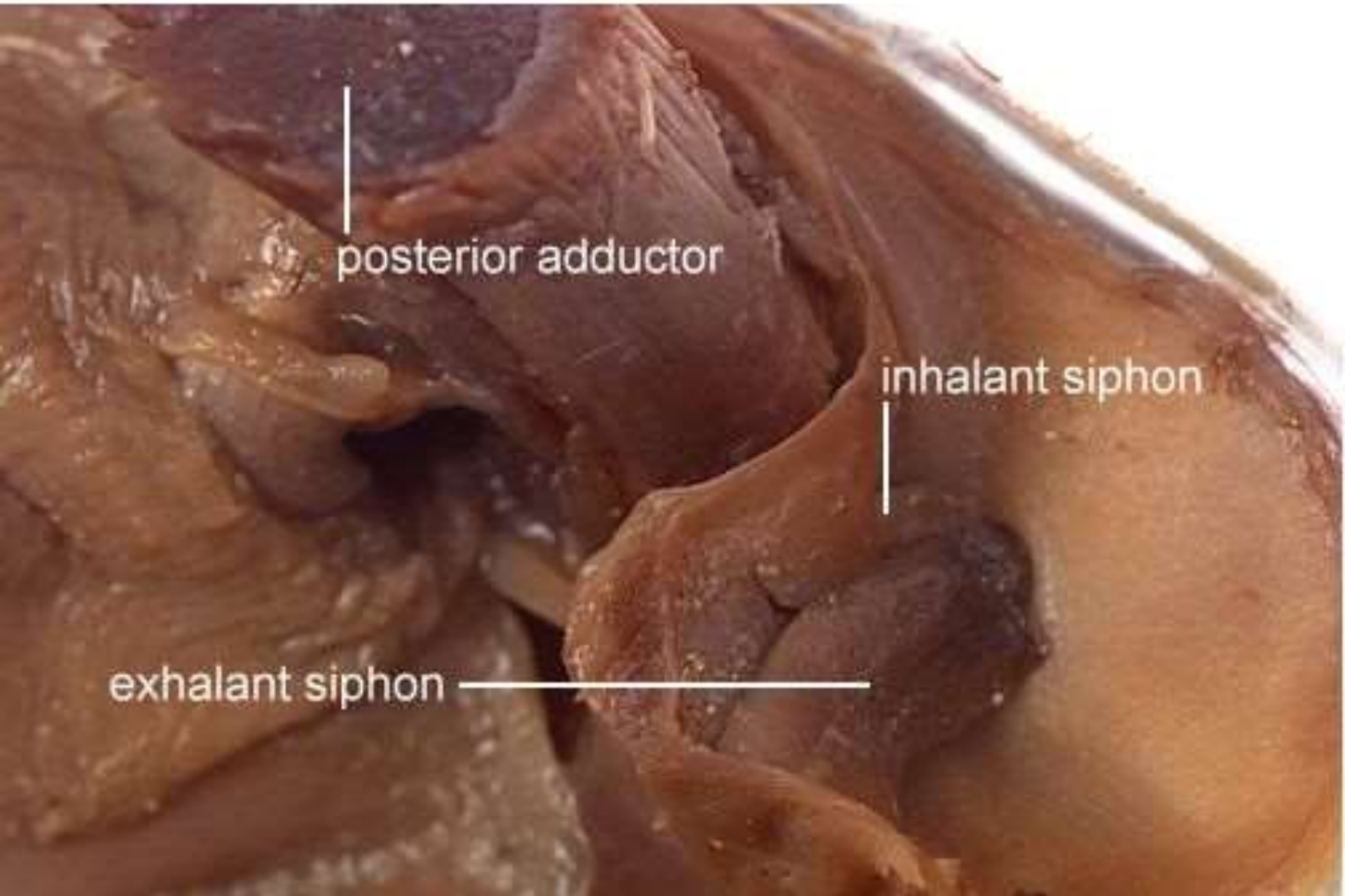


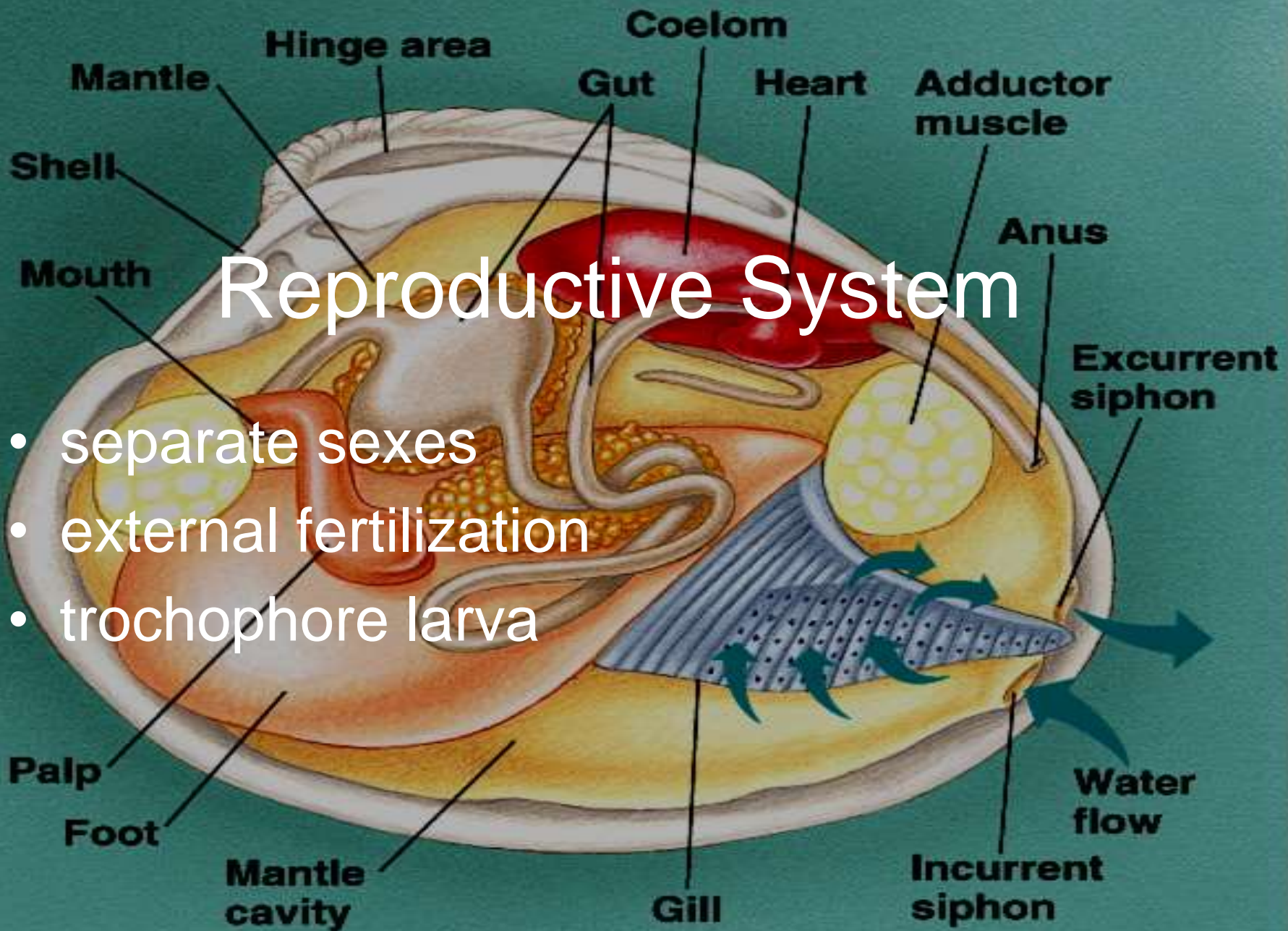
# Excretory System

- kidneys filter hemolymph
- cellular and digestive waste are removed by excurrent siphon



## Clam - Siphons (Close Up)

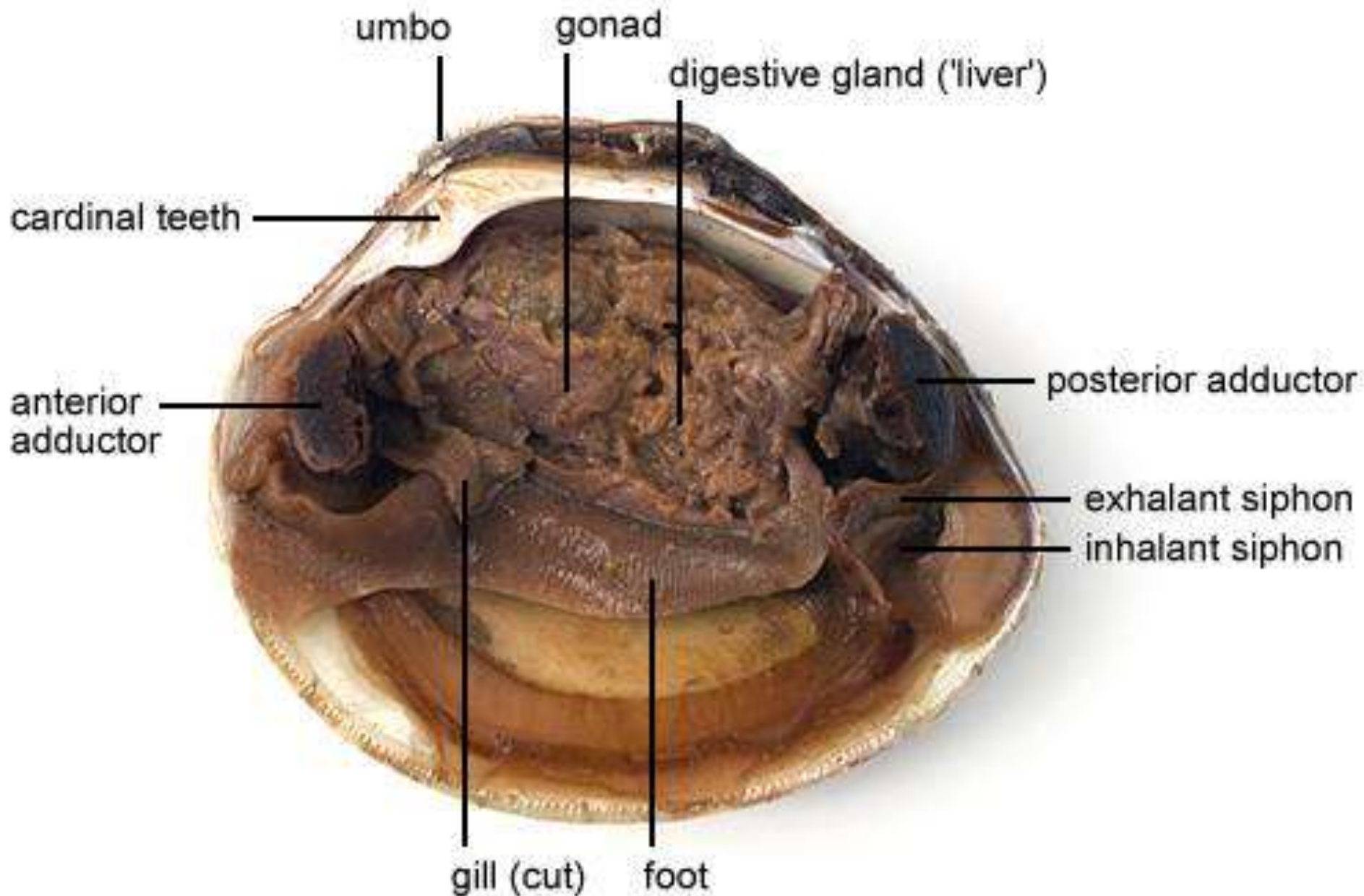




# Reproductive System

- separate sexes
- external fertilization
- trochophore larva

# Clam - Internal Features



# Nervous System

- three pair of ganglia – connected by nerve cords
  - one in stomach
  - one in foot
  - one near mouth
- senses:
  - touch, taste

