

Phylum

# Mollusca

(5 Classes)

Polyplacopphora – Many plates on a foot

Cephalopoda – Head foot

Gastropoda – Stomach

Scaphopoda – Tusk shell

Bivalvia – Hatchet foot

Policemen

Censor

Gals in

Scant

Bikinis!

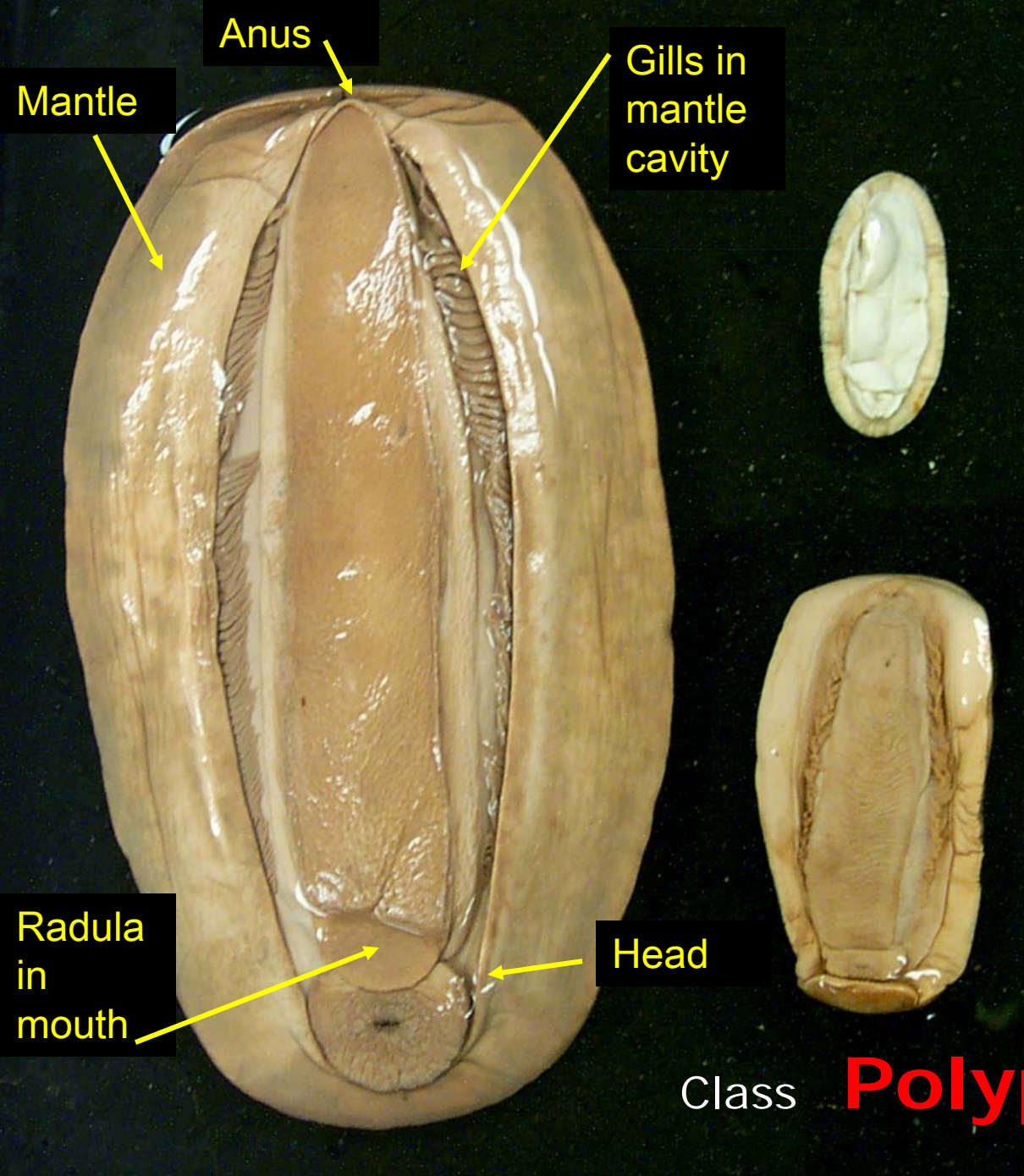


# Typical questions for Mollusca

- How many of these specimens possess a radula?
- Which ones are filter feeders?
- Which have undergone torsion? Detorsion?
- Name the main function of the mantle?
- Name a class used for currency
- Which specimens have lungs?  
*(Just have think of which live on land vs. in water.....)*
- Name the oldest part of a univalve shell? Bivalve?

# Answers...maybe

- Gastropods, Cephalopoda, Mono-, A- & Polyplacophora
- Bivalvia (Scaphopoda....have a captacula)
- Gastropods Opisthobranchia (sea hares & sea slugs) and the land slugs of the Pulmonata
- Mantle secretes the shell
- Scaphopoda
- Pulmonata – their name gives this away
- Apex for Univalve, Umbo for bivalve but often the terms are used interchangeably



Chitons radula, 8 plates

Class **Polyplacophora**



Class **Cephalopoda** - Octopuses, Squid, Nautilus, Cuttlefish...beak, pen, ink sac, chromatophores, jet propulsion.....dissection.

Subclass **Prosobranchia**

Aquatic – marine.

Apex

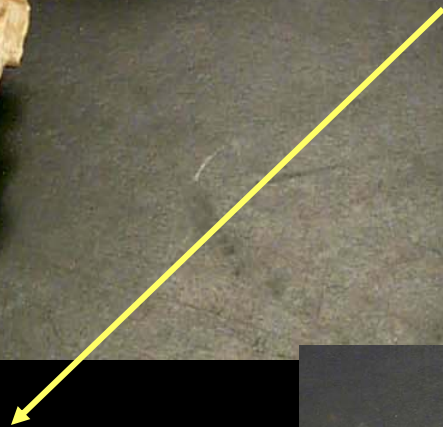


Generally having thick pointed shells, spines, & many have opercula.

**Gastropoda**

WORDS TO KNOW:

snails, conchs, torsion, coiling, radula, operculum & egg sac

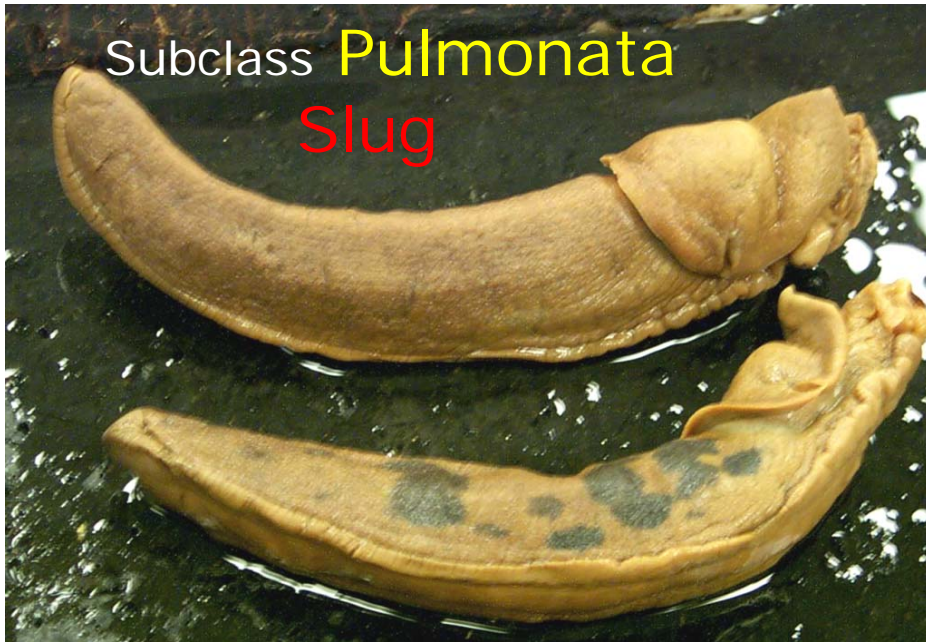


Subclass **Pulmonata**

Aquatic – freshwater.

Shells are thin, rounded, with no spines, ridges or opercula.



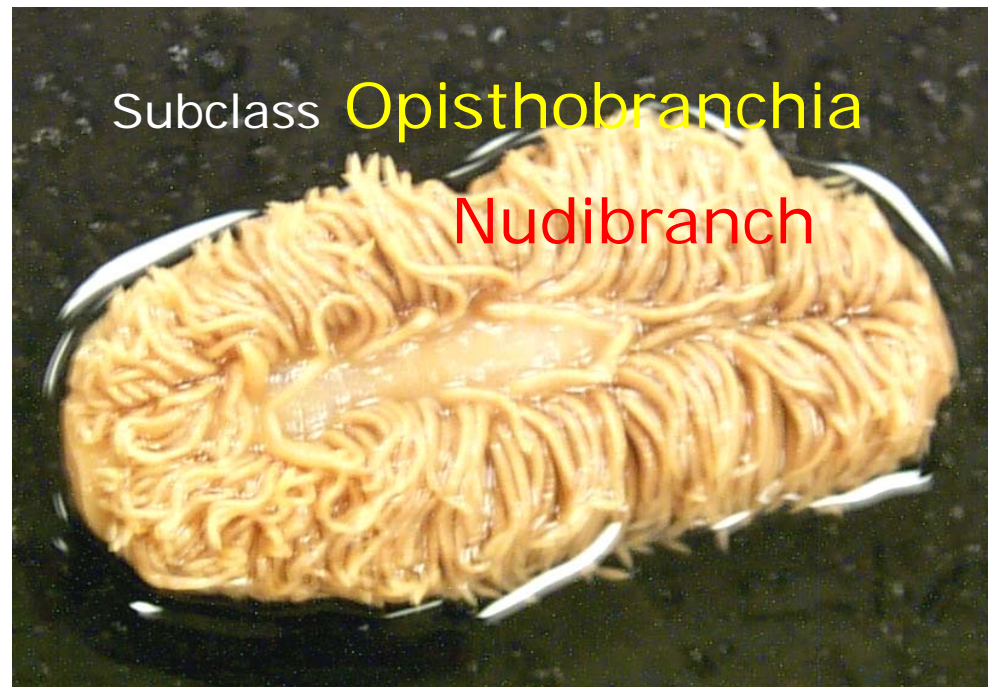


Detorsion...

If something  
looks strange,  
chances are....

.....it is  
something from  
Class **Gastropoda**

**(...or your  
roommate!)**



# Class **Gastropoda**

'**POP**'

## Subclass **P**rosobranchia

- Aquatic snails ("shells")
- Have gills

Sinistral

Dextral



## Subclass **O**pisthobranchia

- Marine
- Have gills
- Nudibranchs / Sea slugs / Sea hares
- Mantle cavity & shell reduced or absent



## Subclass **P**ulmonata

- Terrestrial Slugs and terrestrial snails
- Have lungs

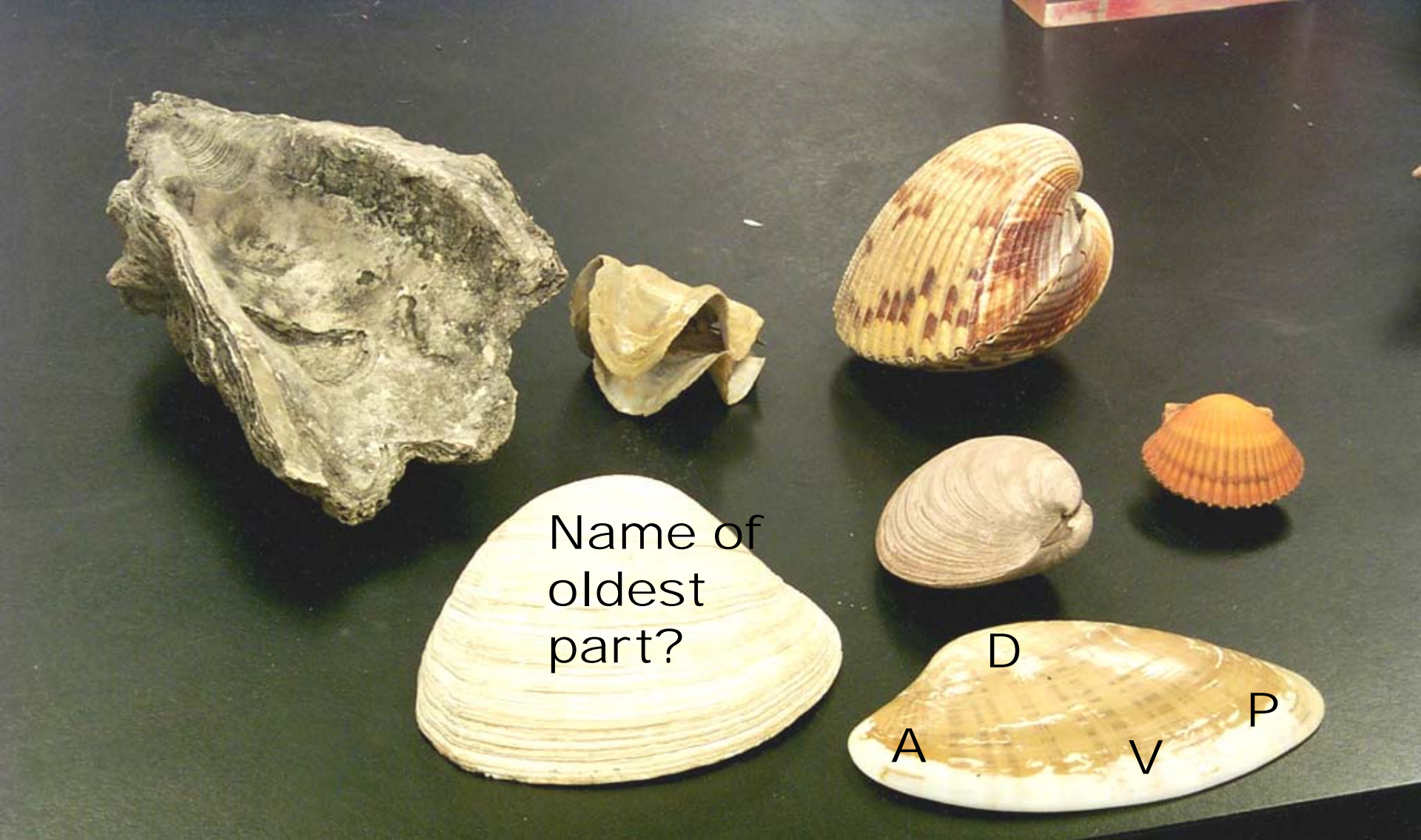




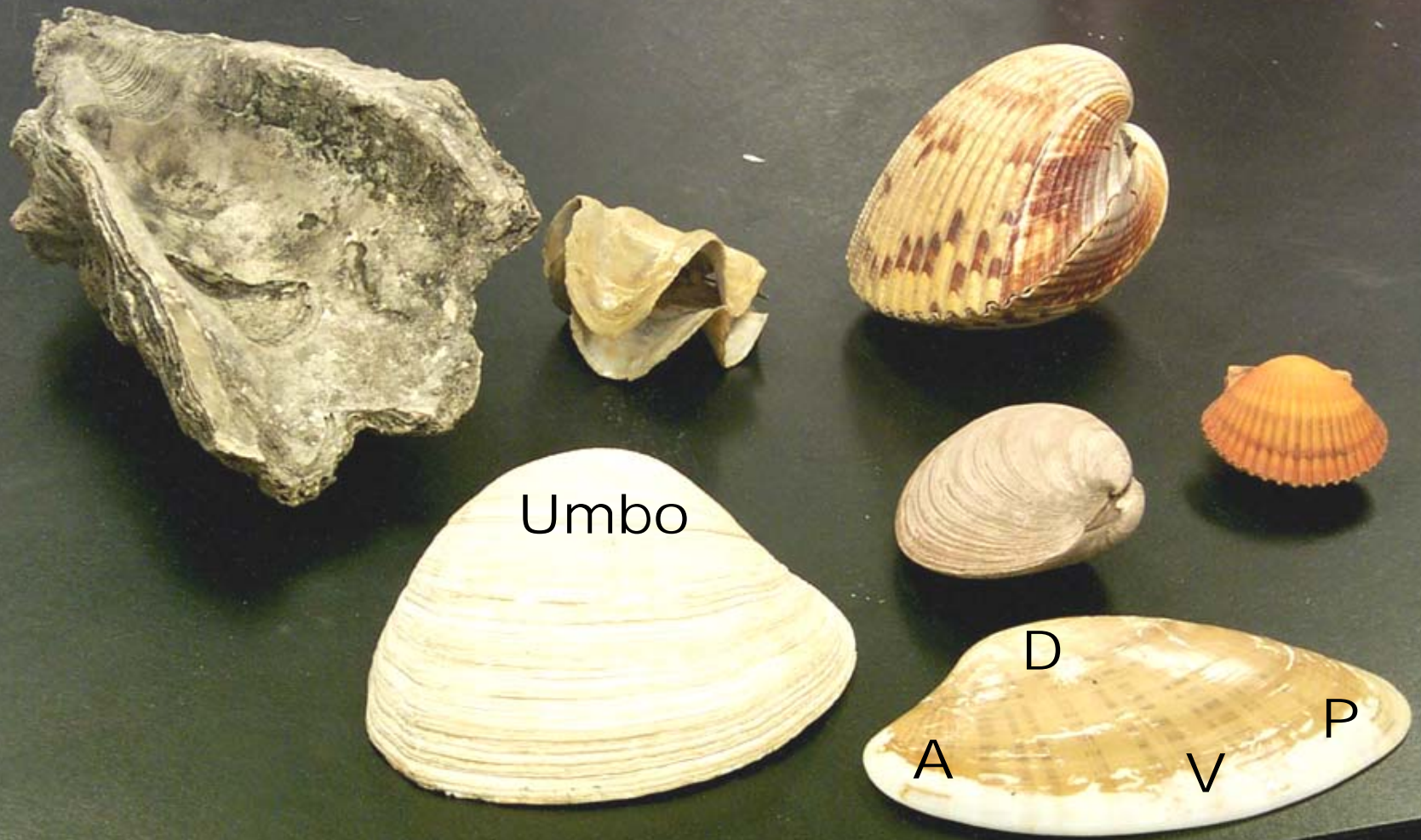
## Scaphopoda - “tusk shells”



Wampum Indian currency. ‘Head’ in sand.  
Respire through mantle (no gills.) **Captacula** for feeding on (capturing) foraminiferans



**Bivalvia** or **Pelecypoda** - clams, scallops etc.  
filter feeders, bivalved shells..... dissection



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Dorsal (hinge)

Anterior (Umbo)

Visceral mass – gonads & digestive tissues

Intestine

Percardial cavity

Ventricle  
Auricle

Adductor muscle

Posterior

Excurrent

& Incurrent siphon

(-hairs & papillae)

**Stomach = Area of gastric & /digestive glands**

Mouth

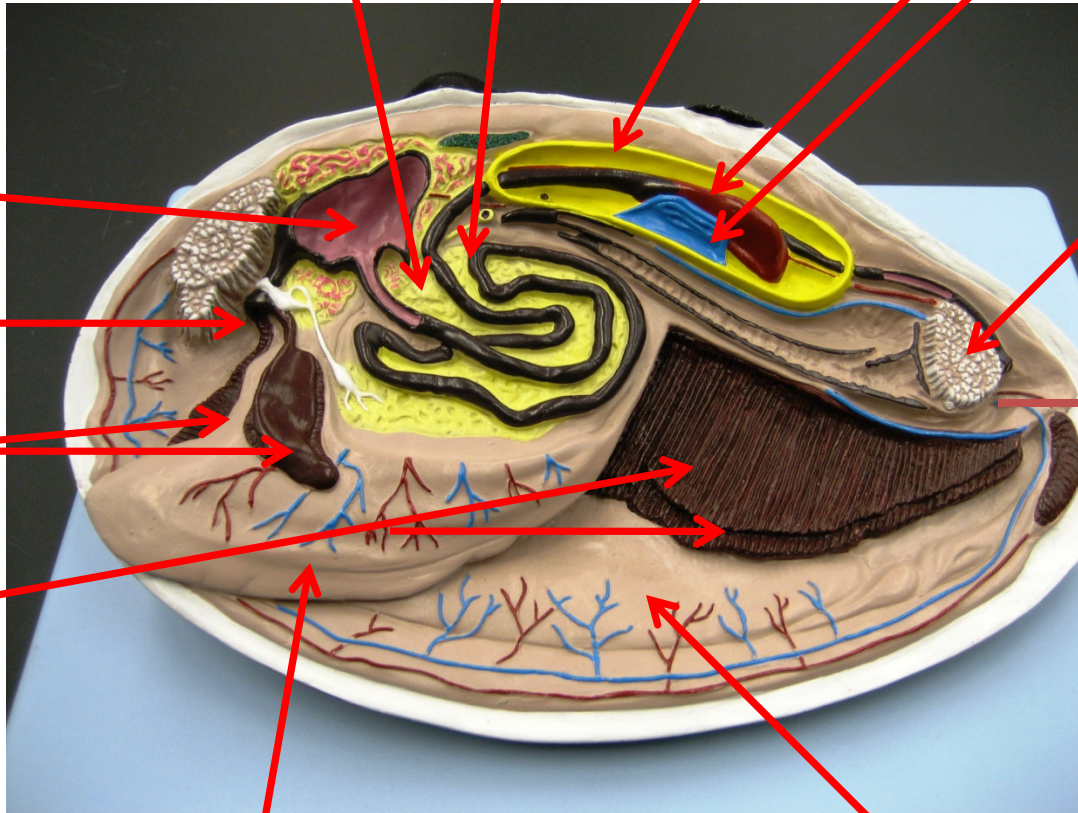
Labial palps

Gills or ctenidium – Each = 2 demibranchs

Foot

Ventral

Mantle



# Quiz Mollusca

- How many classes possess a radula?
  - 3 of the 5 classes (Cephalopoda, Polyplacophora & Gastropoda)
- How many are filter feeders?
  - 1 of the 5 classes (Bivalvia)
- What feeding structure do Scaphopoda use?
  - A/ pedicellaria B/captacula or C/Aristotle's Lantern?
  - B - to catch foraminifera