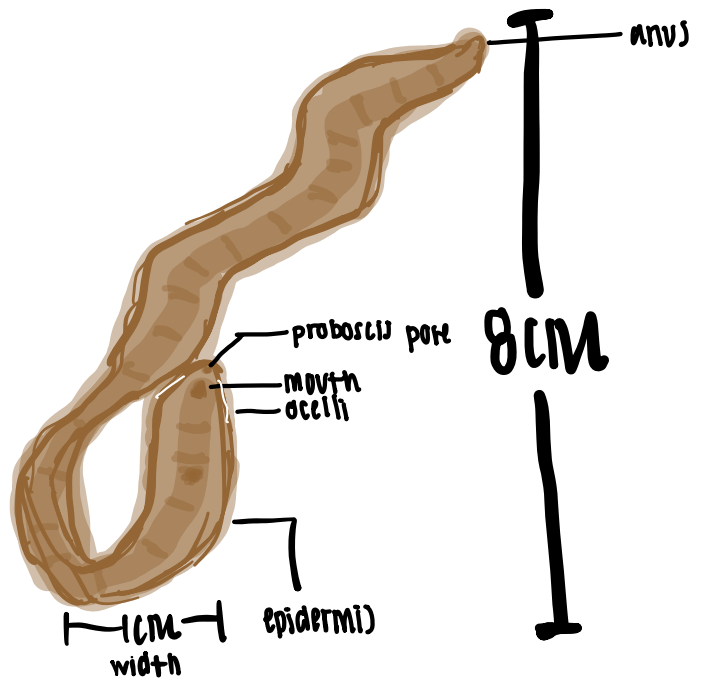
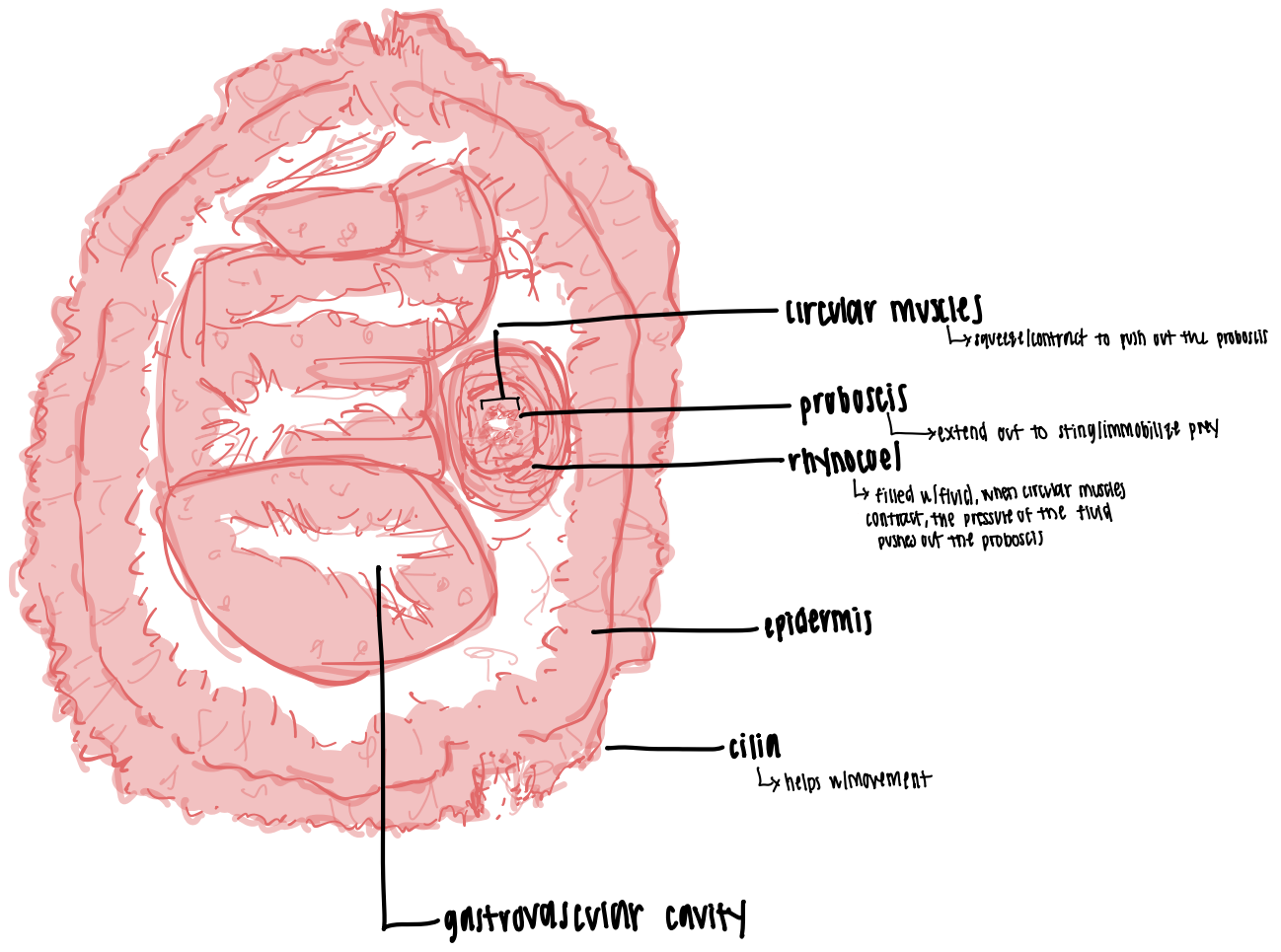


1) Preserved nemertean, sketch



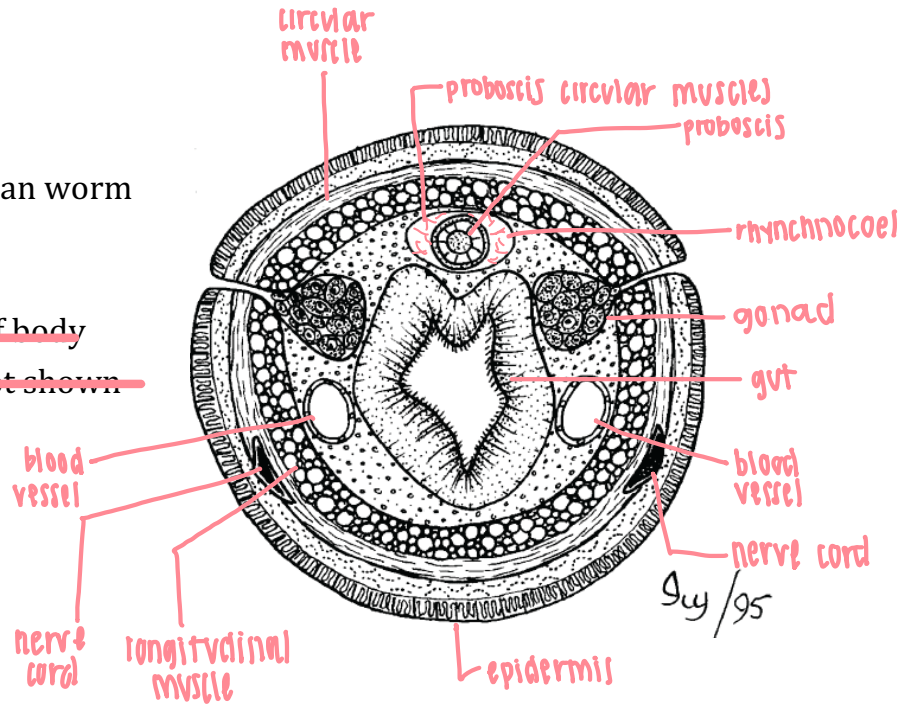
2) Nemertean cross-section, 40x4mm drawing



# Nemertea Worksheet

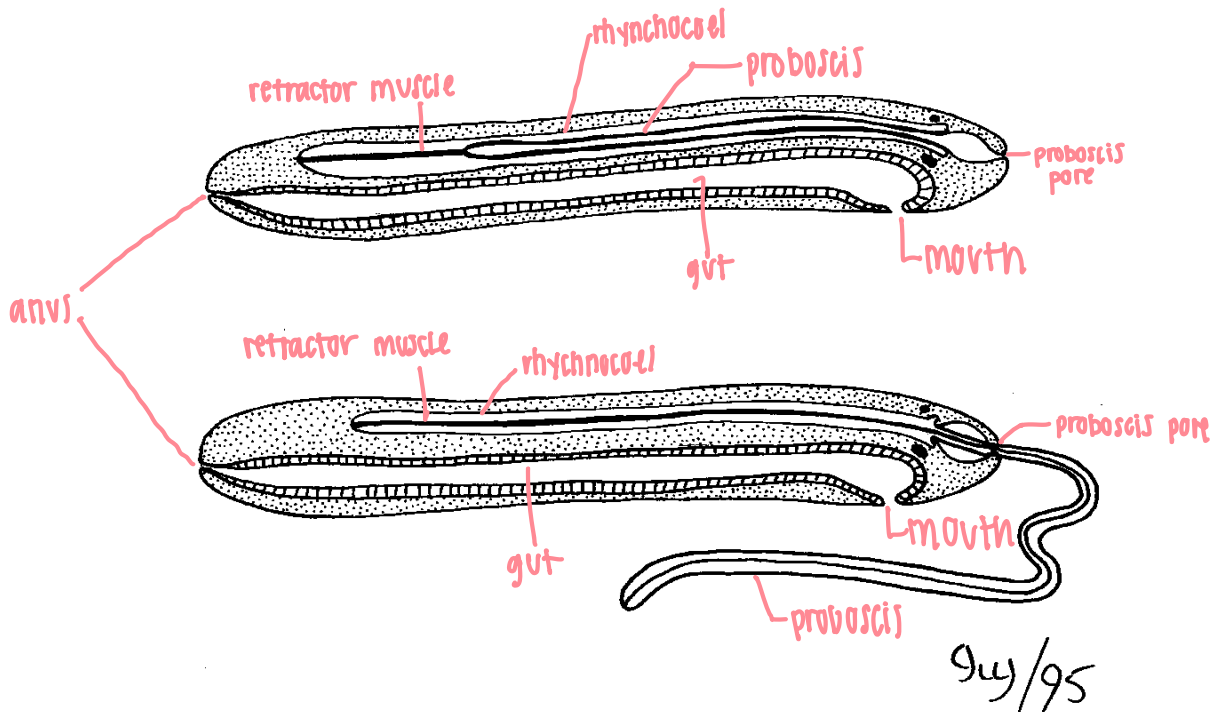
1. On the cross-section of a nemertean worm to the right, label:

- ~~blood vessels~~
- ~~circular and longitudinal muscle of body~~
- ~~circular muscle of rhynchocoel (not shown draw in where it would be!)~~
- ~~epidermis~~
- ~~gonad~~
- ~~gut~~
- ~~nerve cords~~
- ~~proboscis~~
- ~~rhynchocoel~~



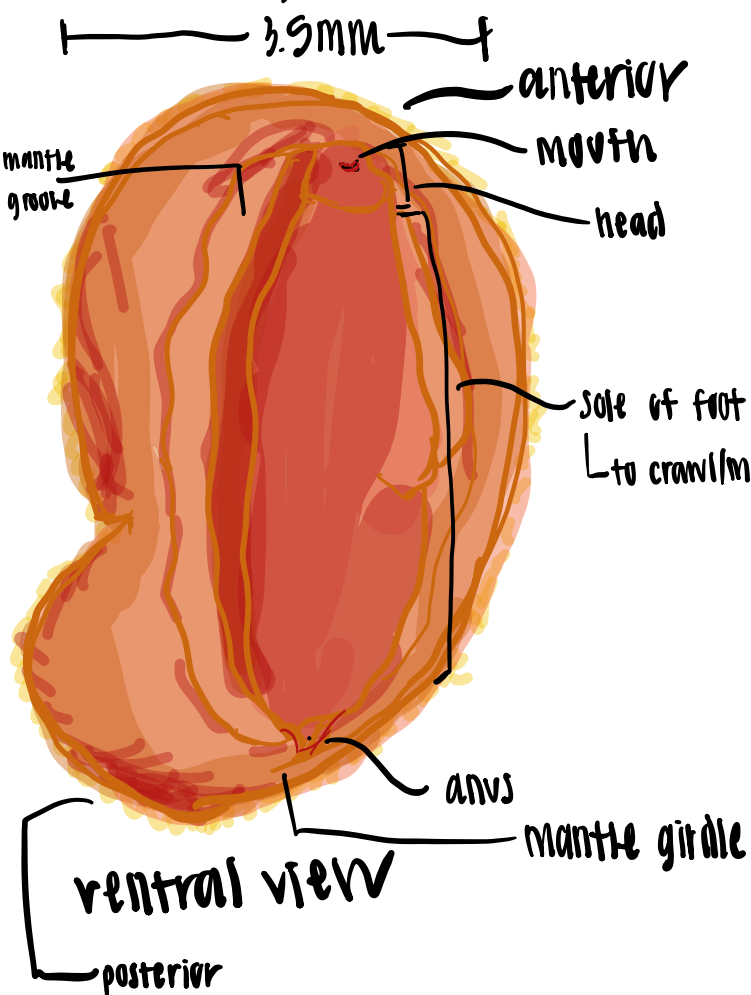
(NOTE: the relative placement of the blood vessels and nerve cords vary depending on the class of Nemertea)

2. Below are two lateral views of a nemertean. On the top picture, the proboscis is retracted. On the bottom, the proboscis is everted. For both, label the ~~anus~~, ~~gut~~, ~~mouth~~, ~~proboscis~~, ~~proboscis pore~~, ~~retractor muscle~~ and ~~rhynchocoel~~.

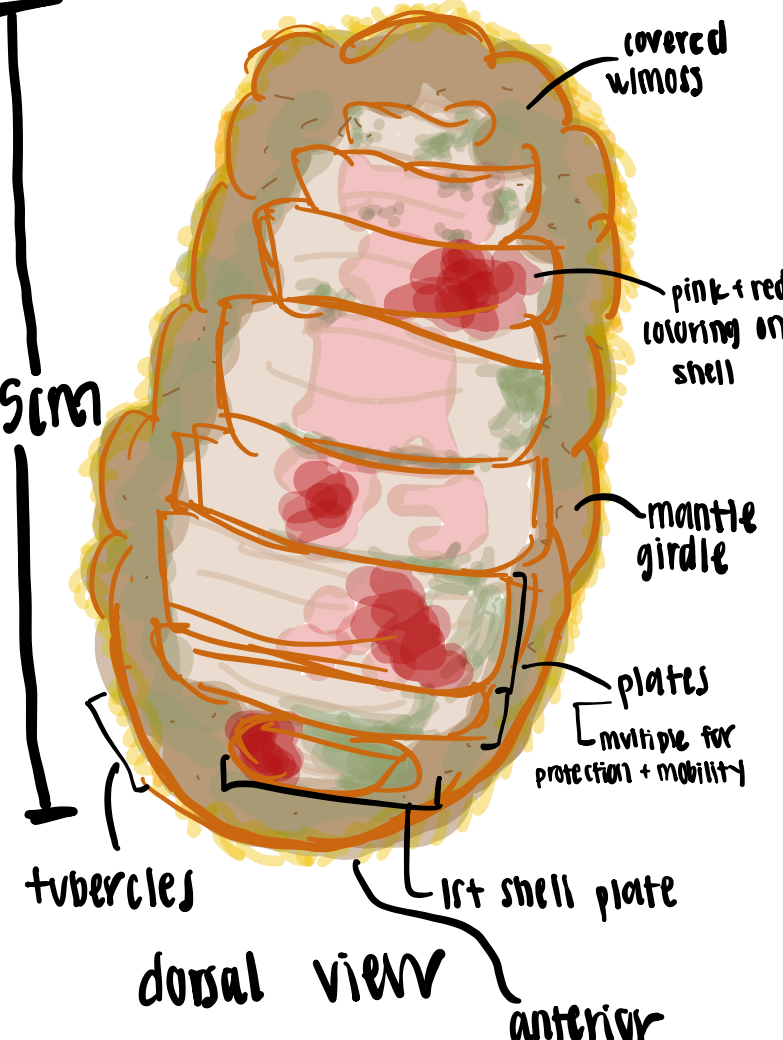


Phylum Mollusca, class Polyplacophora

a.) Live chiton, drawing

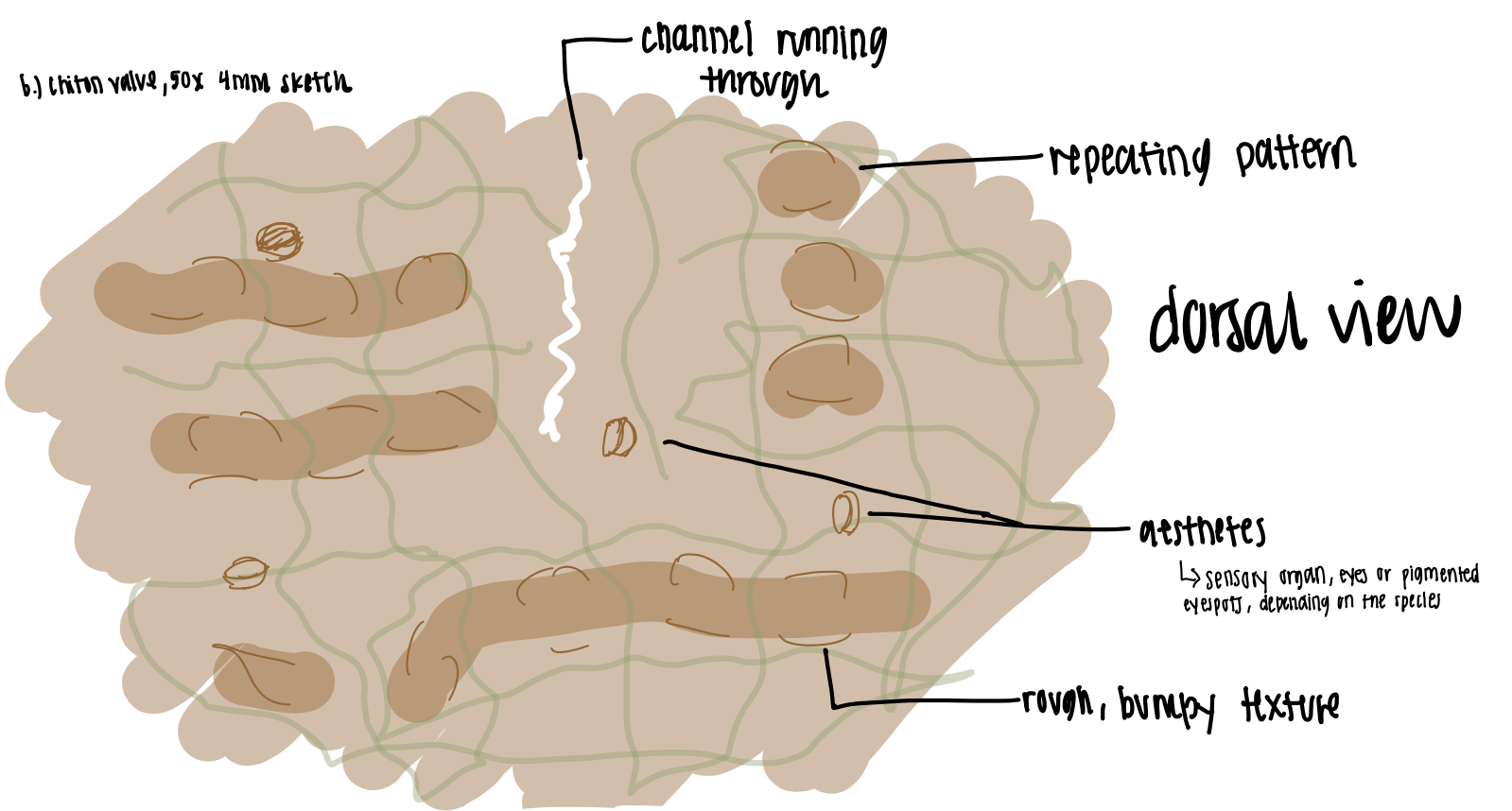


posterior

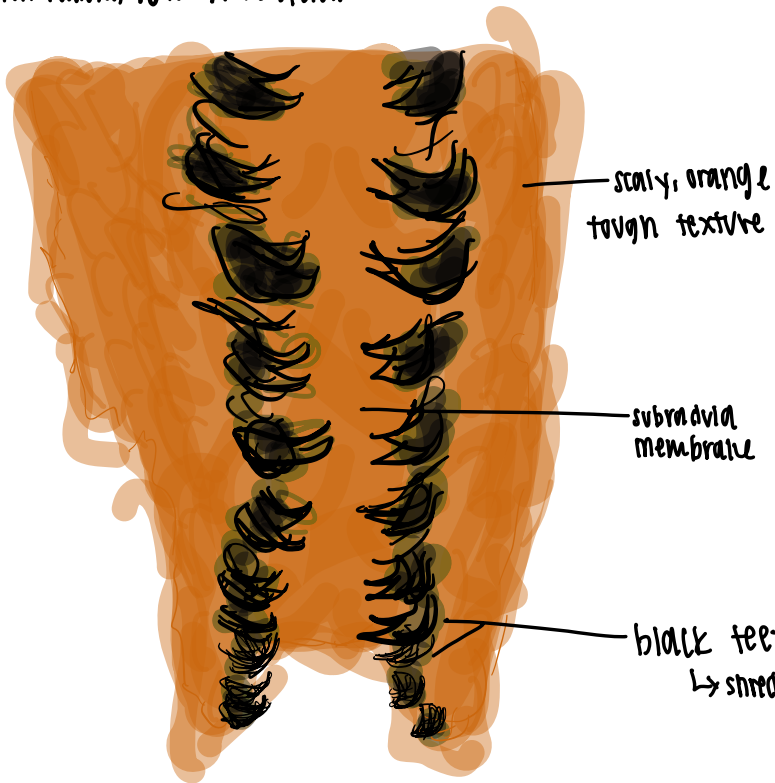


- sedentary/non-interactive behavior
- shell + foot are conserved along mollusca
- slimy/smooth plant/moss growth on shell
- tough, hard shell

b.) chiton valve, 50x 4mm sketch



c.) chiton radula, 40x 4mm sketch



• strength of the radula can be improved w/ iron consumption

scaly, orange tough texture

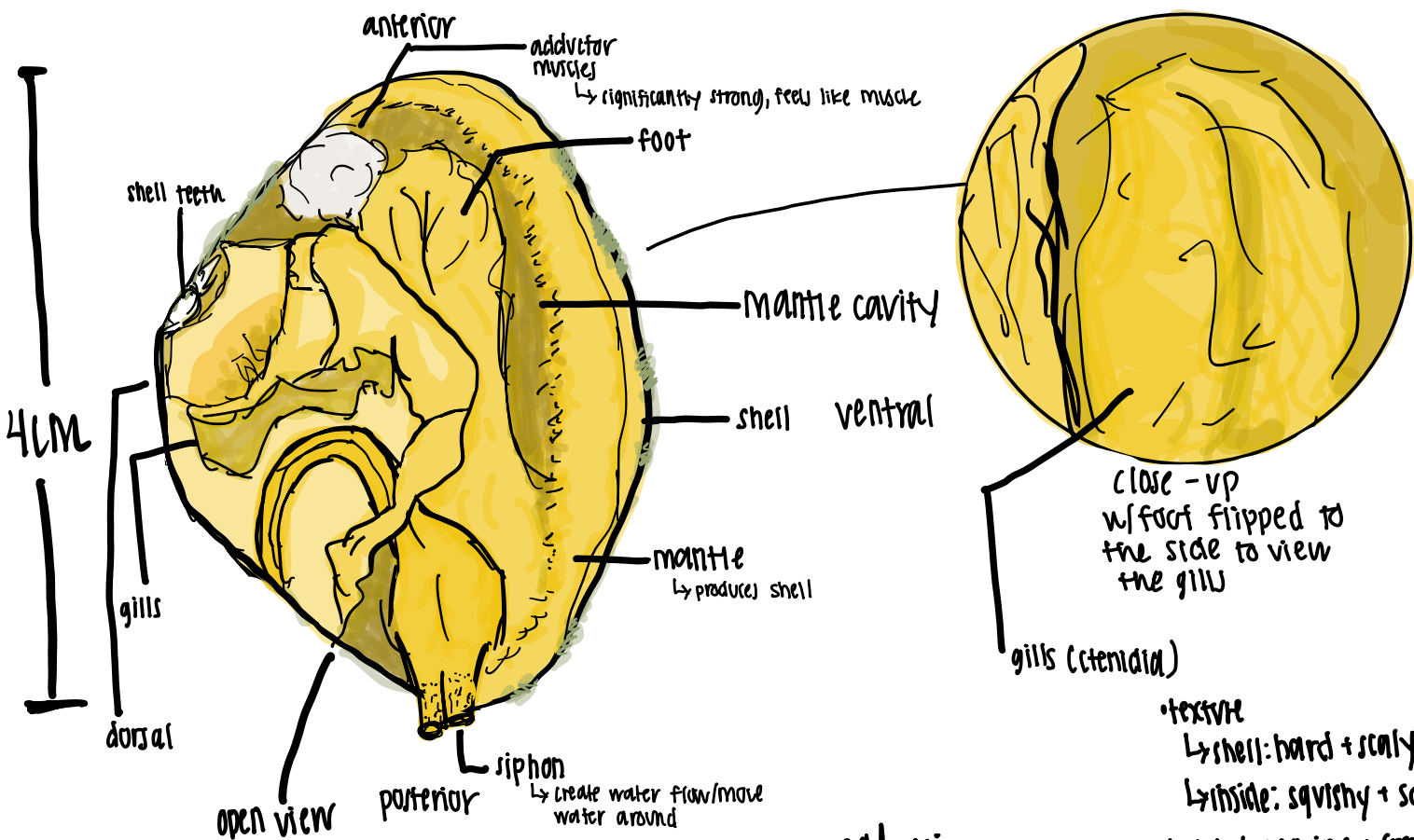
subradial membrane

black teeth/radula  
↳ shred + scrape food

Phylum Mollusca, Class Bivalvia

a.) Clam dissection

1.) Bivalve internal view, drawing



close-up w/ foot flipped to the side to view the gill

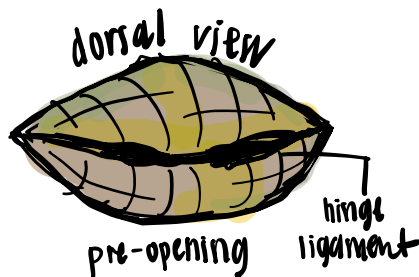
gills (ctenidia)

• texture  
↳ shell: hard + scaly  
↳ inside: squishy + soft

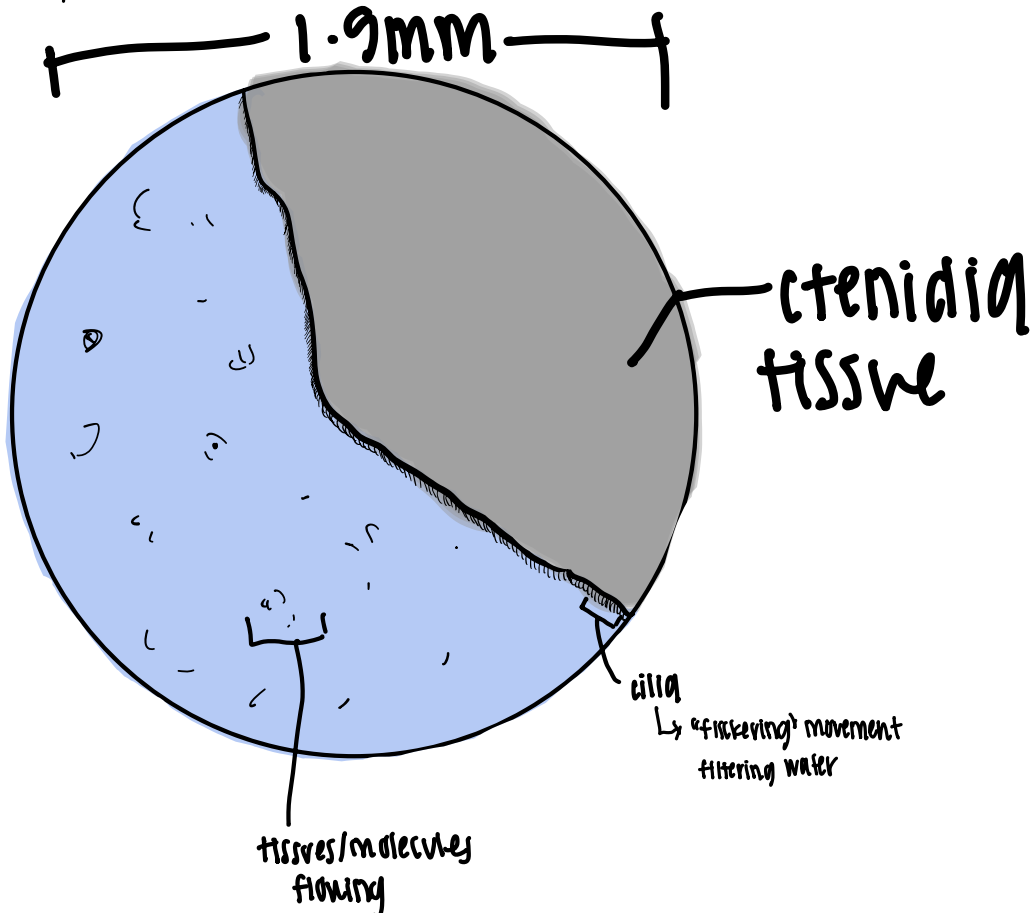
• habitat: marine + freshwater

• behavior:  
↳ minimal response to touch  
↳ siphon + foot moved  
↳ hardened body after ~30 mins

• evolution: share shell w/ other bivalves, though the main difference is that these are enclosed in a shell

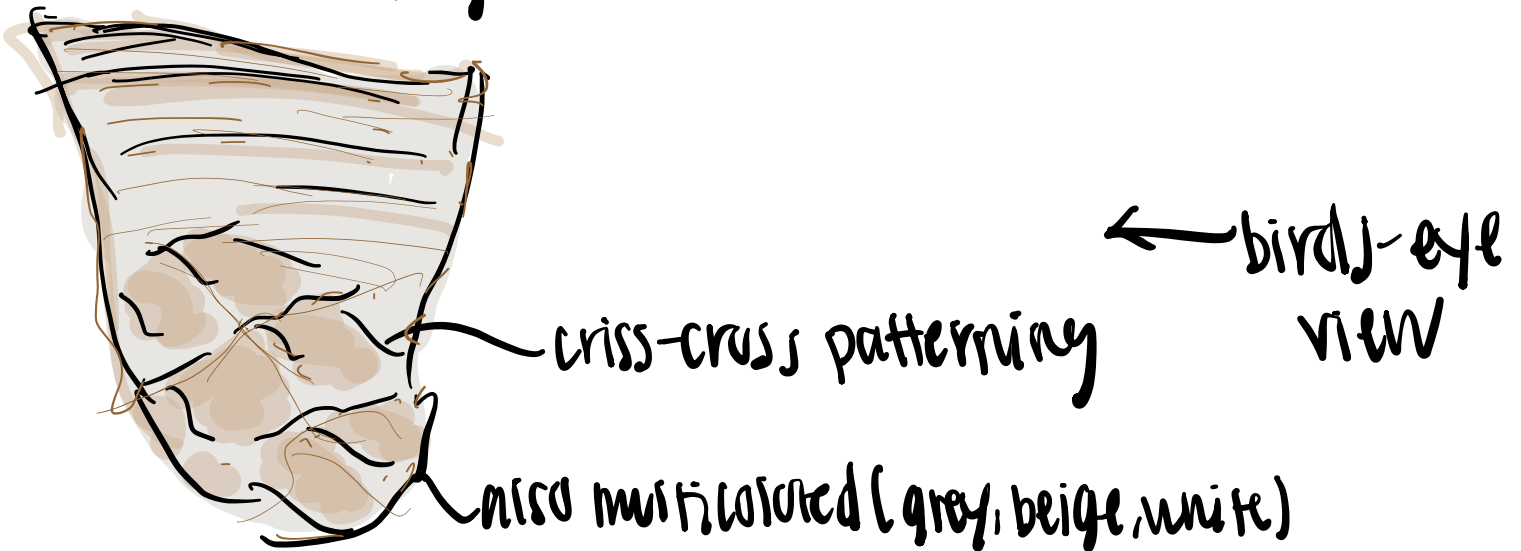
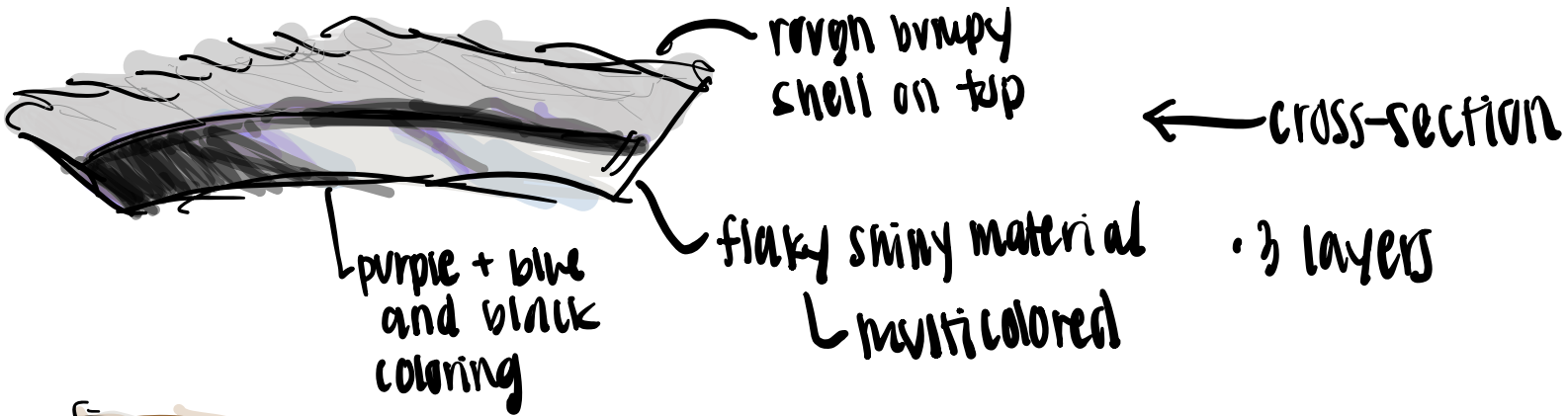


2.) ctenidia, 100x 1.9mm FOV sketch

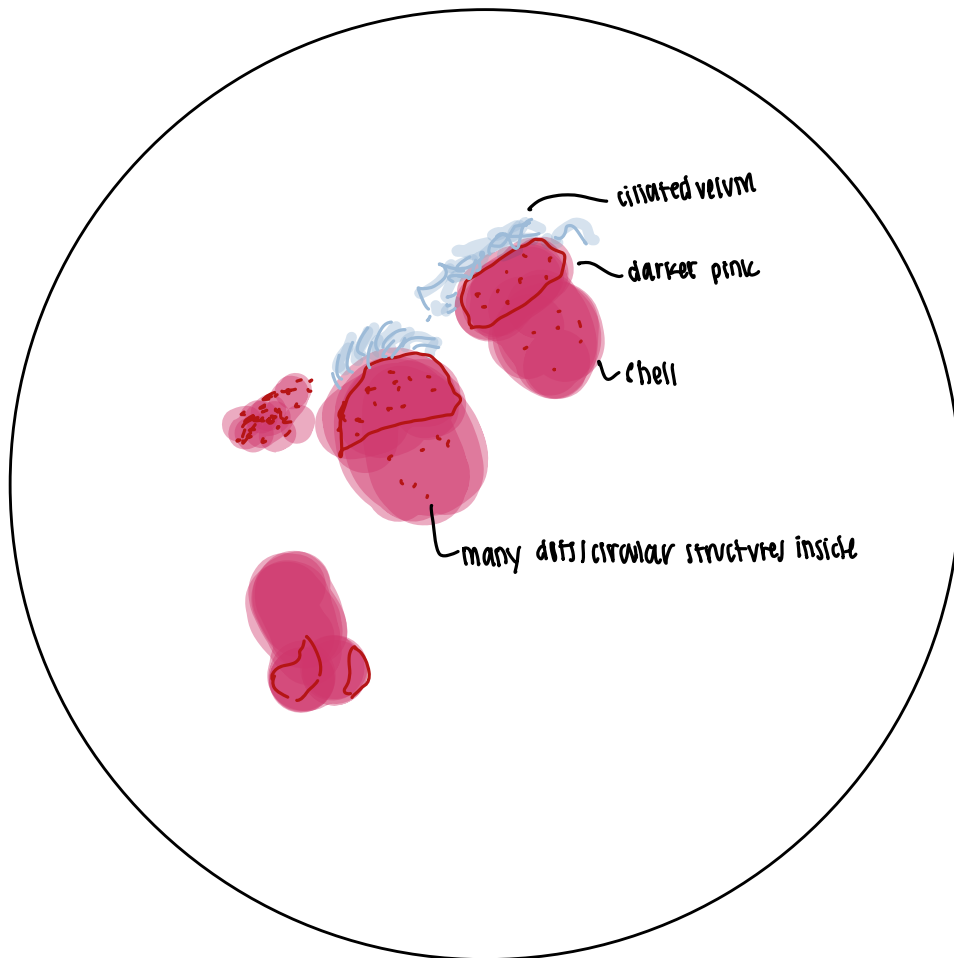


enlarged view

3.) shell cross-section, sketch



b.) bivalve veliger, 100x 1.9mm FOV sketch



• more bivalve veliger seen, not drawn

• texture indiscernible

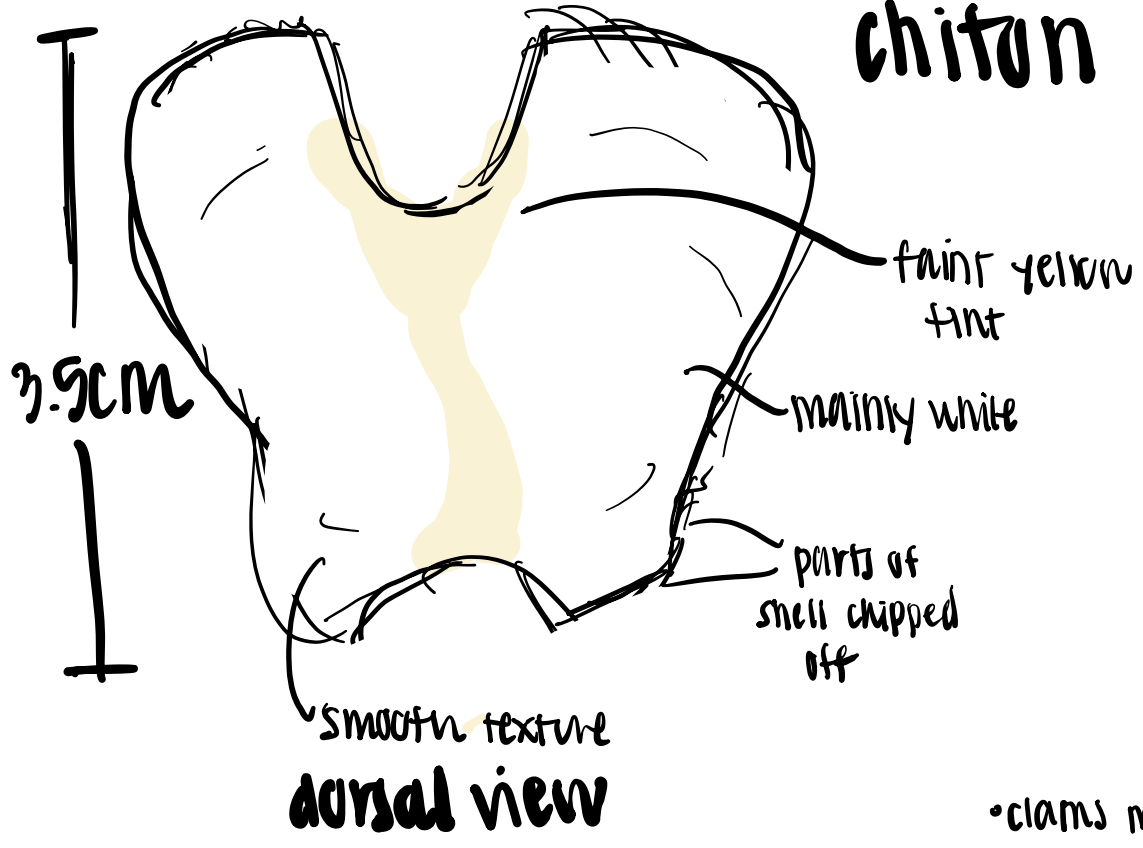
1.9mm  
FOV

• gastropod veliger look similar to snail shell

↳ bivalve veliger are bi-valved (as the name suggests)

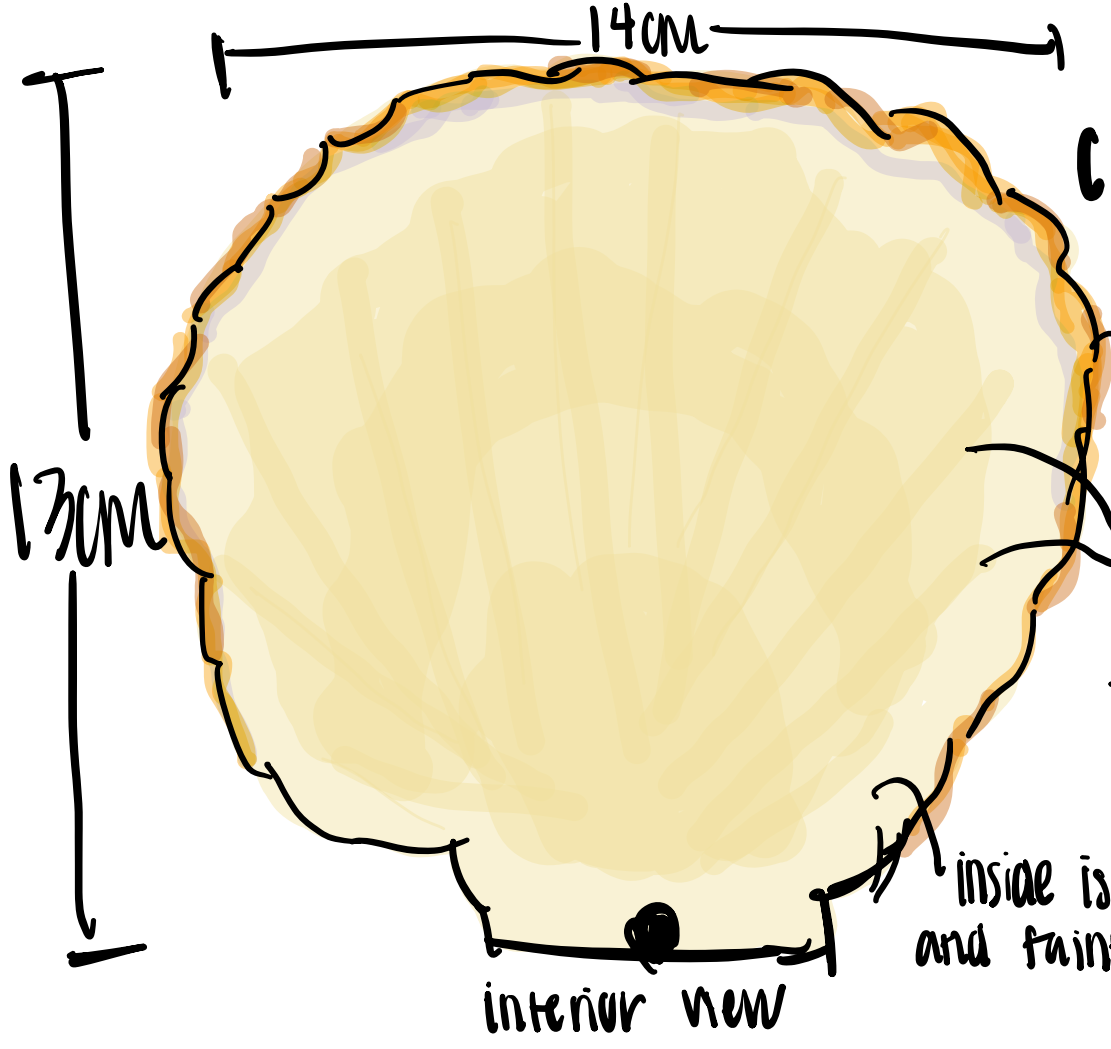
• both gastropod & bivalve veliger have ciliated velum and a shell

# chiton shell



compare/contrast  
 ↳ both have hard shell  
 ↳ both are light colors  
 ↳ both have a spread out / flat shape  
 ↳ clam has valleys / ridges, chiton was nearly completely smooth  
 • clams may have slightly secondary lives + but both use their shell as a defense mechanism

# clam shell



multi-colored outer shell  
 lines/indentations throughout interior of the shell  
 inside is smooth, cool, and faintly pearly