



# Cvičení ze zoologie bezobratlých II

## Cephalopoda a Bivalvia

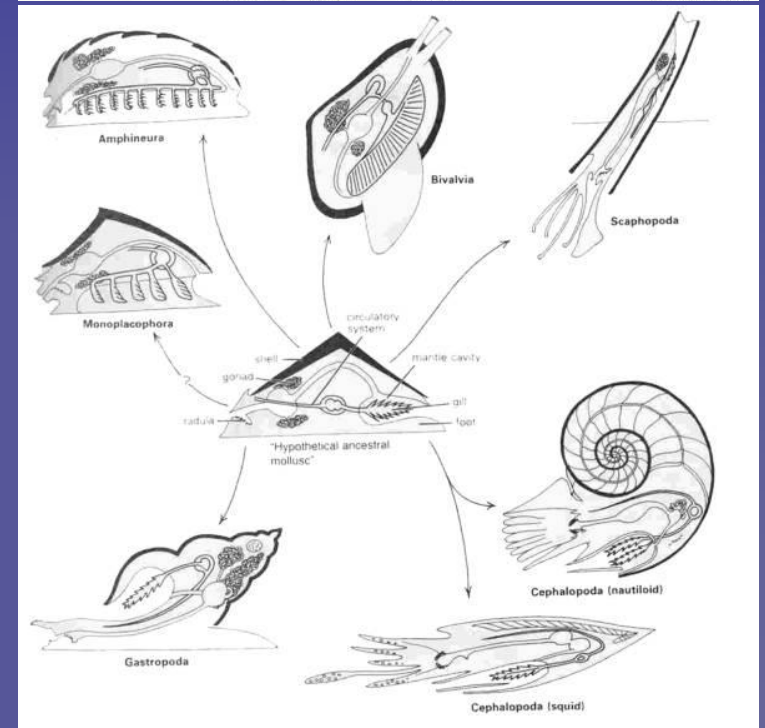
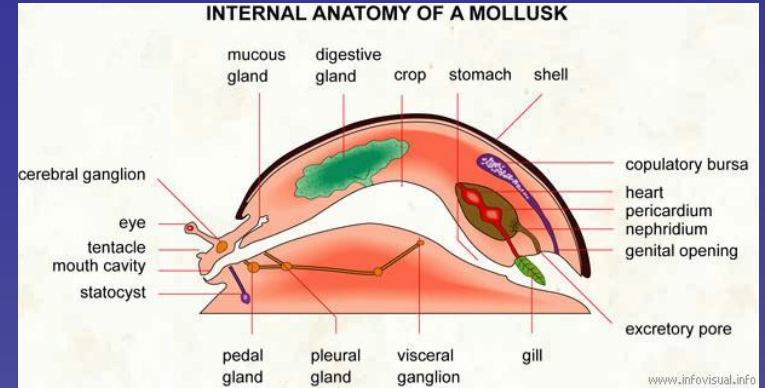
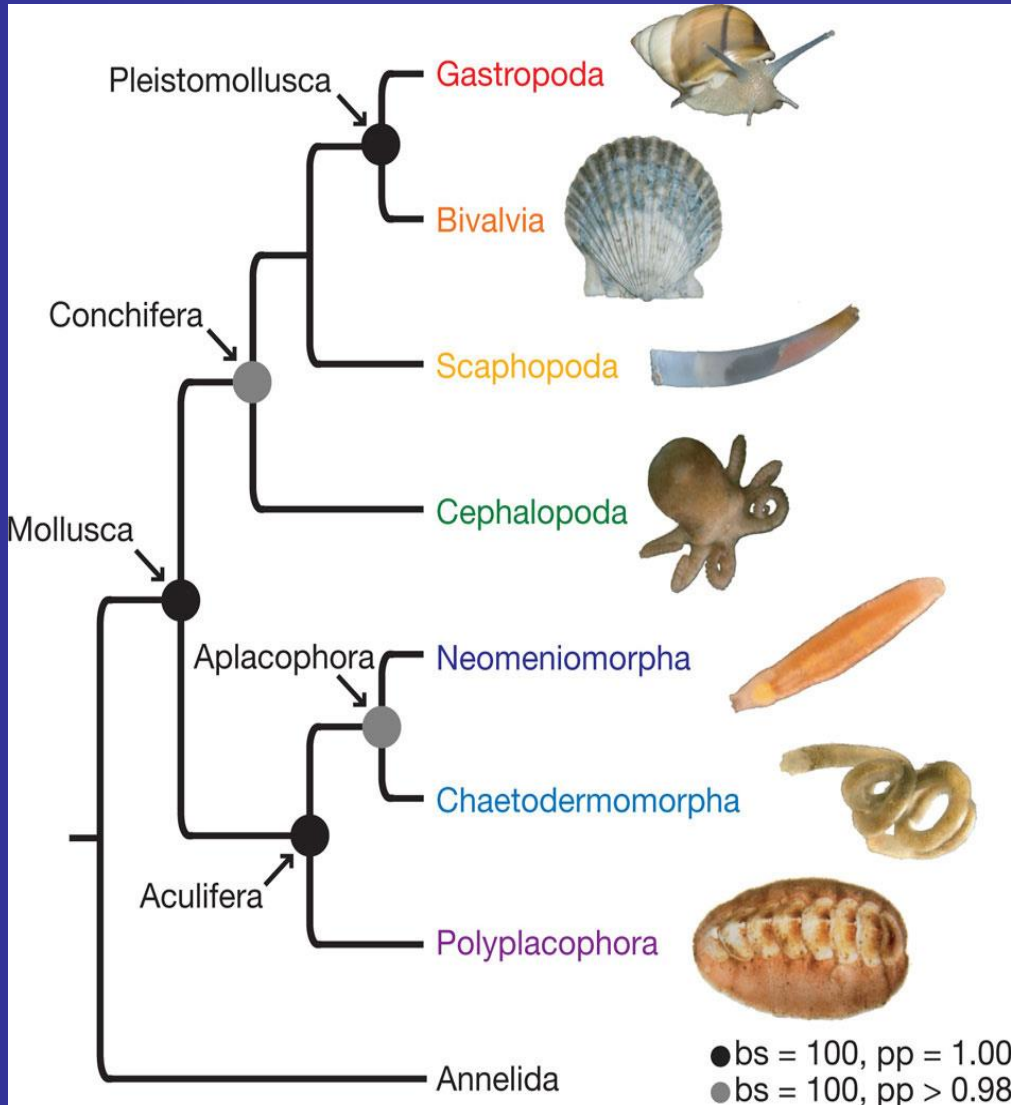


26.2.2013

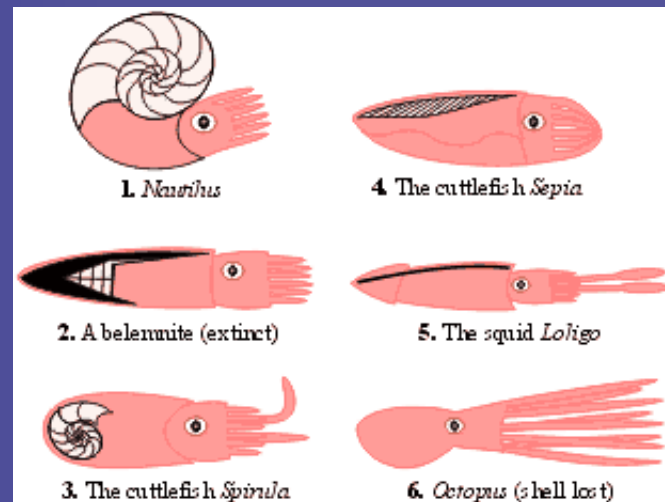
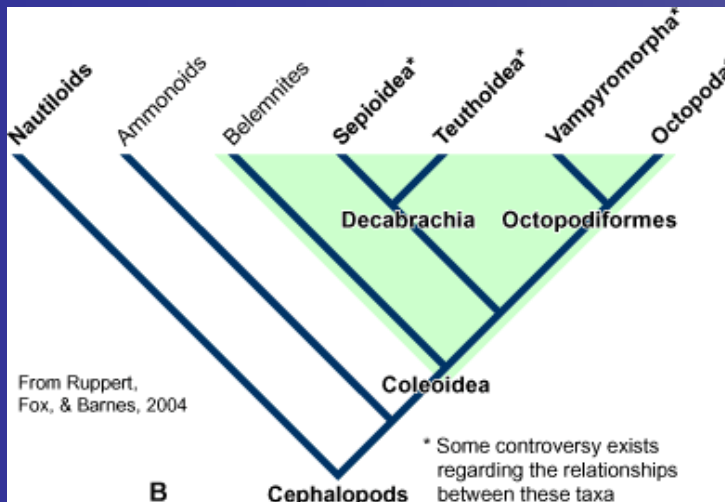
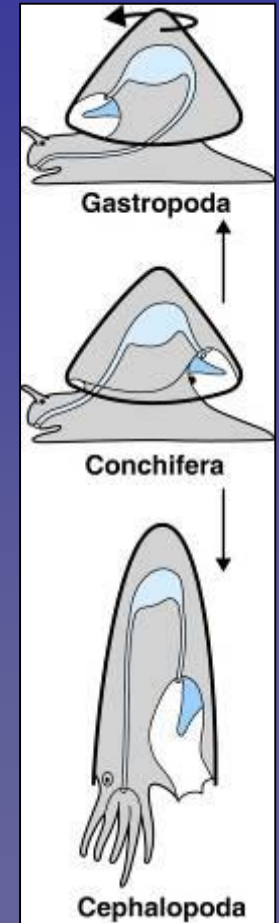
Oldřich Nedvěd, PŘF UK



# Mollusca



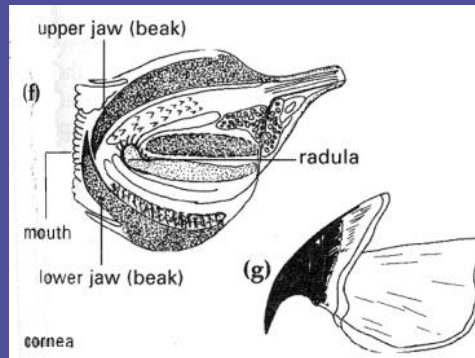
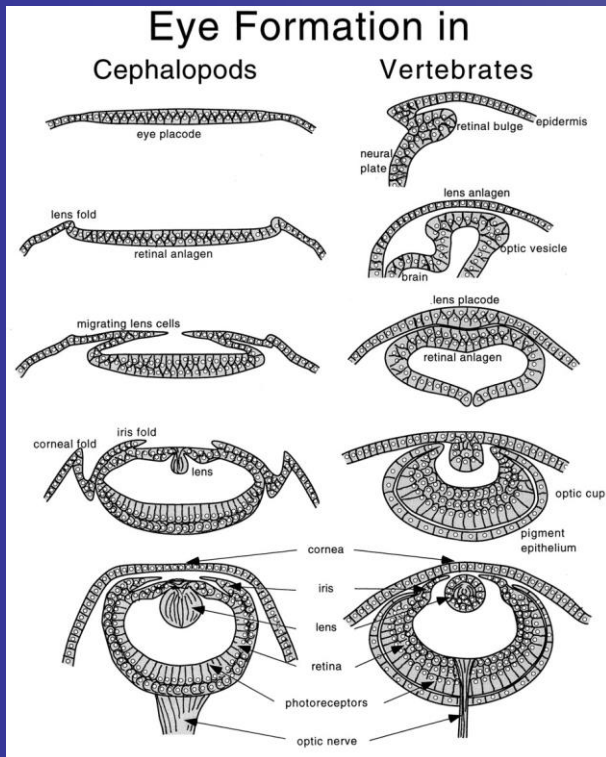
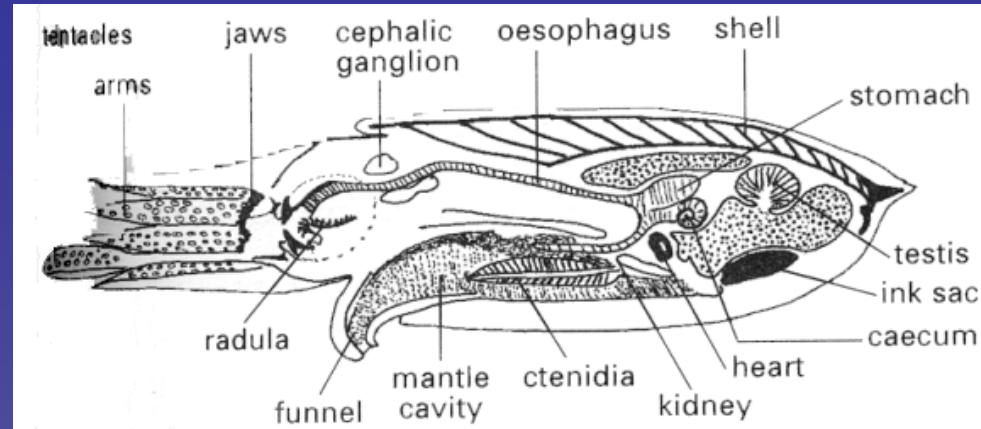
# Mollusca - Cephalopoda



# Cephalopoda

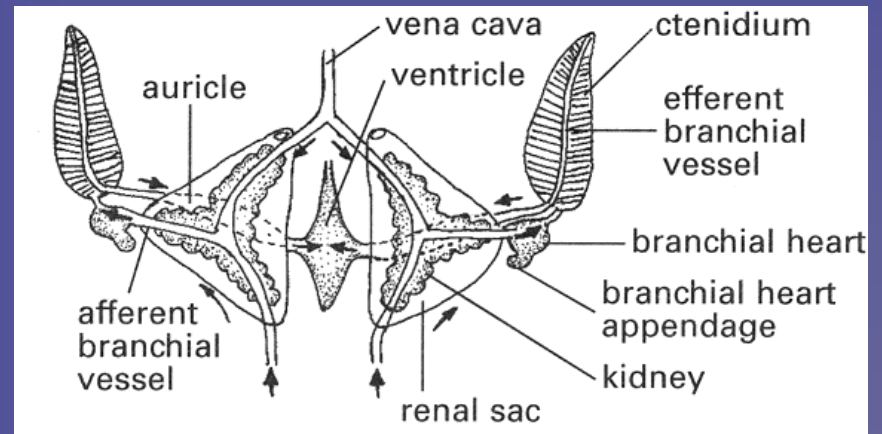
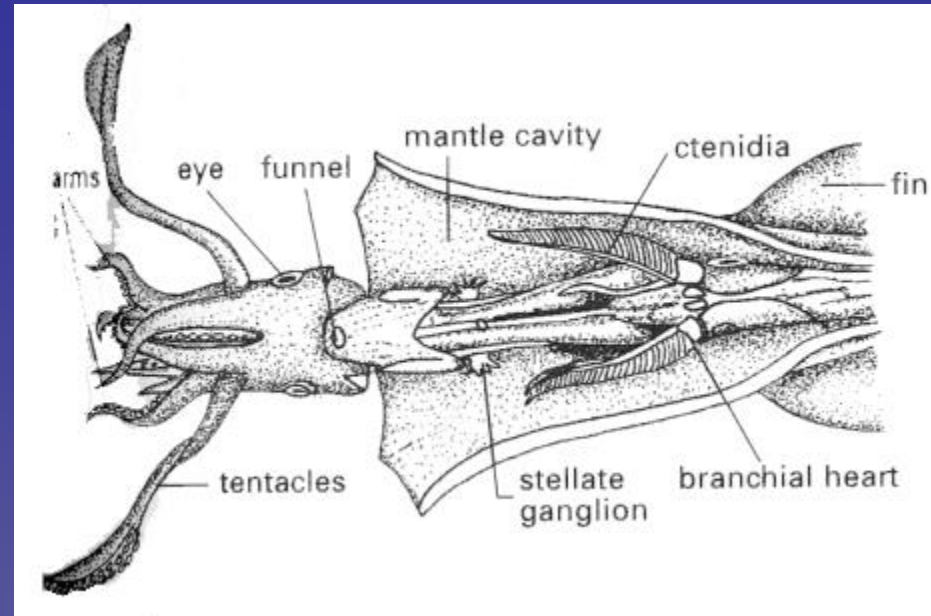
## – Hlava

- Chapadla – potrava, pohyb, rozmnožování
- Oči
- Mozek
- Čelisti - někdy jedová žláza
- Radula



# Cephalopoda

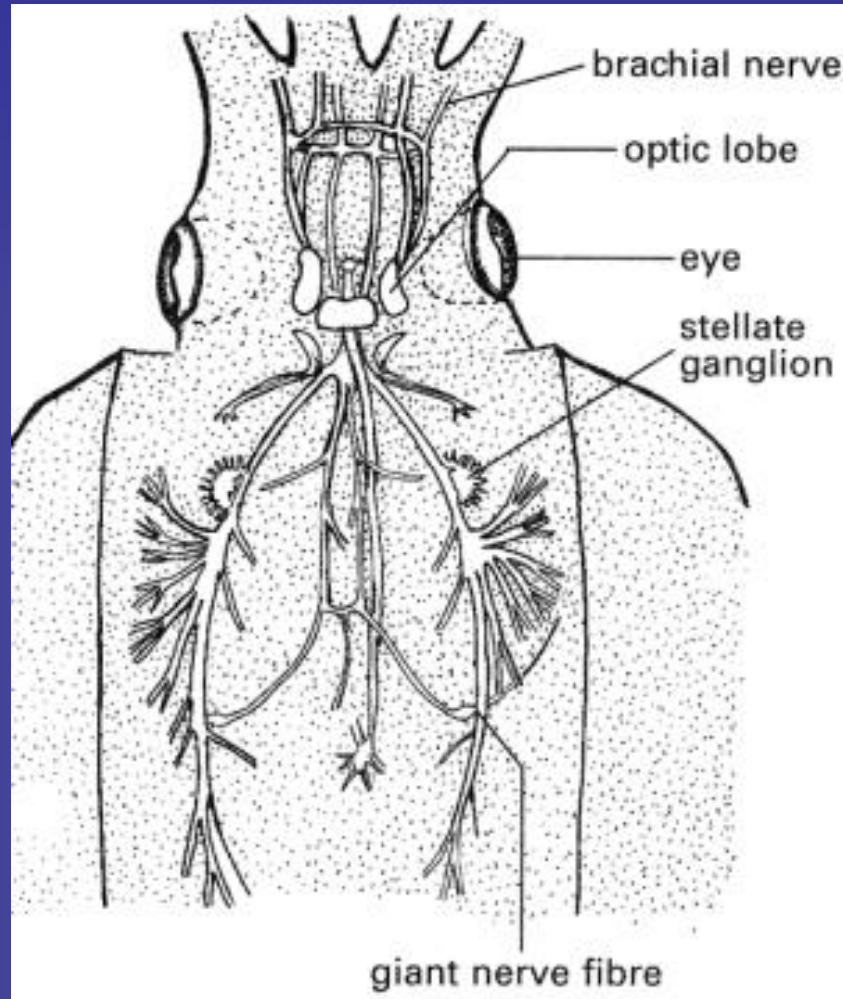
- Tělo
- Srdce – pomocná srdce u žaber
- Ledviny
- Inkoustová žláza
- Gonády
  
- Plášť
  - Dutina
  - Žábra
  
- Nálevka
  - Pohyb
  - Vylučování
  - Inkoust



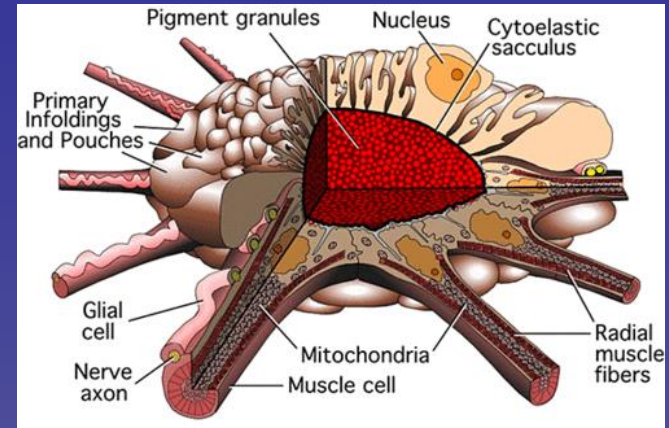
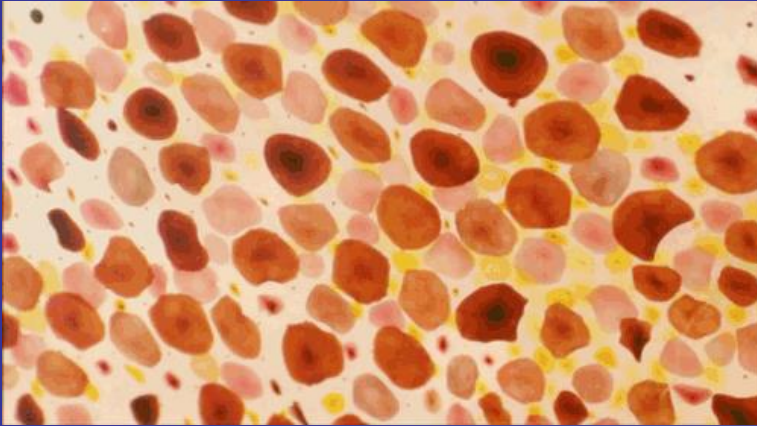
# Cephalopoda

## – Nervová soustava

- Mozek
- Lebka
- Tělová ganglia
- Chromatofory

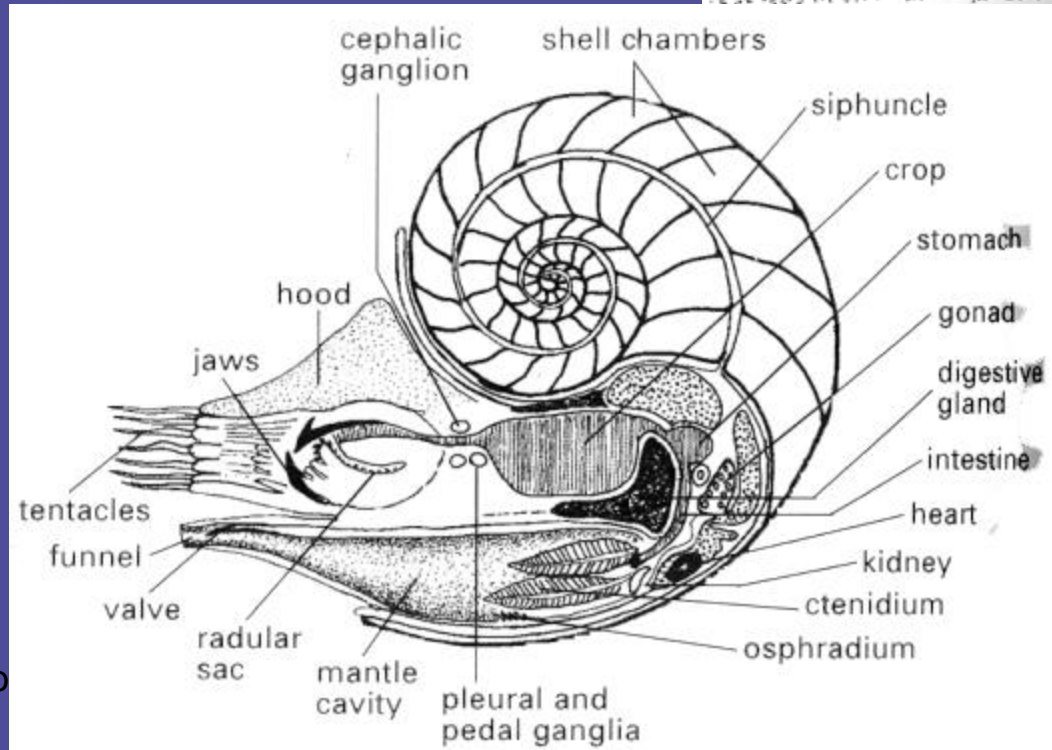
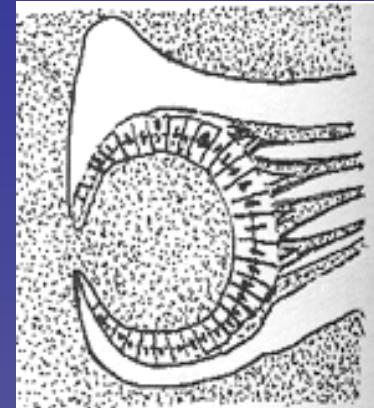


# Cephalopoda



# Cephalopoda

– Tetrabranchia = Nautiloidea – loděnka



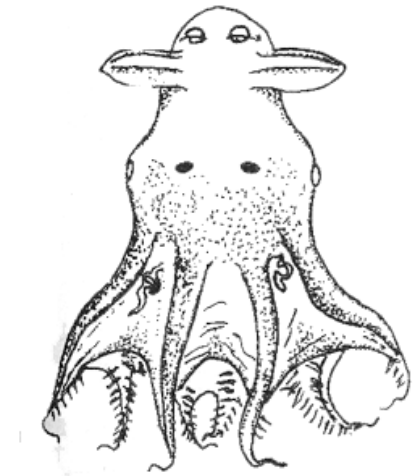
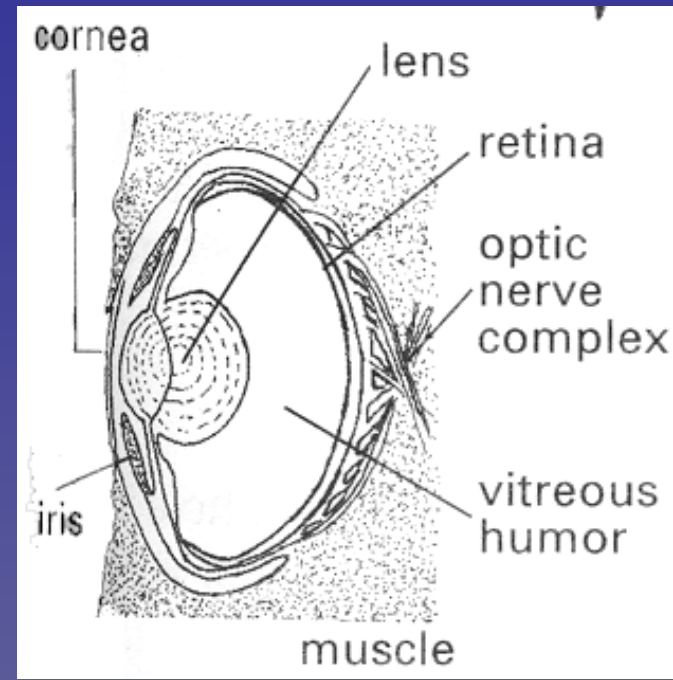
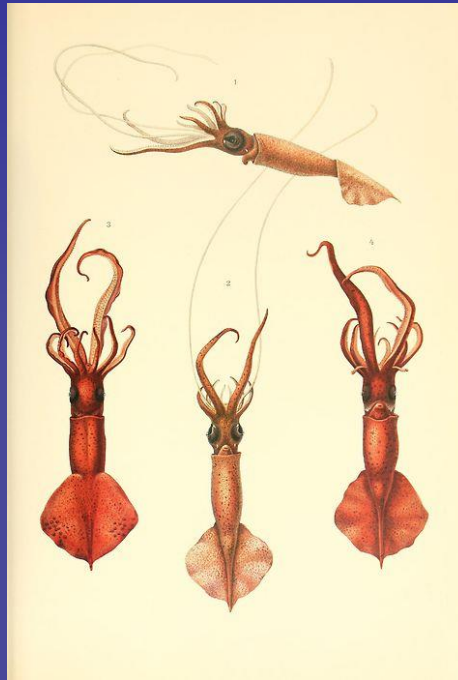
Bio



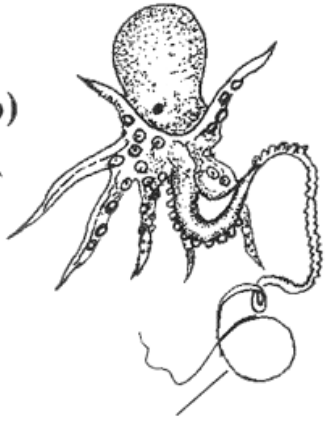
# Cephalopoda

– Dibranchia = Coleoidea -

- Decabrachia
  - Oliheň, sépie
- Octobrachia
  - Chobotnice

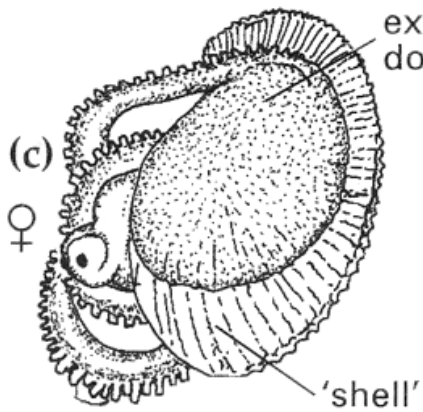


(b) ♂



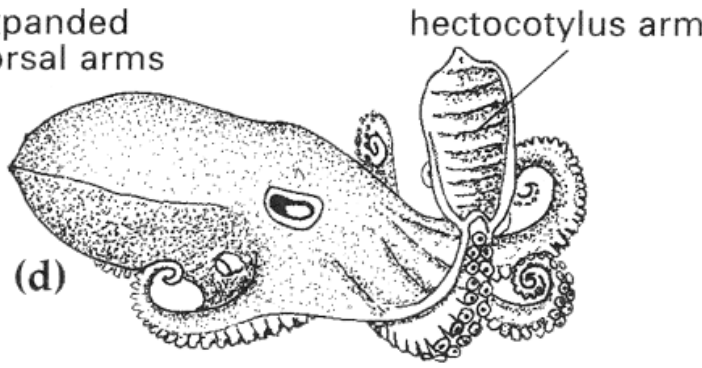
hectocotylus arm

(c) ♀



'shell'

(d)

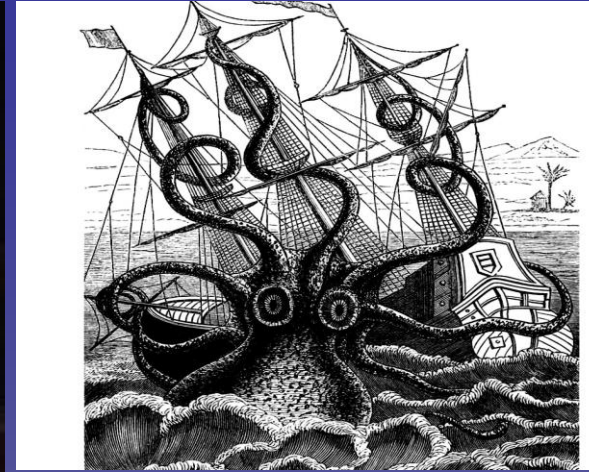


expanded dorsal arms

hectocotylus arm

# Cephalopoda

- Octobranchia



- Decabrachia



# Cephalopoda

- Chobotnice



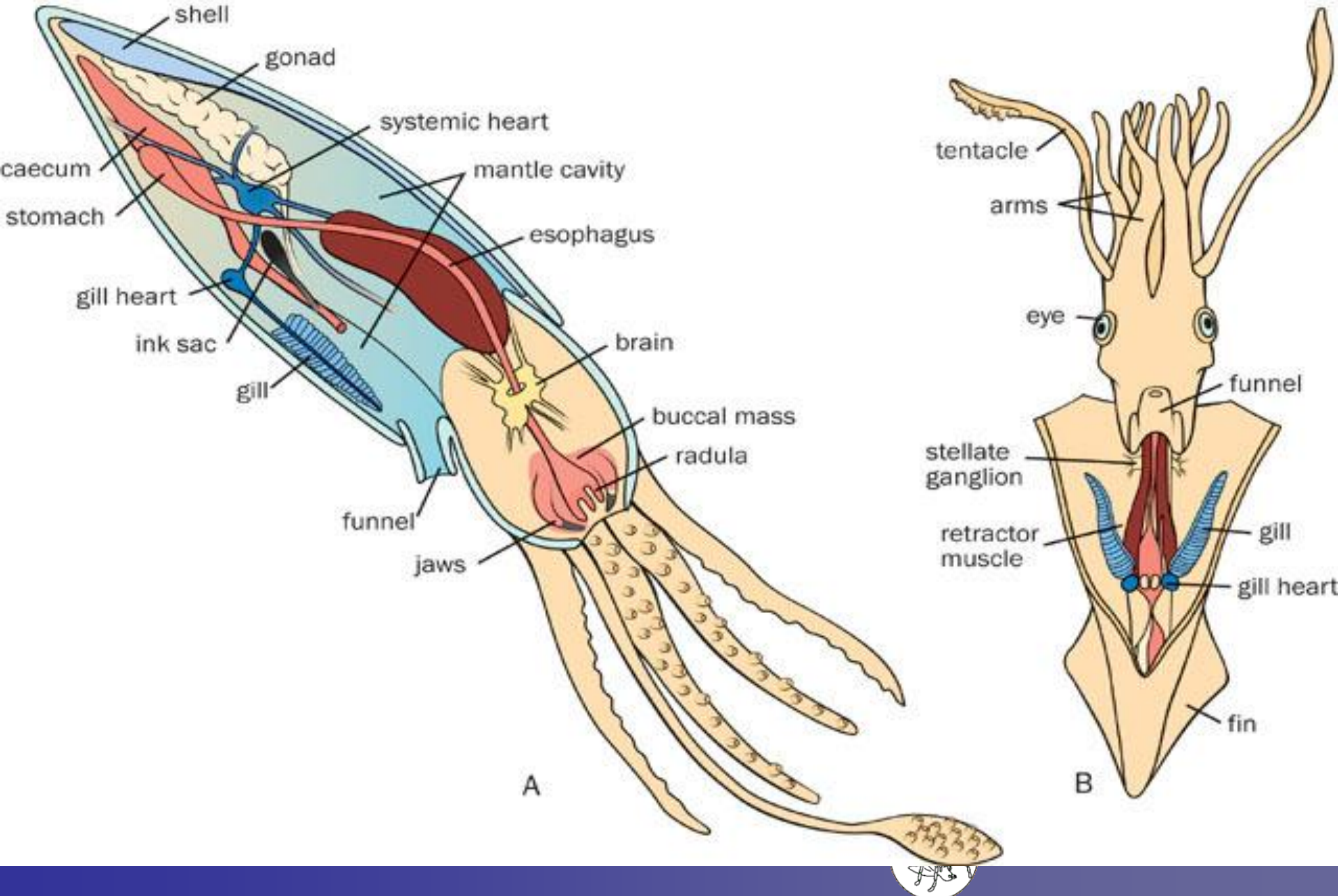
- Sépie



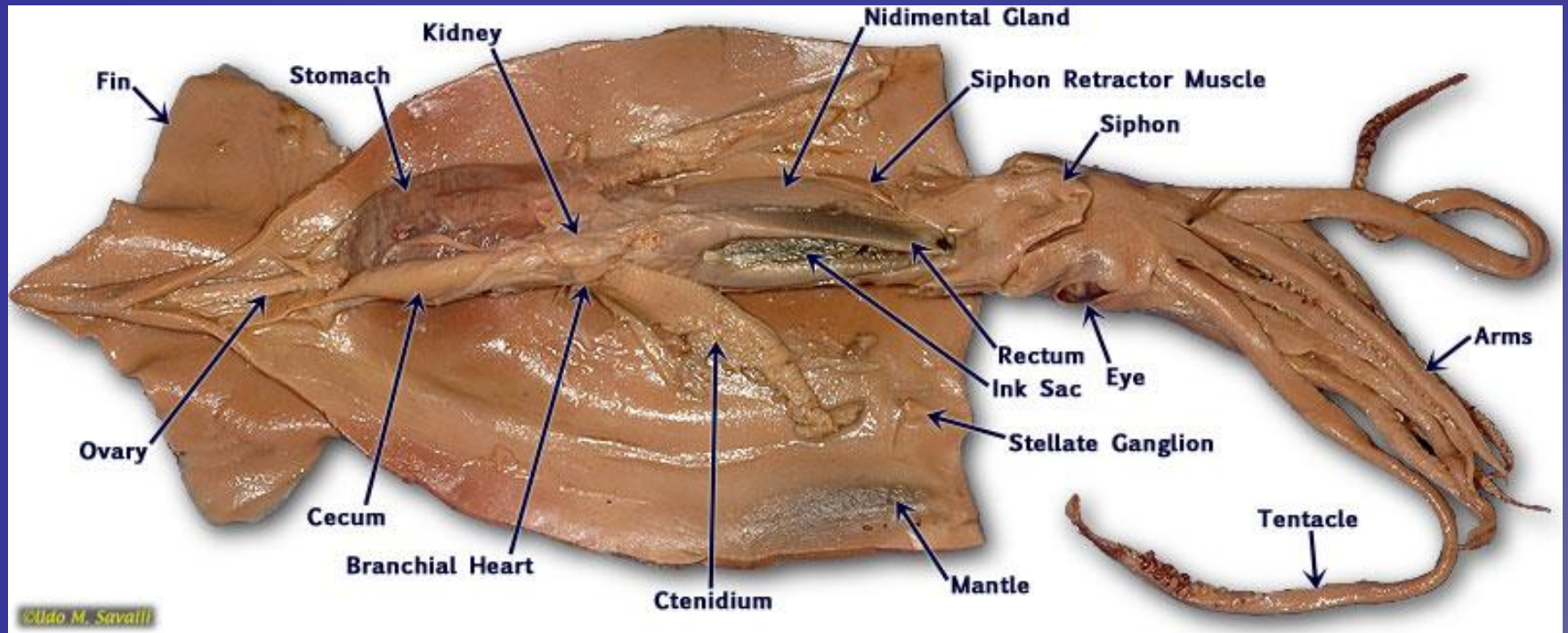
- Oliheň



# vnitřek

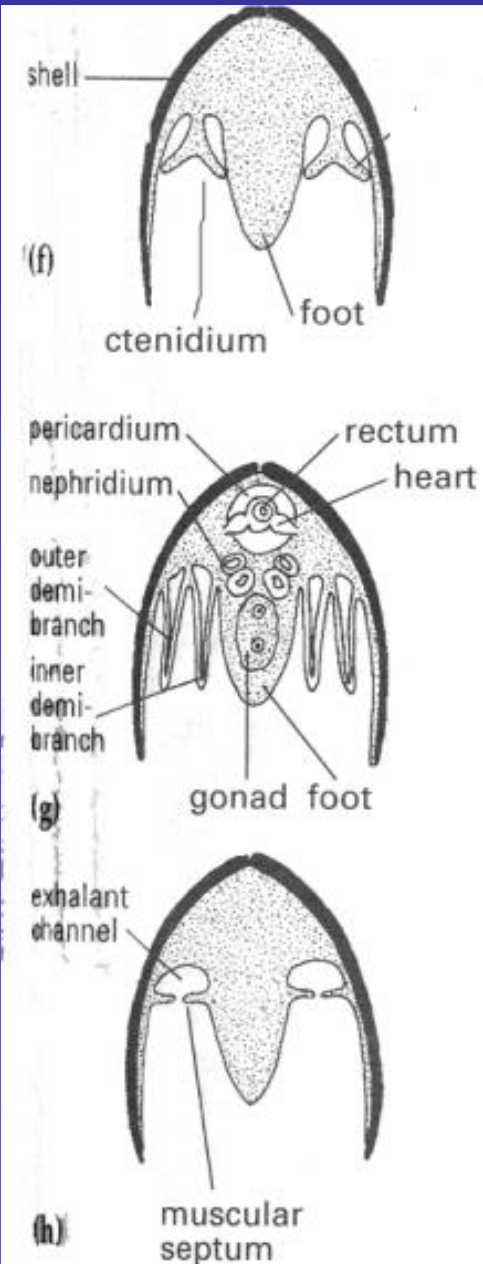
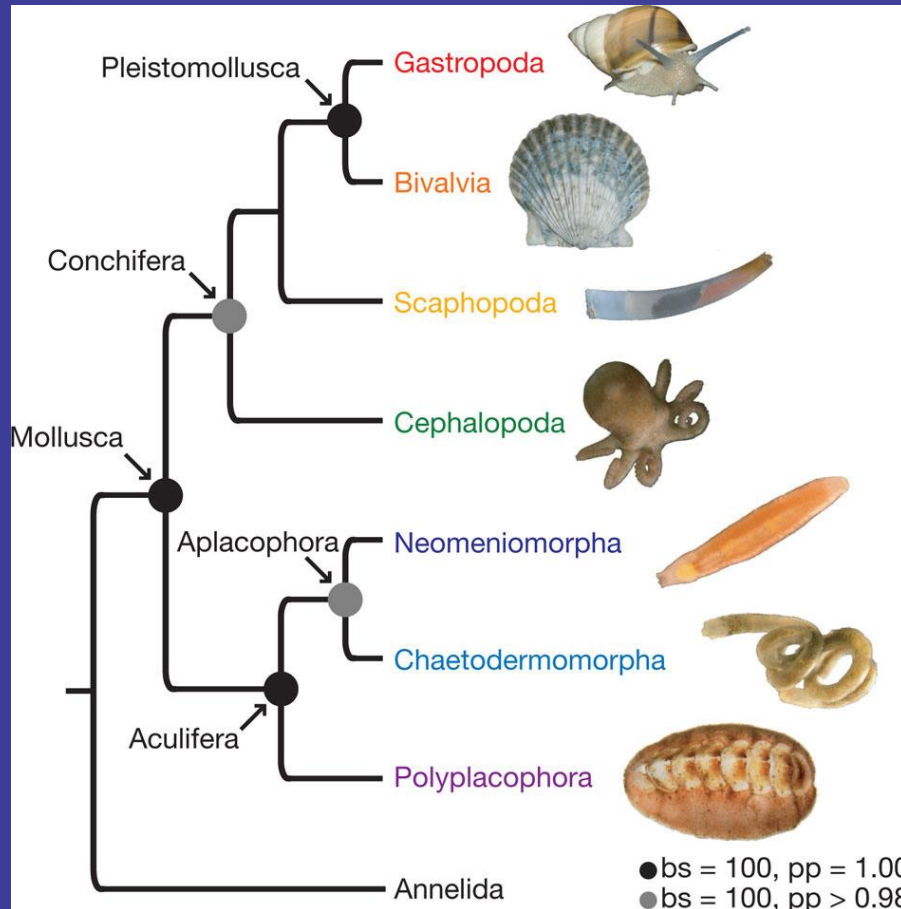


# Vnitřek reálně



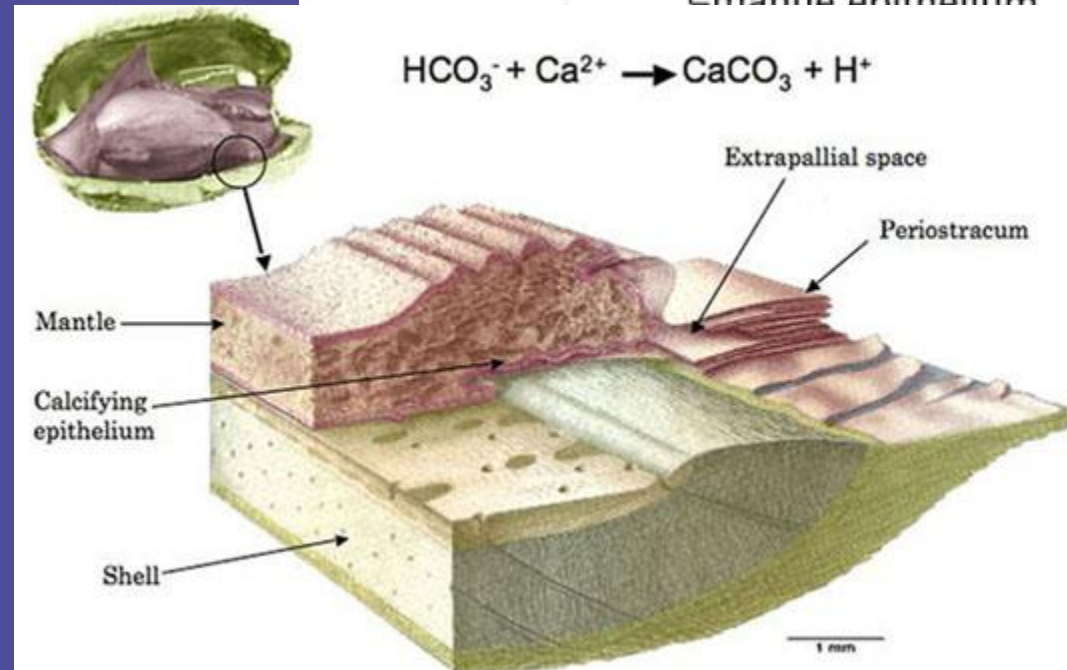
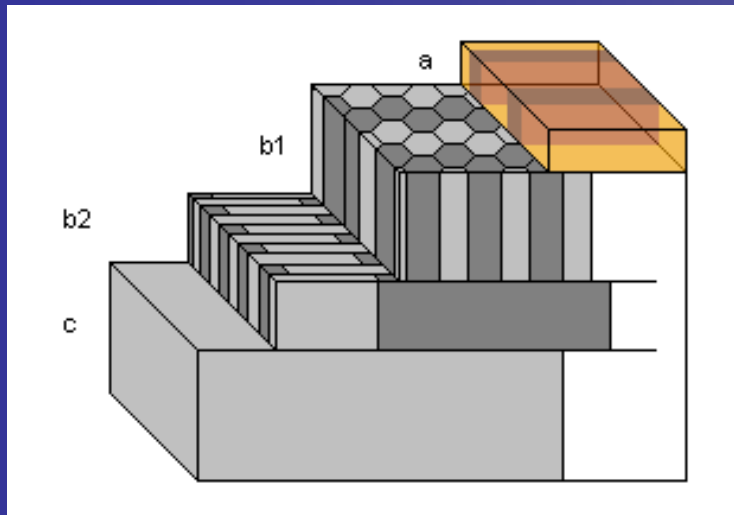
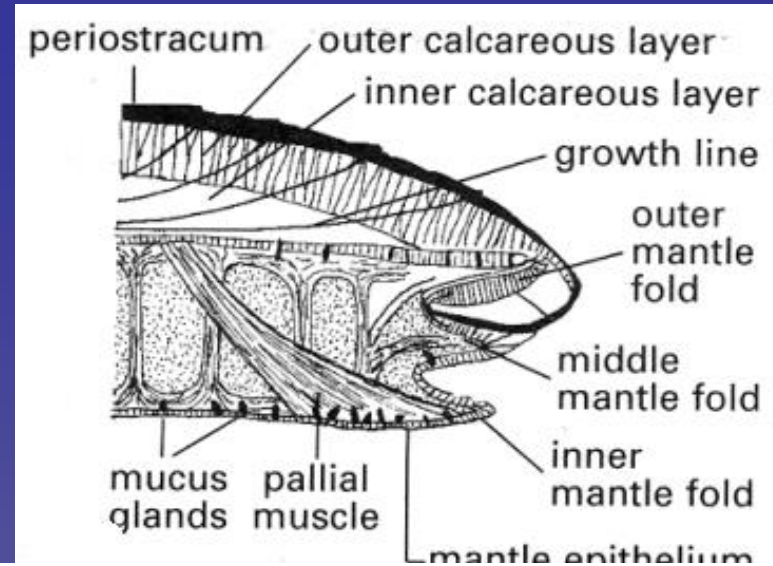
# Mollusca: Bivalvia = Mlži

- Dvouchlopnová schránka
- Plášť
- Žábra
- Tělo s nohou



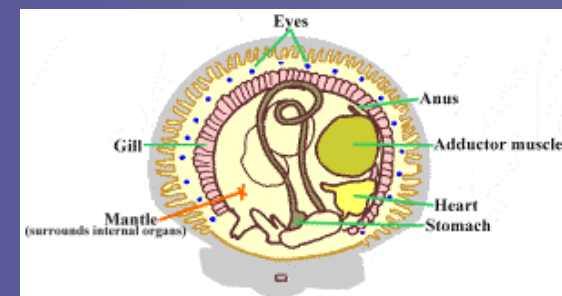
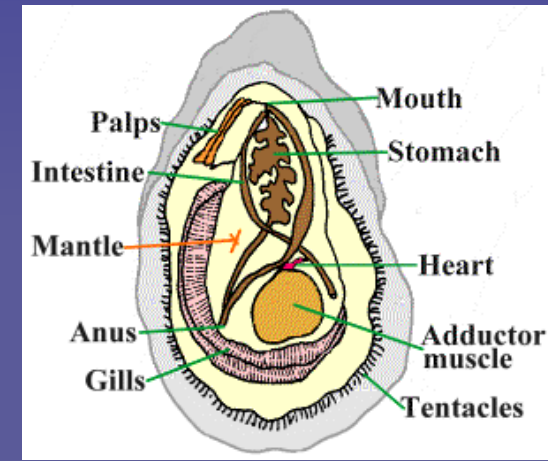
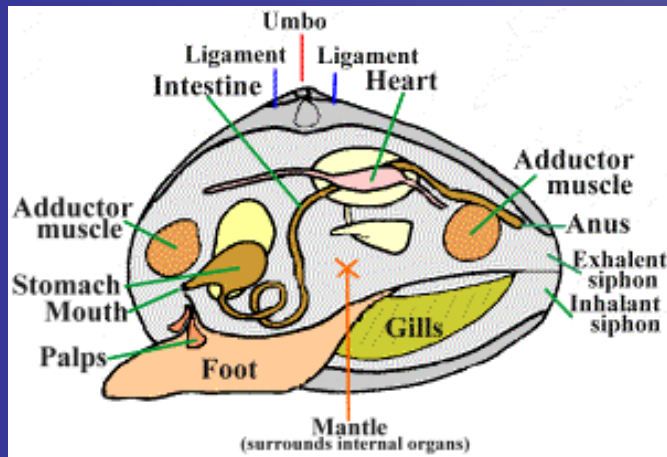
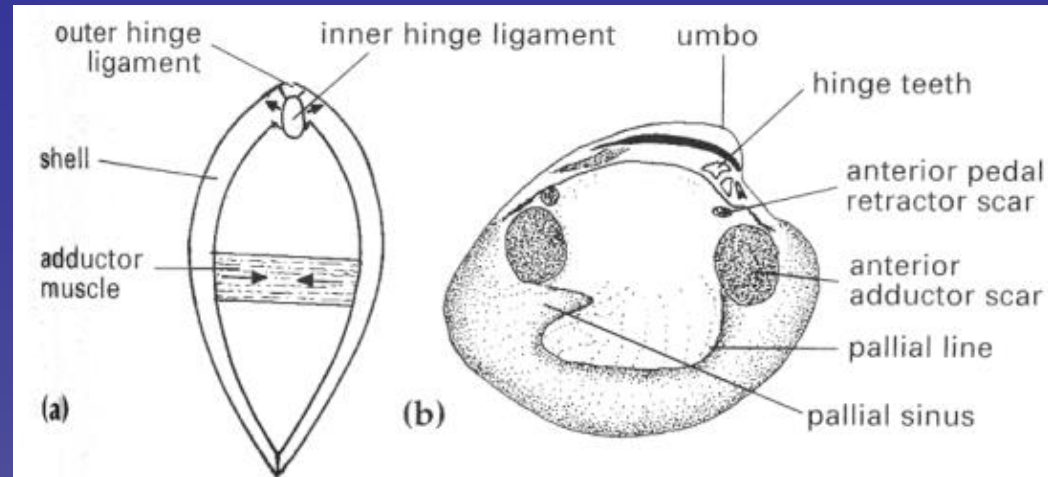
# Mollusca - Bivalvia

- Schránka vytvářena pláštěm
- Periostracum
- Ostracum
- Hypostracum



# Bivalvia

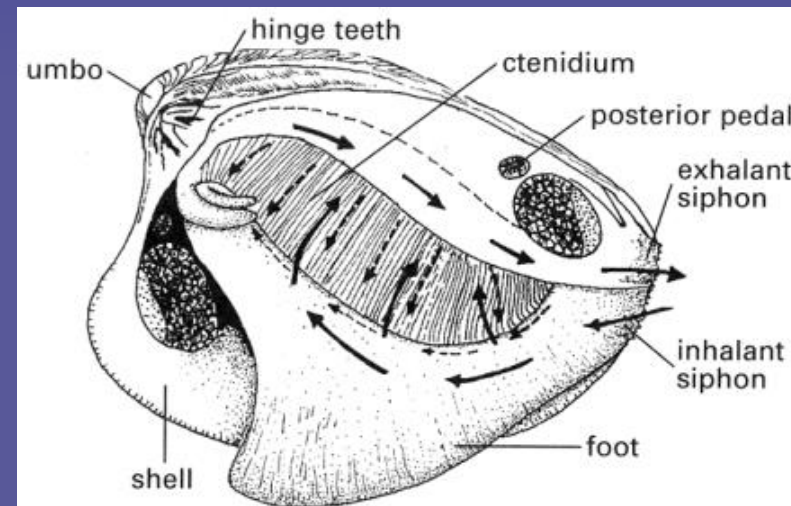
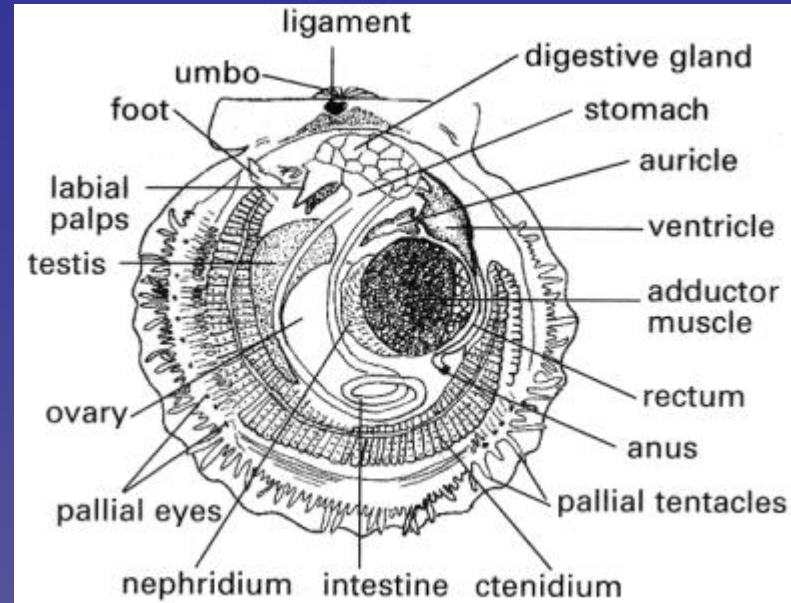
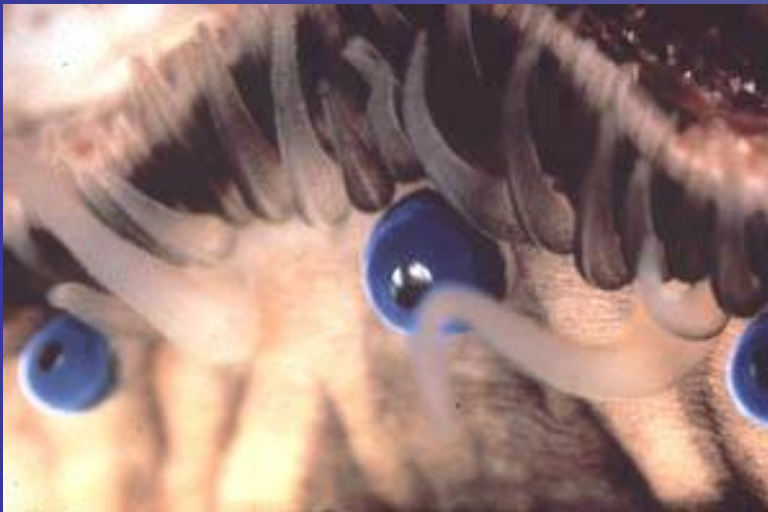
- Ligament
- Zámek
- Připojení svalů
- Zatahovače
- Svěrače



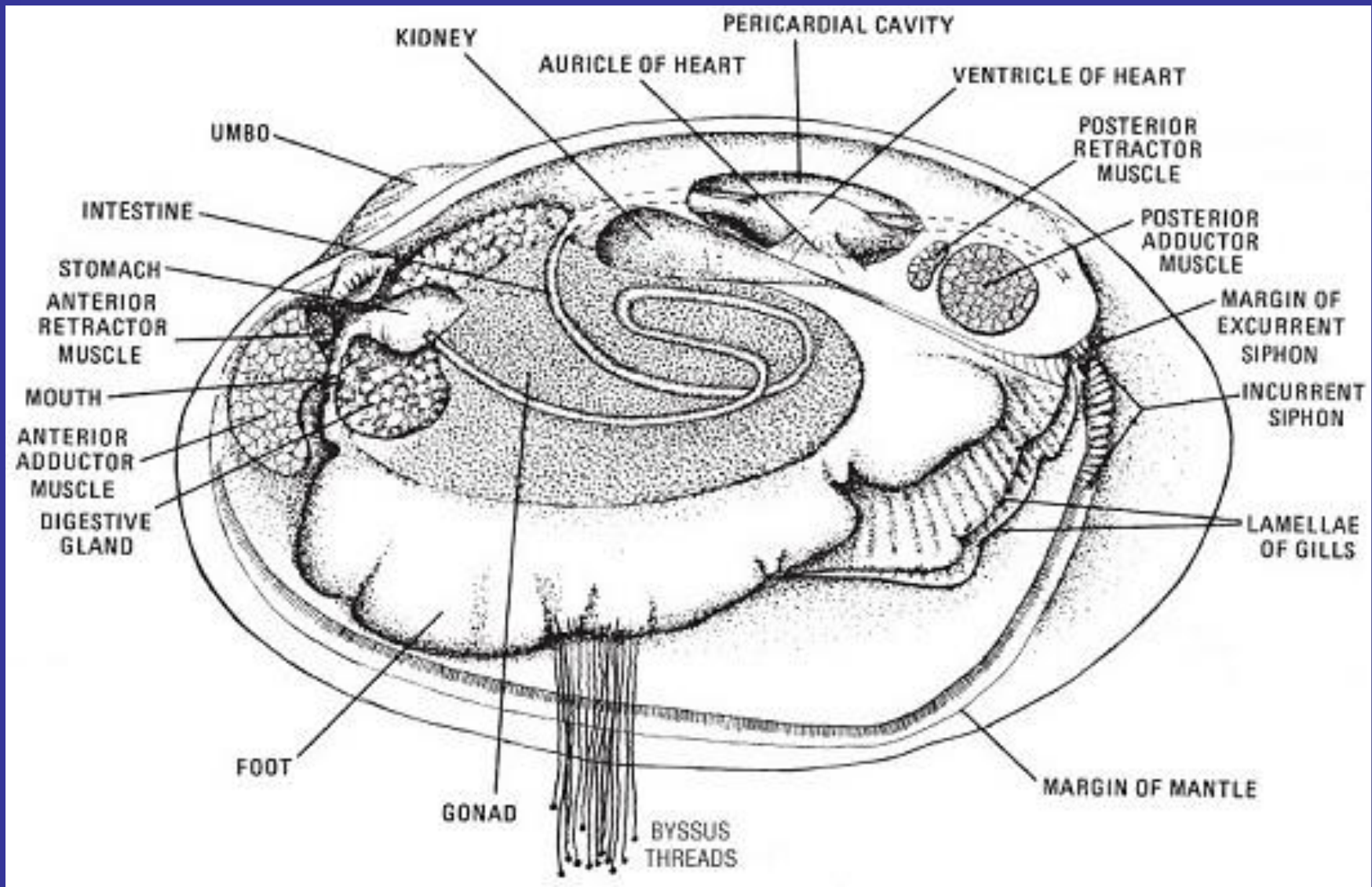


# Bivalvia

- Plášť
- Žábry
- Noha
- Oči

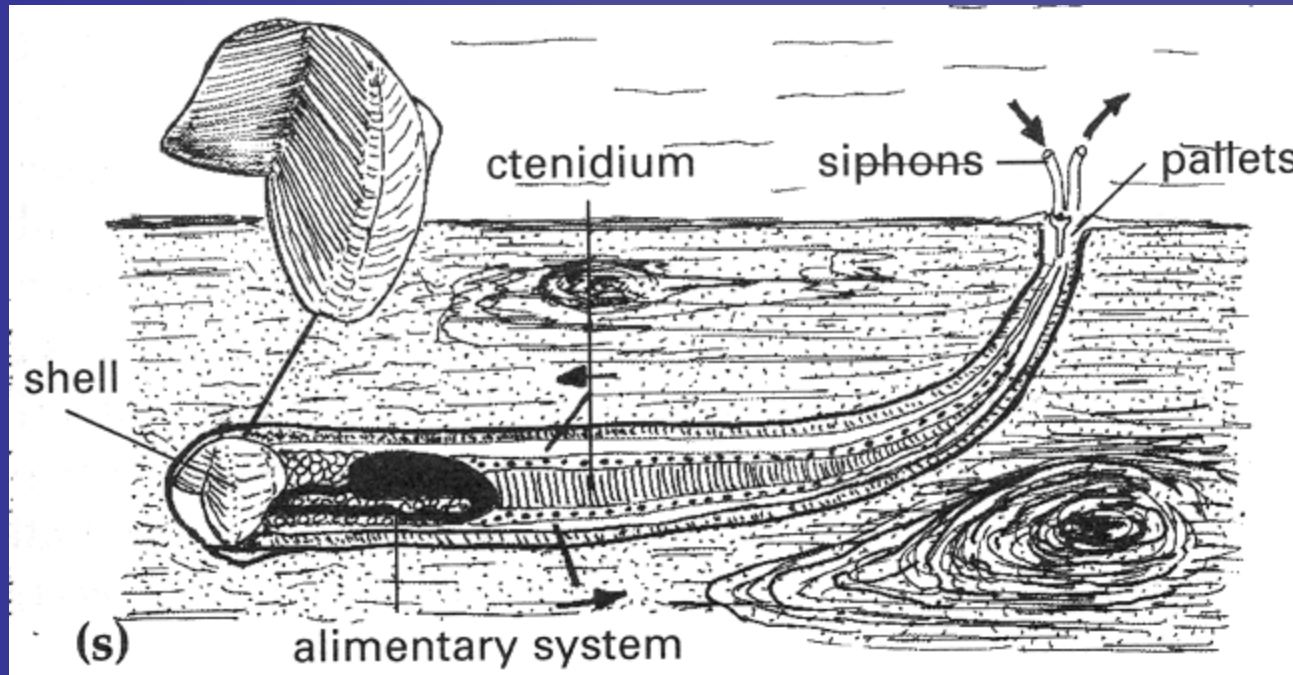


# vnitřek



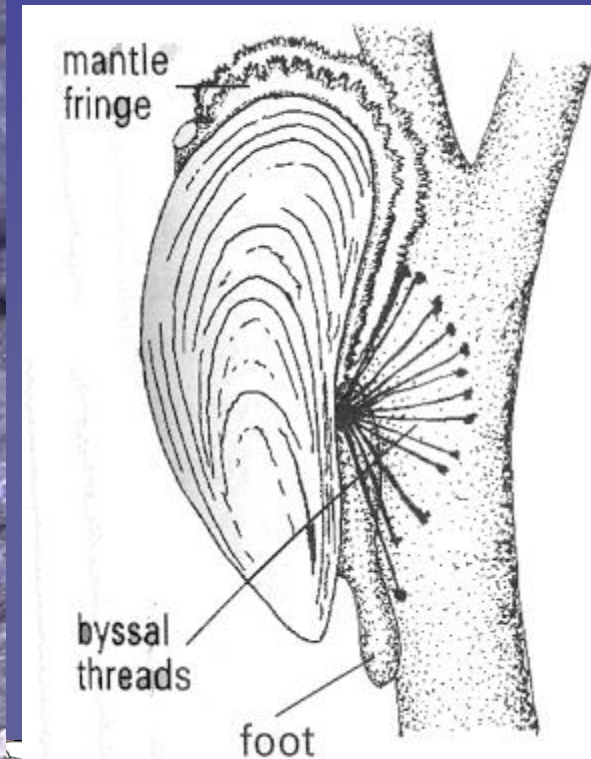
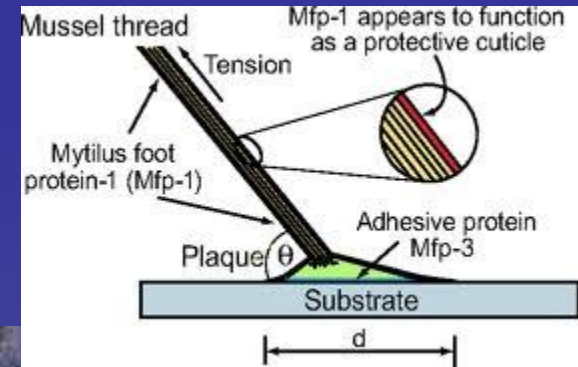
# Bivalvia

- Sášeň (Teredo)
- Chodby vystlané vápníkem



# Bivalvia

- Slávka (*Mytilus*)
- byssal threads
- 500 MPa



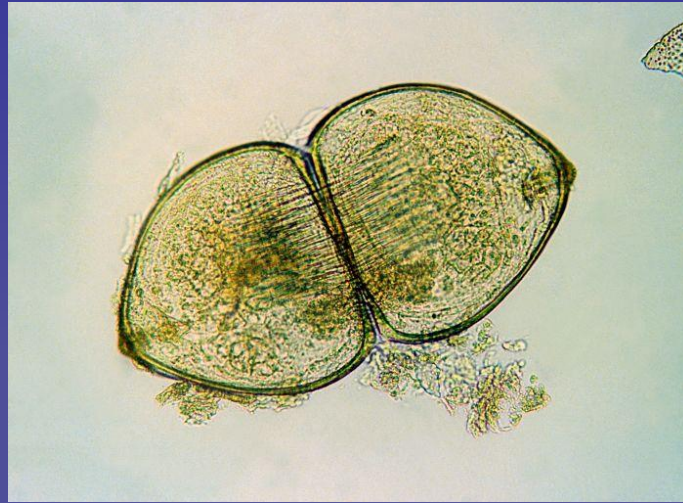
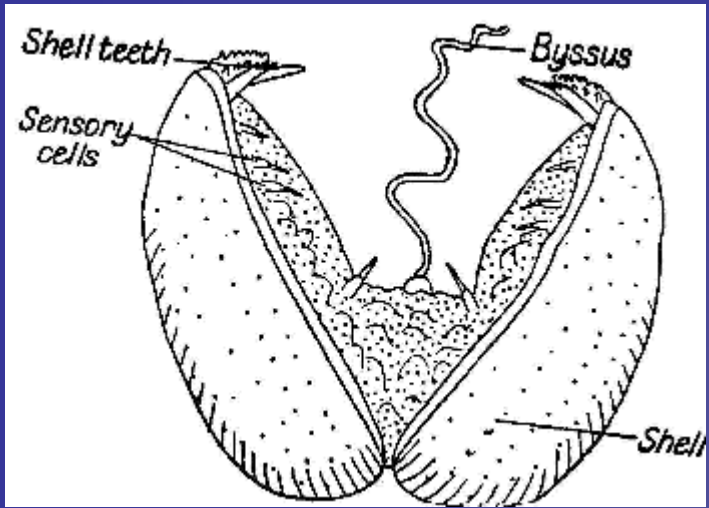
# Bivalvia

- Škeble (Anodonta)
- Velevrub (Unio)
- Perlorodka (Margaritifera)
- Hřebenatka (Pecten/Chlamys)
- Ústřice (Ostrea)
- Zéva (Tridacna/Hippopus)
- Slávička mnohotvárná (*Dreissena polymorpha*)



# Bivalvia

– glochidie



als



# Scaphopoda

Mořské

Žijí ve dně

Schránka otevřená na obou koncích

