



Cvičení ze zoologie bezobratlých I

Deuterostomia



18.2.2014

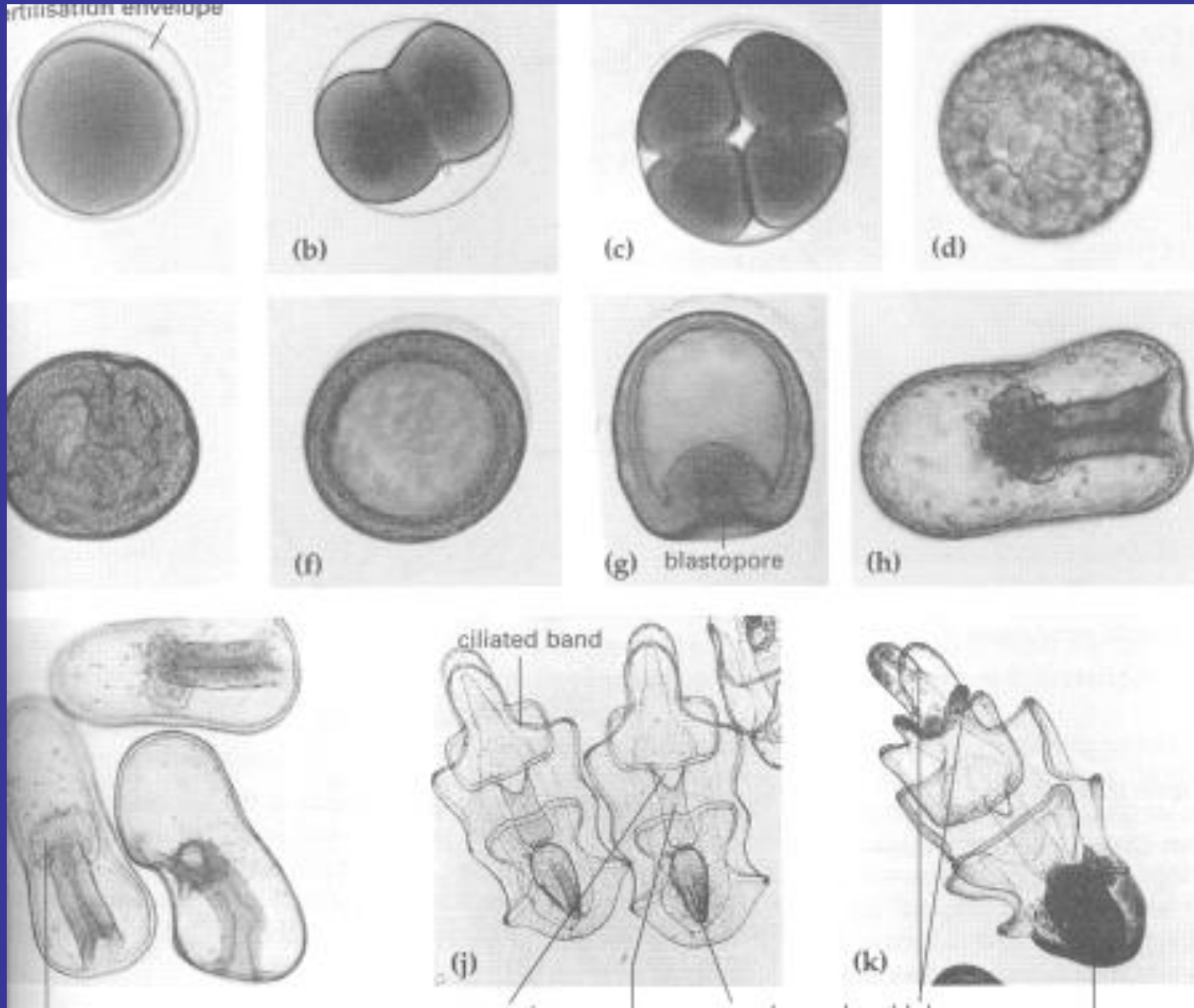
Oldřich Nedvěd, Martin Volf, František Sládeček

PřF UK



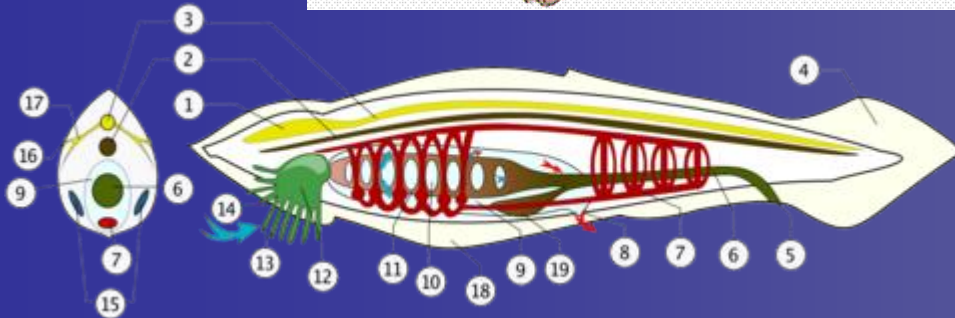
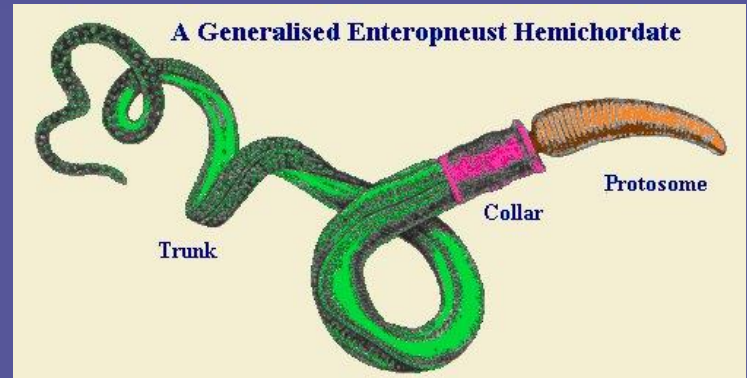
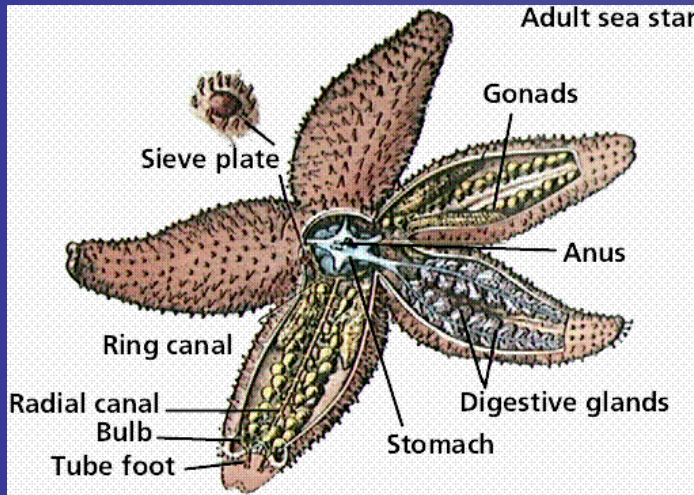
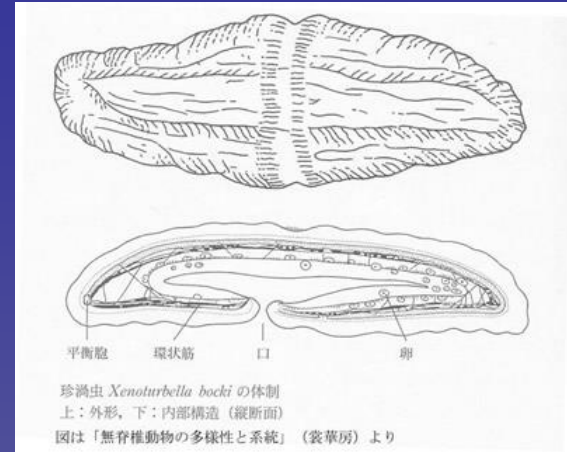
Deuterostomia

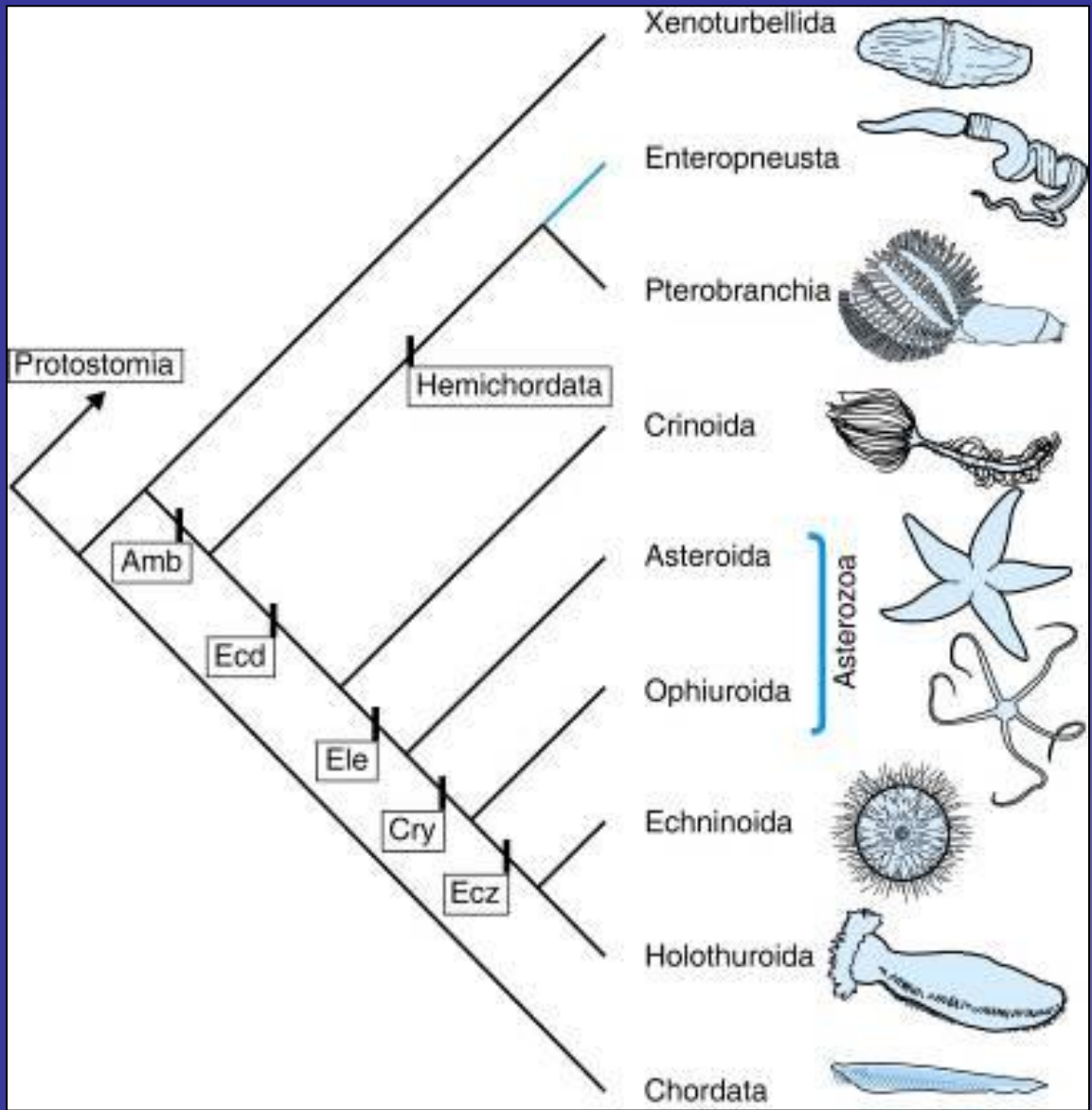
- radial cleavage



Deuterostomia

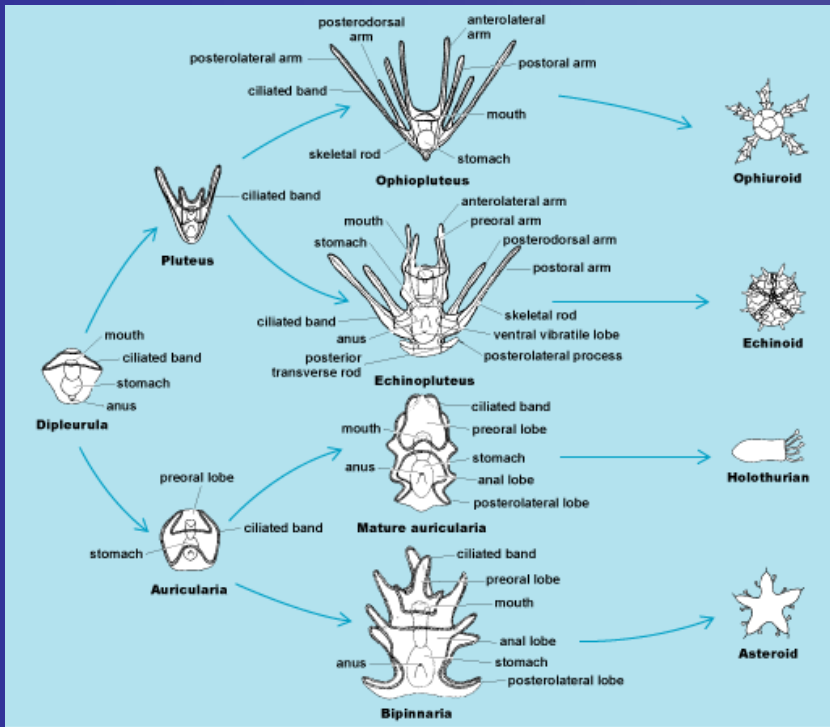
- Acoelomorpha
- Xenoturbellida
- Echinodermata
- Hemichordata
- Chordata





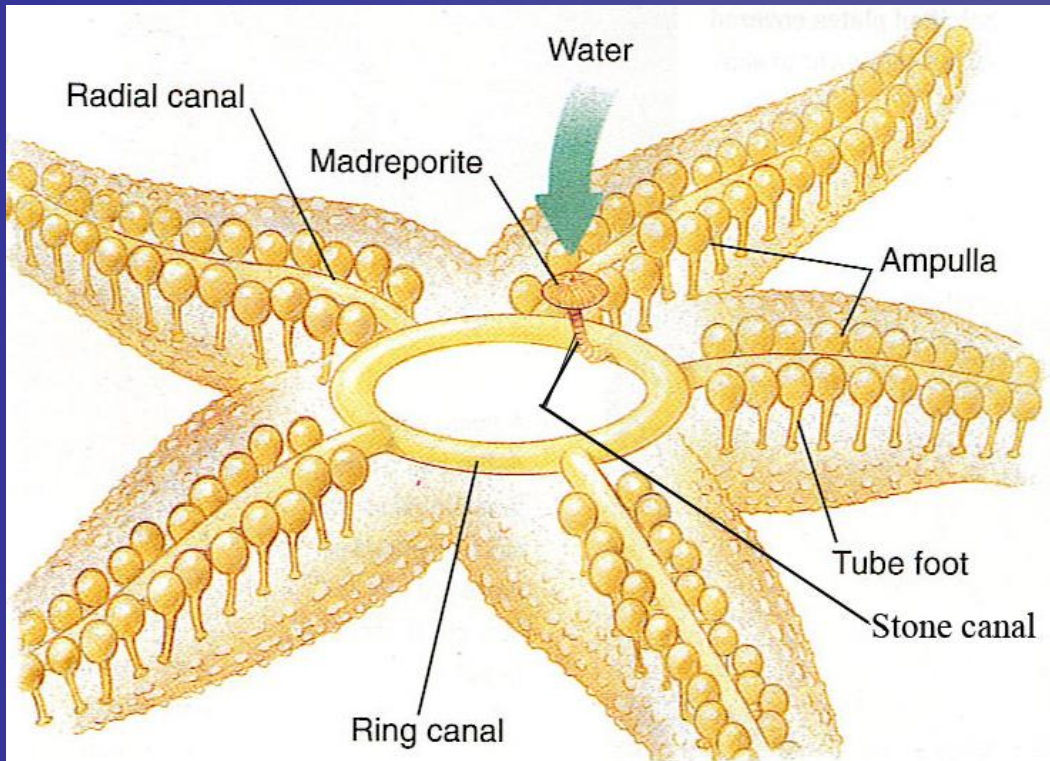
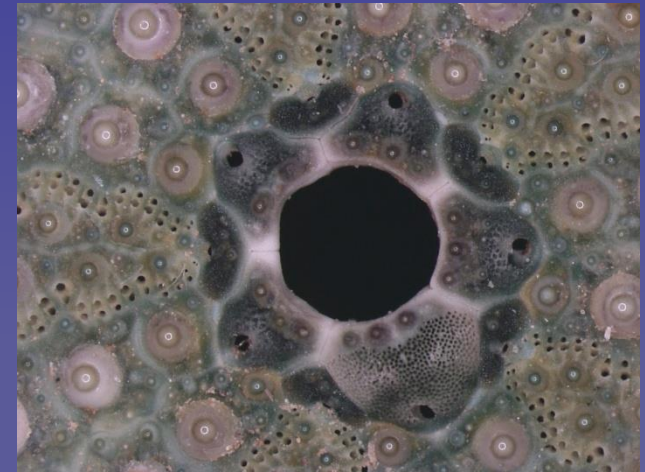
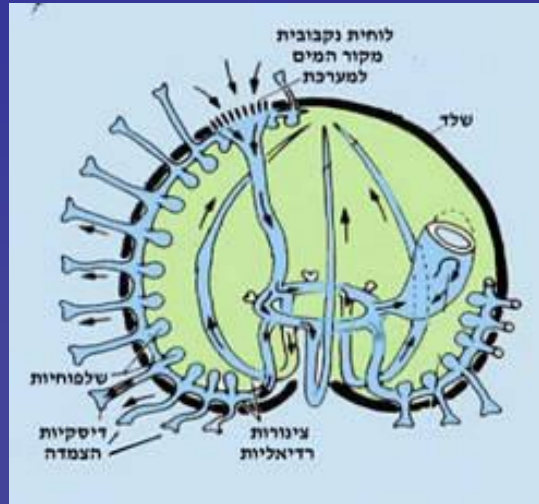
Echinodermata

- Pouze mořští
- Dospělci radiálně souměrní
- Larvy bilaterální



Echinodermata

- ambulakrální systém
 - madreporit
 - panožky



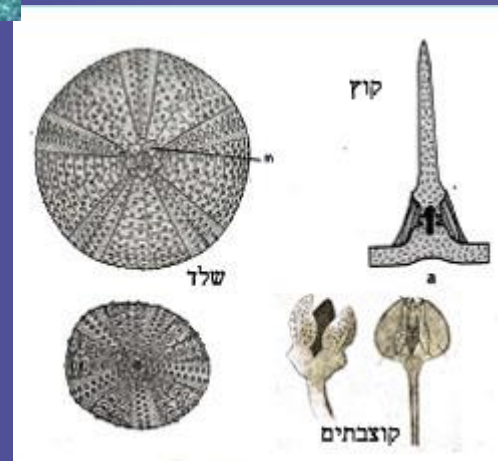
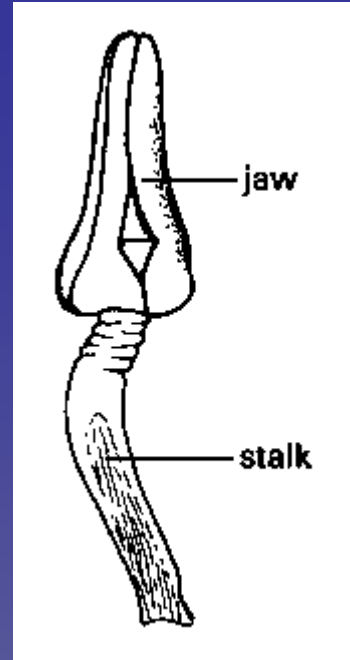
Echinodermata

- respirace
 - skin
 - pseudopodia
 - papulae – coelomic
 - bursae – invaginations = lungs
 - water lungs in rectum
 - peristomial gills



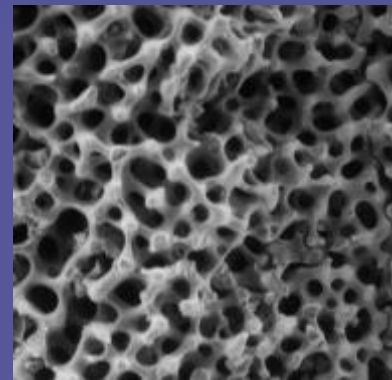
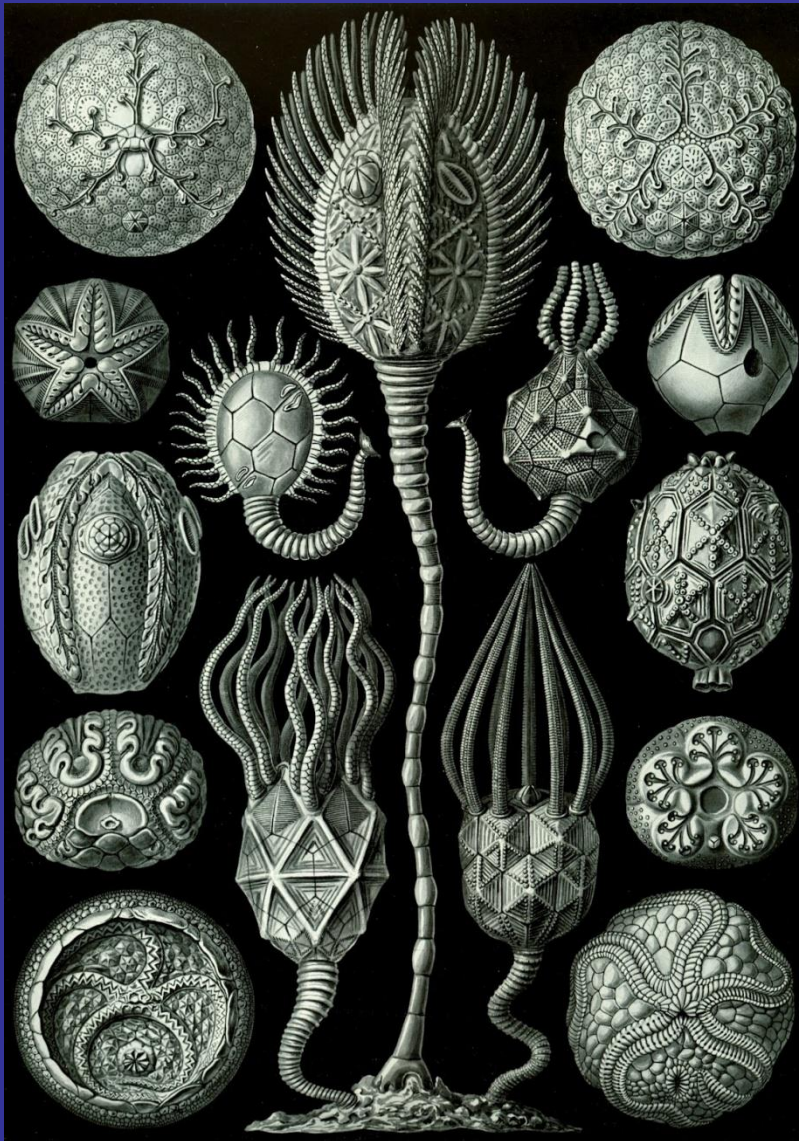
Echinodermata

- obrana
 - skelet
 - ostny
 - pedicellarie
 - lepivá excrece
 - autotomie střeva
 - regenerace



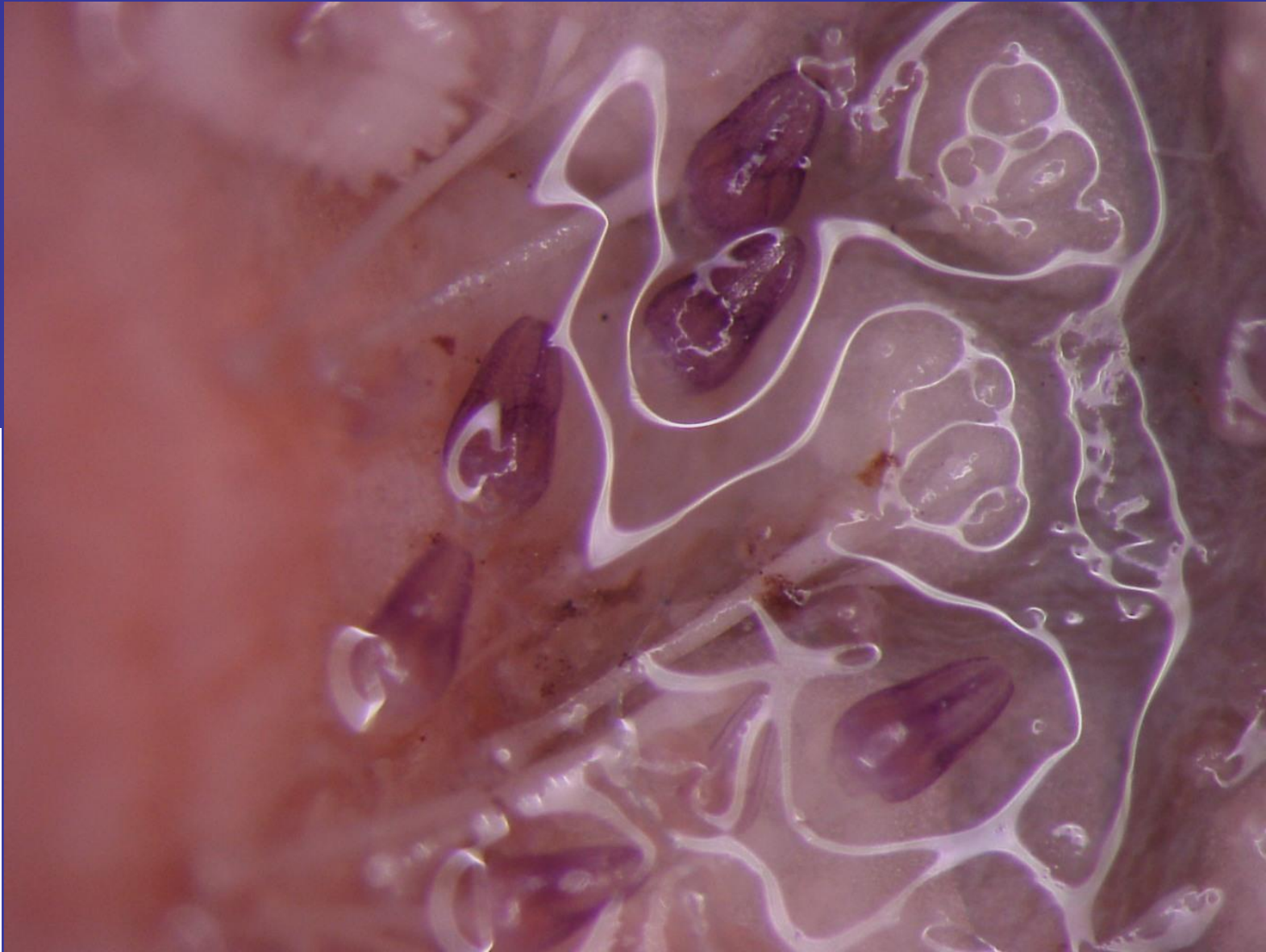
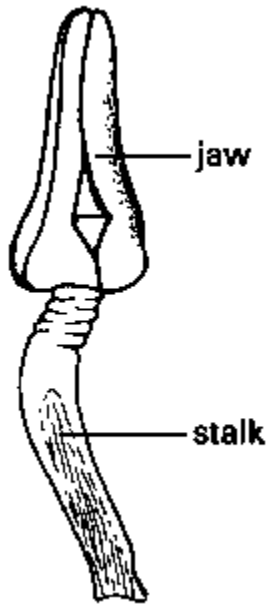
Echinodermata

- endoskelet



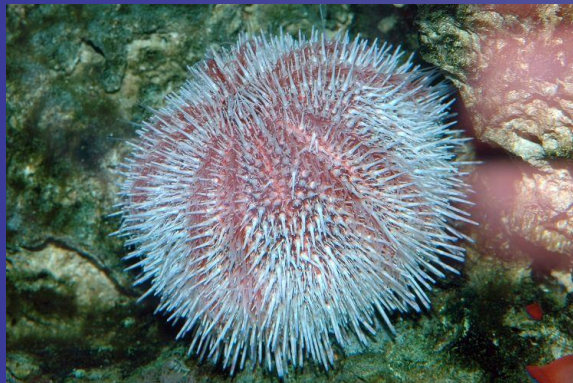
Echinodermata

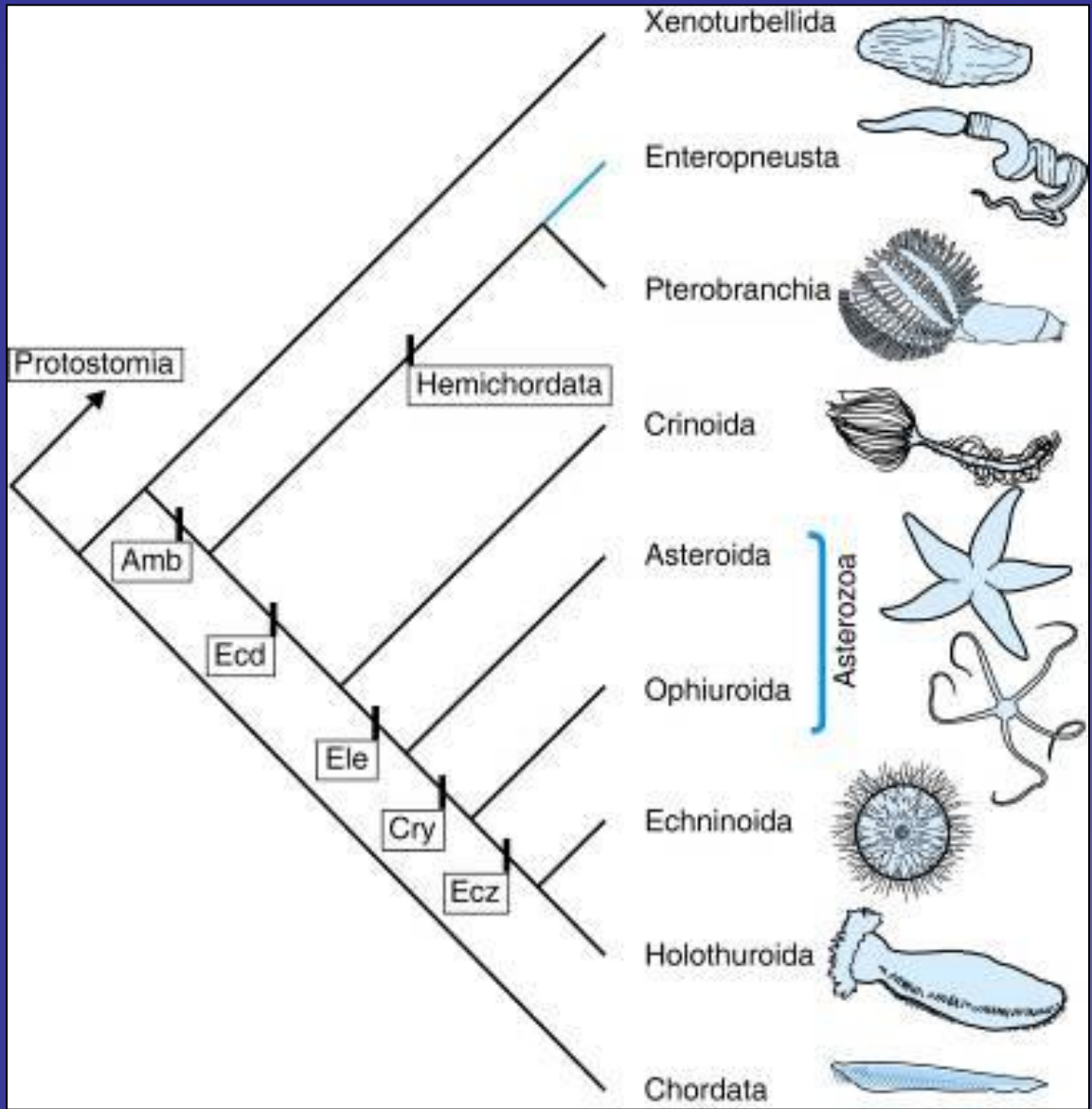
- obrana
- pedicellarie



Echinodermata

- system - 6000 spp.
 - Crinoida - 550
 - Asteroidea – sea stars: 1500
 - Ophiuroidea - 2000
 - Echinoidea – sea urchins: 950
 - Holothuroidea – sea cucumbers 900





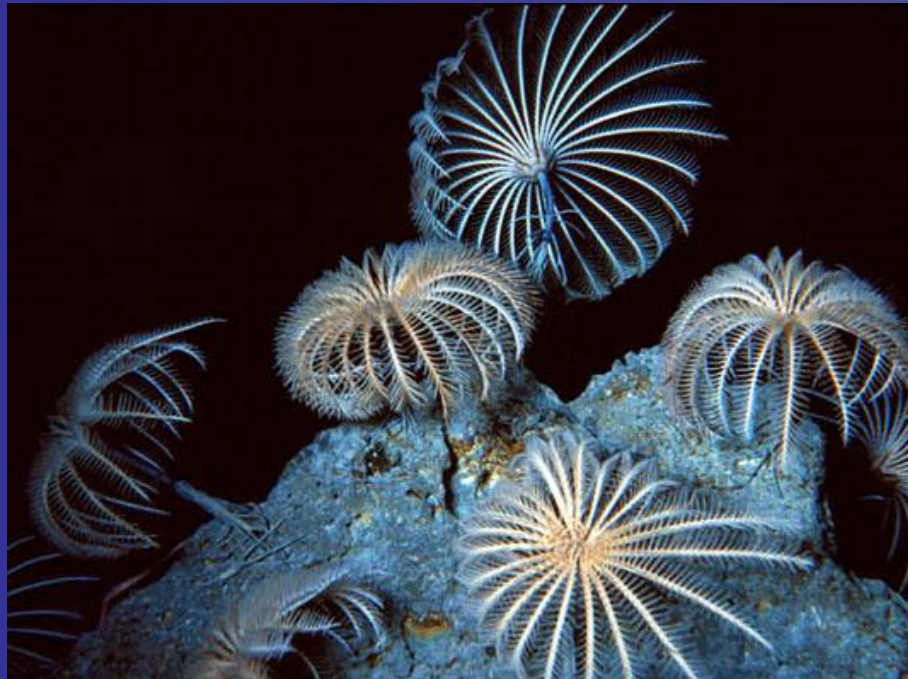
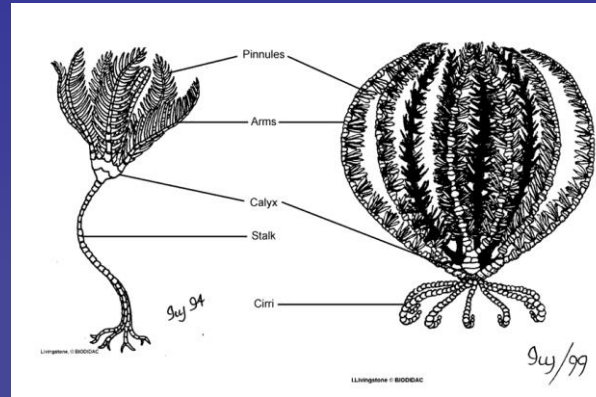
Crinoidea

Přisedlé i lezoucí

Zpeřená ramena

Trávicí trubice do U

Gonády vznikají ad hoc, gonochoristi



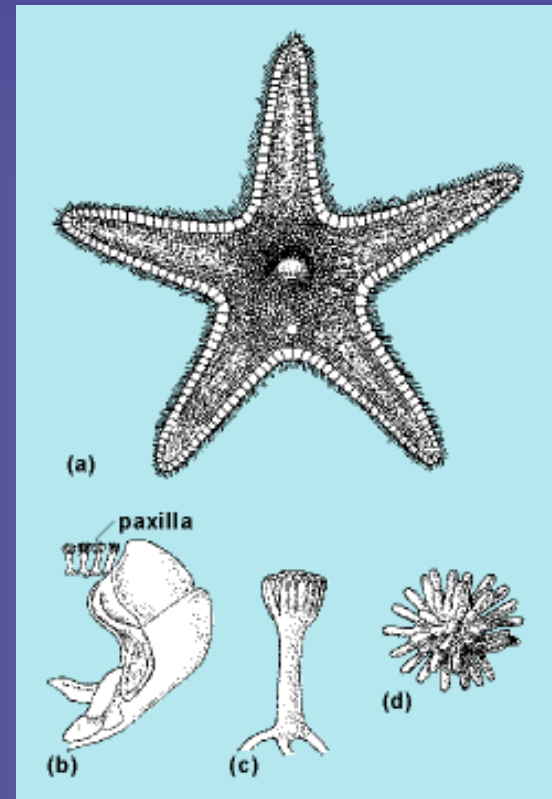
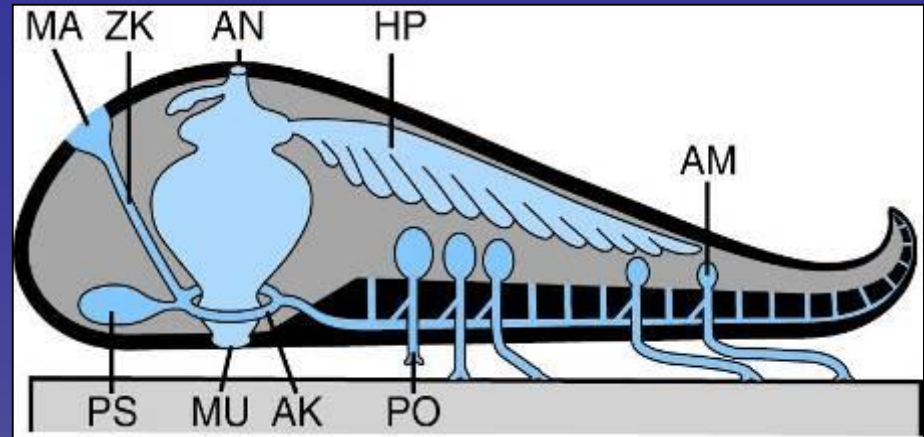
Asteroida

Pohyb pomocí
panožek

Gonochoristi

Miskovité očko

Paxilla

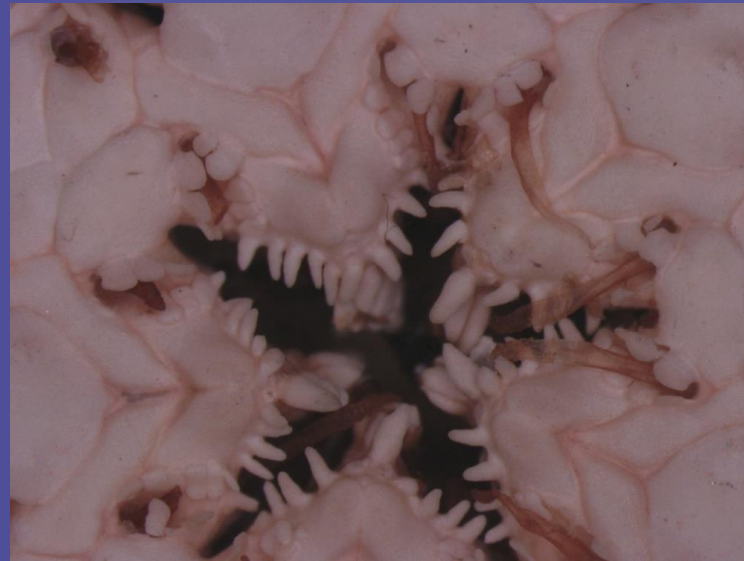


Ophiuroida

Pohyb pomocí ramen

Společný ústní i vyvrhovací otvor

Gonochoristi



Echinoida

Dobře vyvinutá
ambulakrální
soustava

Kompaktní
schránka

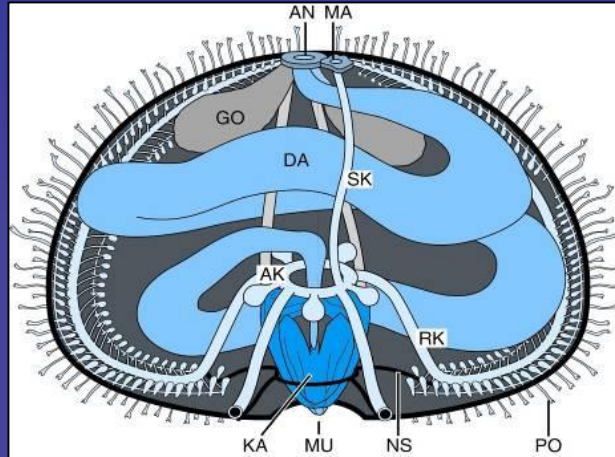
Aristotelova
lucerna

- Euechinoida

Irregularia

- hrabavé

- asymetrické

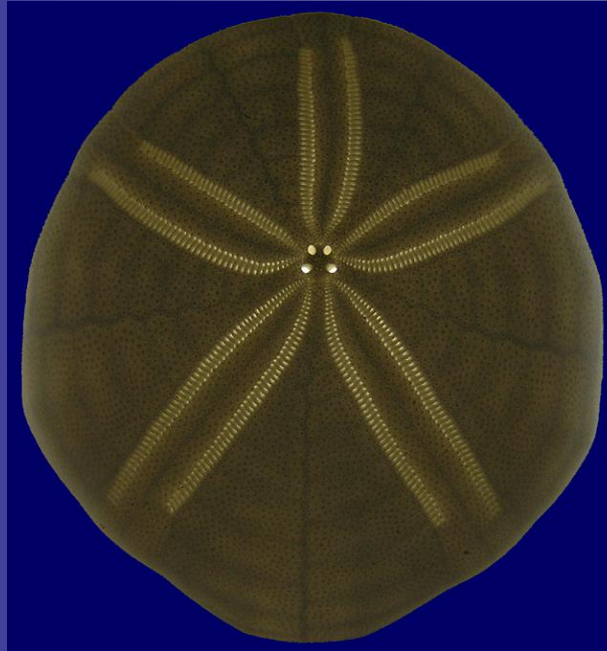


Divný ježovky

- Spatangoidea



- Cassiduloidea



Echinoida

Ostny:

- kloubně připojené
- pohyb
- obrana



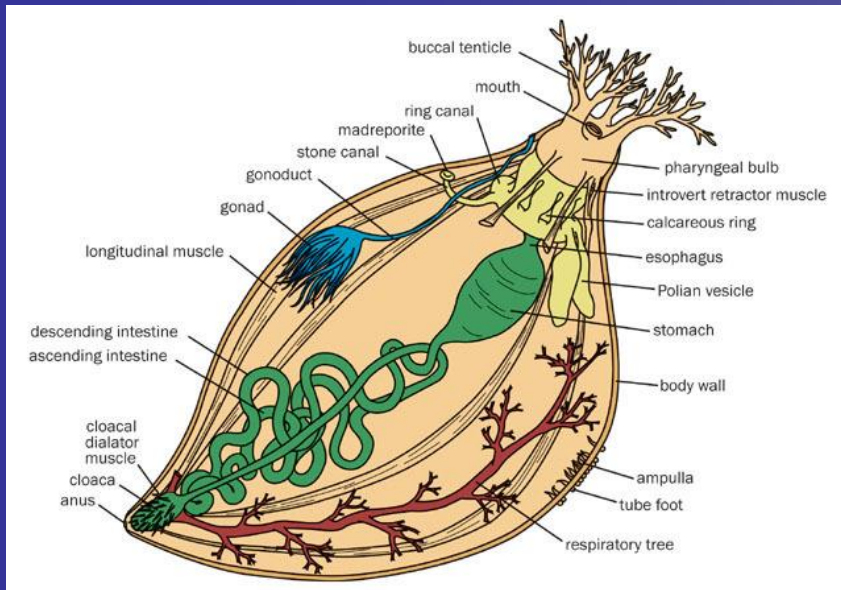
Holothuroida

Redukovaná schránka

Holothurin

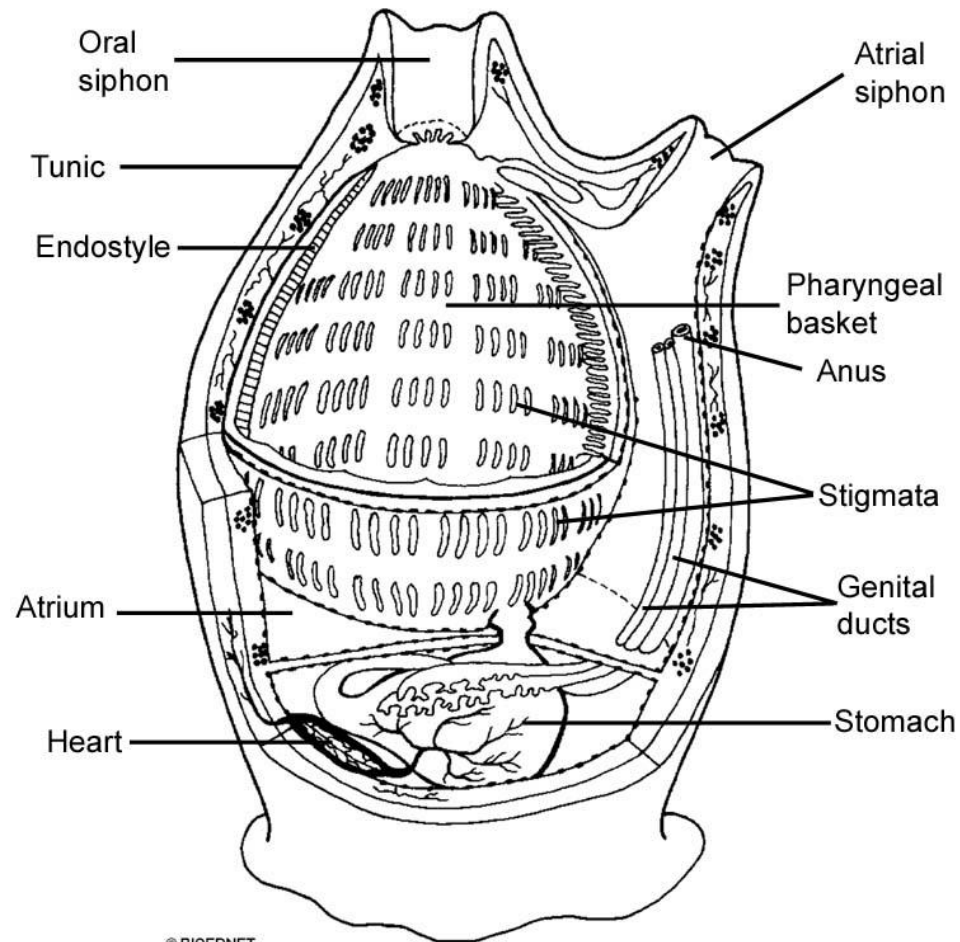
Cuvierovi žlázy

Vyvrhování střeva



Chordata

- Tunicata = Urochordata
 - Ascidiacea



Chordata

(Classe)
Thaliacea.
Salpen.

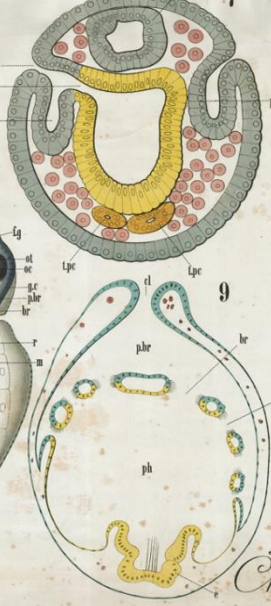
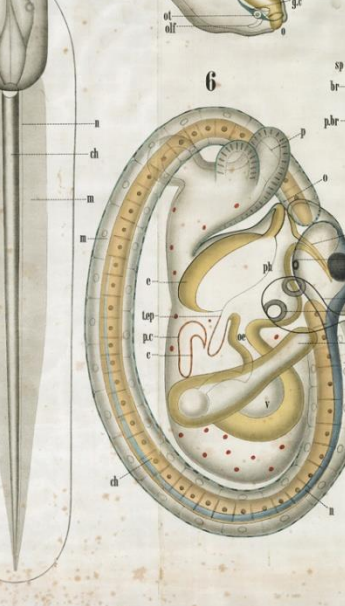
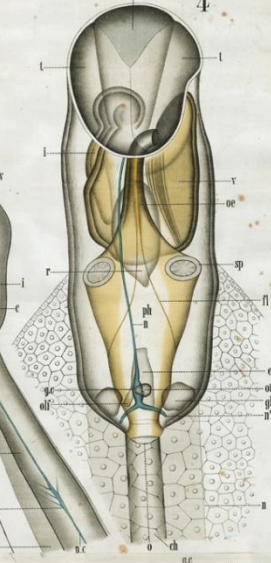
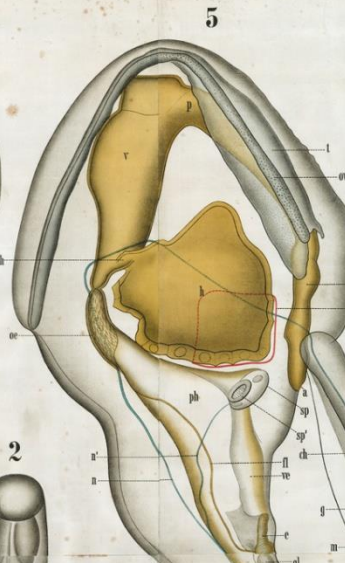
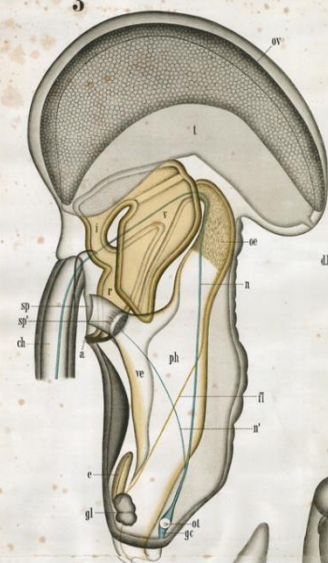
(Typus)
Tunicata.
Manteltiere.

(Ordnung)
Cyclomyaria et
Desmomyaria.

(Classe)
Appendicularia.
Appendicularien.

(Typus)
Tunicata.
Manteltiere.

(Classe)
Larvae Ascidiarum.
Ascidiarlarven.



Chordata

- Tunicata = Urochordata

Ascidiacea

Tunicin

Hltan – filtrace, endostyl

