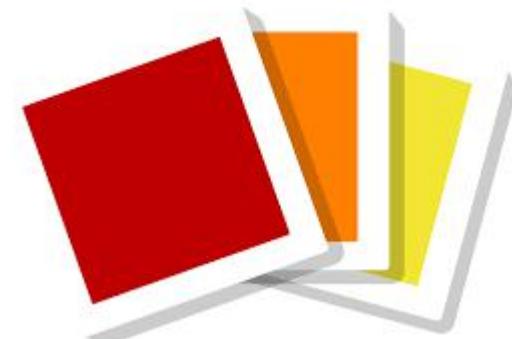


Buts du cours

- Un peu de vocabulaire
- De la biologie marine basée sur les anciens standard de la Lifras
- Quelques exemples illustratifs
(Méditerranée, Zeeland & eau douce belge)



Un peu de vocabulaire (1)

Environnement pélagique

Phytoplancton



Zooplancton

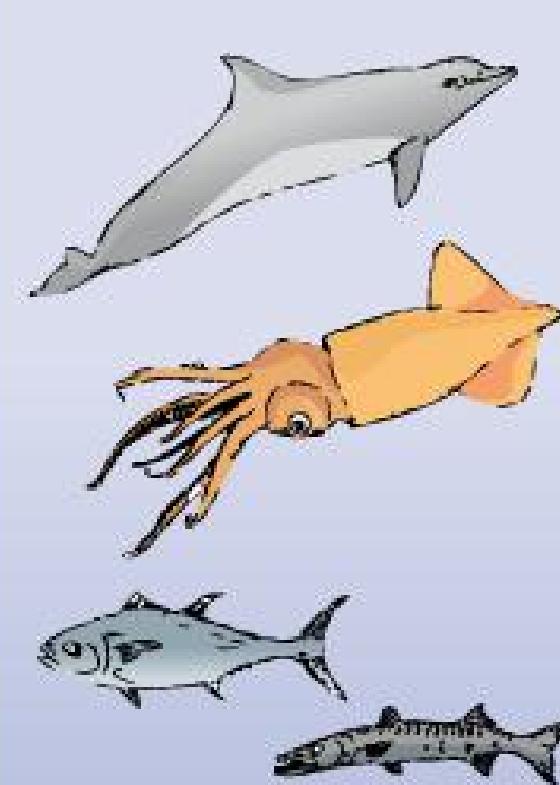


PLANCTON

Environnement benthique

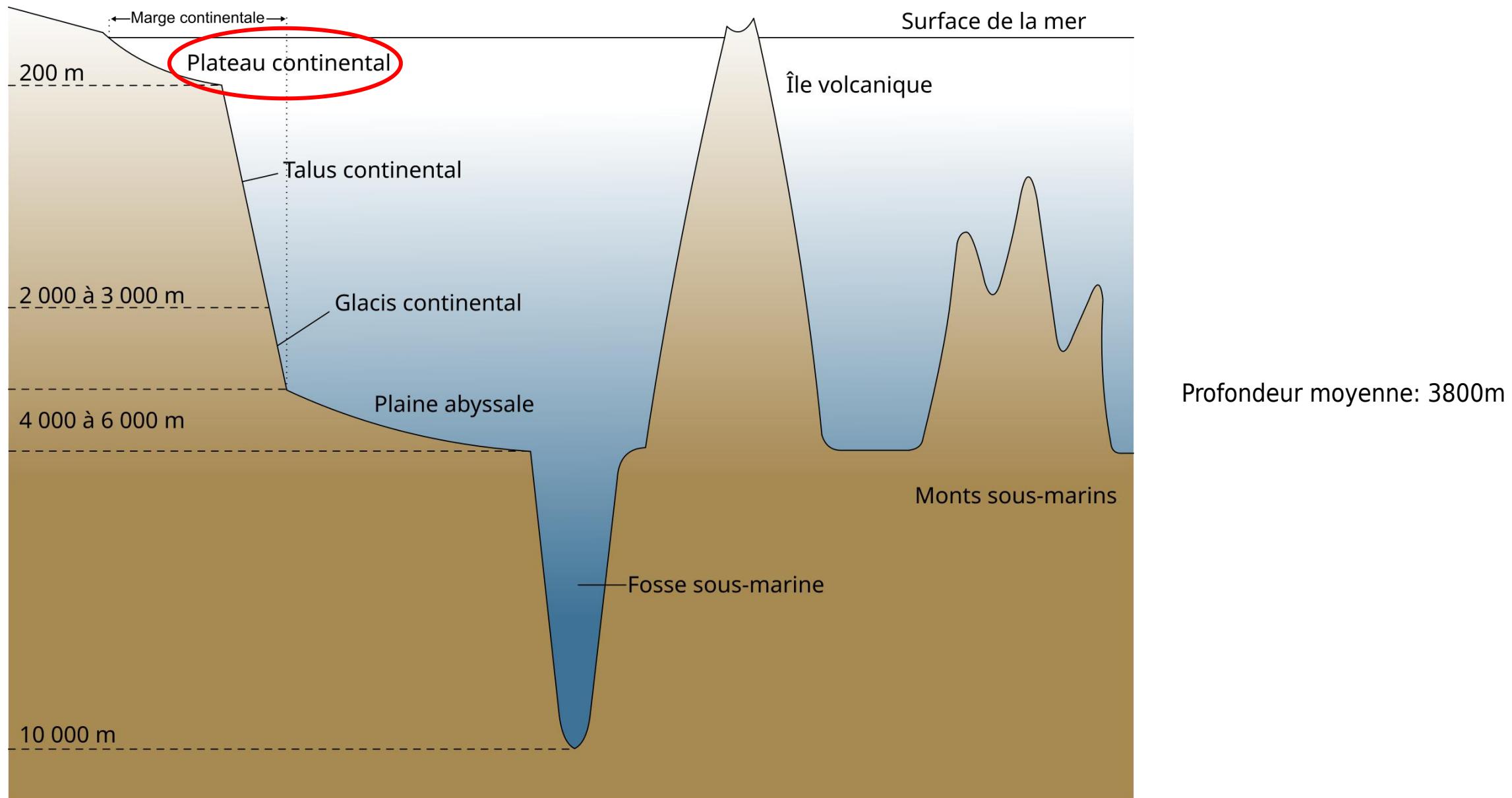


BENTHOS

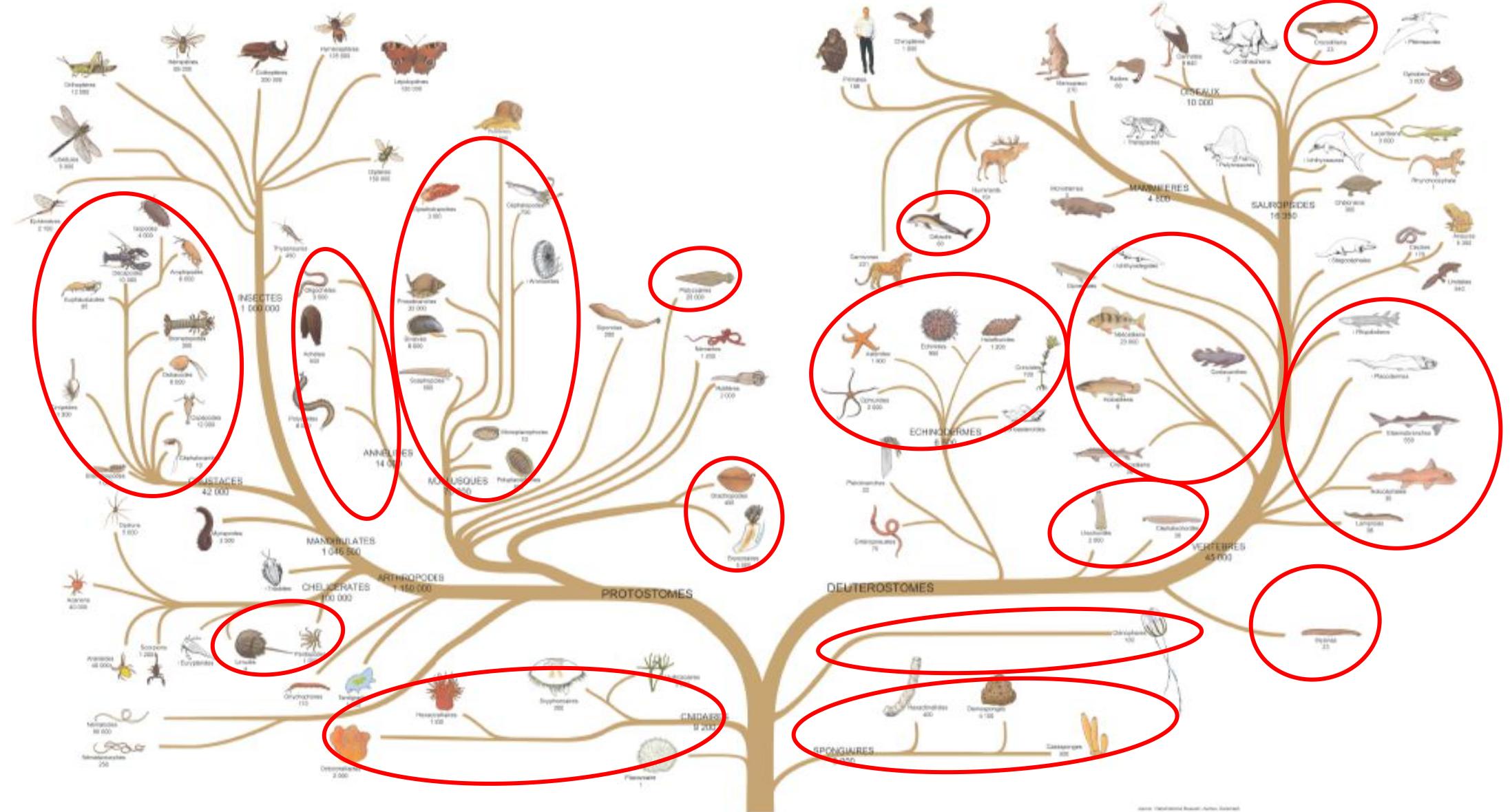


NECTON

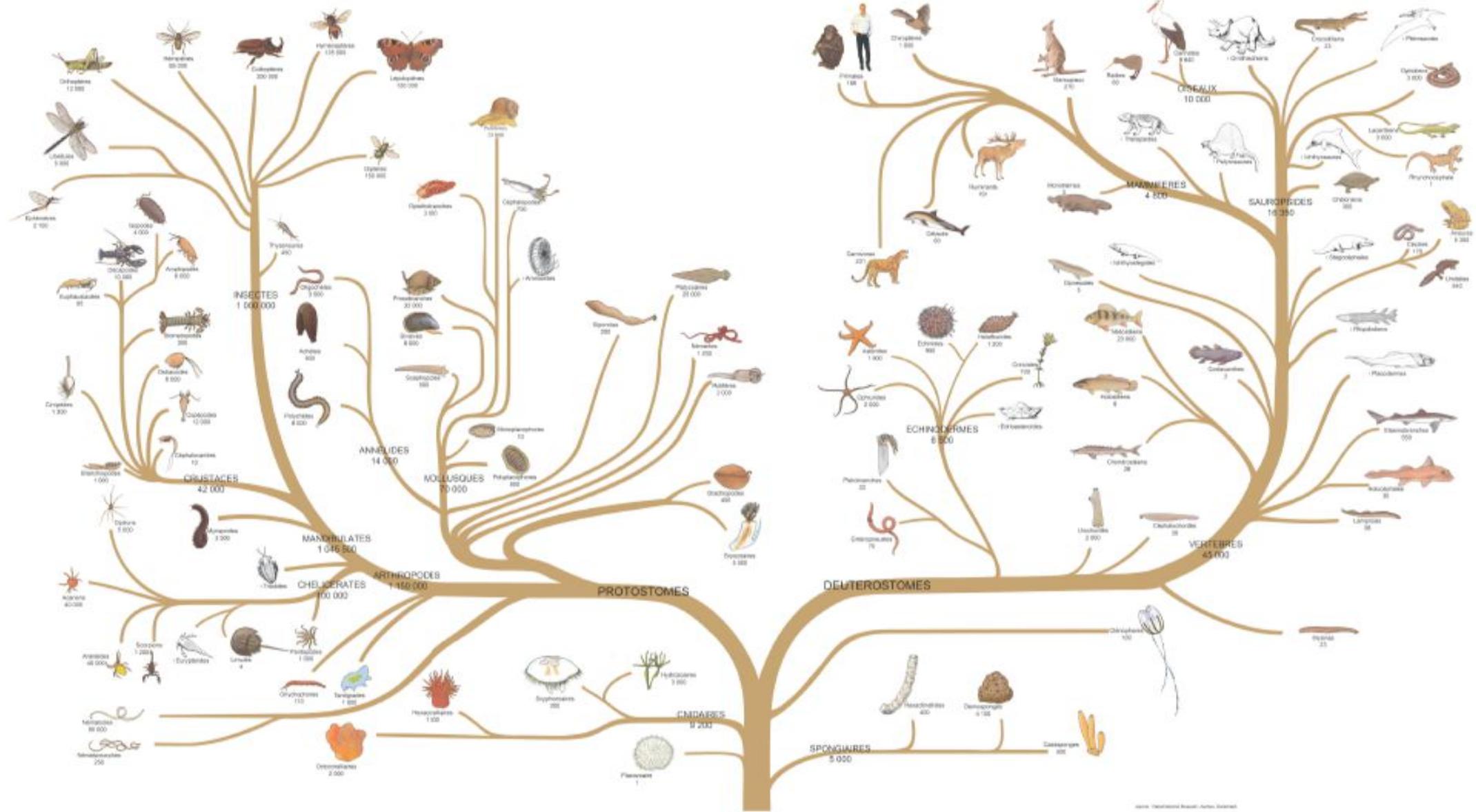
Un peu de vocabulaire (2)



Fil rouge



Comment lire un arbre phylogénétique?



Algues

Algue verte (Chlorophyta)



Laitue de mer

(*Ulva lactuca*)

Algue rouge (Rhodophyta)



Algue rouge encroûtante

(*Lithophyllum incrustans*)

Algue brune (Phaeophyceae)



Sargasse japonaise

(*Sargassum muticum*)

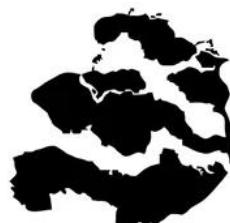
Angiospermes



Posidonie
(*Posidonia oceanica*)



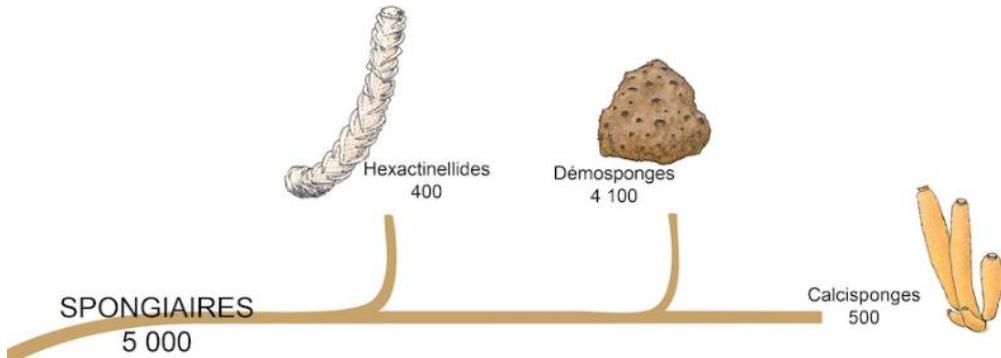
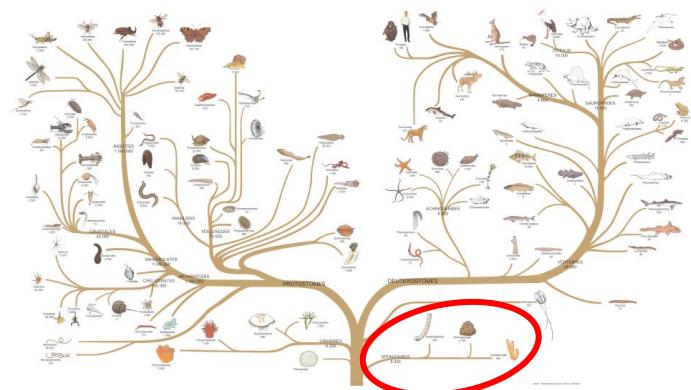
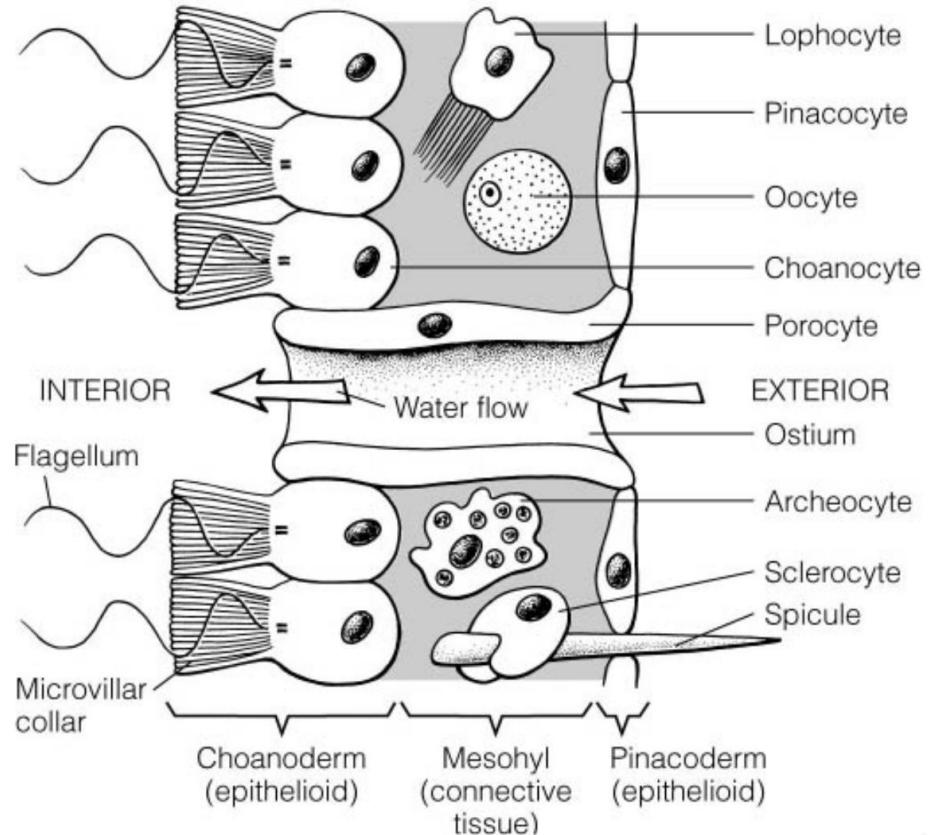
Zostère marine
(*Zostera marina*)



Cératophylle
(*Ceratophyllum demersum*)



Spongaires



- Spongine (collagène)
- cellules totipotentes

Spongaires



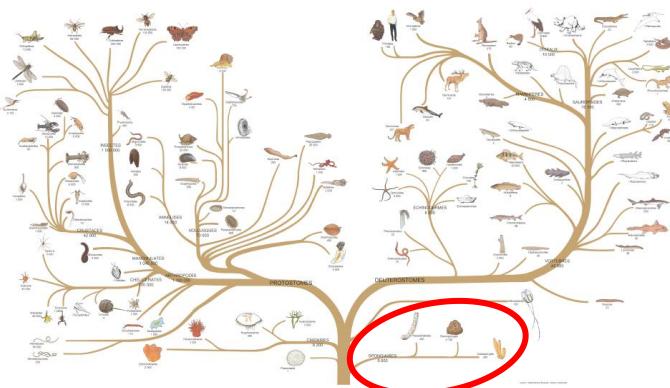
Eponge encrustante orange-rouge
(*Crambe crambe*)



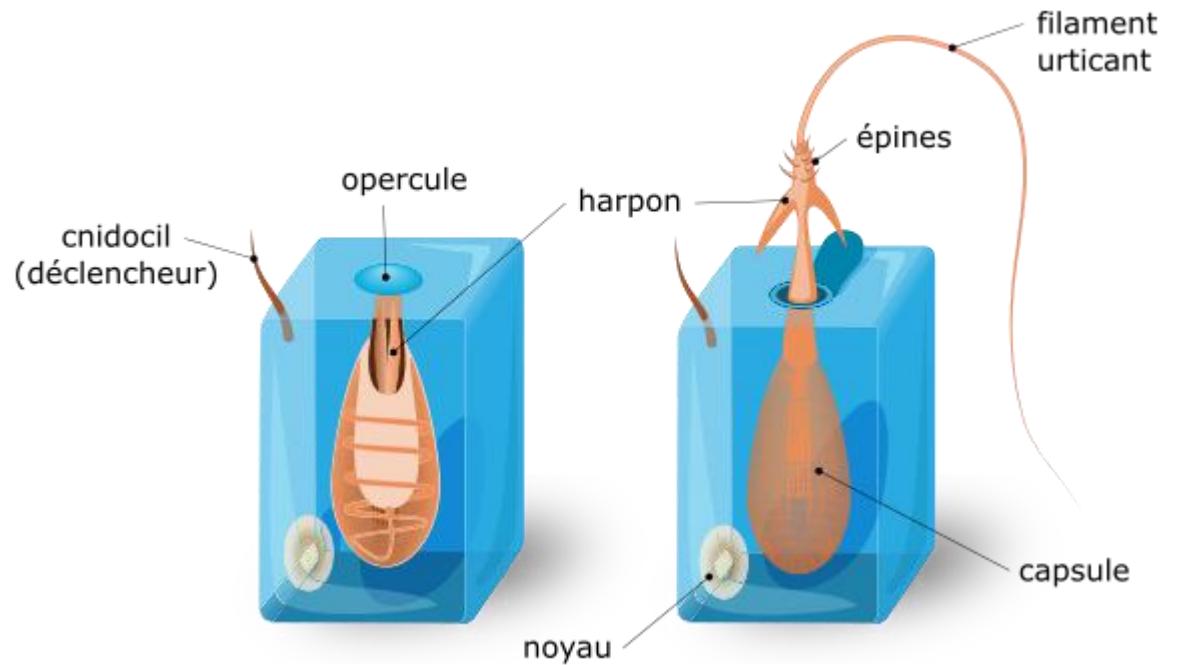
Eponge mie de pain
(*Halichondria panicea*)



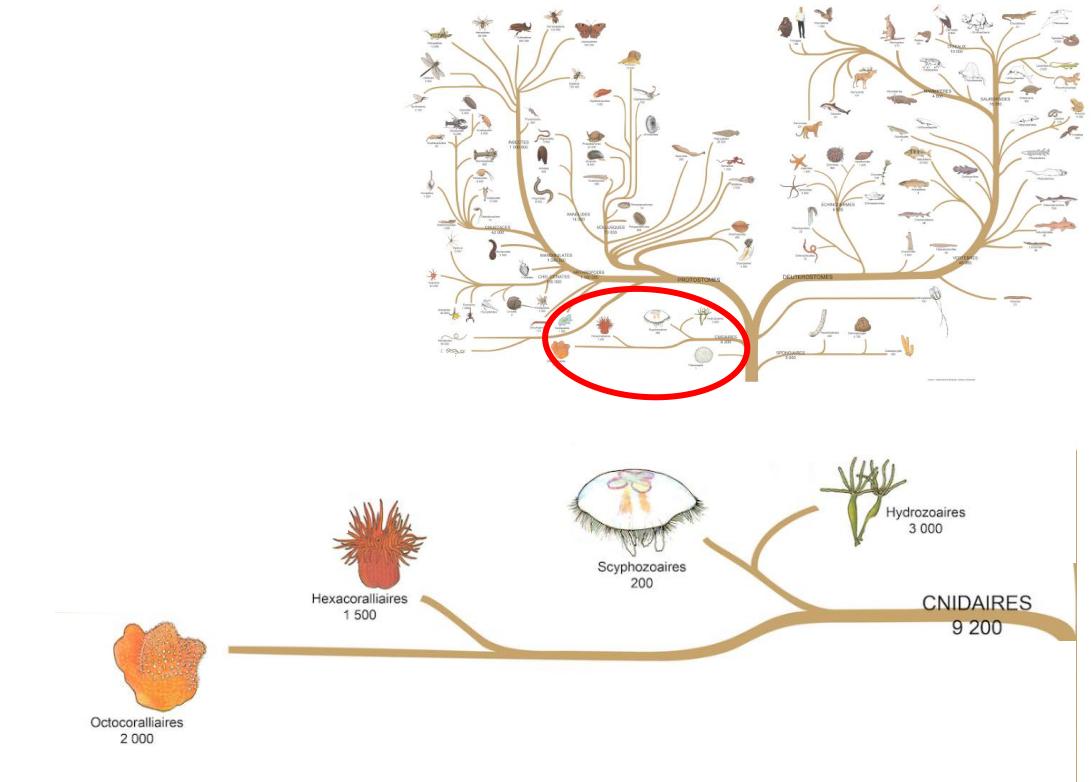
Eponge d'eau douce
(*Ephydatia fluviatilis*)



Cnidaires



- Cnydocyte
- Tissus
- Symétrie radaire

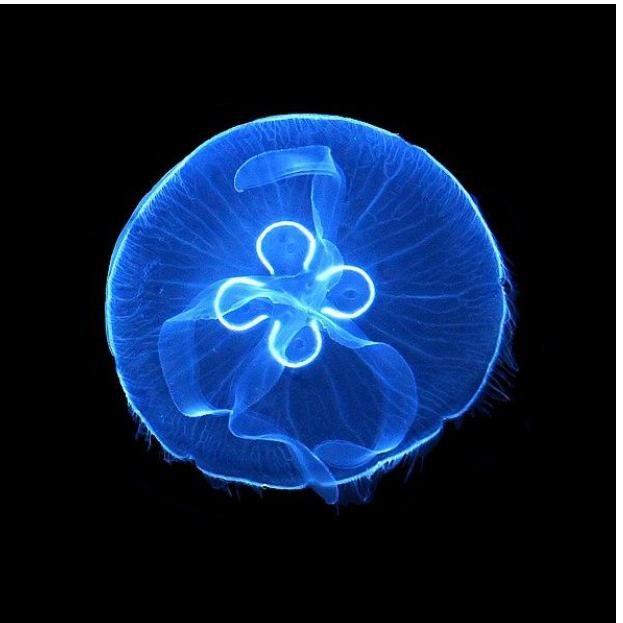


- anémones
- coraux
- méduses
- hydrozoaires

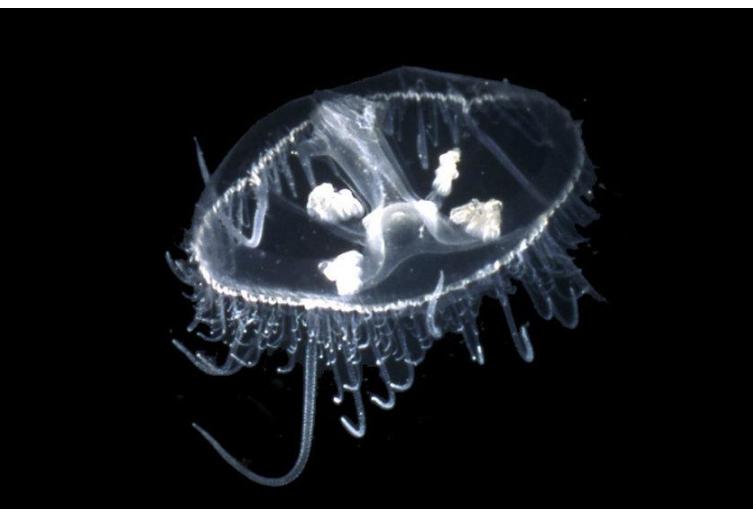
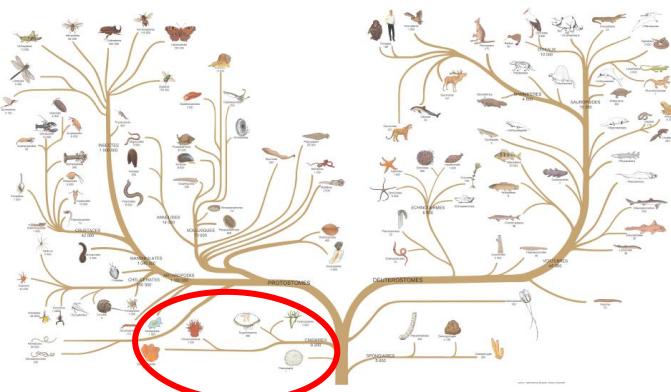
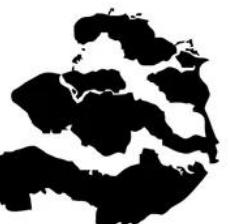
Cnidaires



Tomate de mer
(*Actinia equina*)



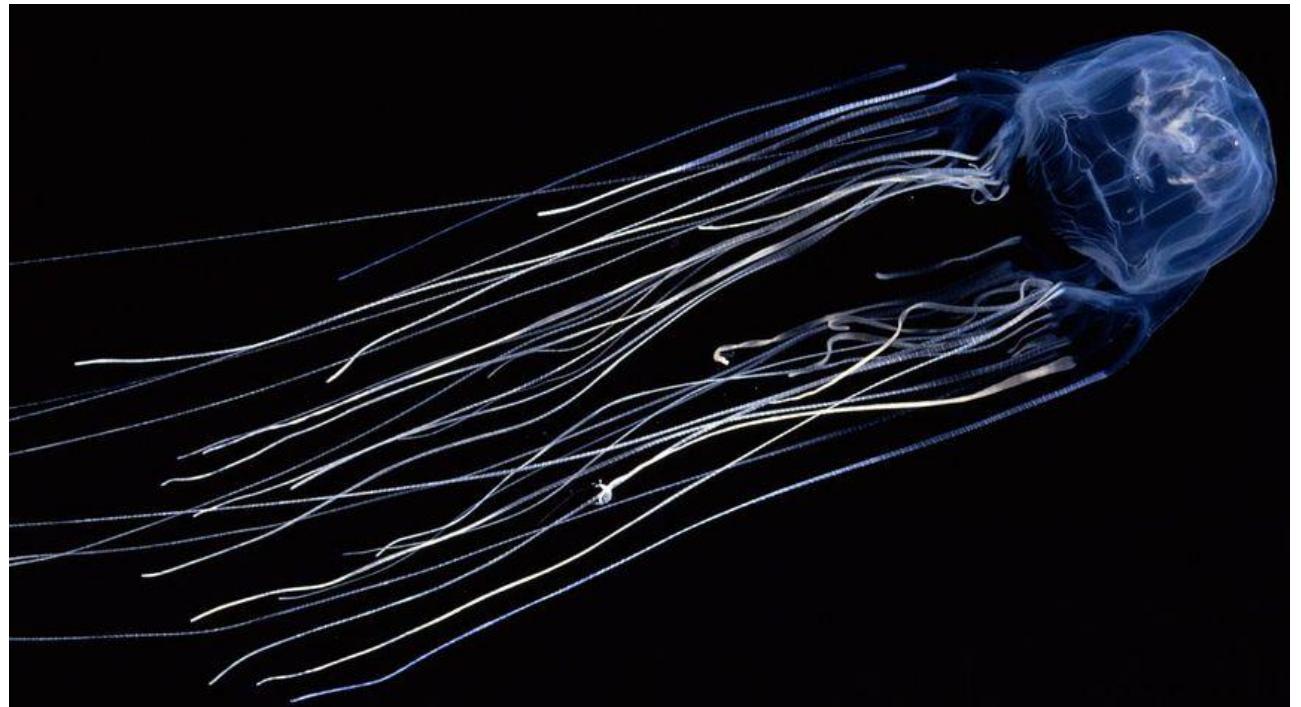
Méduse commune
(*Aurelia aurita*)



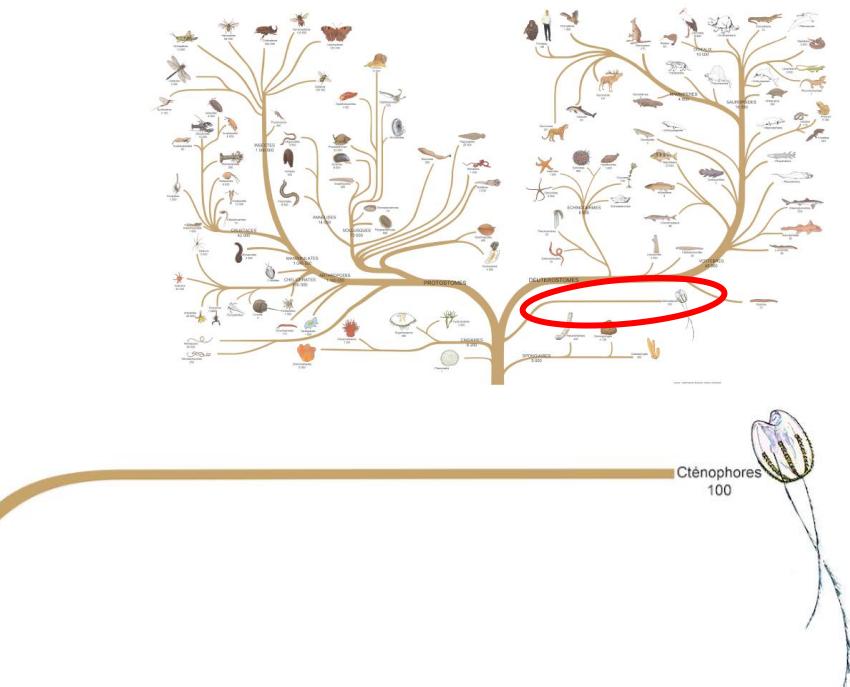
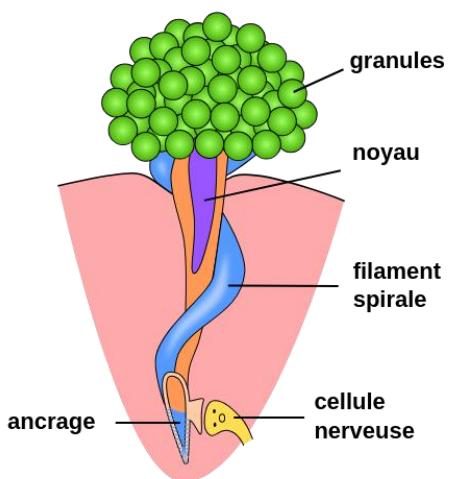
Méduse d'eau douce
(*Craspedacusta sowerbii*)



Cténaires



- pas de cnidocytes mais des colloblastes



Cténaires

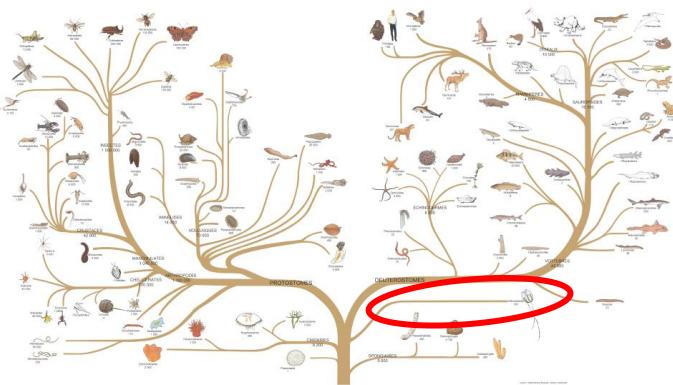
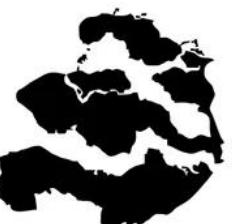


Béroé
(*Beroe* sp.)



© B. GUICHARD/PatriNat

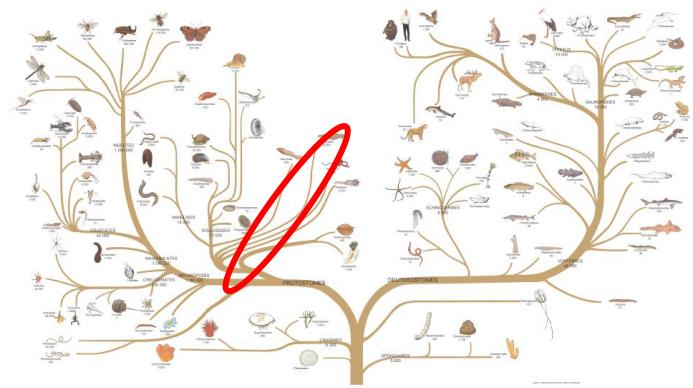
Groseille de mer
(*Pleurobrachia pileus*)



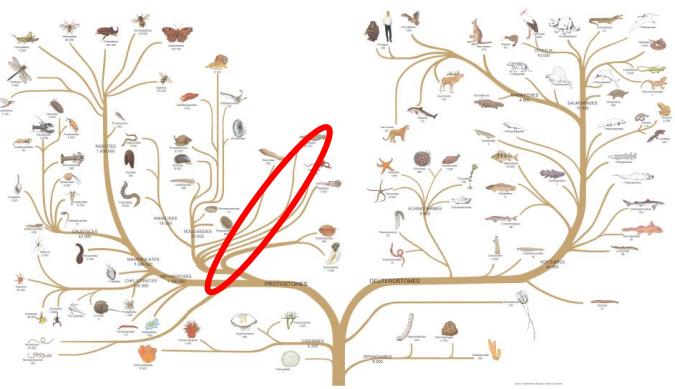
Vers (Platyzoaires)



- symétrie bilatérale
- céphalisation



Vers (Platyzoaires)



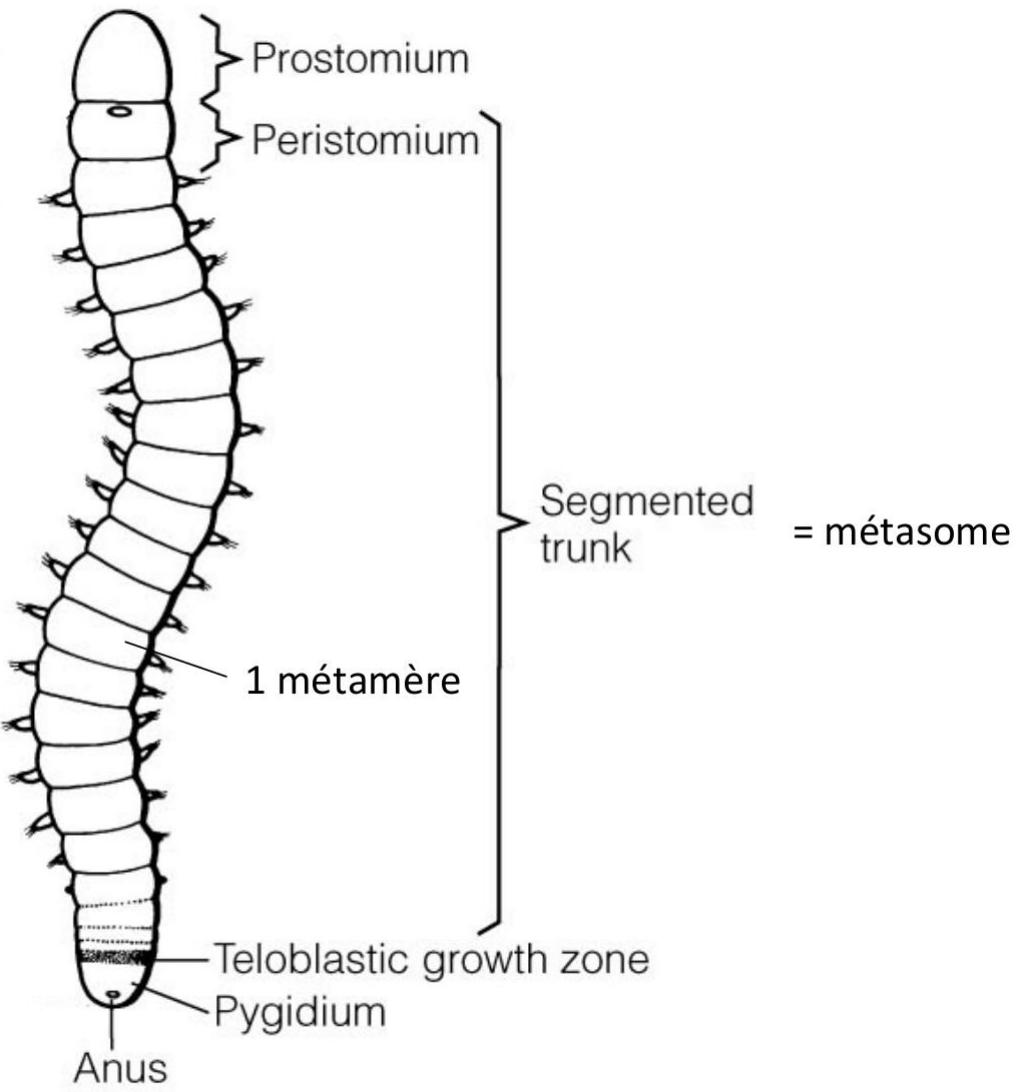
Planaire rose
(*Prostheceraeus roseus*)



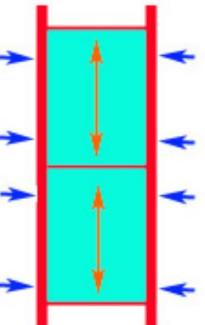
Planaire
(Tricladida)



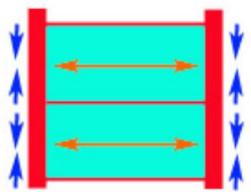
Vers (Annelides)



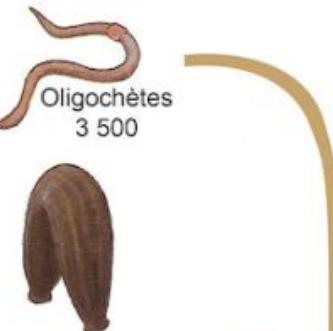
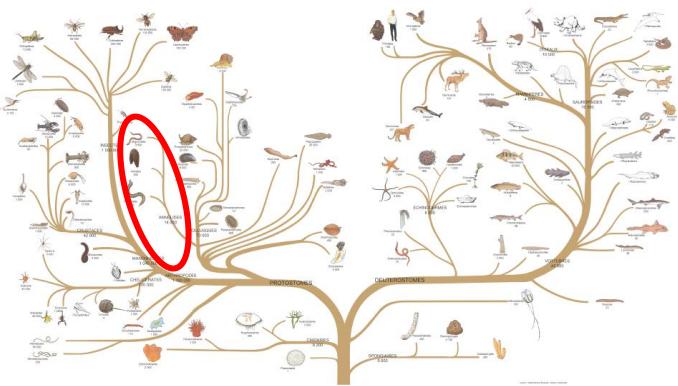
Différence majeur avec les platyzoaires:
Compartimentalisation en anneau



Muscles circulaires
contractés



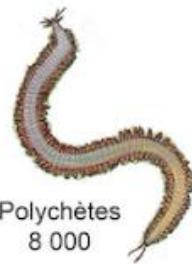
Muscles longitudinaux
contractés



Oligochètes
3 500



Achètes
500



Polychètes
8 000

ANNELIDES
14 000

Vers (Annelides)



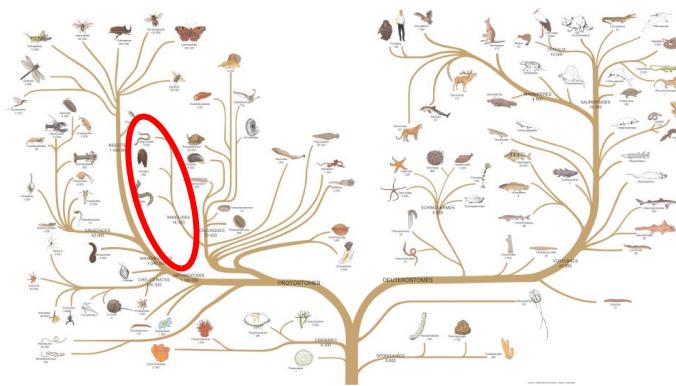
Sabelle
(*Sabella pavonina*)



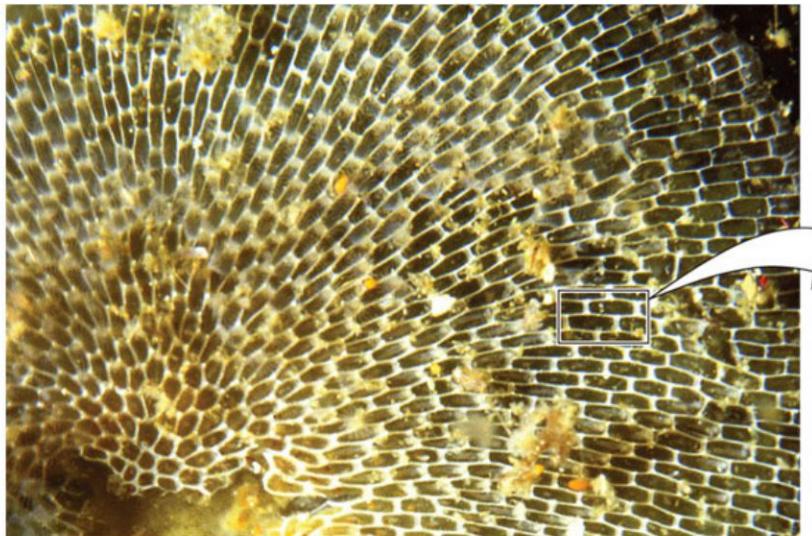
Ver tubicole de sable
(*Lanice conchilega*)



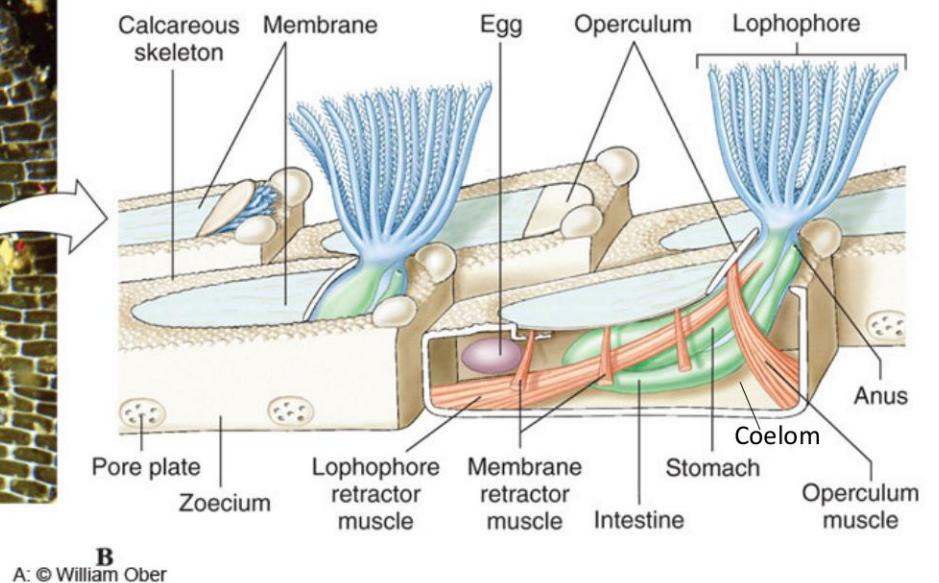
Sangsue
(*Glossiphonia* spp.)



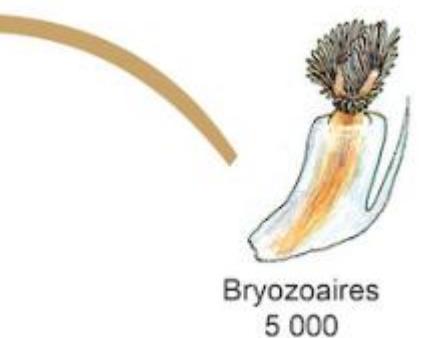
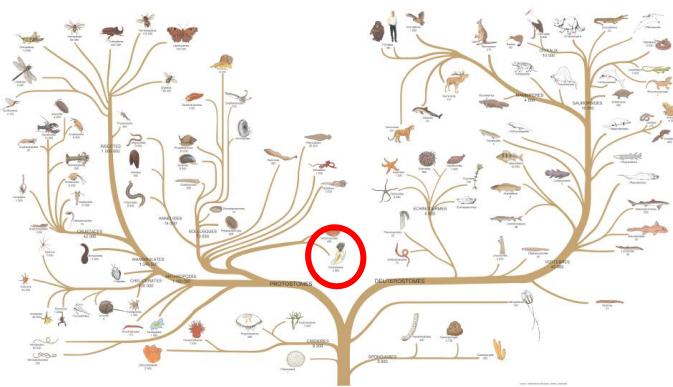
Bryozoaires



Membranipora



B
A: © William Ober



- colonies de zoïdes

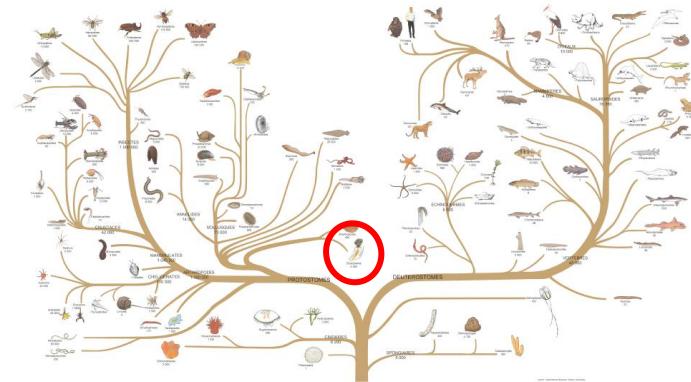
Bryozoaires



Bryozoaire des posidonies
(*Electra posidonae*)



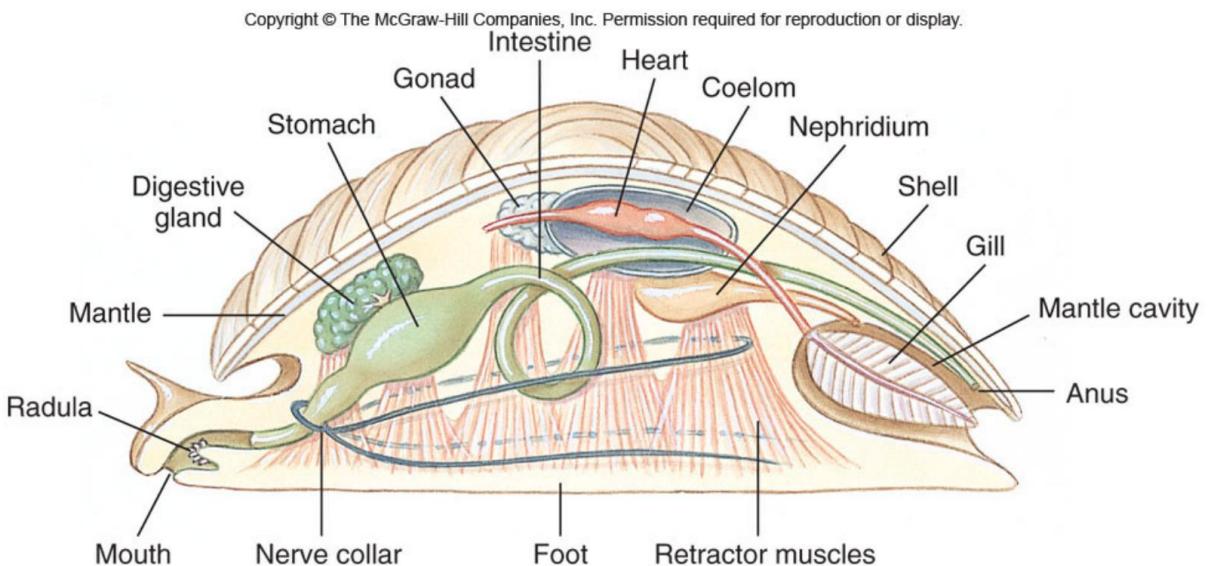
Flustra
(*Flustra sp.*)



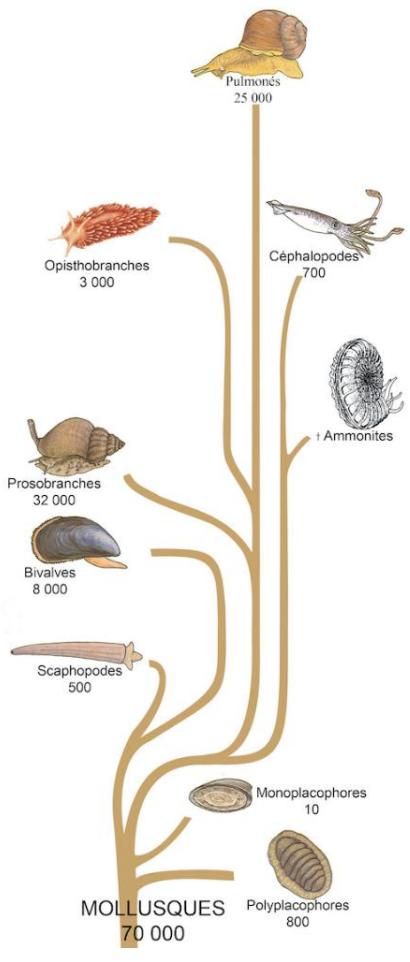
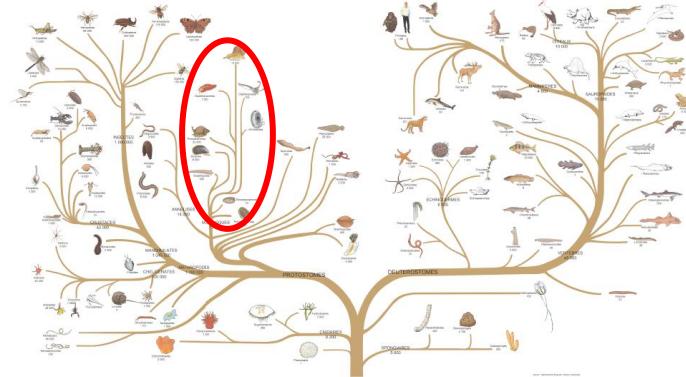
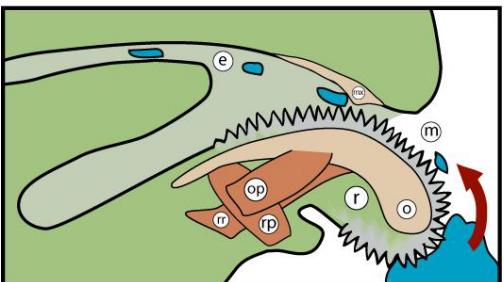
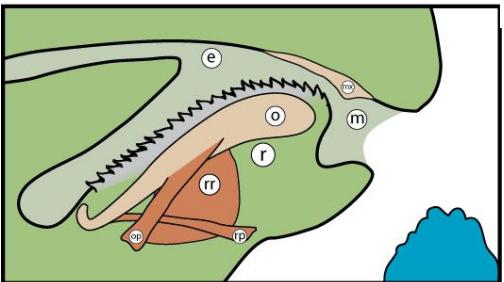
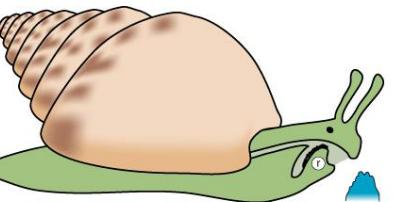
Fredericella sultana
(*Fredericella sultana*)



Mollusques



- radula
- coquille



- chitons
- patelles
- bivalves
- escargots de mer
- nudibranches
- céphalopodes

Mollusques



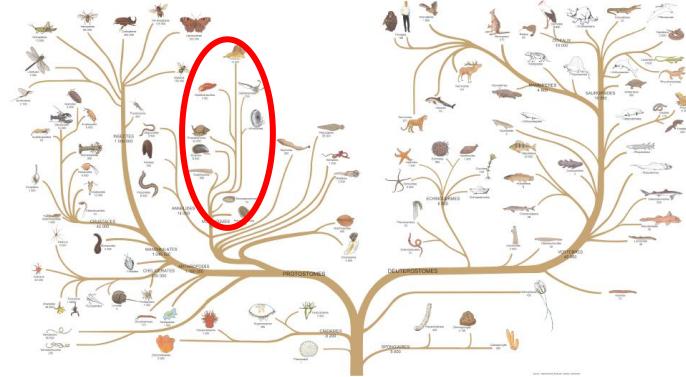
Pieuvre commune
(*Octopus vulgaris*)



Elysie verte
(*Elysia viridis*)

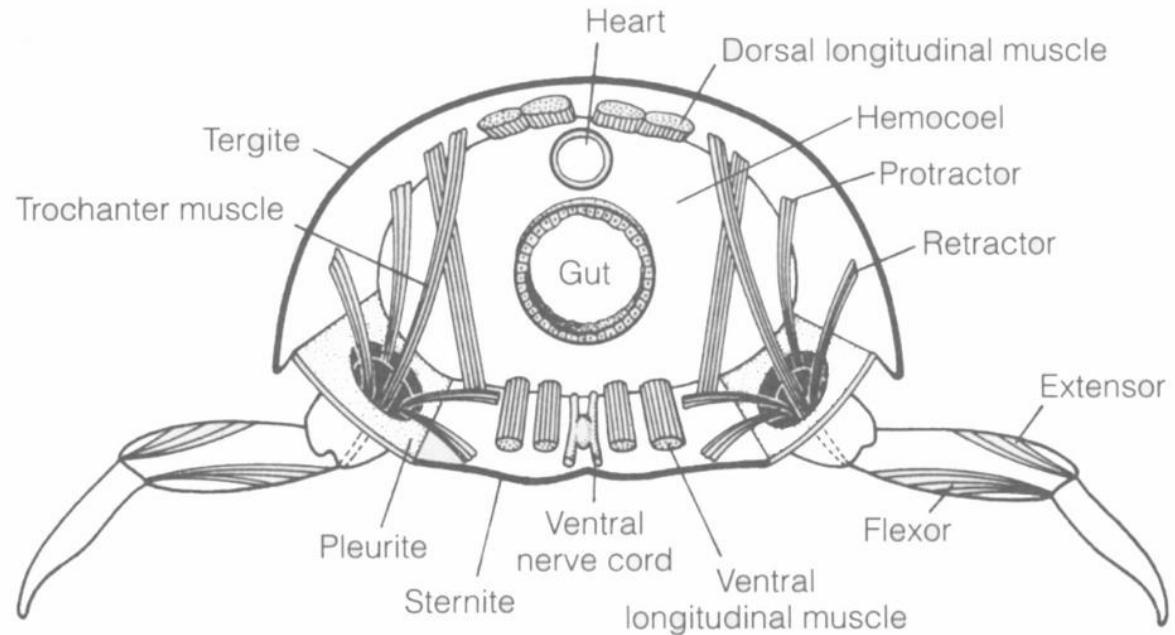


Moule zébrée
(*Dreissena polymorpha*)



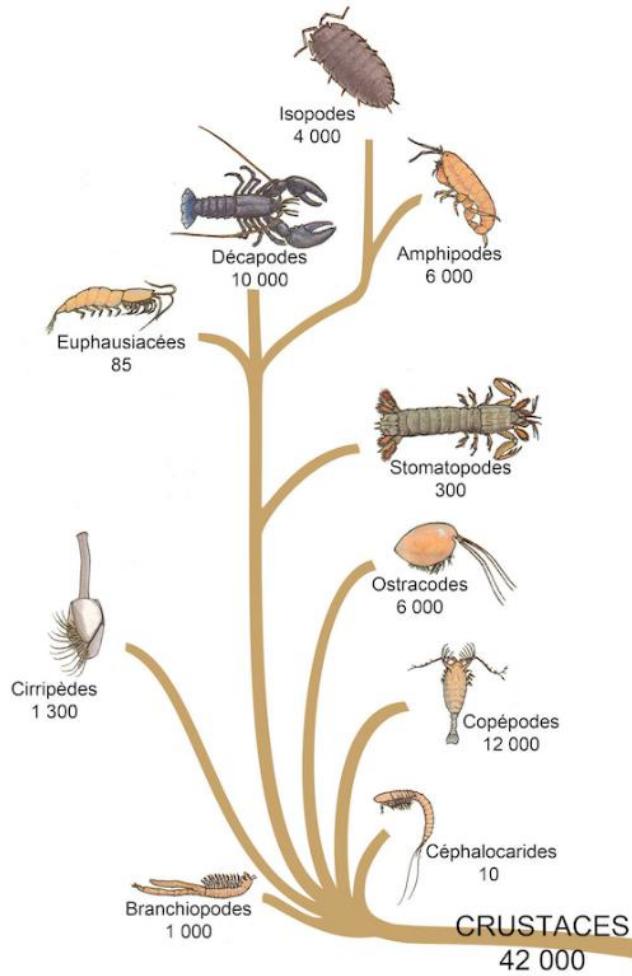
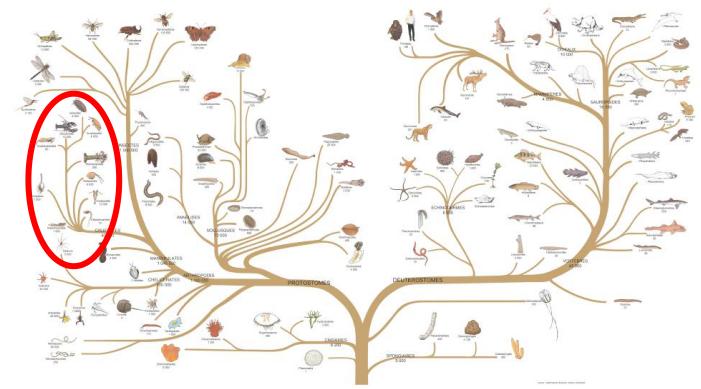
doris.ffessm.fr © Jean-Pierre COROLLA

Crustacés (/Arthropodes)

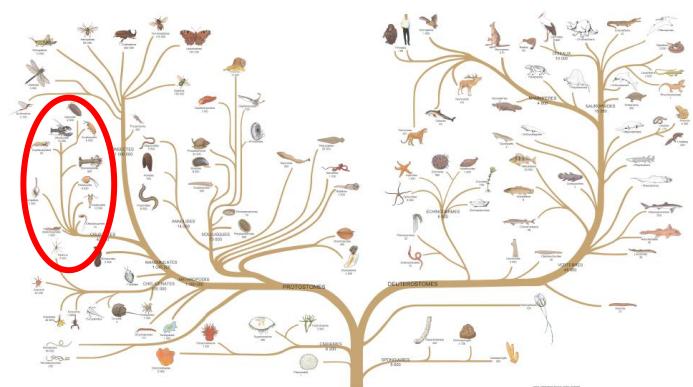


- arthropodes: membres articulés et exosquelette
- crustacés: exosquelette calcaire

- crabes
- crevettes
- homards
- gammare
- balanes
- krill



Crustacés (/Arthropodes)



Balane commune
(*Perforatus perforatus*)



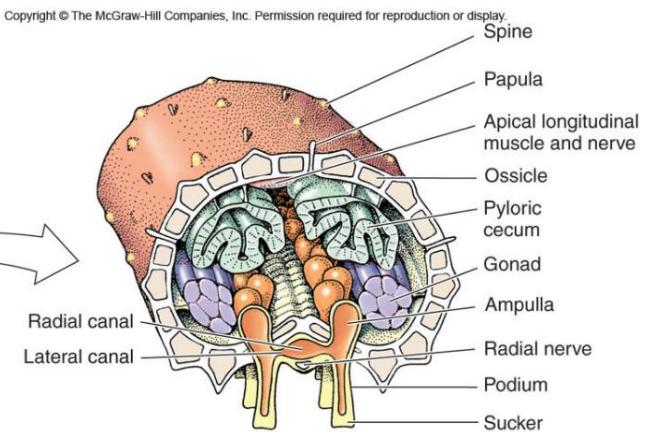
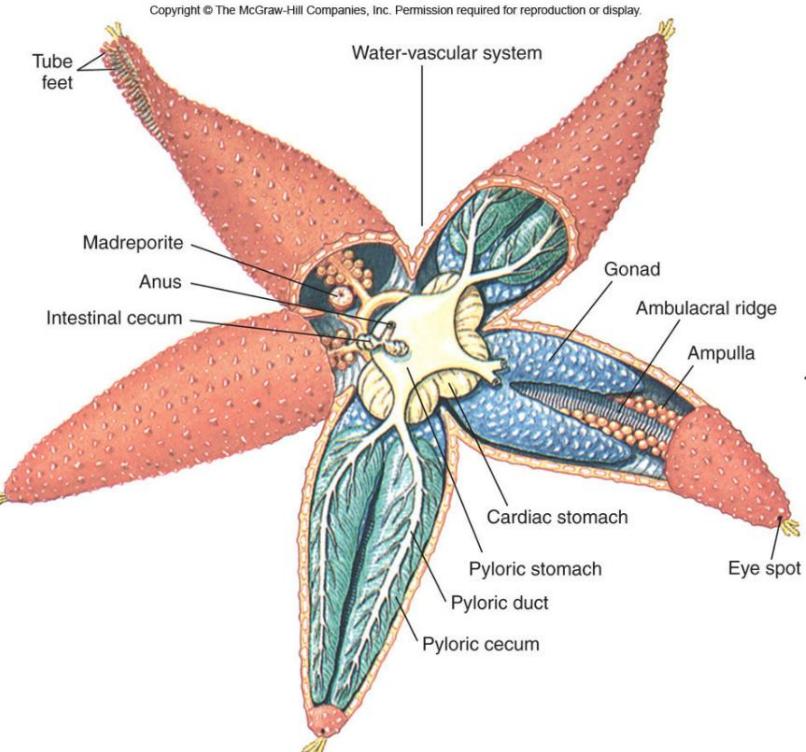
Homard européen
(*Homarus gammarus*)



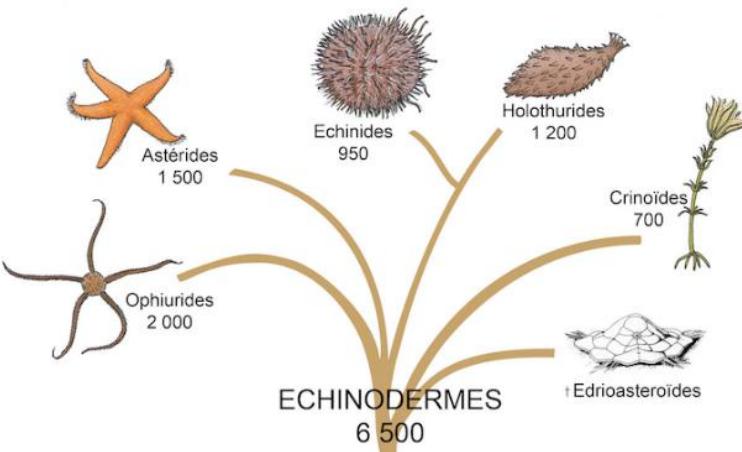
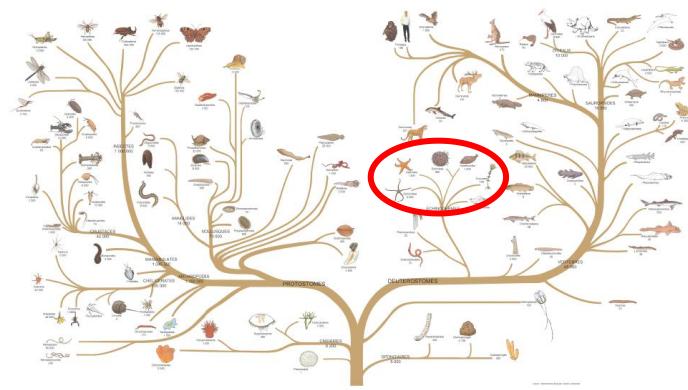
Ecrevisse américaine
(*Faxonius limosus*)



Echinodermes



- symétrie pentaradiaire
- système ambulacraire



- crinoïdes
- étoiles de mer
- ophiures
- oursins
- concombres de mer

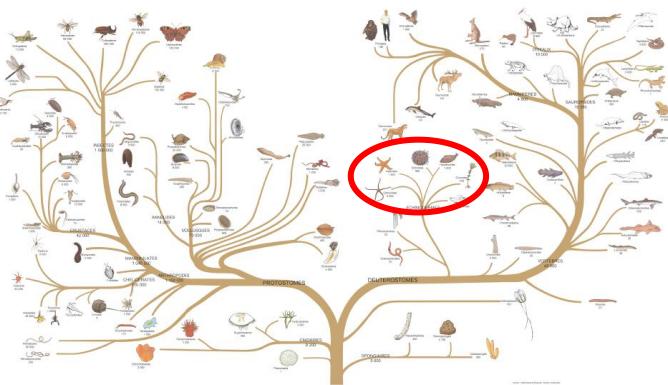
Echinodermes



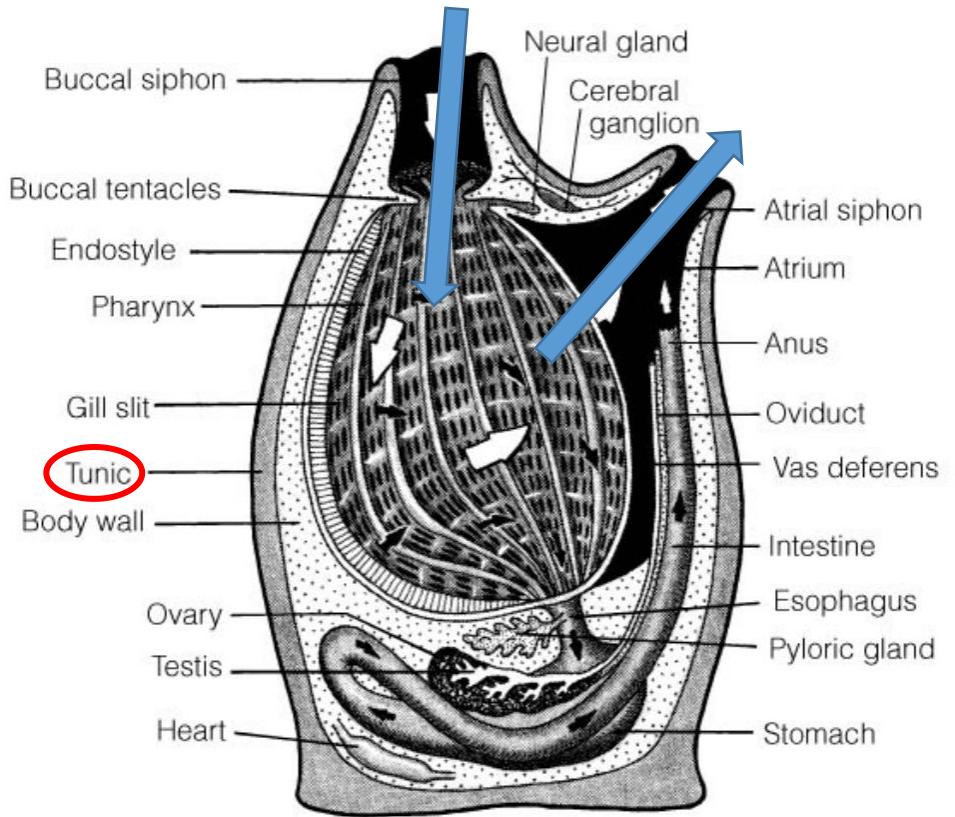
Holoturie auréolée
(*Holothuria sancta*)



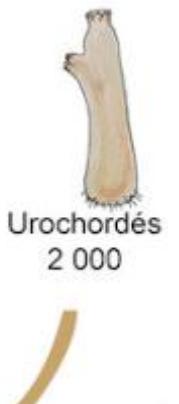
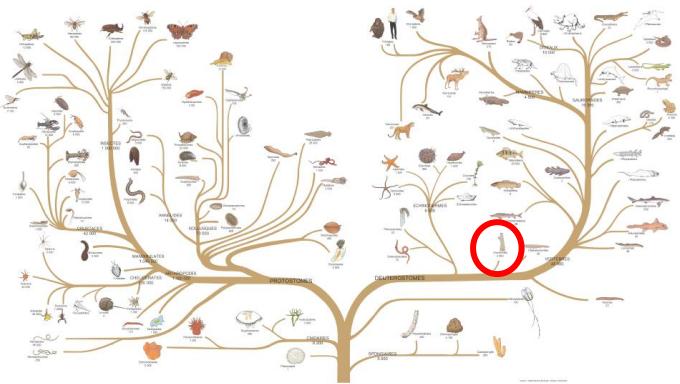
Ophiure fragile
(*Ophiothrix fragilis*)



Tuniciers/Ascidies



- chorde
- tunique



- ascidies

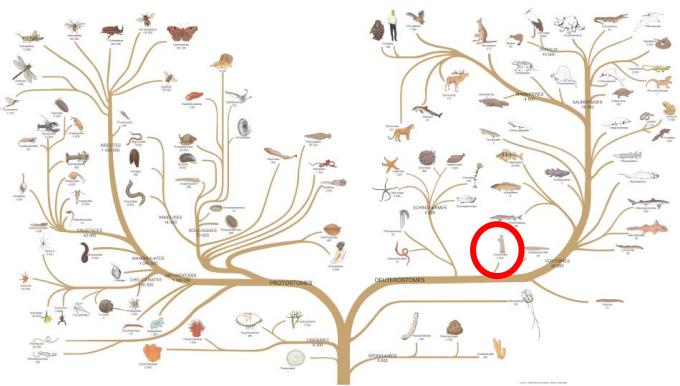
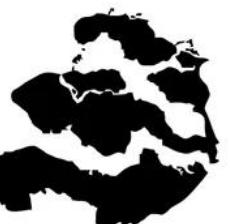
Tuniciers/Ascidies



Ascidie rouge
(*Halocynthia papillosa*)



Cione
(*Ciona intestinalis*)



Vertébrés



Craniates: crâne: myxines



Vertébrés: vertèbres: lampreys

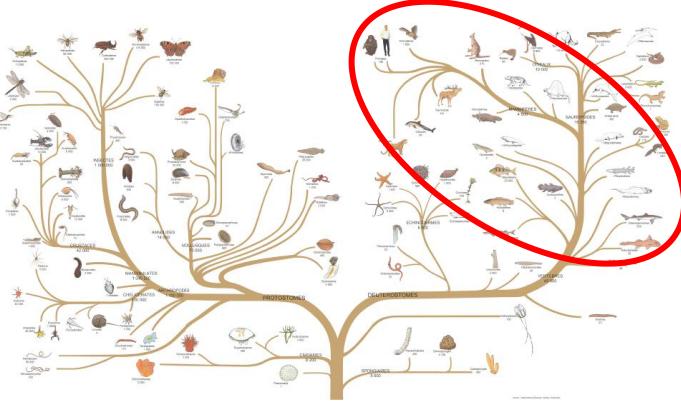
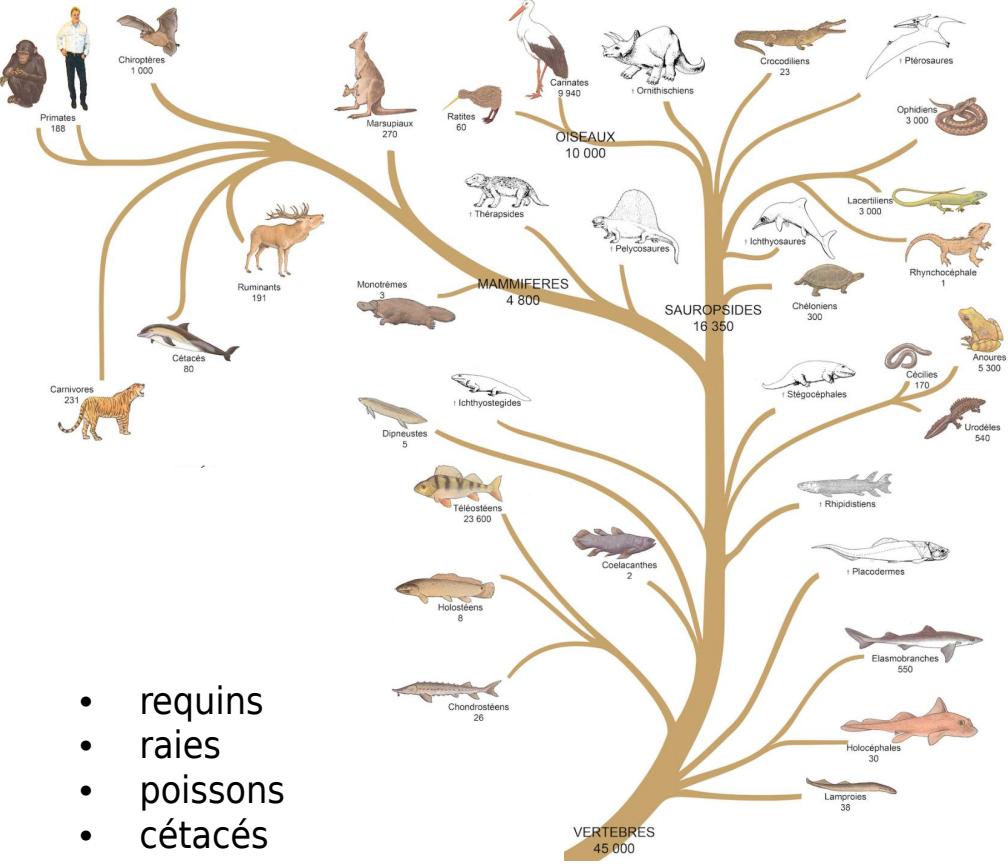


Gnathostomes: mâchoire: chondrichtyens



Ostheichthyens: squelette osseux

- requins
 - raies
 - poissons
 - cétacés



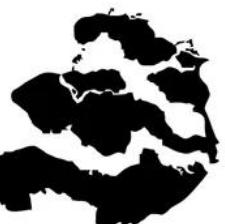
Vertébrés



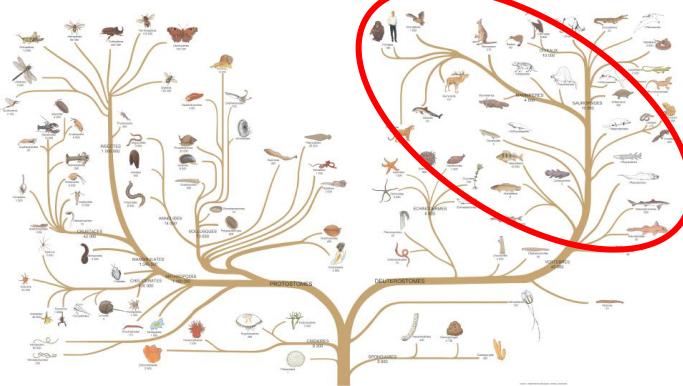
Barracuda
(*Sphyraena barracuda*)



Sole
(*Solea solea*)



Gardon
(*Rutilus rutilus*)





Merci pour
votre attention

Pierrot Van der Aa

prionace96@gmail.com