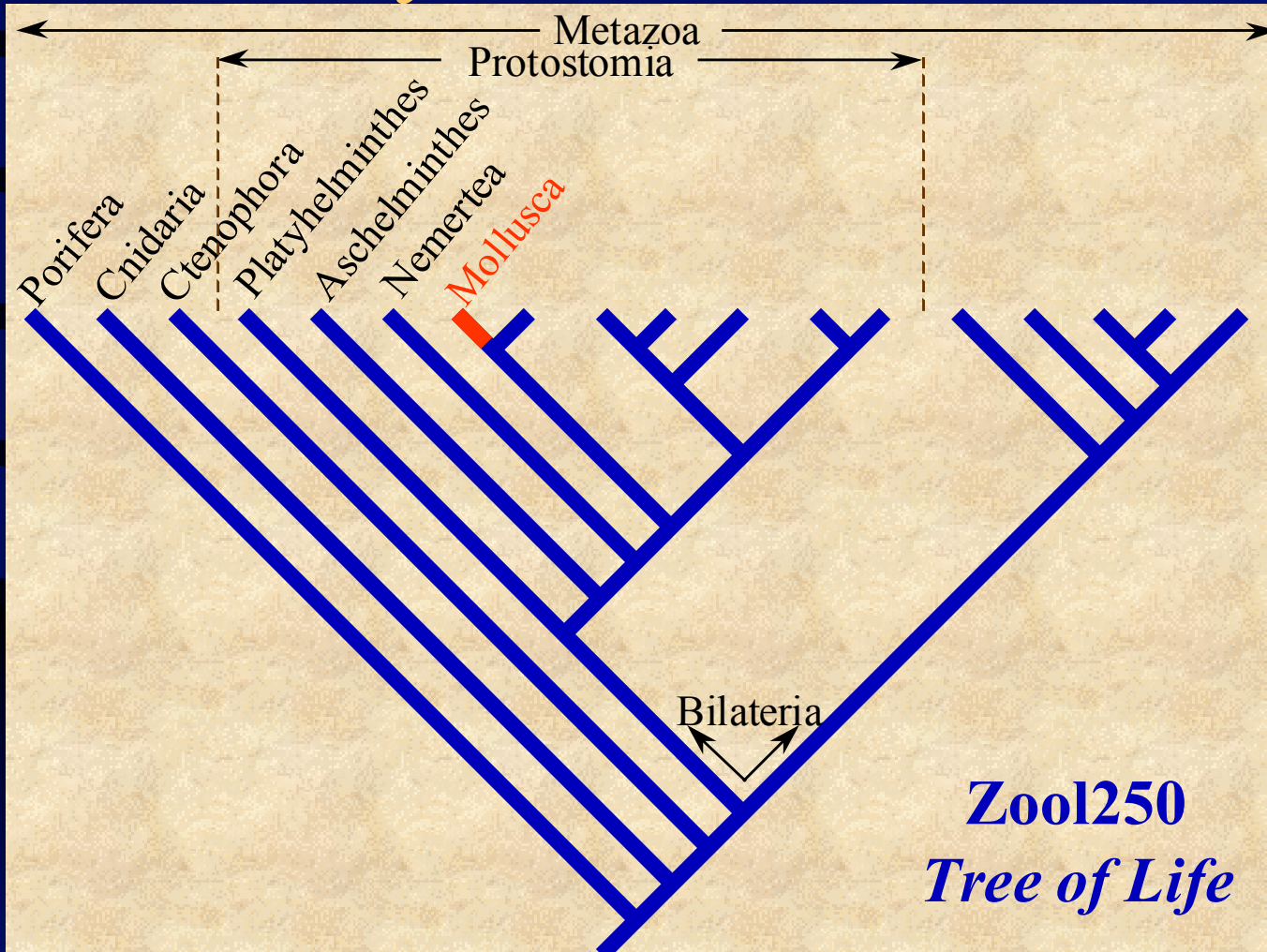
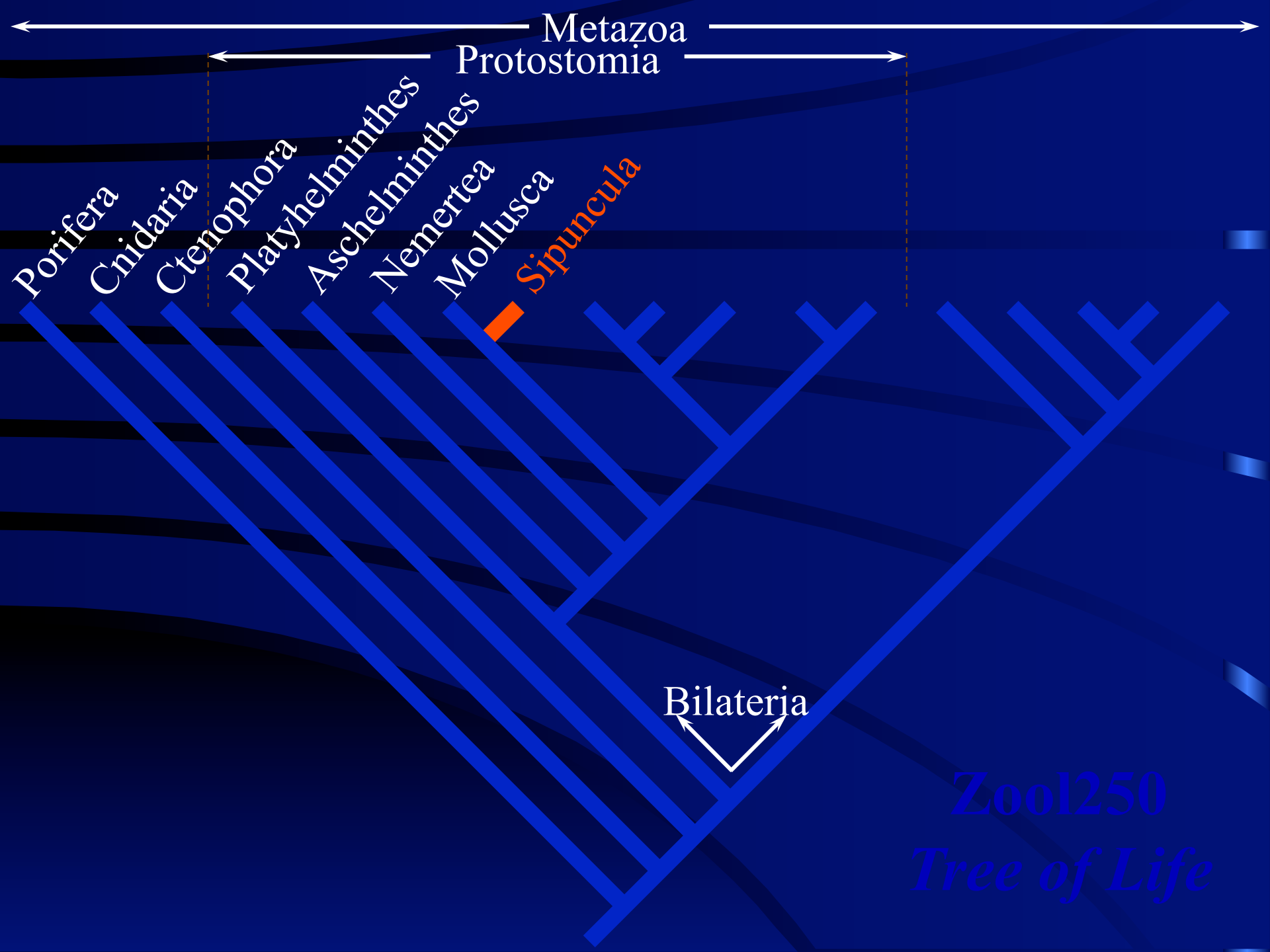
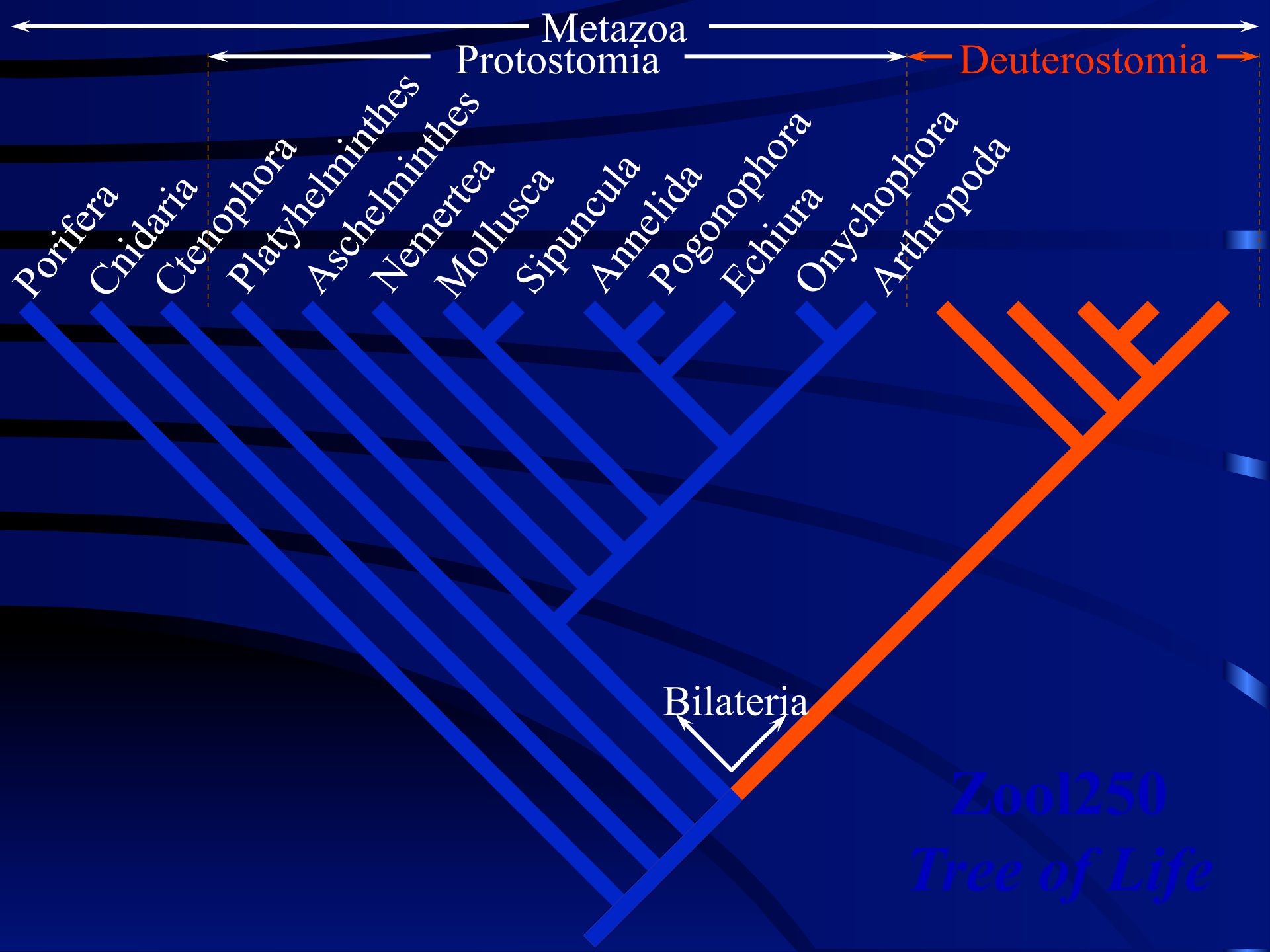


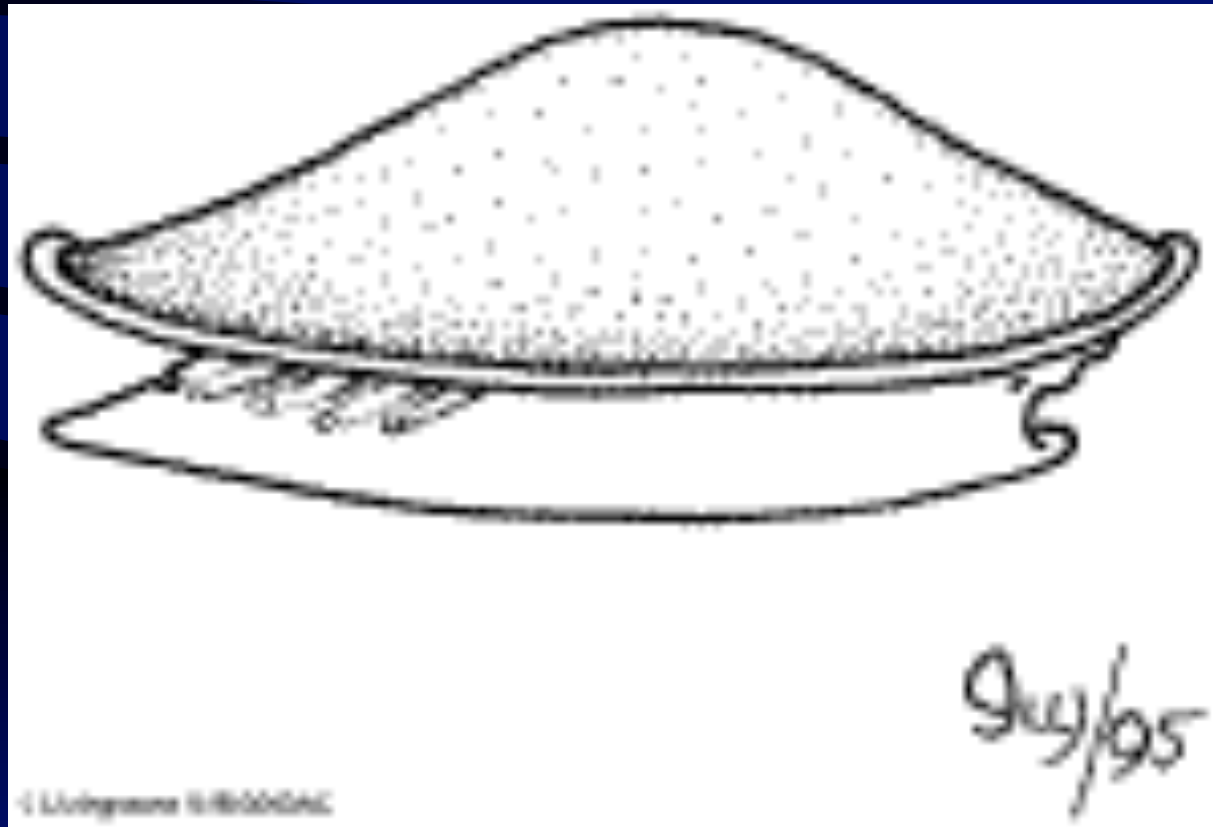
# Phylum Mollusca



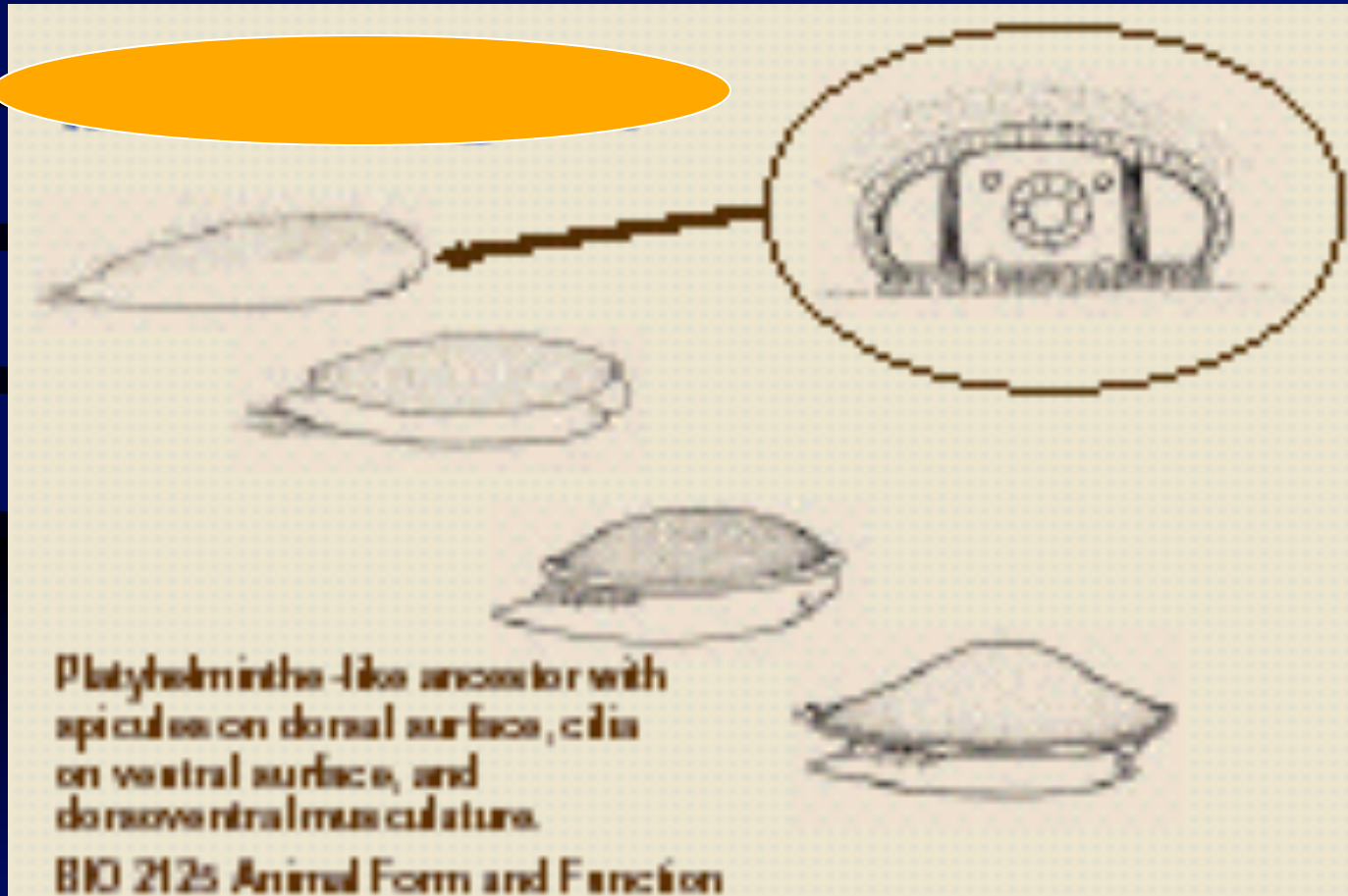




# Molusco ancestral..?



# Origen de los moluscos?



# Novidades evolutivas del phylum

# Molusco generalizado

Nefridiop

MANTO

Corazon bicameral

CONCHA

epidermis

Celoma

Ano

Aorta

Cav. paleal

Glan.  
digestiva

Gónada

Branquia

Músculos

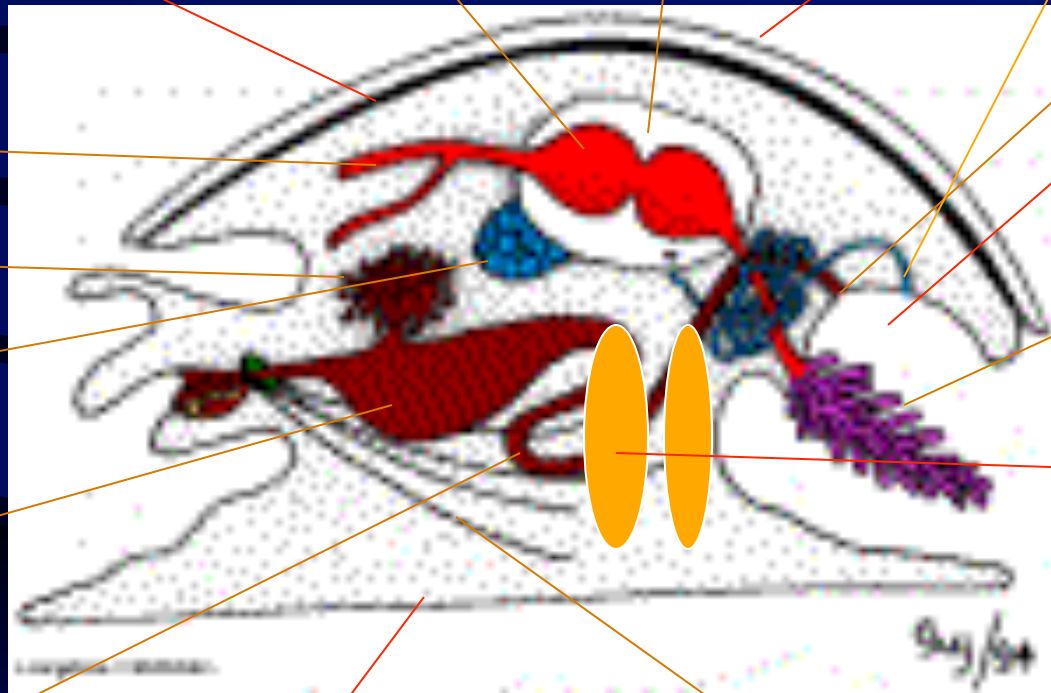
Saco estilo

Retractores

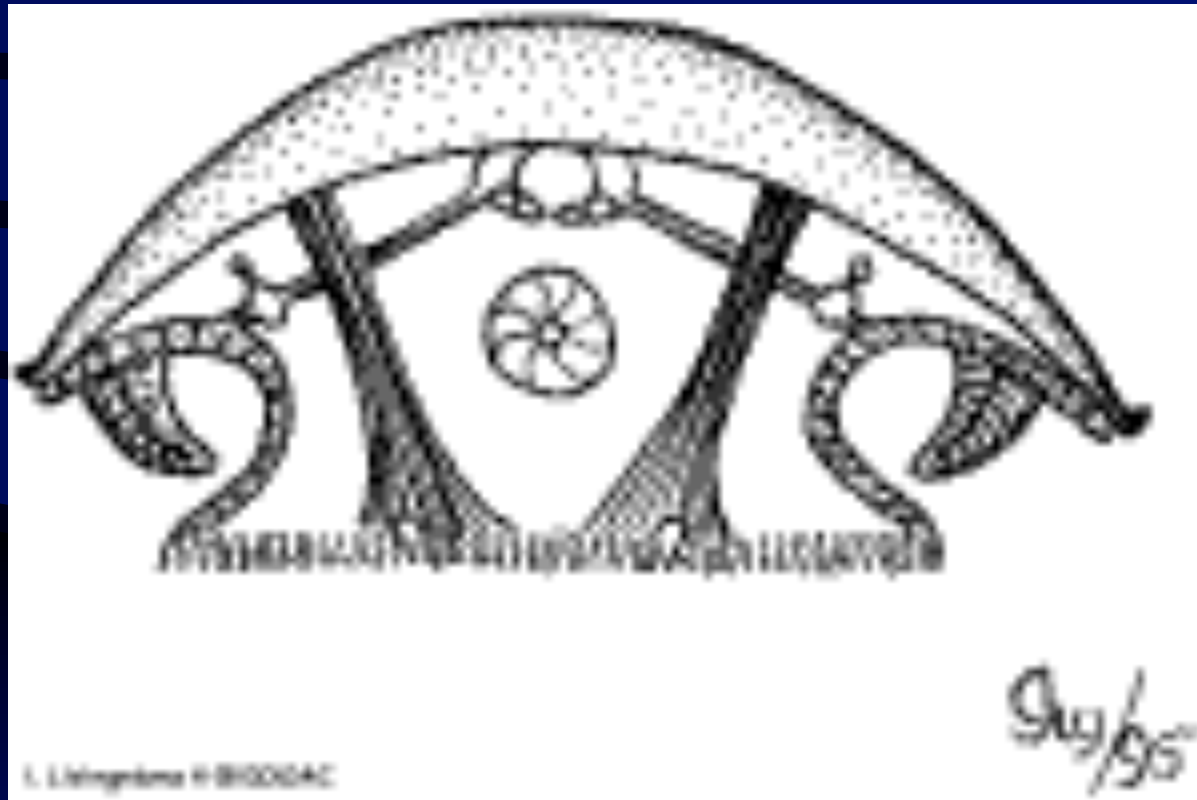
Intestino

Nervios pedales

PIE



# Músculos retractores: pie-manto

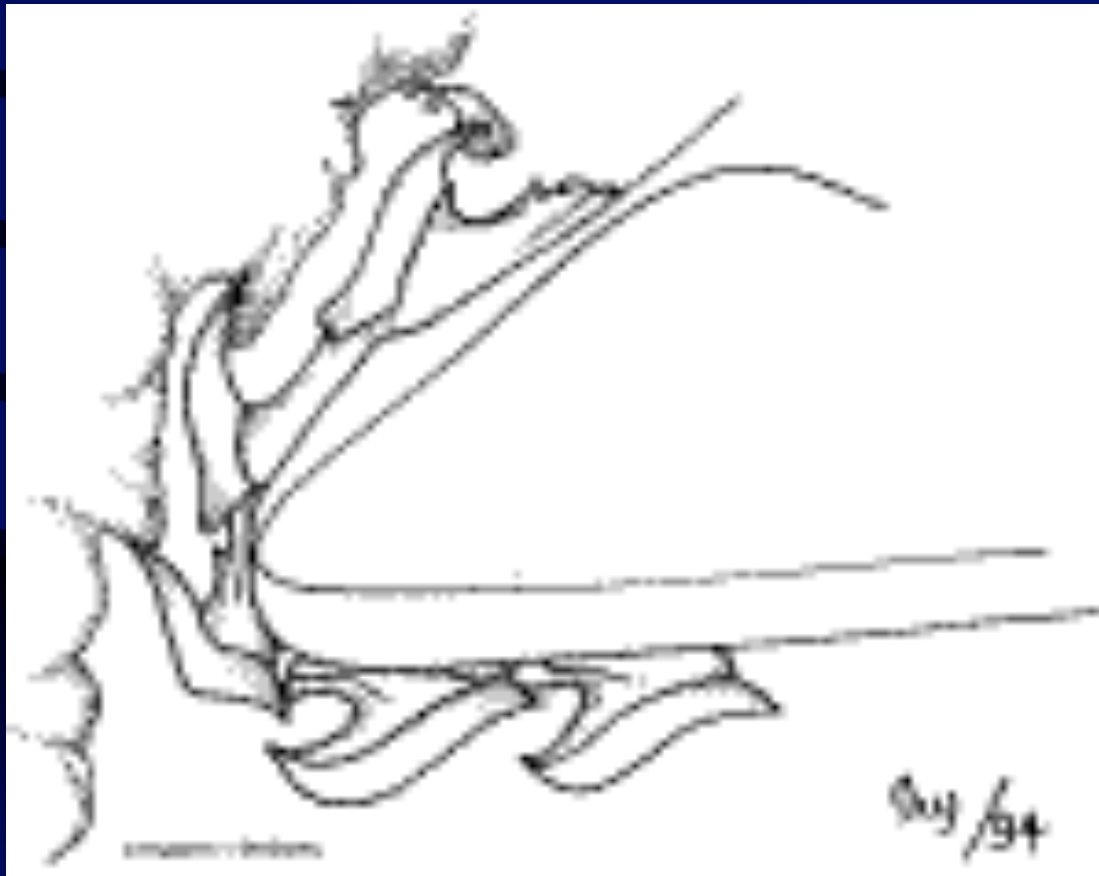




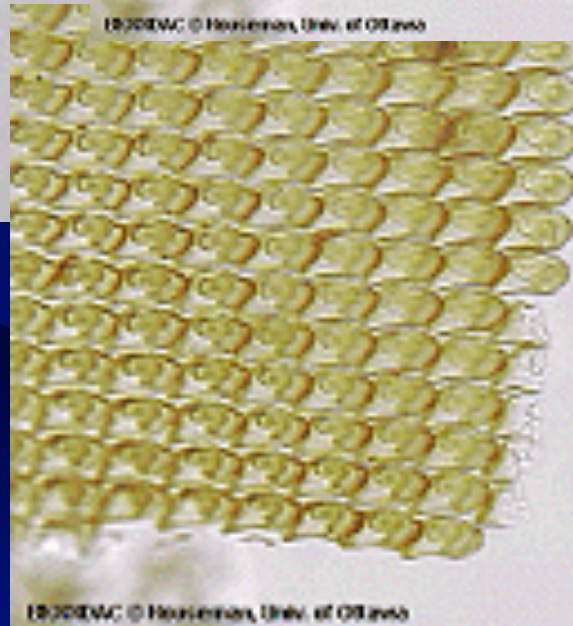
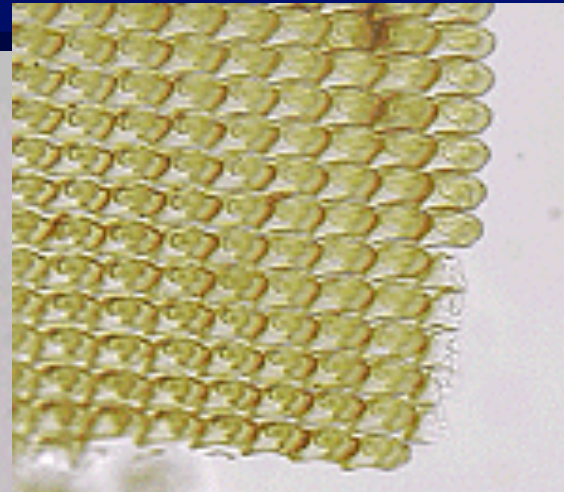
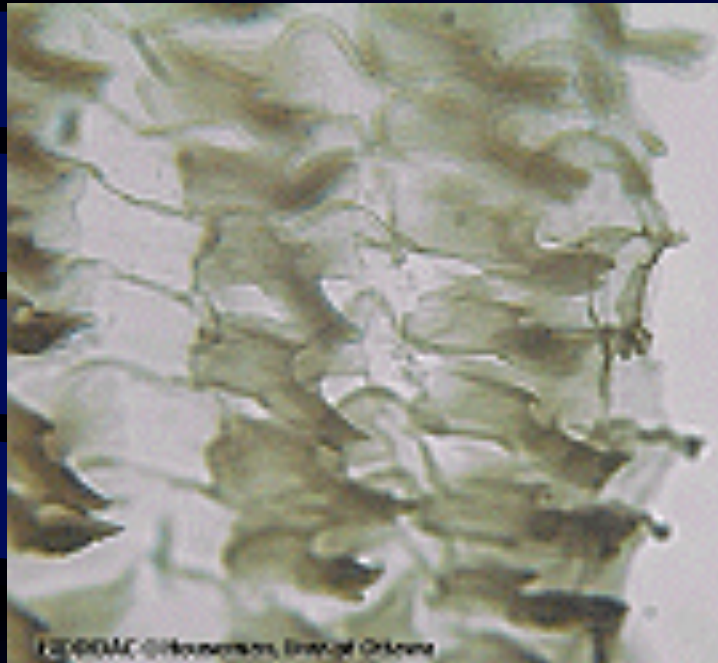
# Cabeza con boca-odontoforo- rádula-músculos y glándulas



# Acción de corte dientes-rádula



# Rádula



# Radula

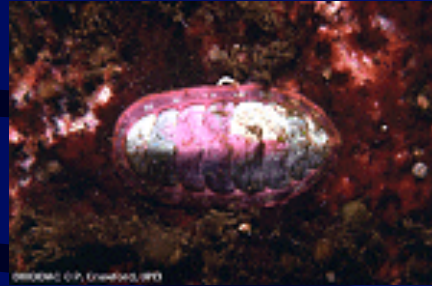


# Larva trocófora

# Diversidad dentro del phylum



Monoplacofora



Poliplacofora



Aplacofora



Gastropoda



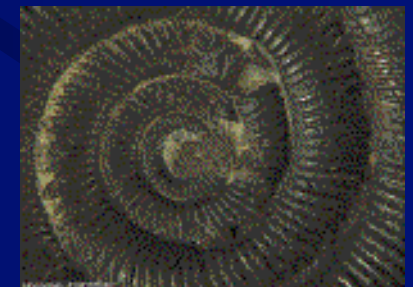
Bivalvia



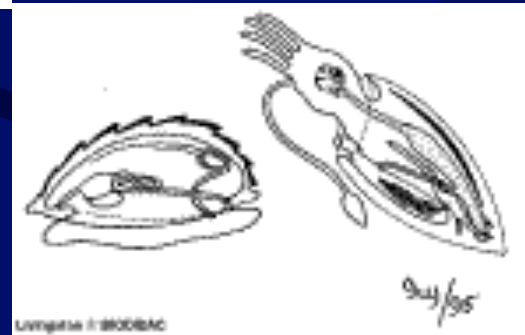
Scaphopoda



Cephalopoda



# Modificaciones a mismo patrón corporal



# Clase Monoplacophora



Dorsal

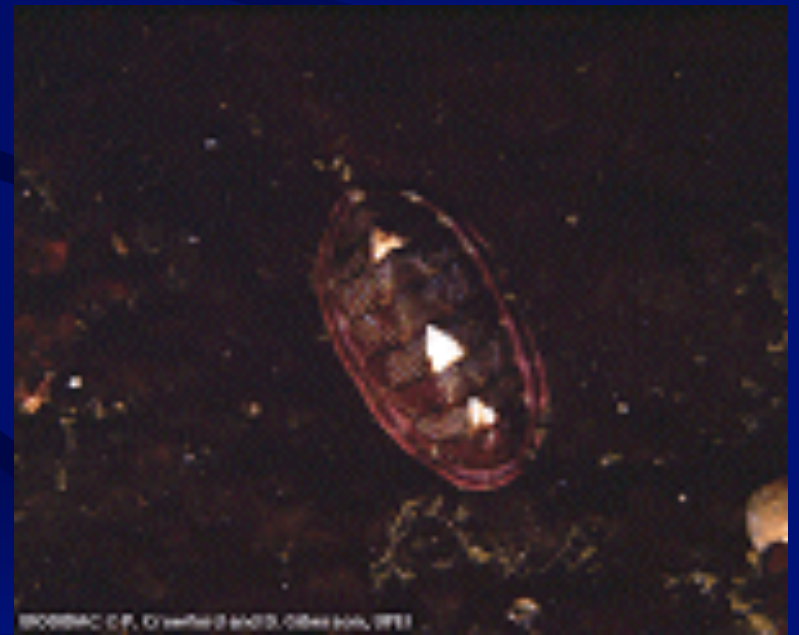


Ventral

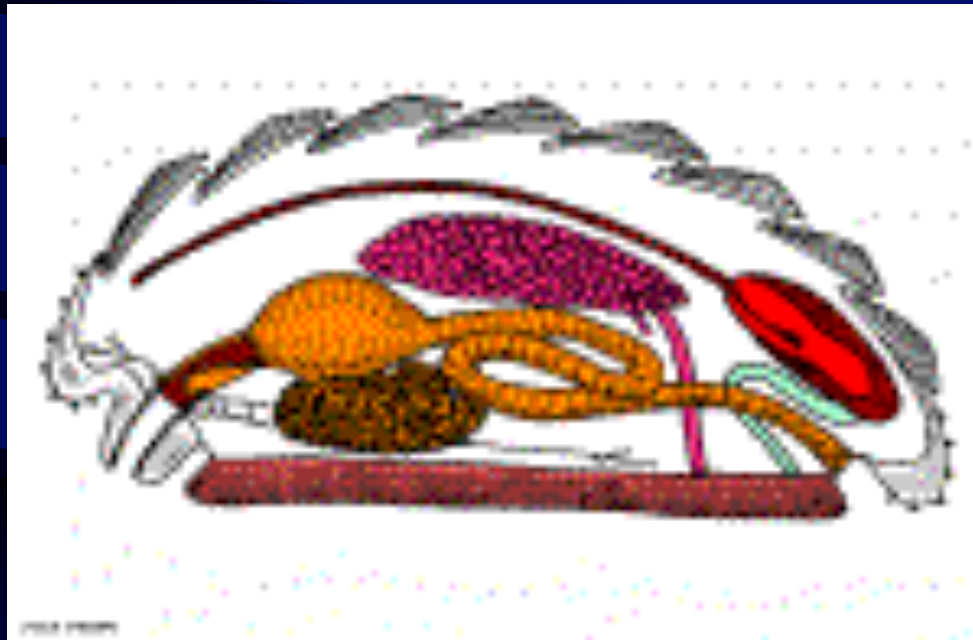


# Clase Aplacophora

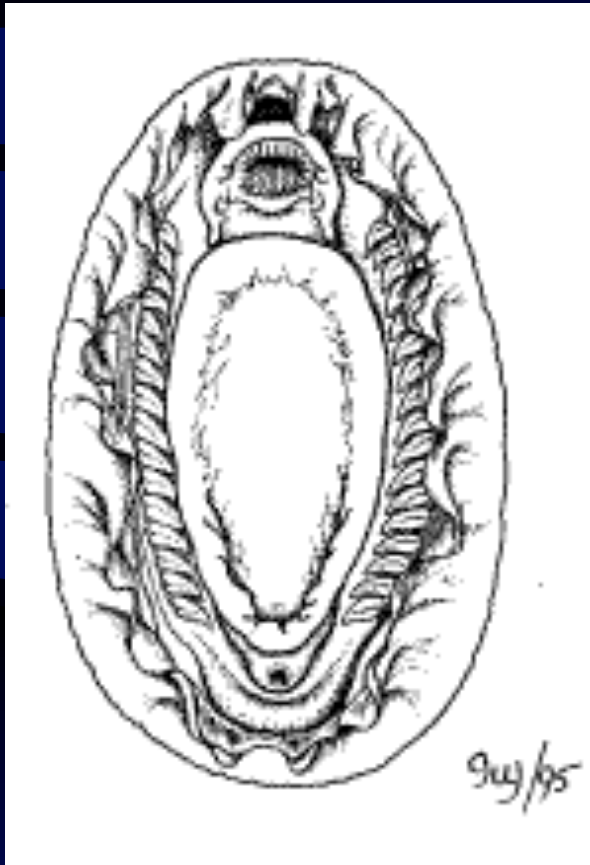
# Clase Poliplacophora



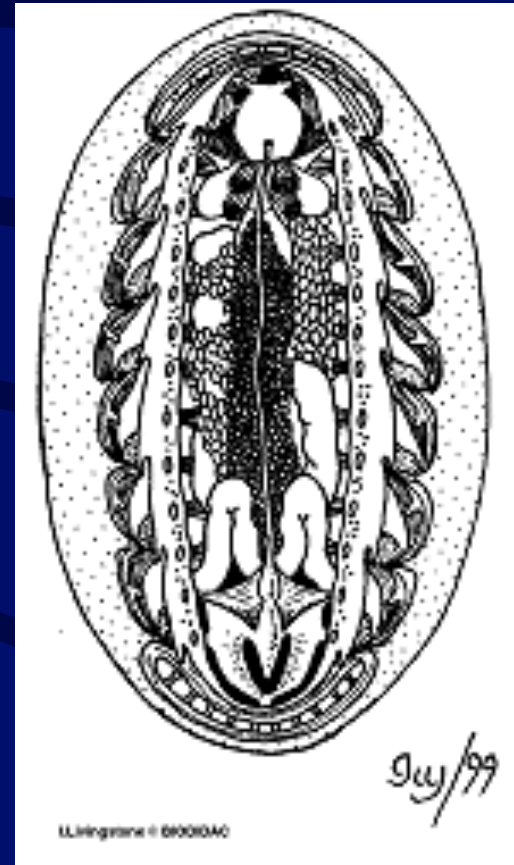
# Vista lateral sistemas



# Quiton

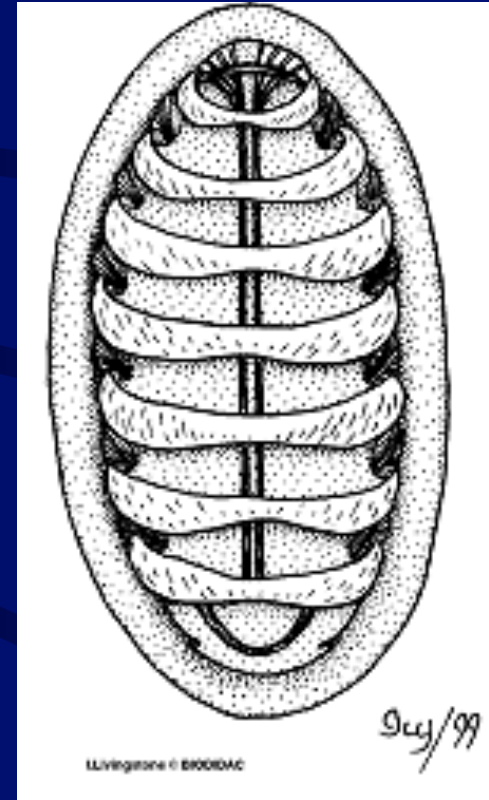
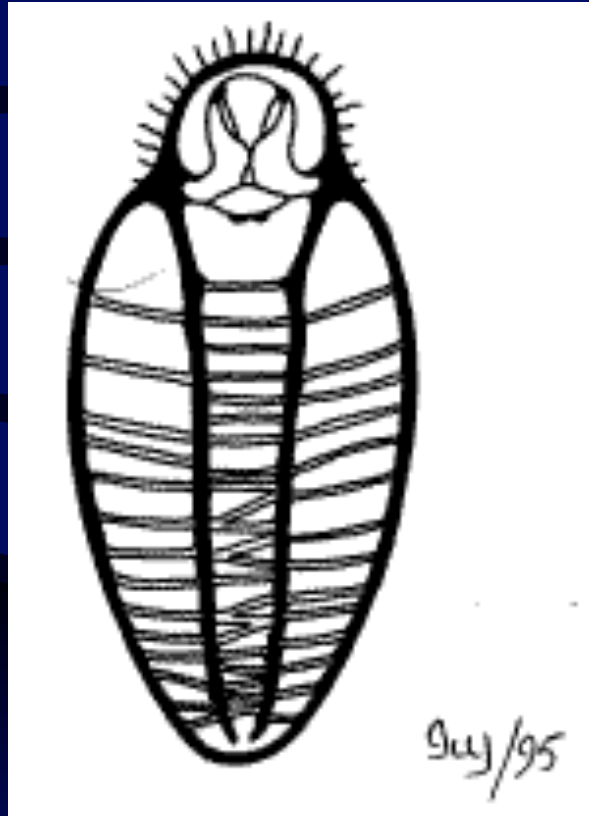


Vista ventral



Dorsal sin ceramas

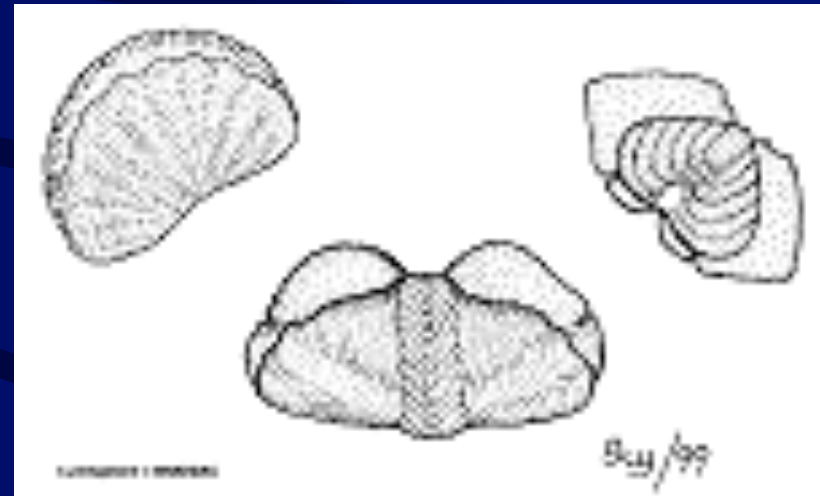
# Sistema nervioso- Muscular



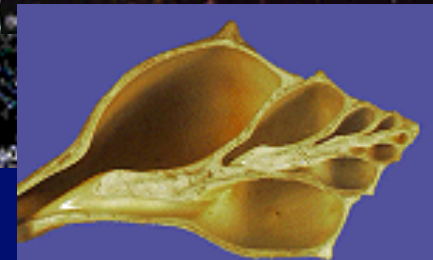
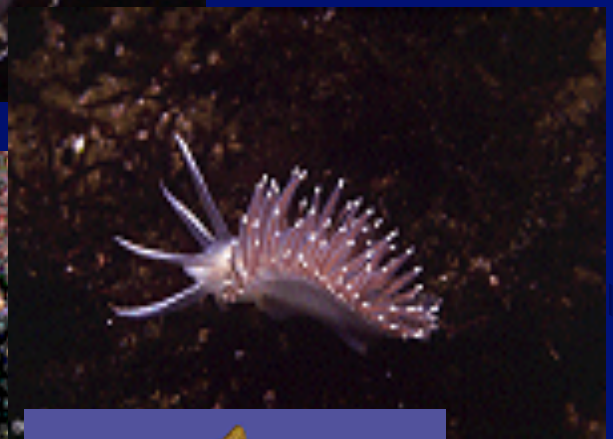
# Corte transversal quiton



# Ceramas generalmente 8



# Clase Gasteropoda





**GASTEROPODA INCLUYE: LAPAS, LIEBRES  
DE MAR, BABOSAS DE MAR, CARACOLES  
TERRESTRES  
CON:**

**30.000 ESPECIES ACTUALES**

**15.000 ESPECIES FOSILES REPRESENTADAS POR**

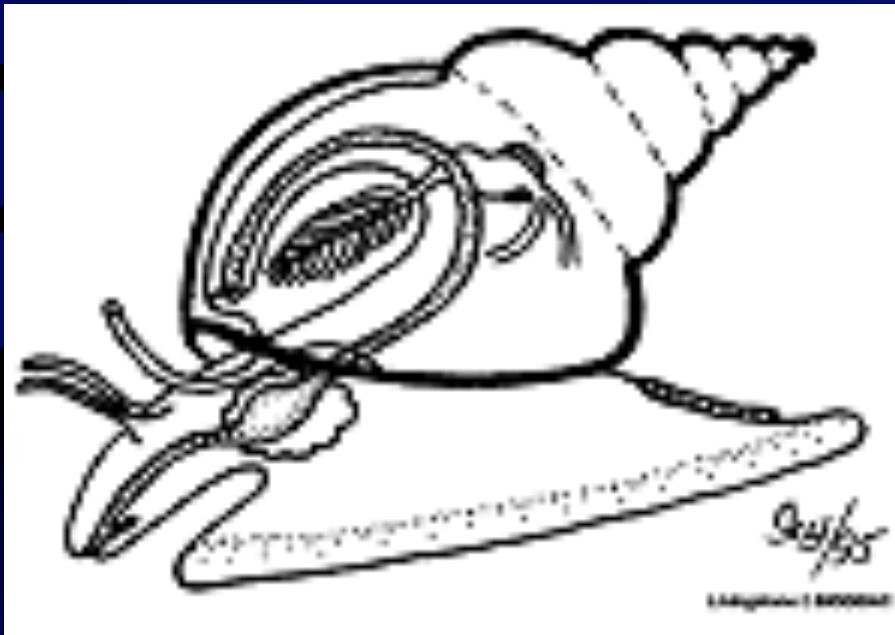
**UN RICO RESGISTRO FÓSIL ININTERRUMPIDO**

# CAMBIOS EVOLUTIVOS IMPORTANTES:

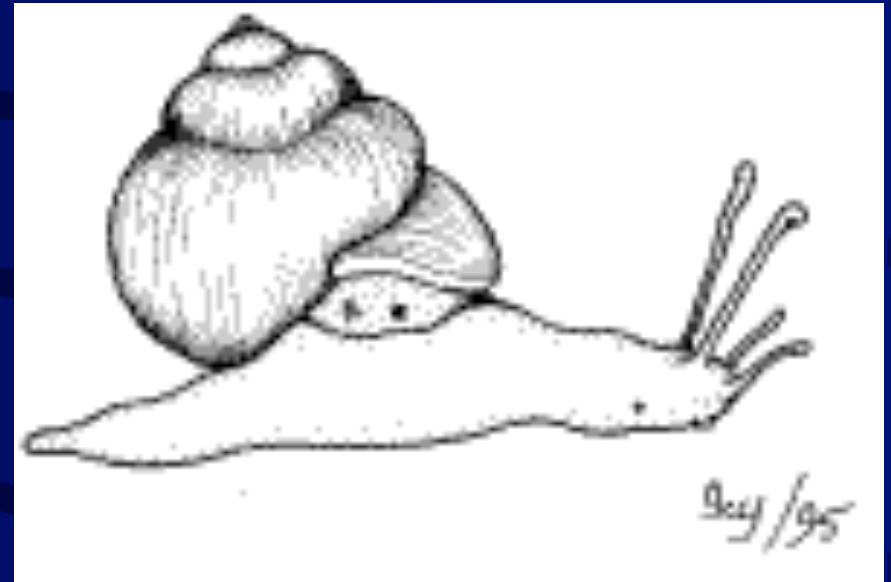
1. DESARROLLO DE UNA CABEZA
2. ALARGAMIENTO DEL CUERPO ( DORSO VETRAL)
3. ESPIRALIZACIÓN DE LA CONCHA
4. TORSIÓN DEL CUERPO.

# Evolución del grupo

## 1. Desarrollo de cabeza y alargamiento del cuerpo



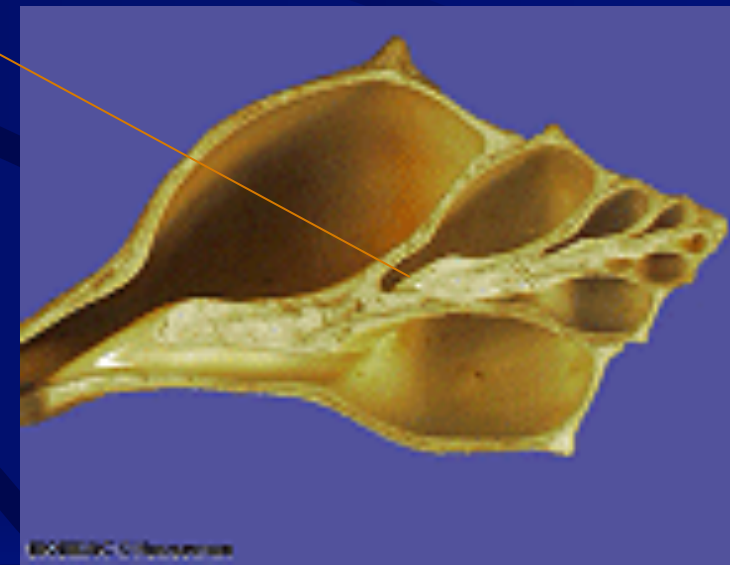
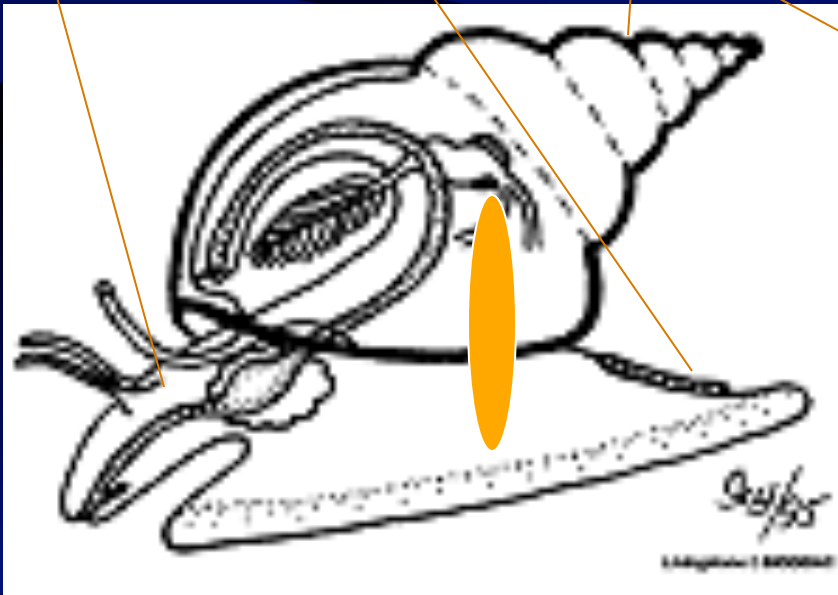
# Cephalización



# DESARROLLO PRIMITIVO

CABEZA- ESPIRALIZACION CONCHA  
ASIMETRICA ALREDEDOR DE UNA  
COLUMELA

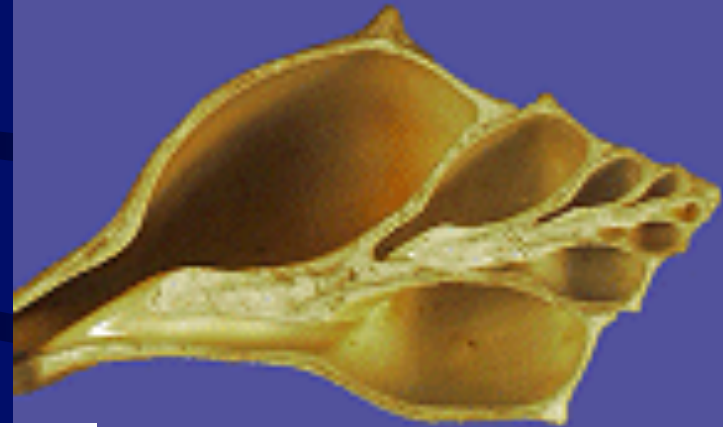
MUSCULO RETRACTOR COLUMELAR  
OPERCULO



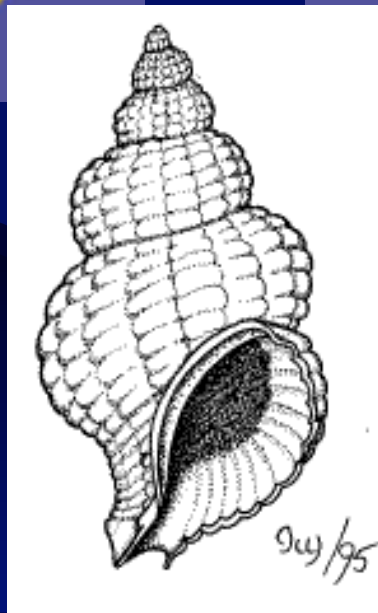
## 2. Espiralización de la concha



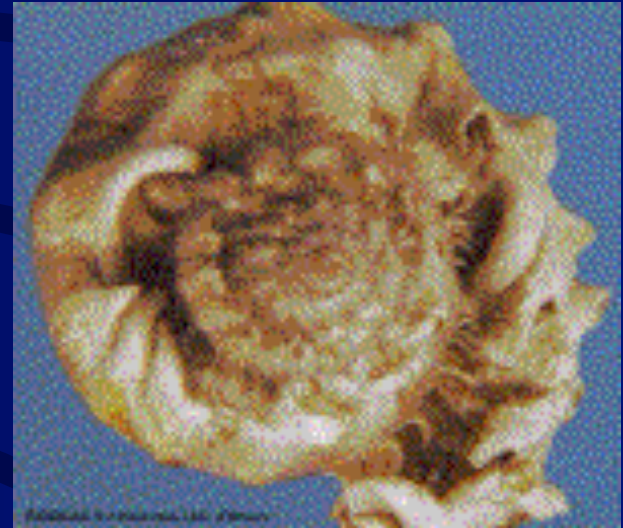
BOBILIC O. Invertebrata



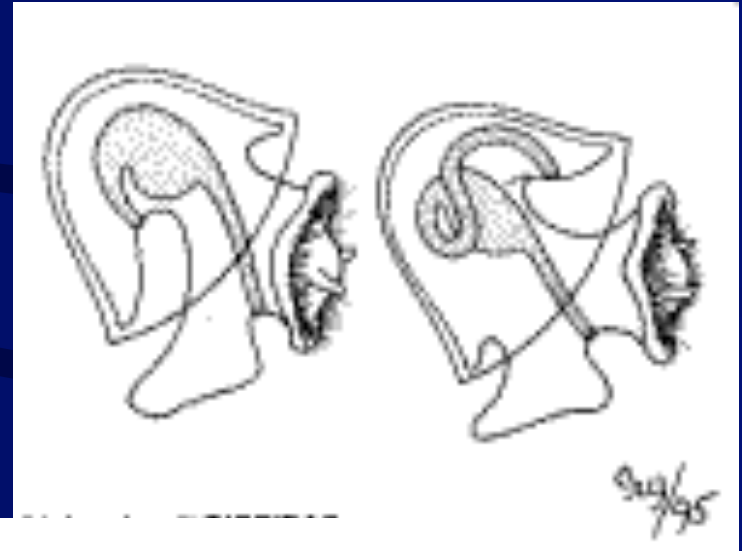
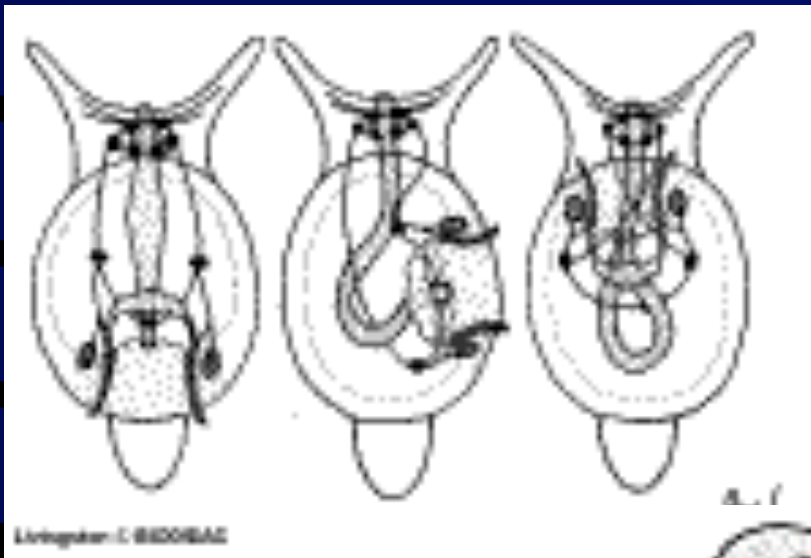
C. C. Invertebrata



# Espiralización abertura

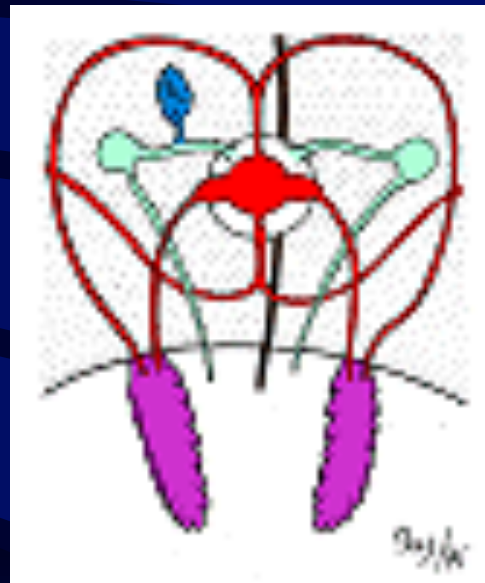


# 3. Torsión corporal





# Sistema circulatorio



Subclases de gasteropodos con base en la circulación del agua e intercambio gaseoso:

1. Prosobranquia
2. Opistobranquia
3. Pulmonata

# 1. PROSOBRANQUIA: 18.000 ESPECIES

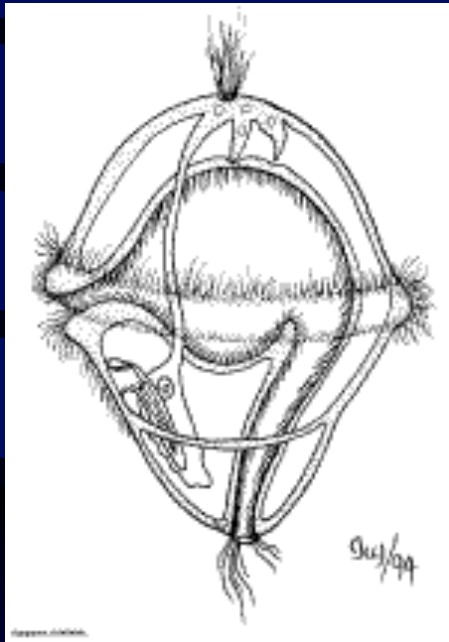
- Respiración por branquias –dos- – Torsión de 180\*
- Conchas con hendiduras como solución a problemas higiénicos de la torsión.
- Sexos separados-dioicos- pocos hermafroditas.

ARCHEOGASTEROPODA: Con concha hendida DOS  
BRANQUIAS BIPECTINADAS-MENOR No.  
Otros.. BRANQUIAS MONOPECTINADAS-EXCAVADORES-  
HERVIBOROS,CARNIVOROS **Nerita sp**

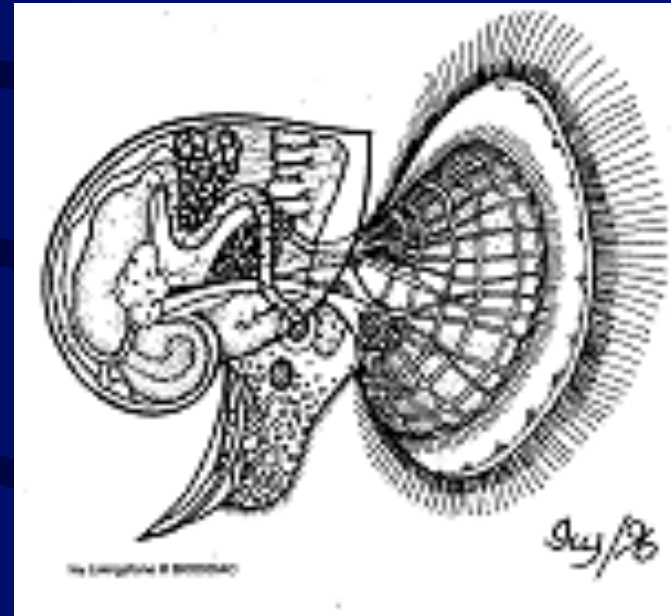
MESOGASTEROPODA: Marinos,dulceaquícolas,terrestres  
con opérculo.

NEOGASTEROPODA: Desarrollo de un sifón inhalante

# Larva de arqueogasteropoda



Trocophora



Larva Veliger

## 2. OPISTOBRANQUIA

CIERTA DETORSIÓN DEL cuerpo 90\* -

HERMAFRODITAS

REDUCCIÓN DE LA CONCHA - MAYOR. MARINOS

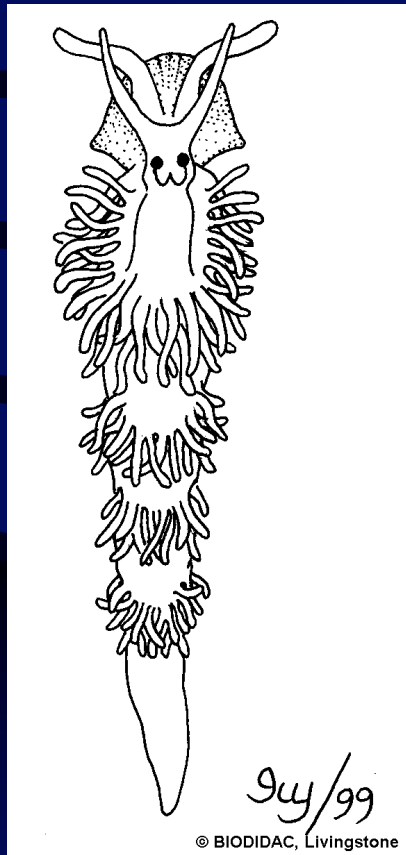
BRANQUIAS TIPO PLEGADO

ADULTOS SIN OPERCULO

ORDEN NUDIBRANQUIA : CARNIVOROS

CON CNIDOSACOS

# Nudibranchia



# PULMONATA: 16.000ESP.

HERMAFRODITAS- DETORSIÓN-  
CAVIDAD PALEAL TRANSF. EN  
PULMON-PNEUMOSTOMA-  
HERVIBOROS.

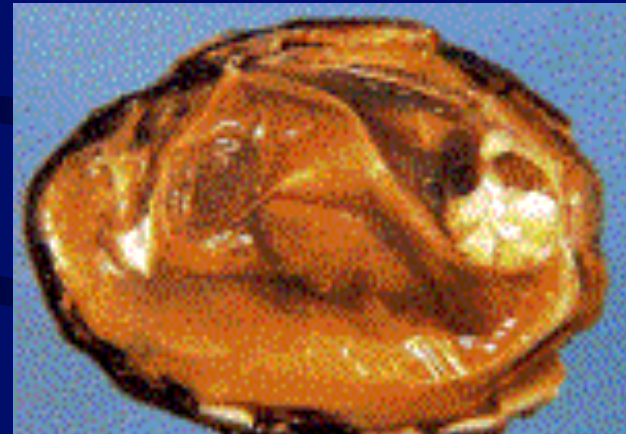
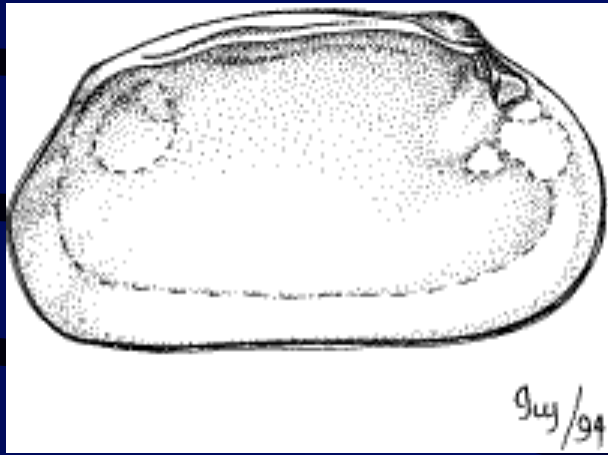


# Clase Bivalvia

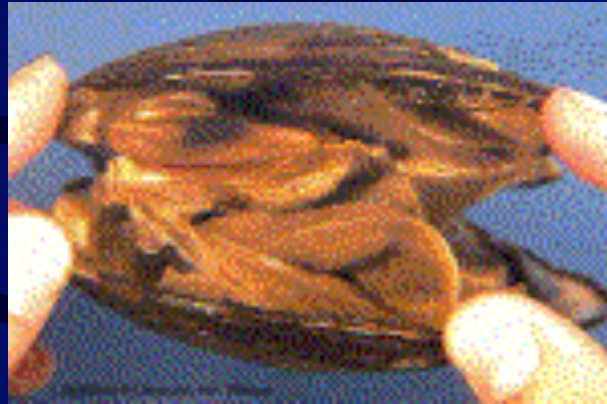




# Concha : dos valvas simétricas



# Antes de la disección



# Anatomía interna de bivalvo



Cavid. pericardica

Corazón

Músculo aductor

Ctenidio

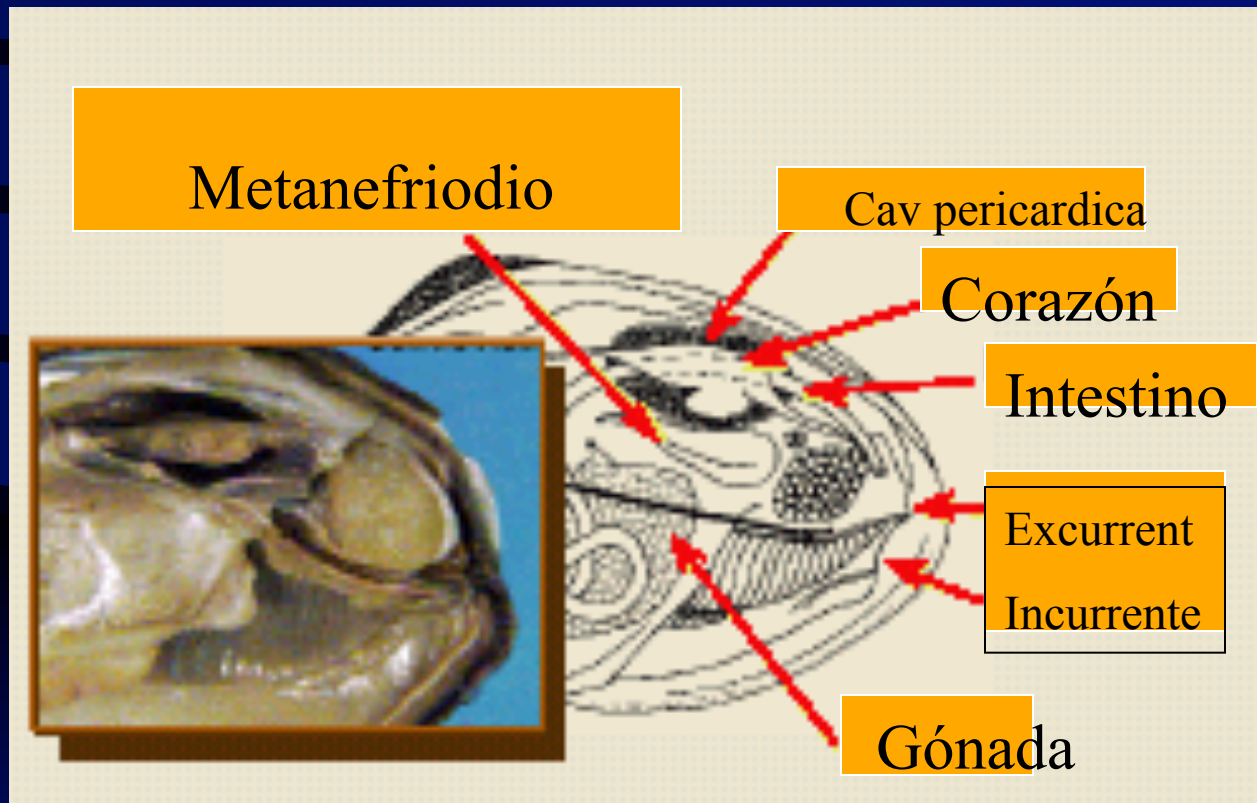
Gónada

Intestino

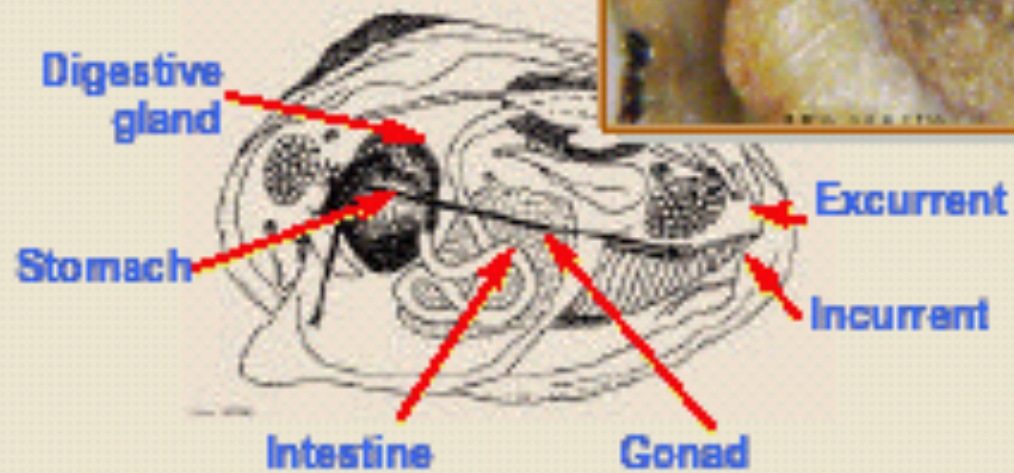
Pie

Estómago

# Anatomía bivalvo



## Clam anatomy



Digestive gland

Stomach

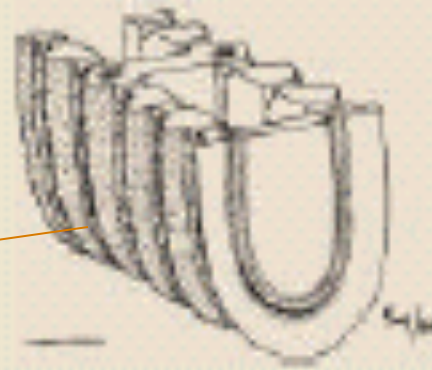
Intestine

Gonad

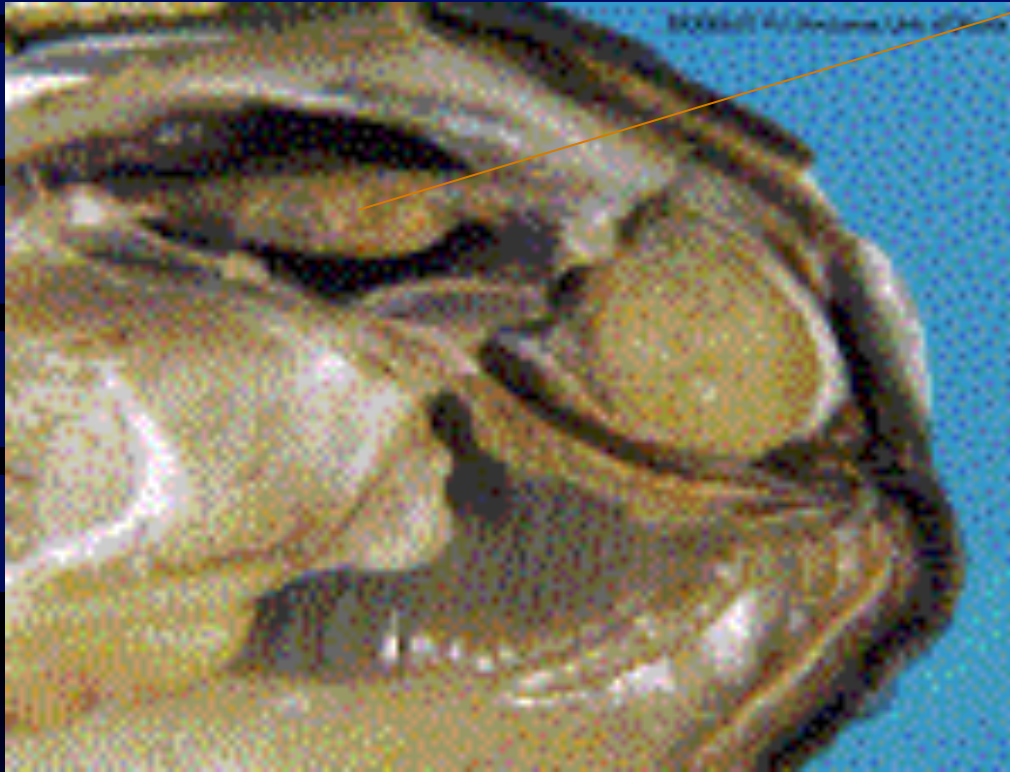
Excurrent

Incurrent

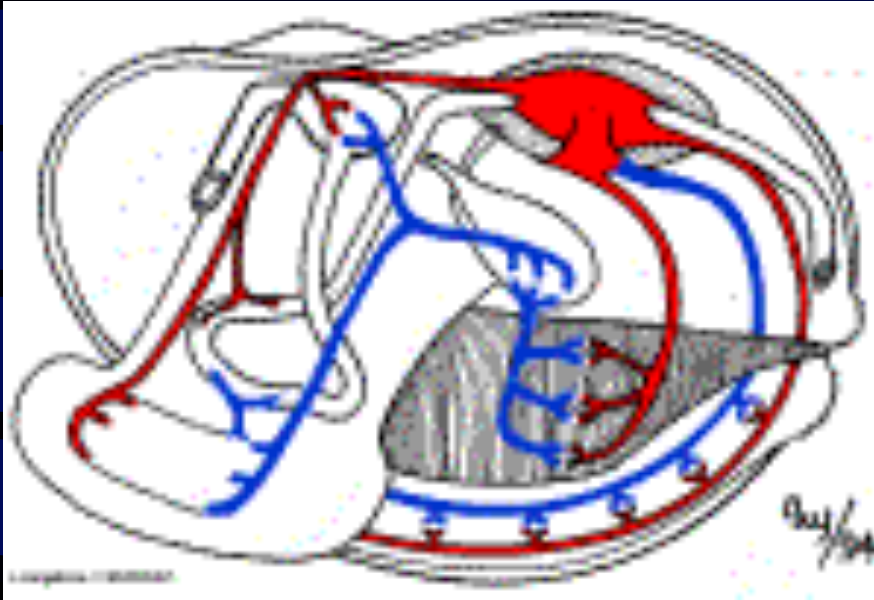
# Ctenidios



# Corazón

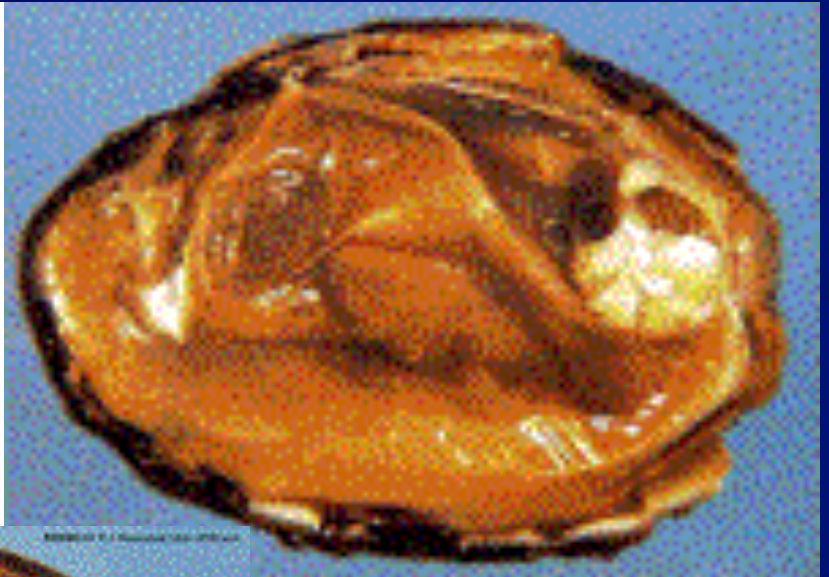


# Sistema circolatorio

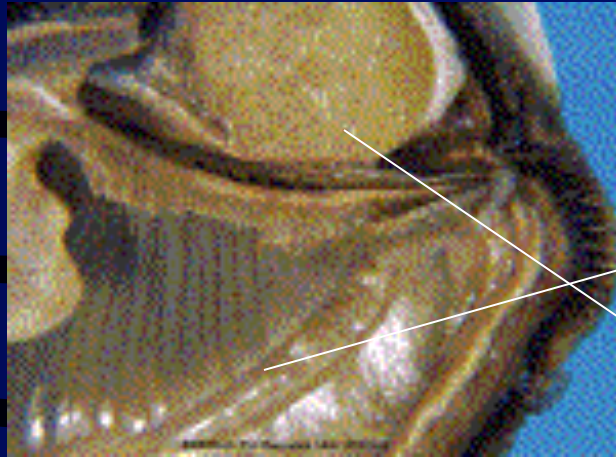




# Bivalvos estructura interna

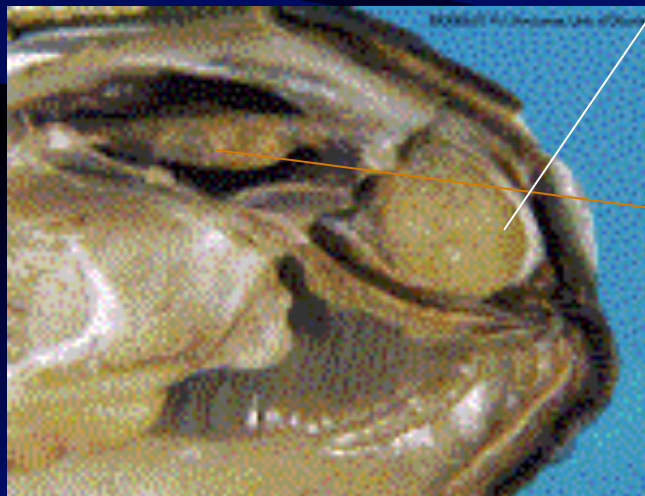


# Músculos aductores



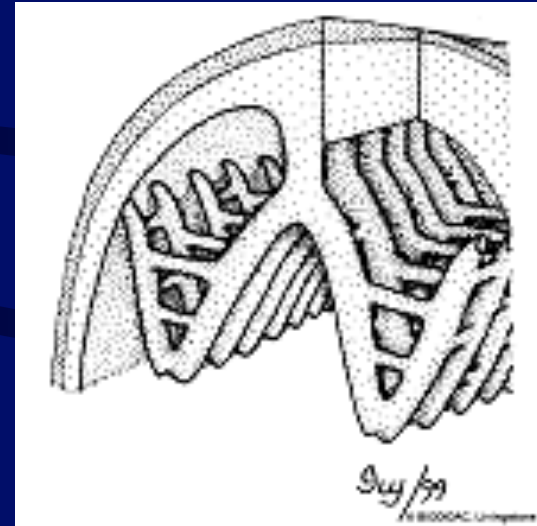
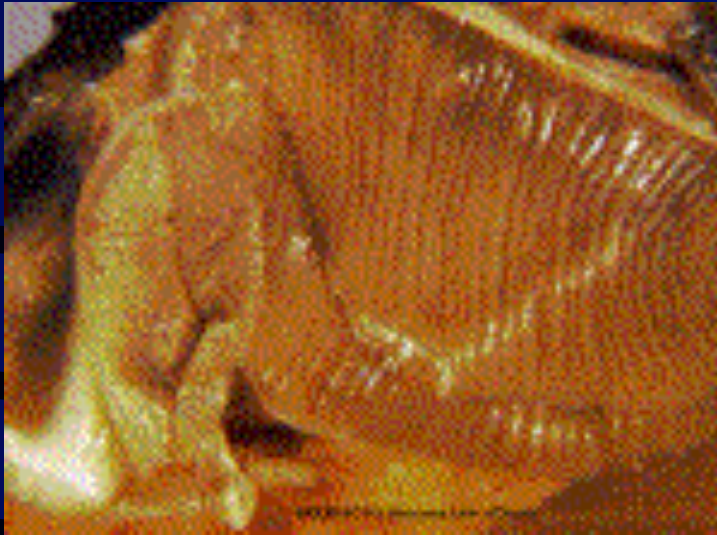
Branquias

Músculos

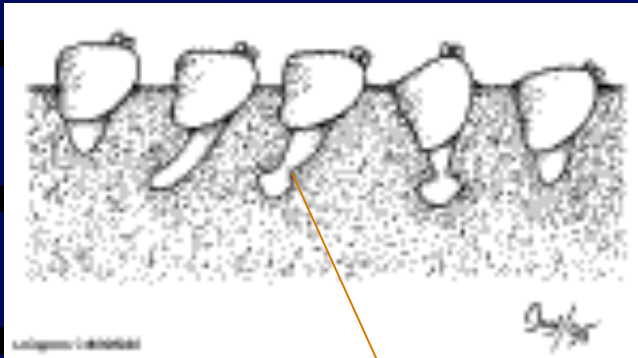


Estómago

# Lamelibranquios filtradores

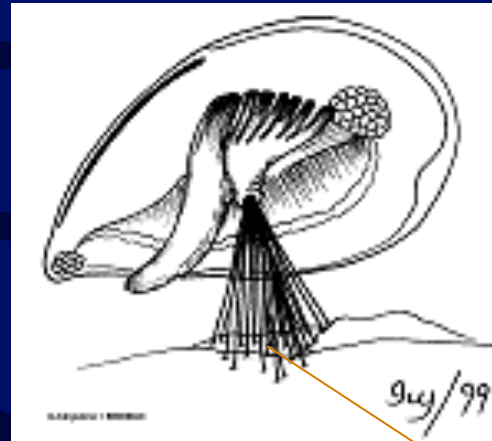


# Hábitos y hábitat



*Donax* sp

Pie  
excavador

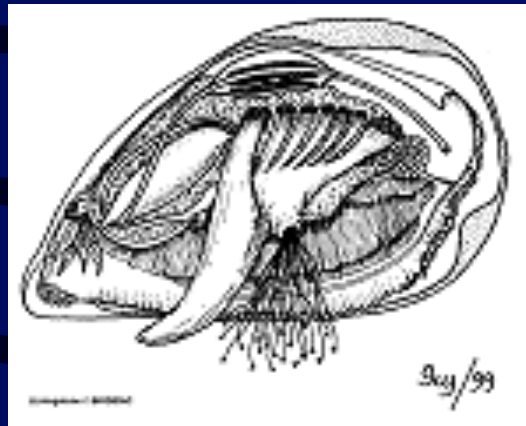


*Mytilus*: mejillones

Biso

Excavadores de fondos blandos

# Mecanismo de filtración



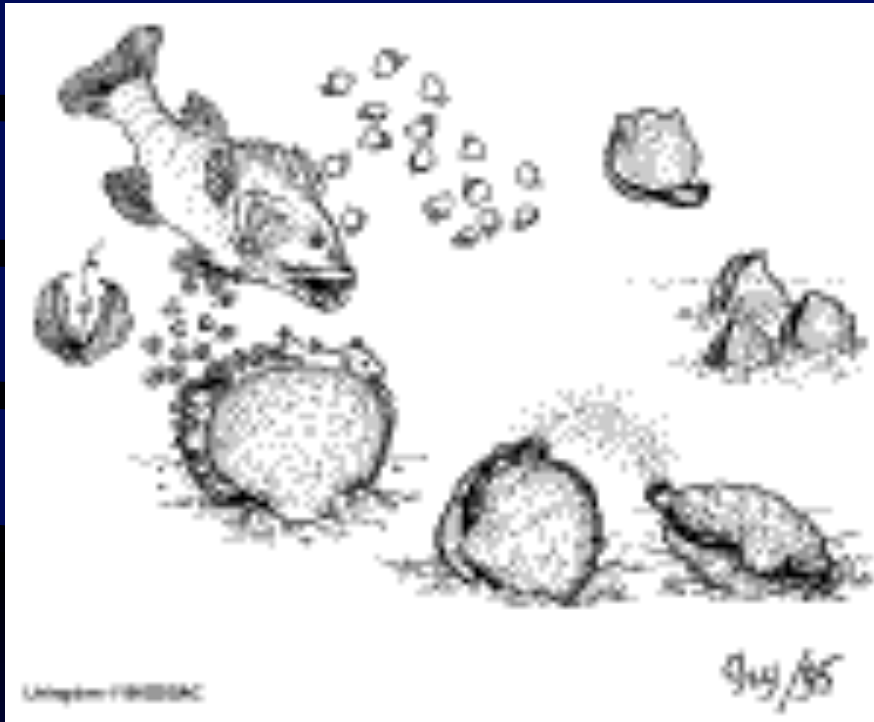
FilbranchBivalve.exe

# En excavadores..

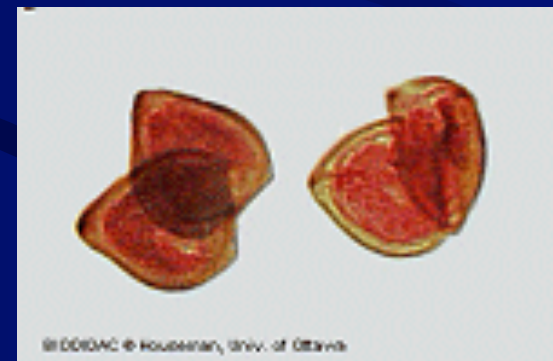


Clam.exe

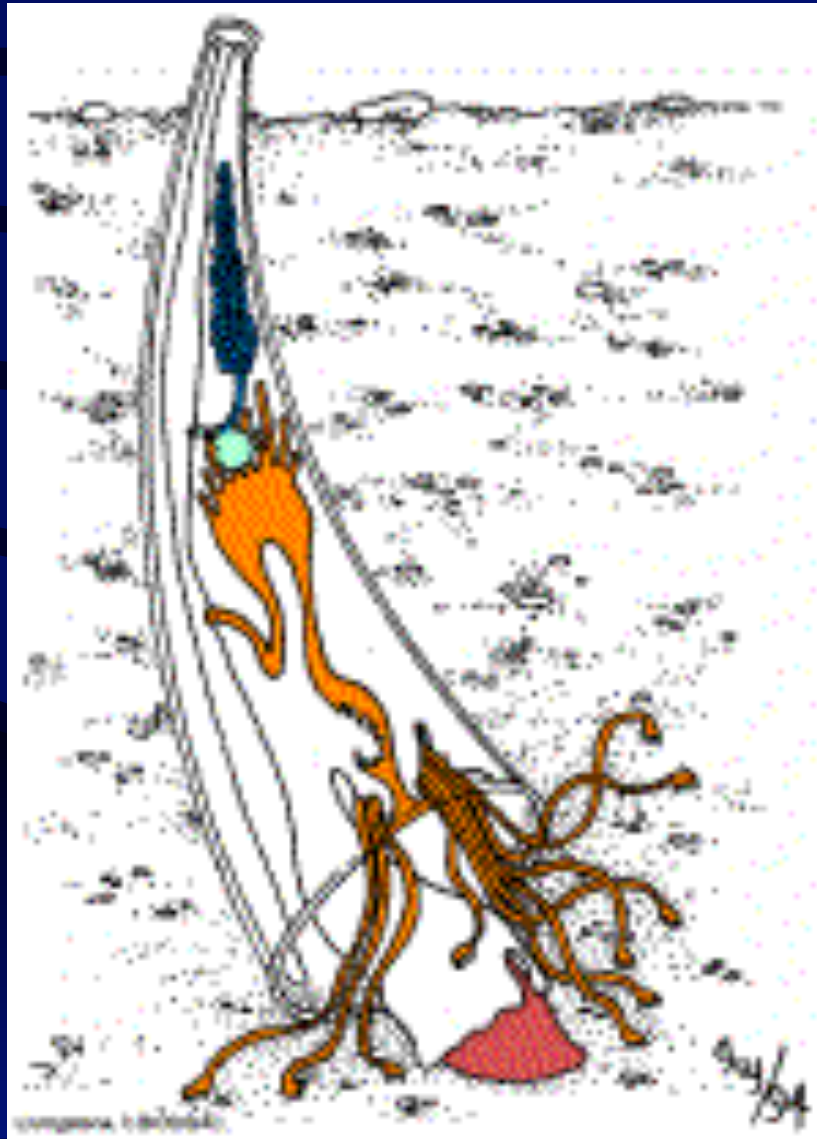
# Estrategias de reproducción



Larva gloquidio



# Clase Scaphopoda



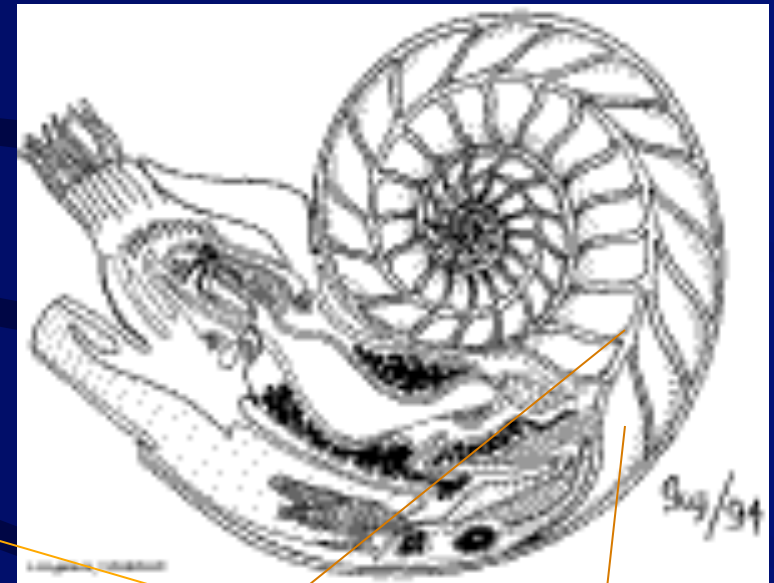
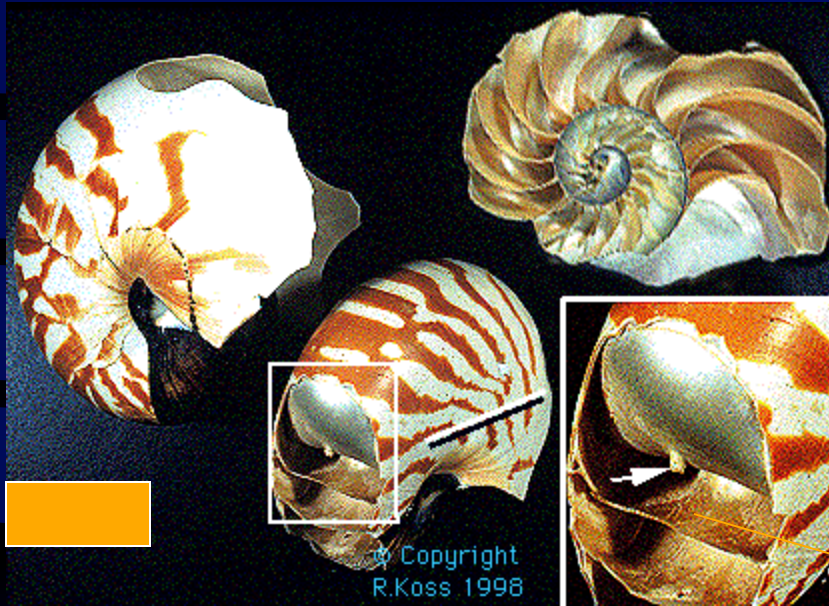


# Clase Cephalopoda





# Nautilodea



Sifúnculo

Cámara