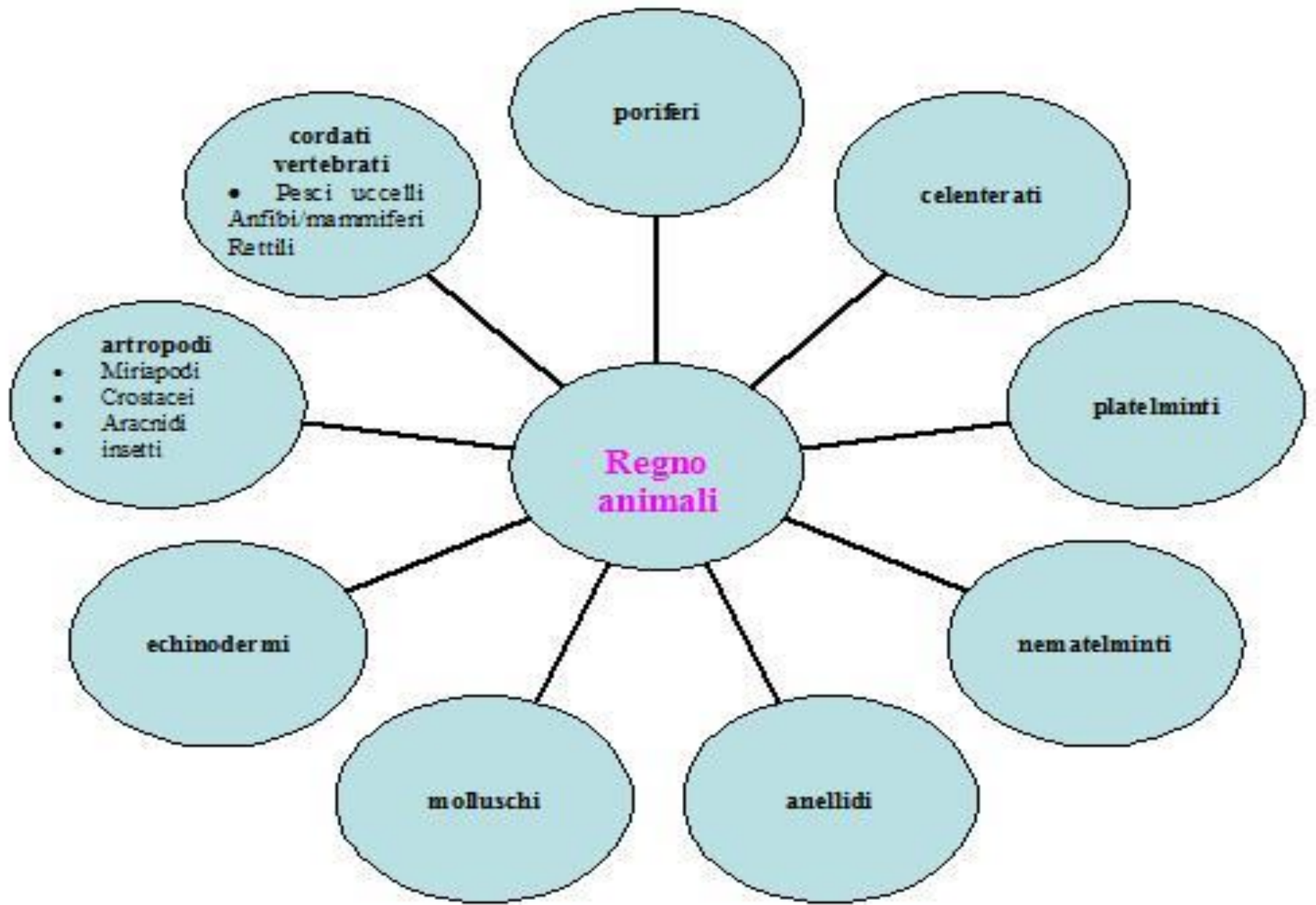
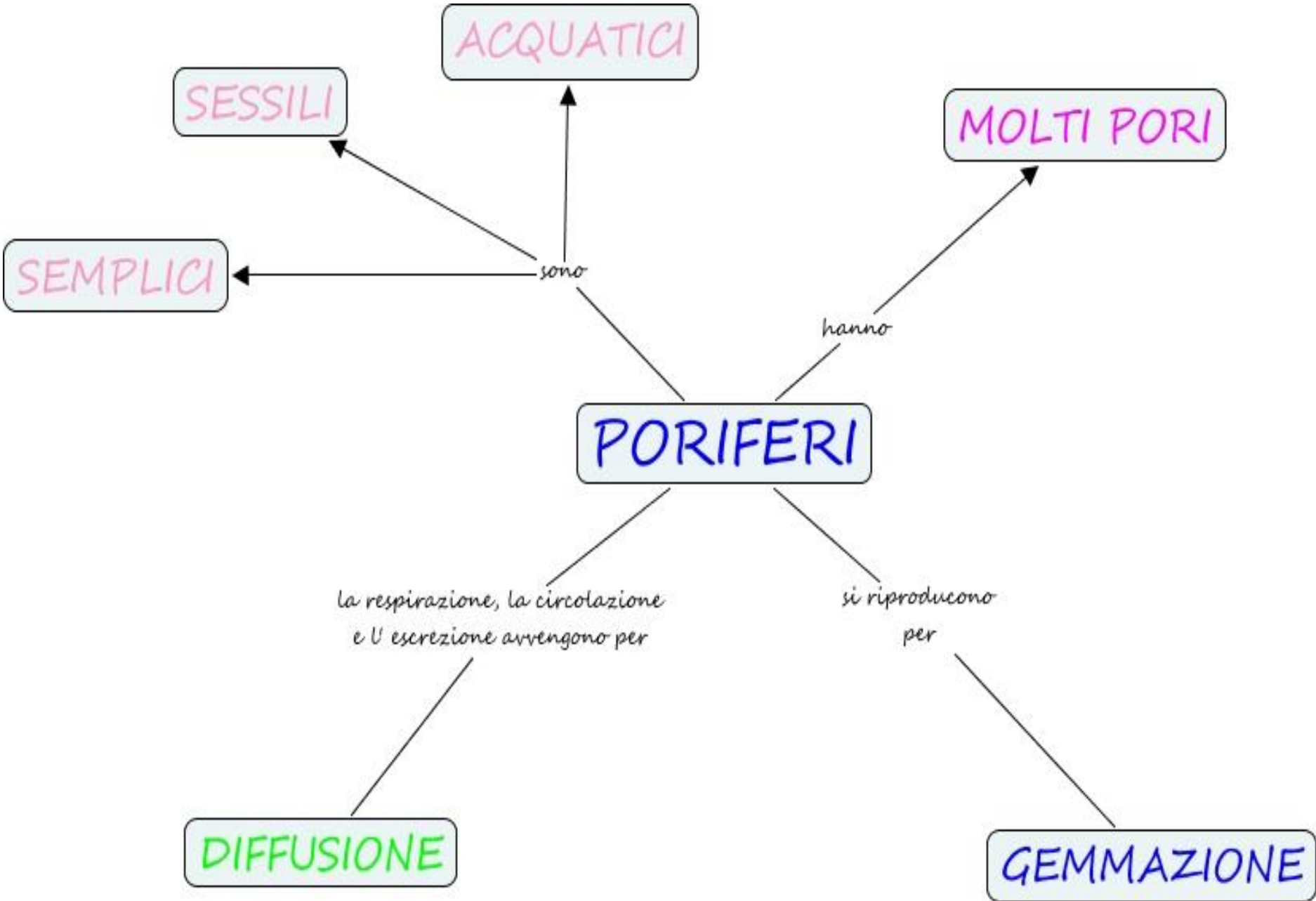


**GLI ANIMALI**



# GLI INVERTEBRATI



ACQUATICI

SESSILI

MOLTI PORI

SEMPLICI

PORIFERI

la respirazione, la circolazione  
e l'escrezione avvengono per

DIFFUSIONE

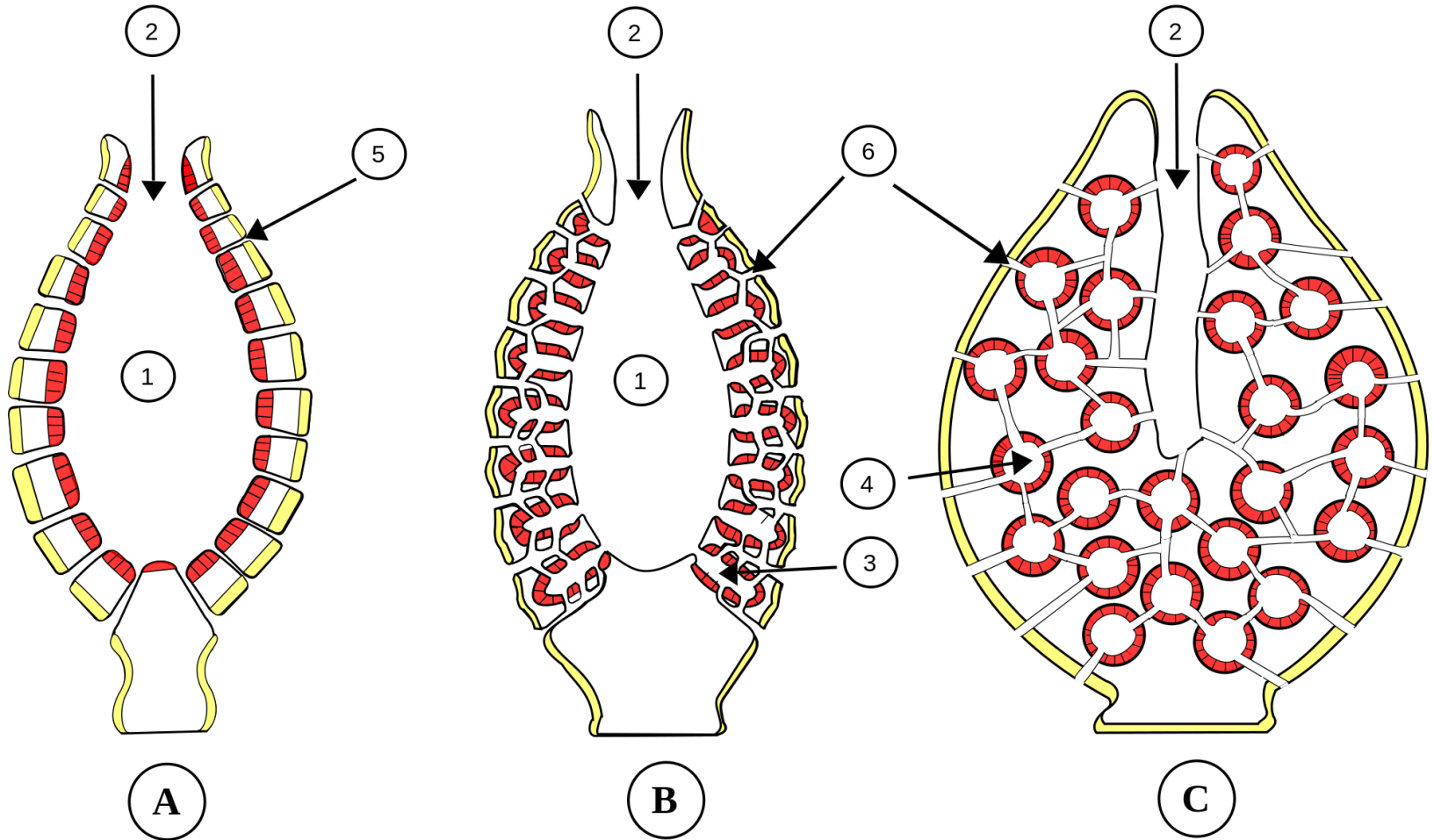
si riproducono  
per

GEMMAZIONE

sono

hanno

# I PORIFERI



## Interno spugna

Coanociti

Strato interno

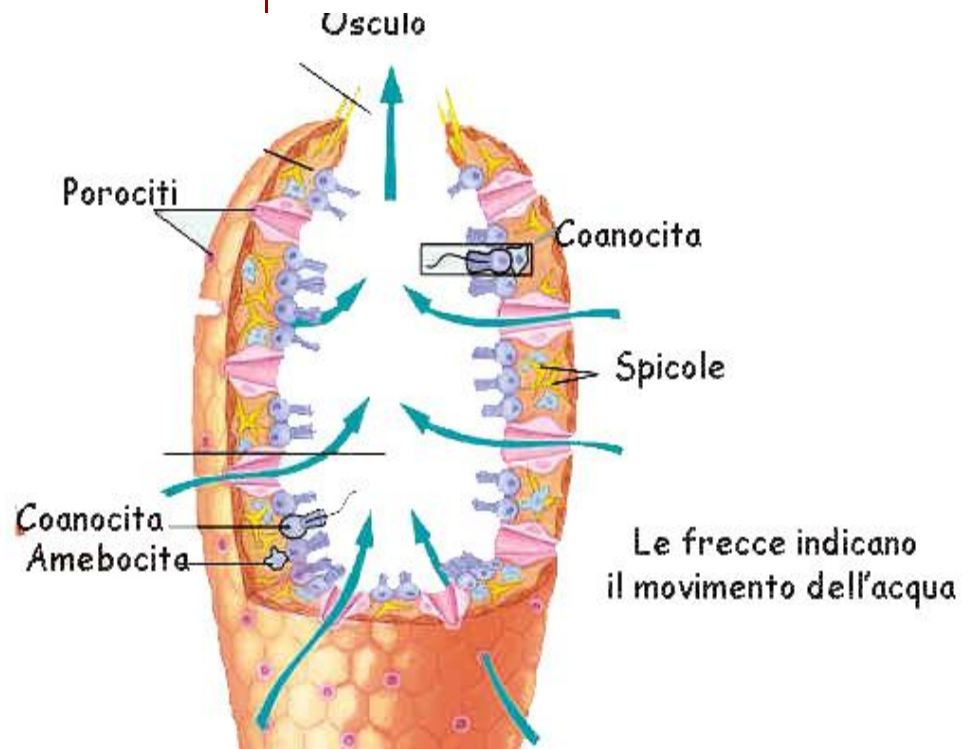
Cellula  
riproduttiva

Sostanza  
gelatinosa

Strato esterno

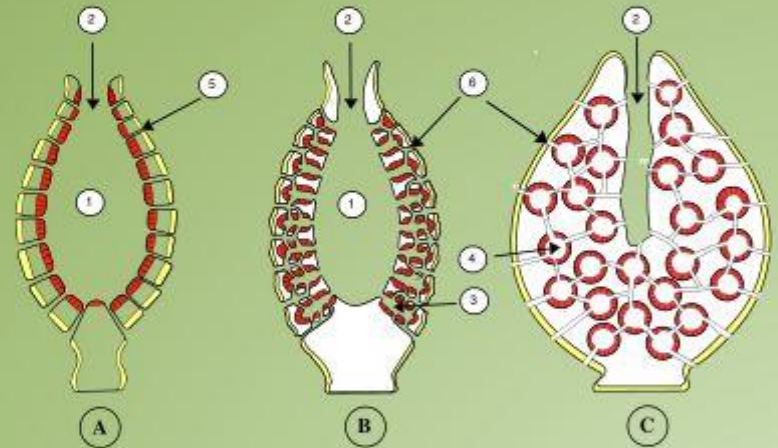
Spicola

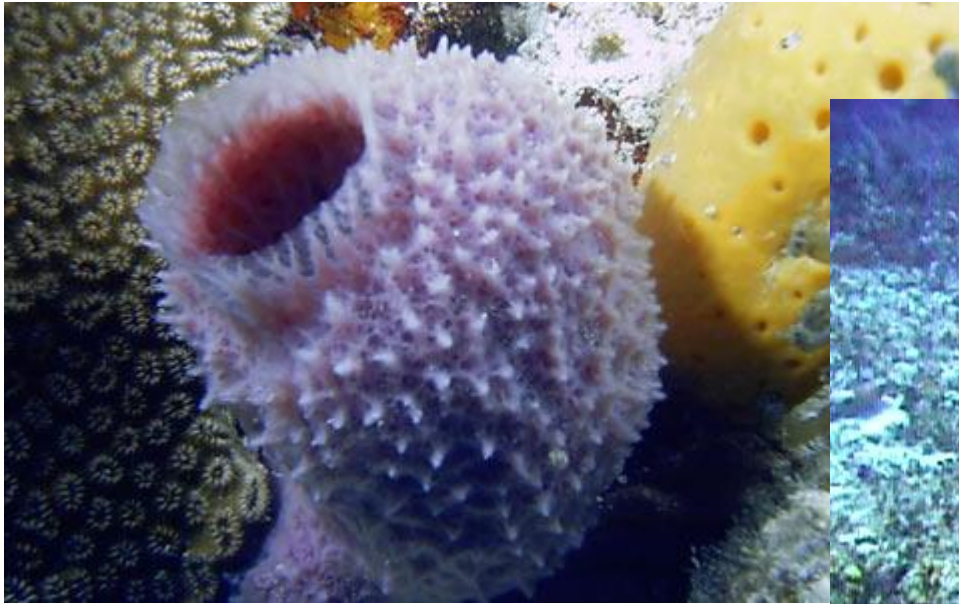
## Esterno spugna



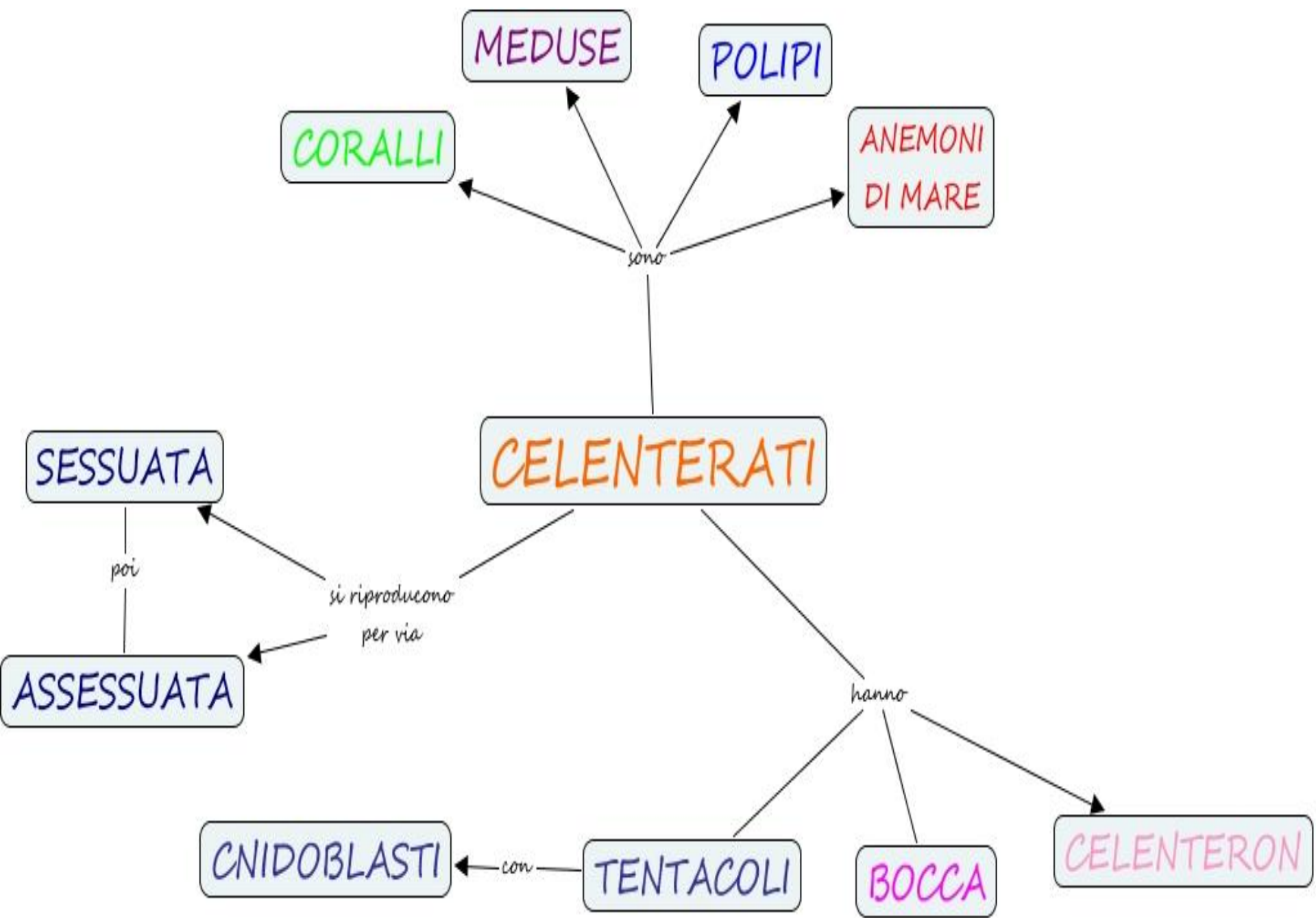
# I poriferi si riproducono per via...

- A sessuata : dalla spugna madre si originano delle gemmule che si fissano sul fondale marino , germinando danno origine a un nuovo porifero
- Sessuata : dalla fusione dell'ovulo e dello spermatozoo si origina l'embrione che si sviluppa in una larva e si sposta nell'acqua ... si ancora sul fondale e diventa una nuova spugna

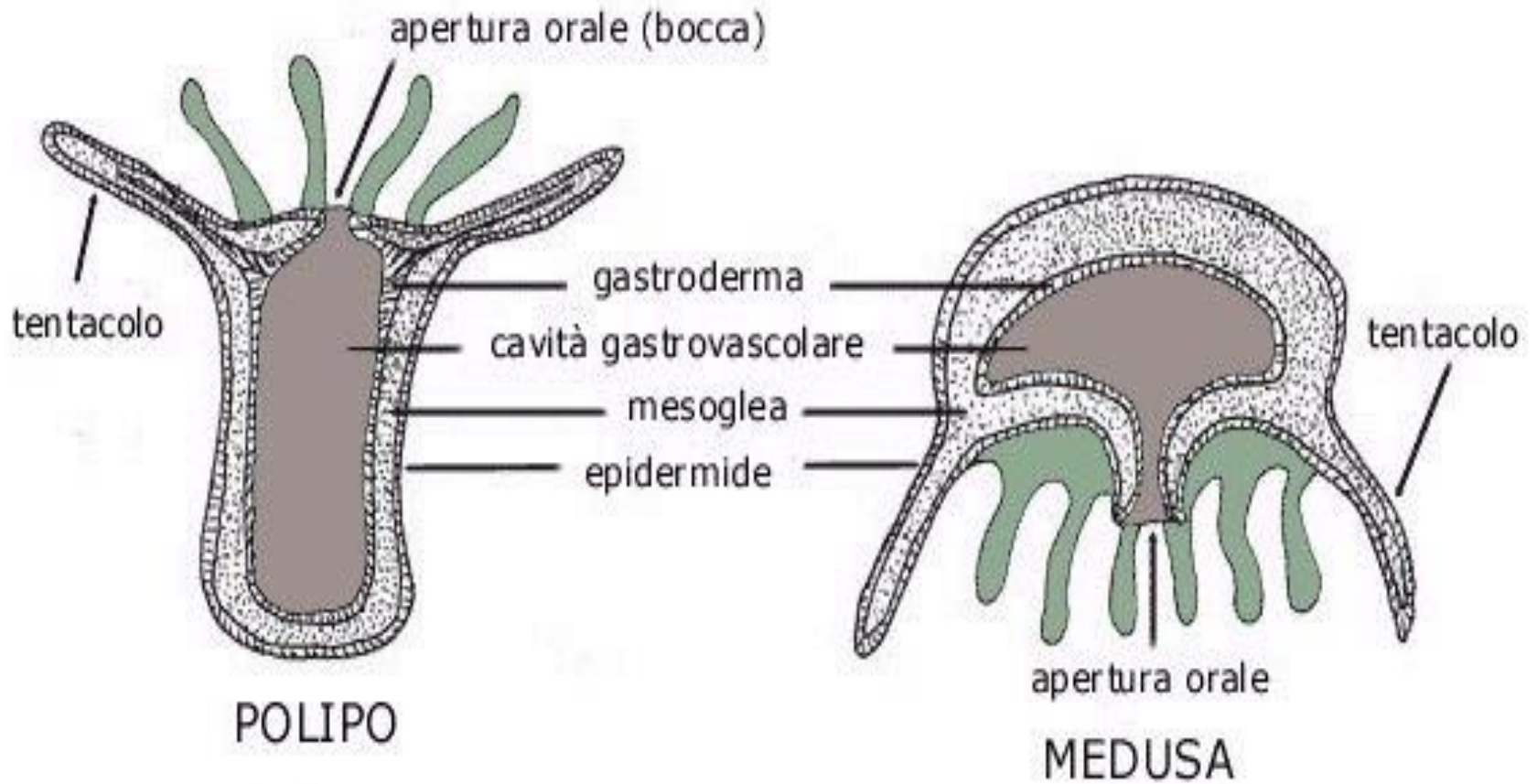


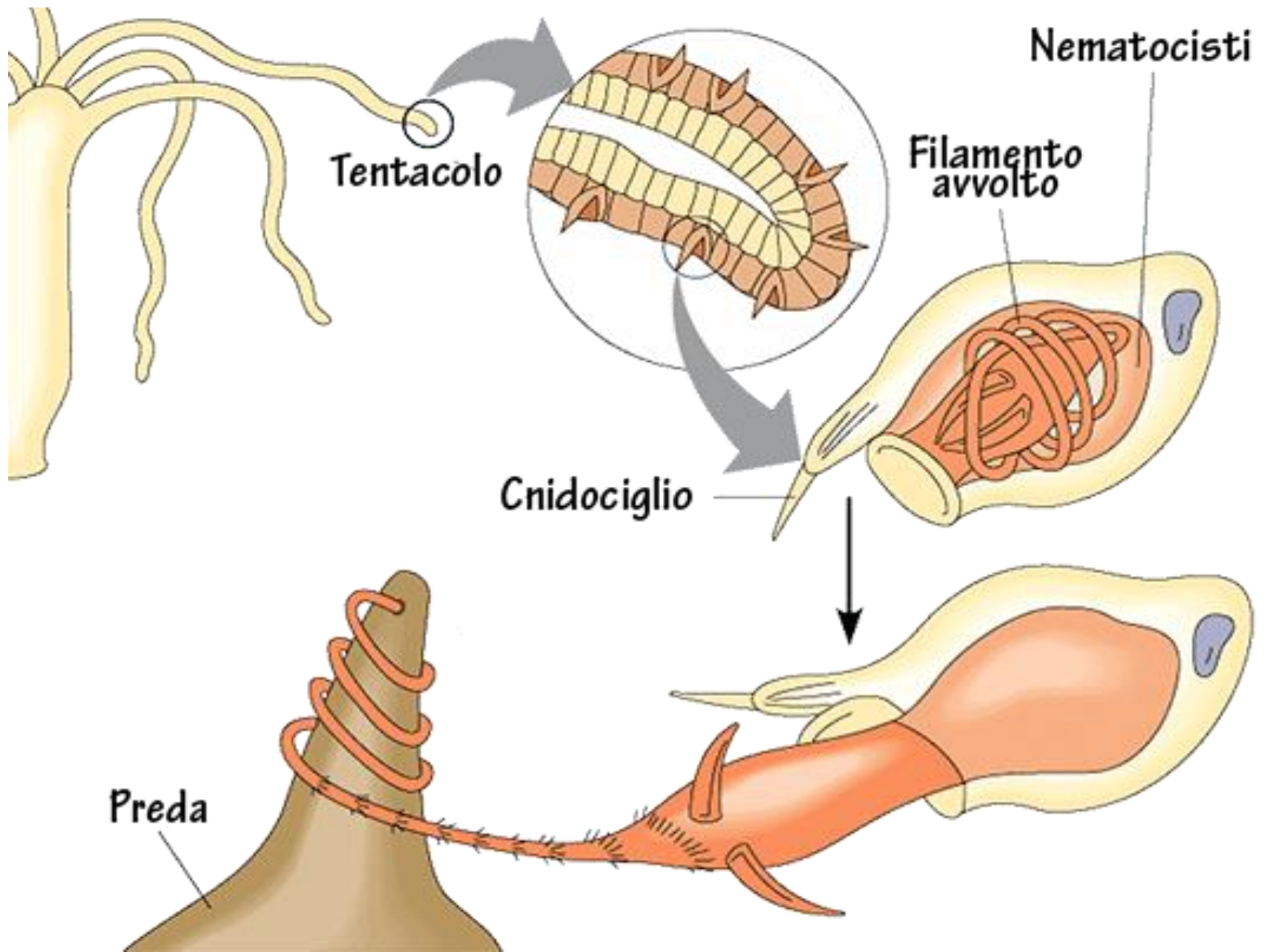


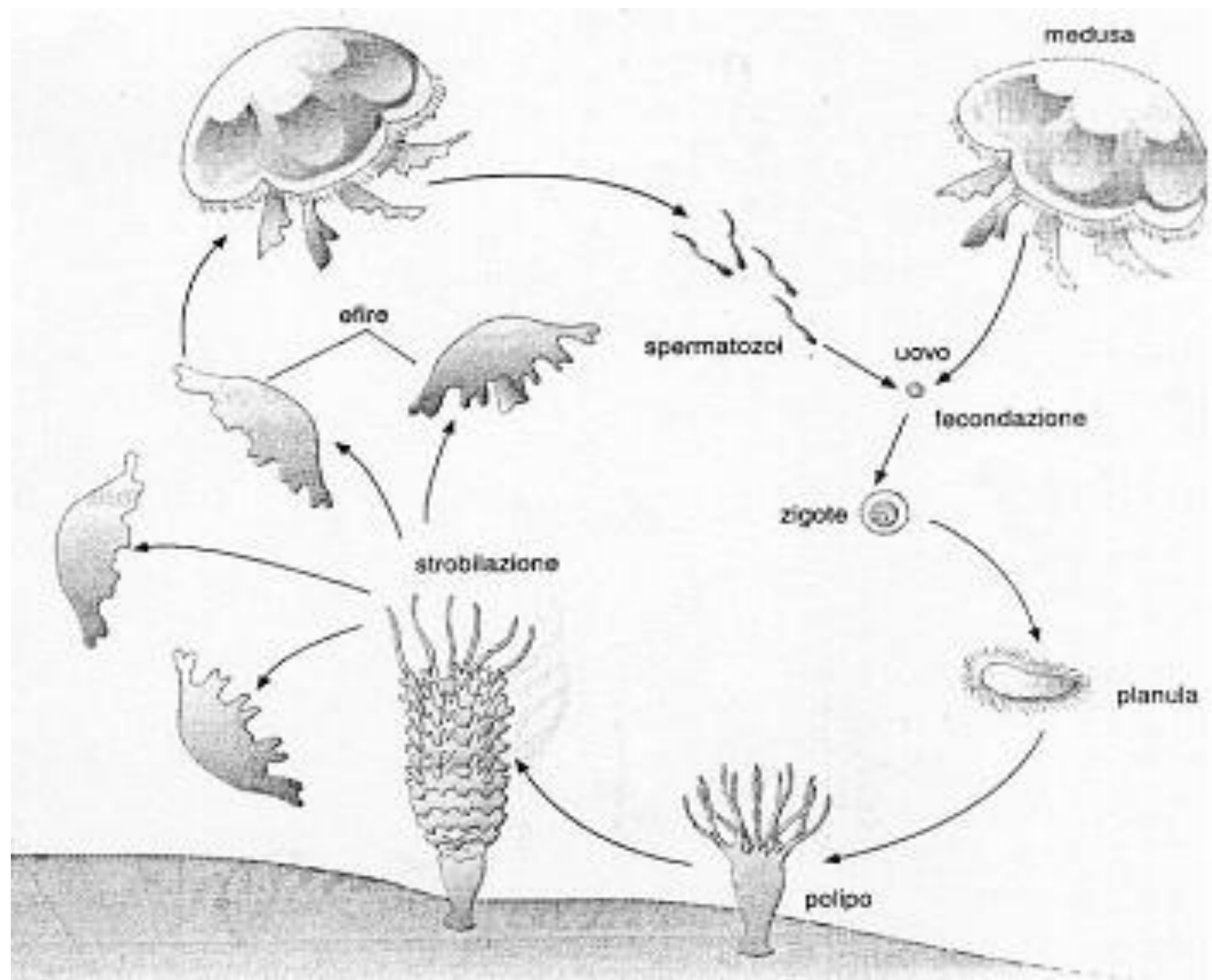


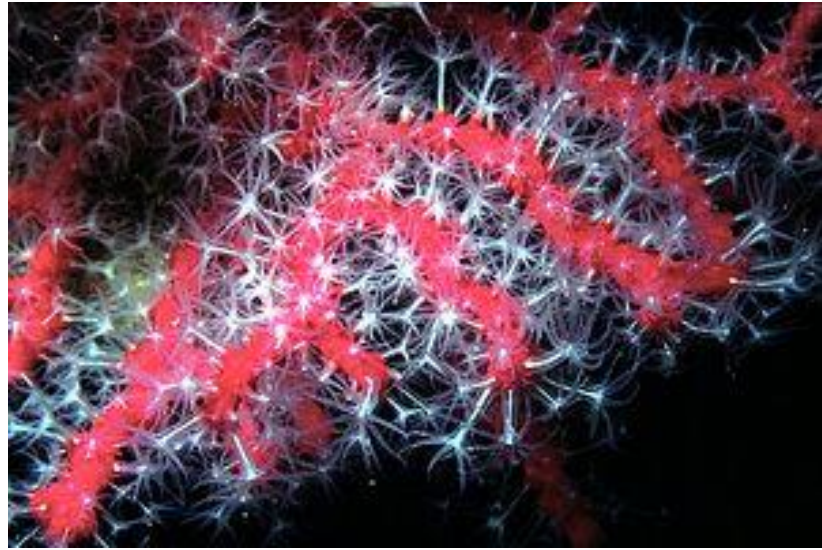


# CELEENTERATI









# I vermi

si suddividono in

platelminti

nematelminti

anellidi

comprendono gli

ossiuri

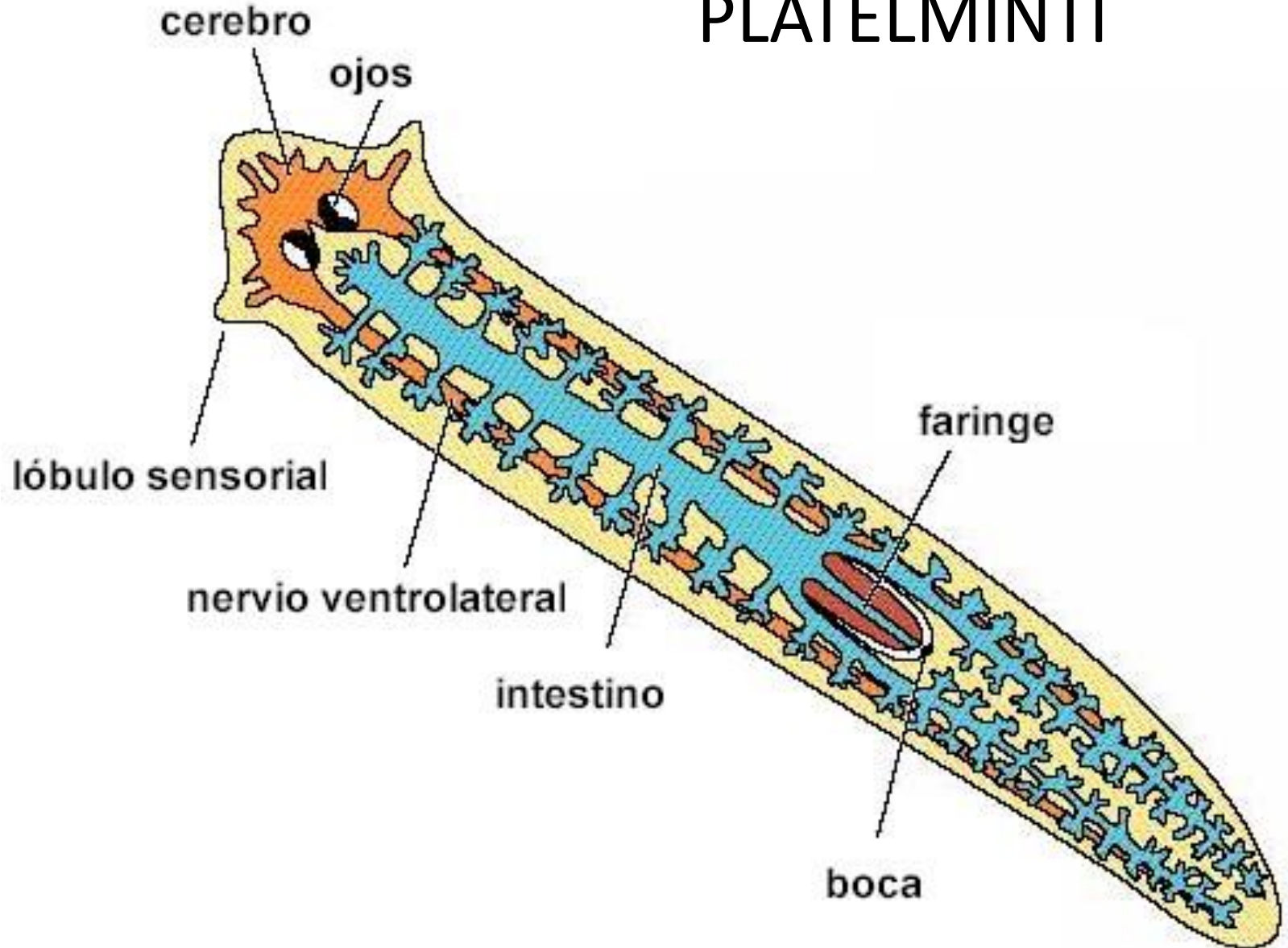
ascaridi

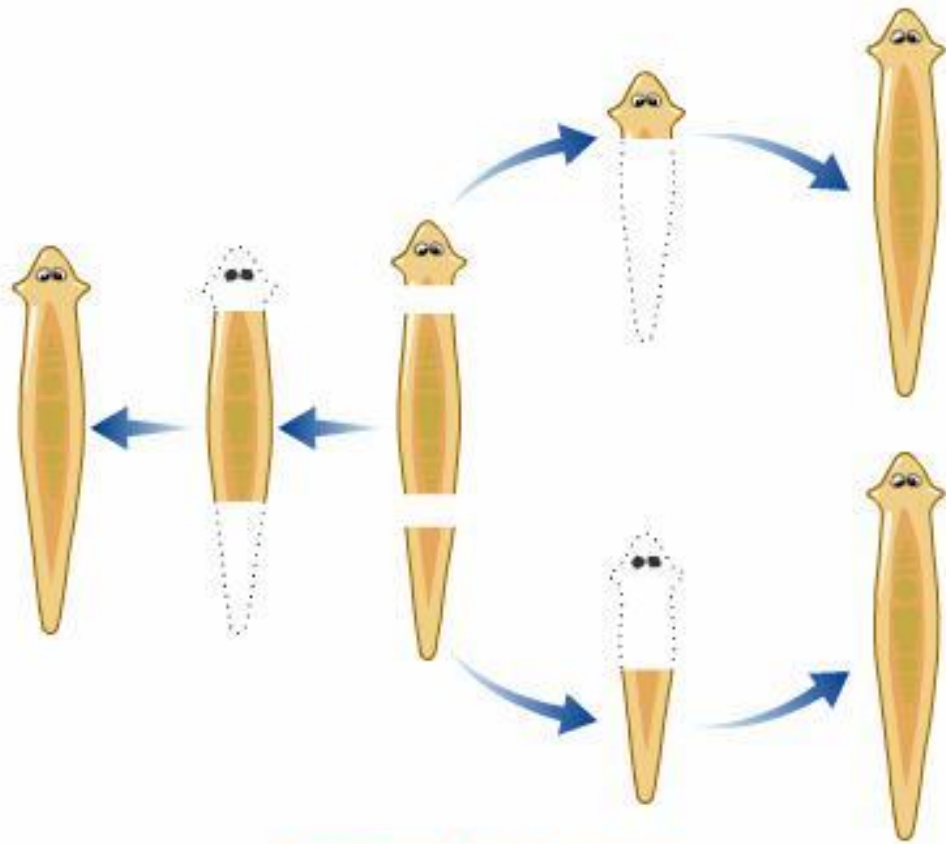
formati da

metameri



# PLATELMINTI

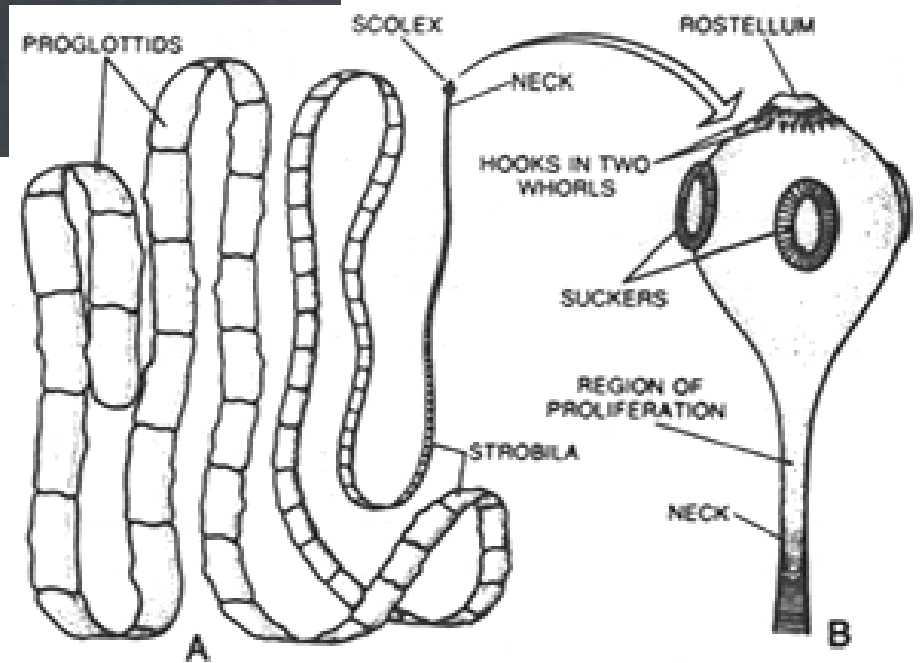




Regeneration in Planaria



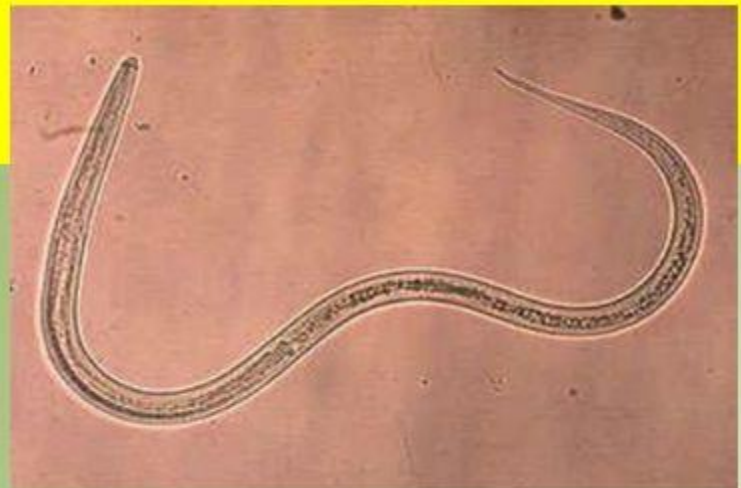




*Taenia solium* : A. whole; B. its scolex

# Nematelminti

- I Nematelminti hanno il cilindrico protetto da una **cuticula** che si rinnova al crescere dell'animale.
- Presentano **un sistema muscolare, una forma primitiva di apparato digerente, un sistema nervoso e un apparato escretore.**
- Gli appartengono gli **ossiuri e gli ascaridi** che sono **parassiti** intestinali dei bambini.



Il corpo flessibile e segmentato del lombrico è adatto per strisciare su superfici umide e per scavare gallerie nel terreno.

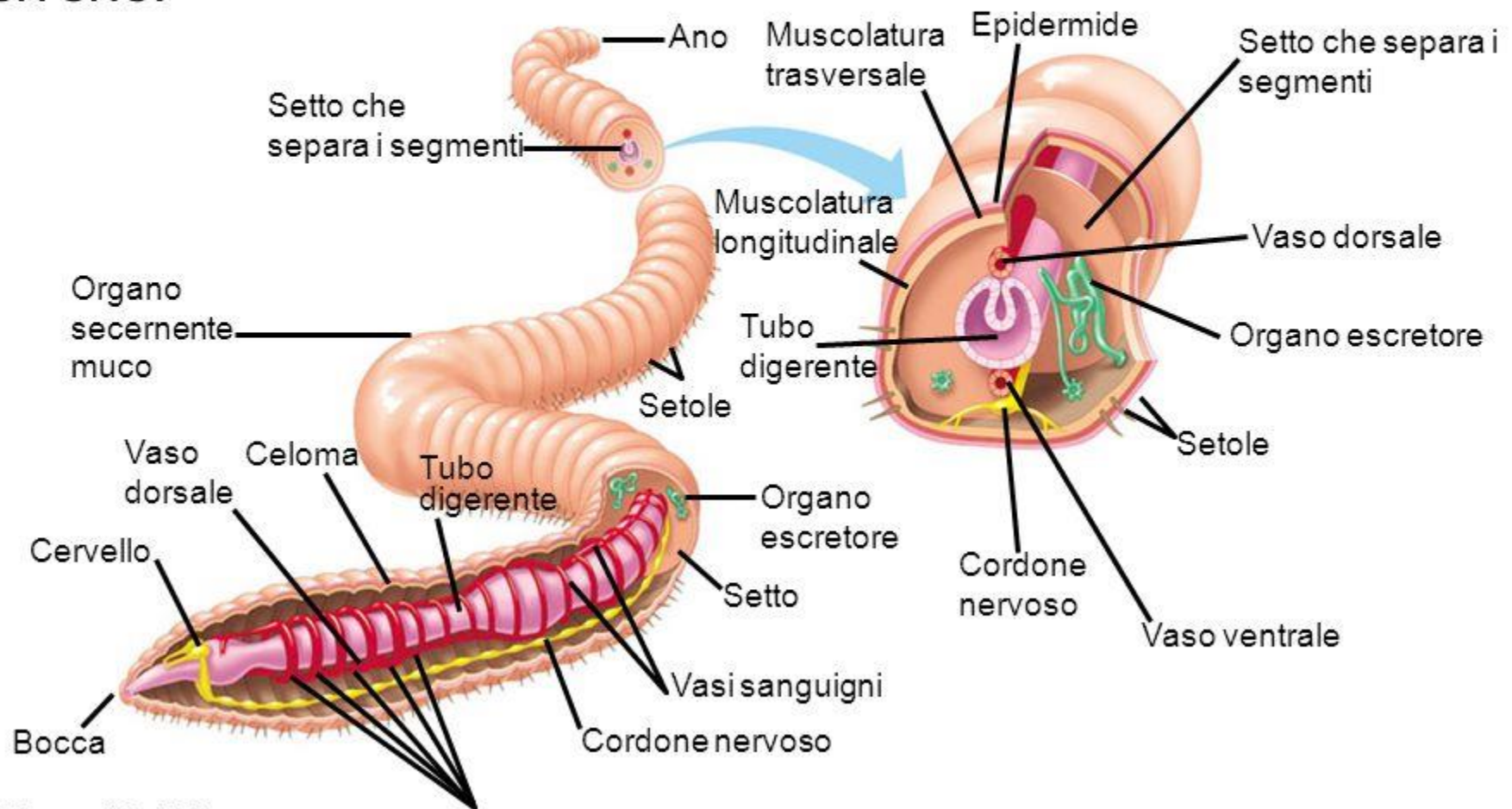
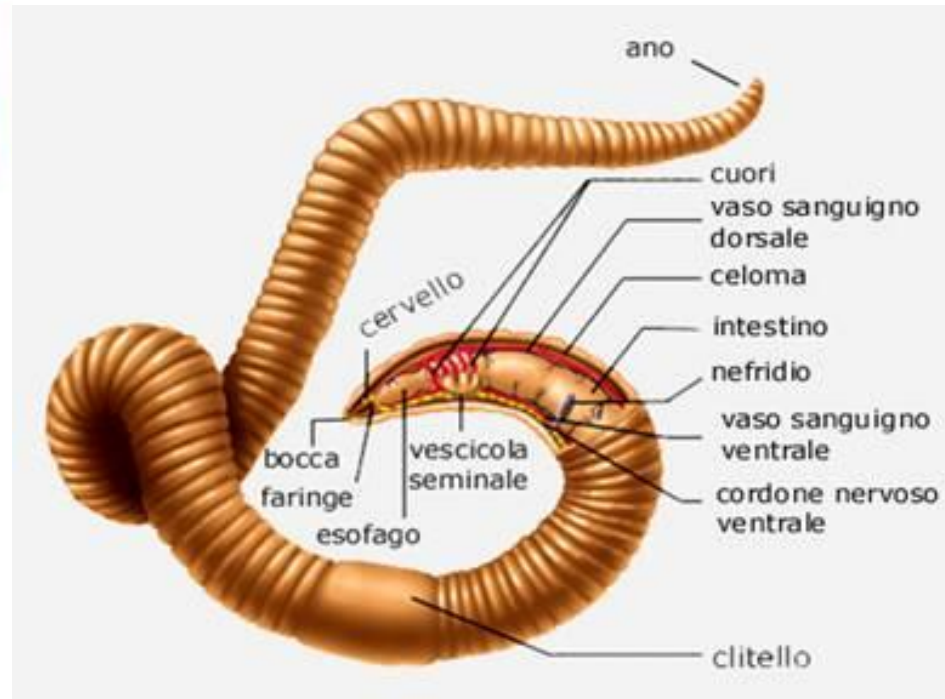
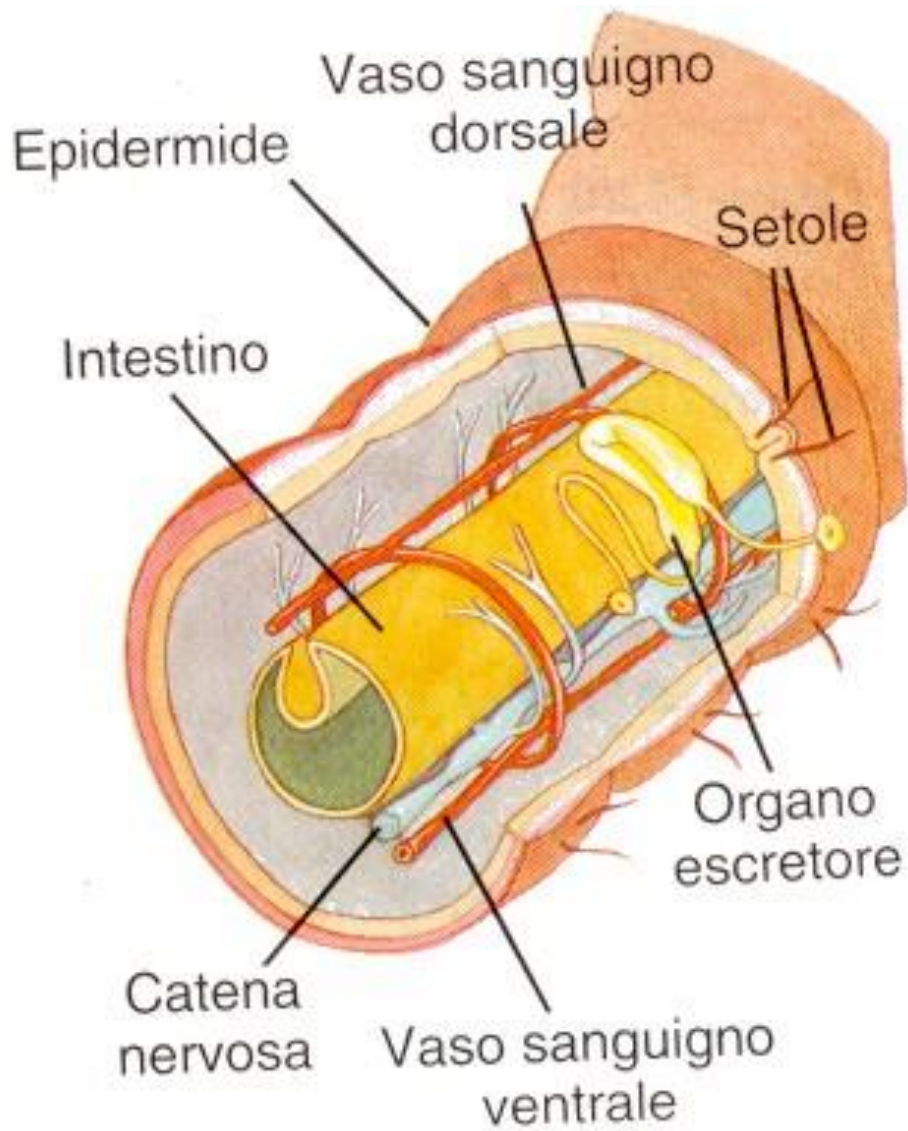
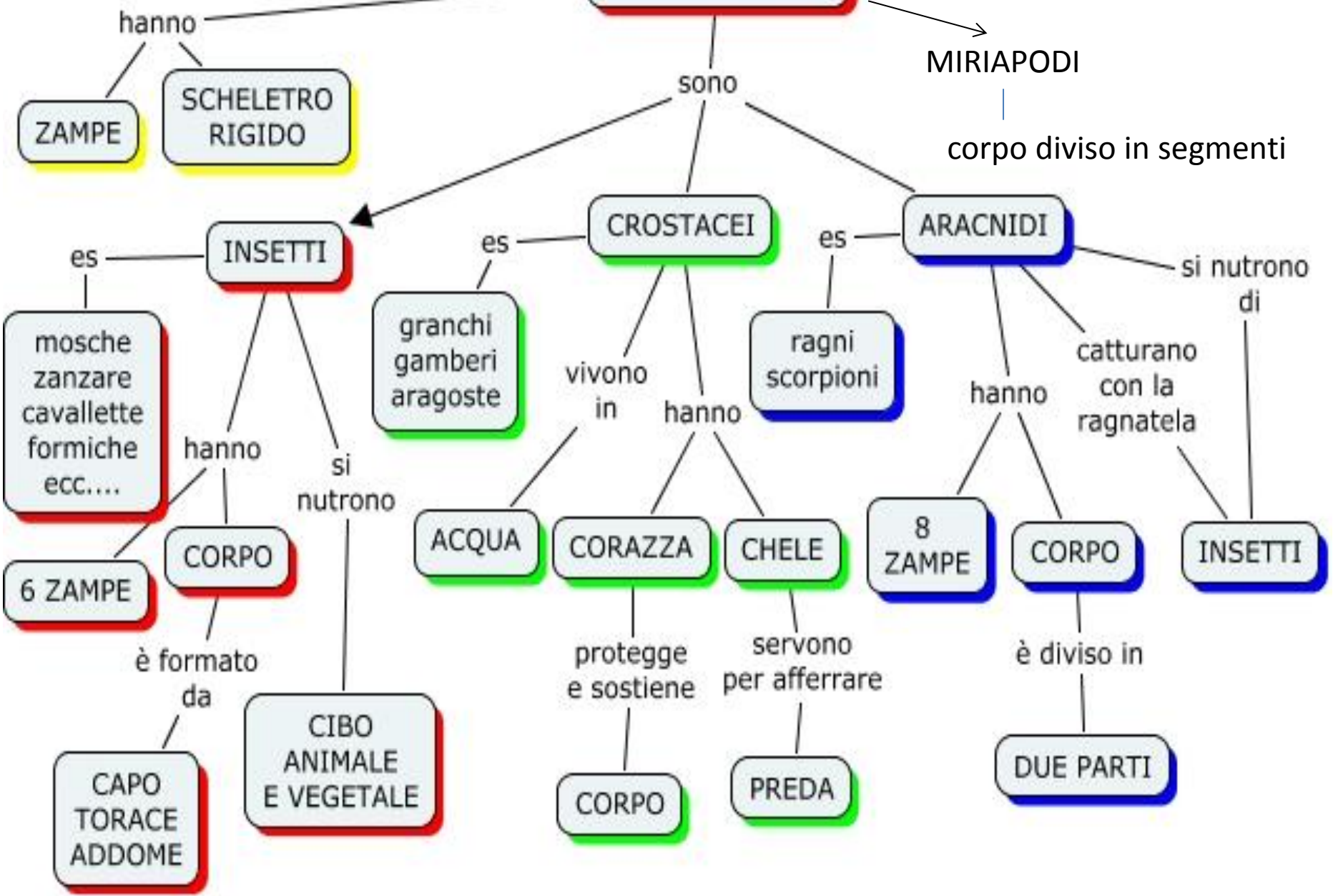


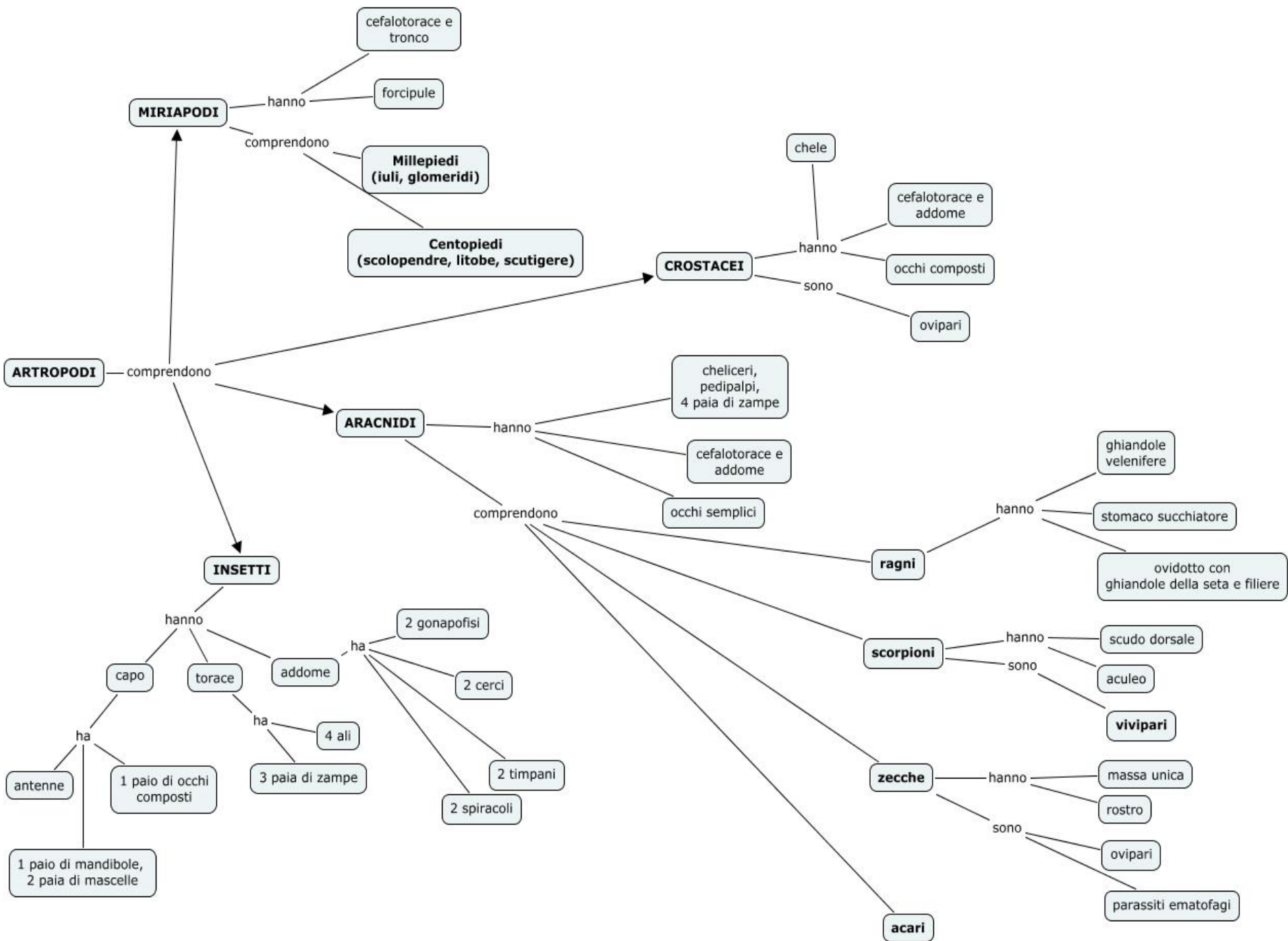
Figura 36.10A



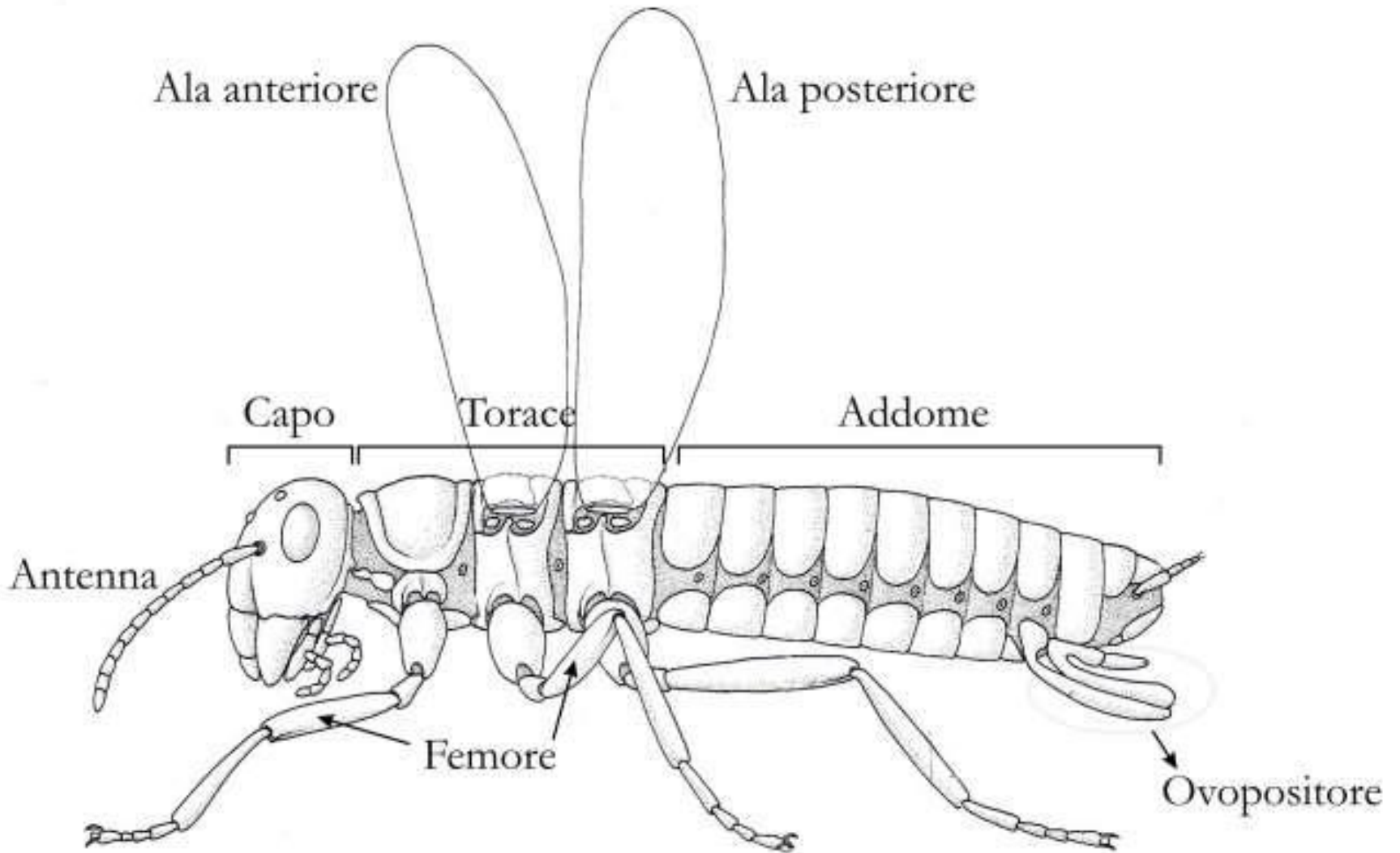
# GLI ARTROPODI

# ARTROPODI





# INSETTI







Apparato boccale di tipo masticatore (coleottero)



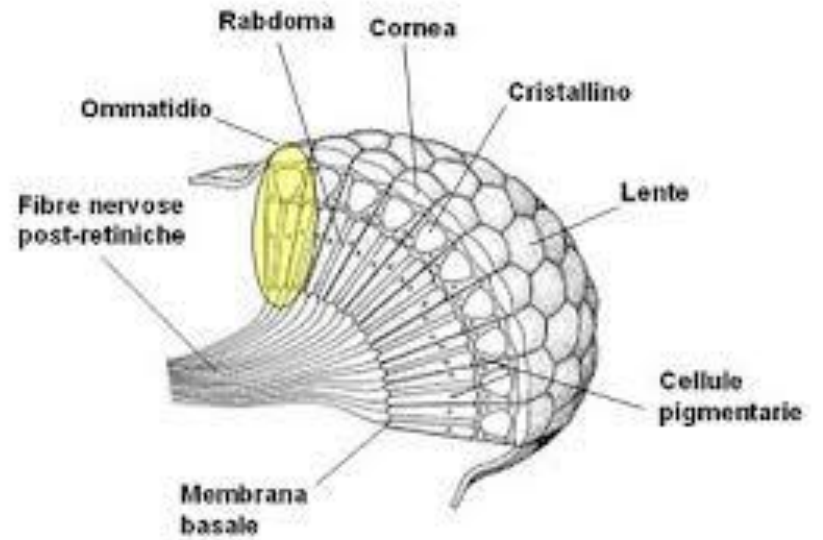
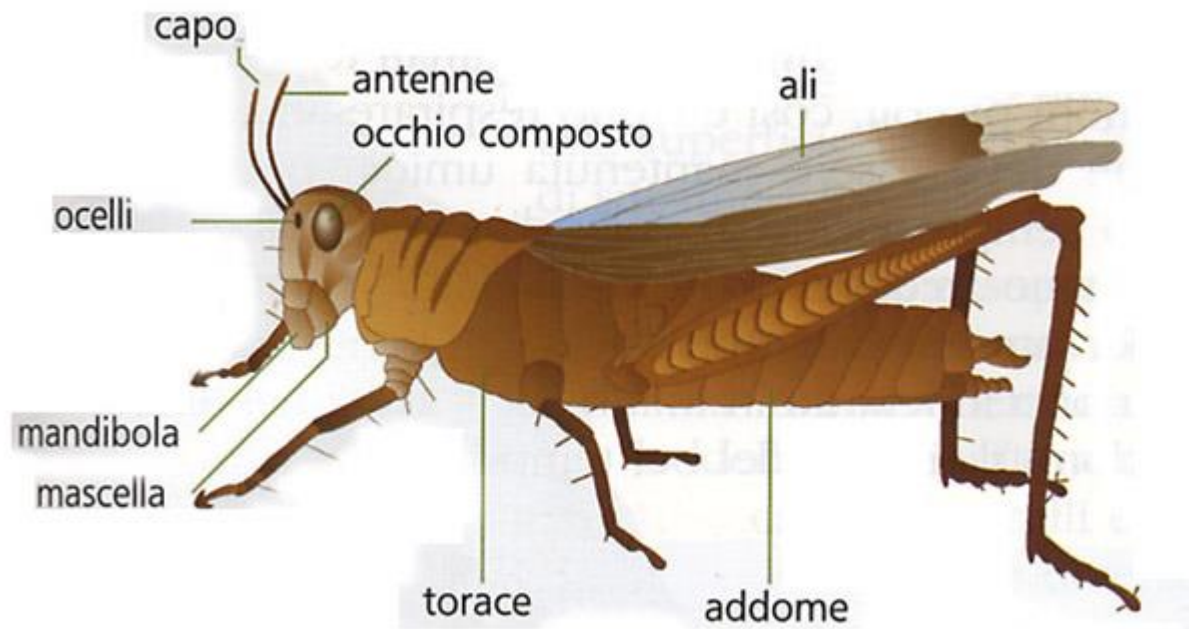
Apparato boccale di tipo lambente (mosca)

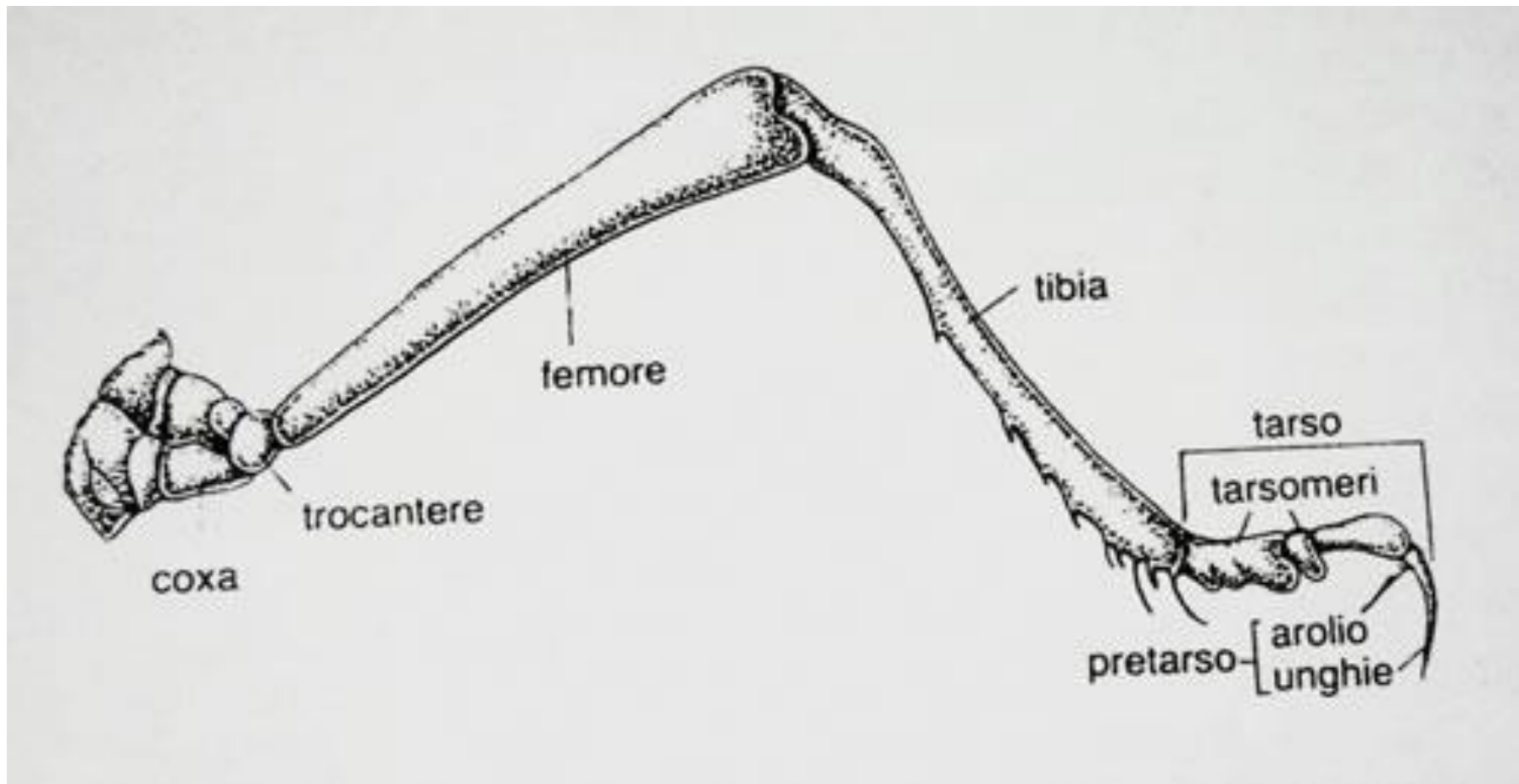


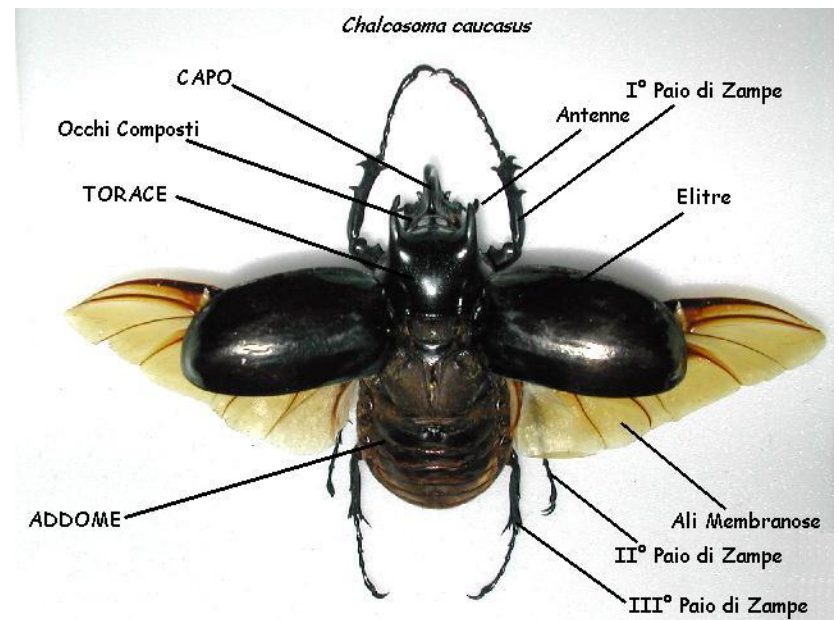
Apparato boccale di tipo succhiatore (farfalla)

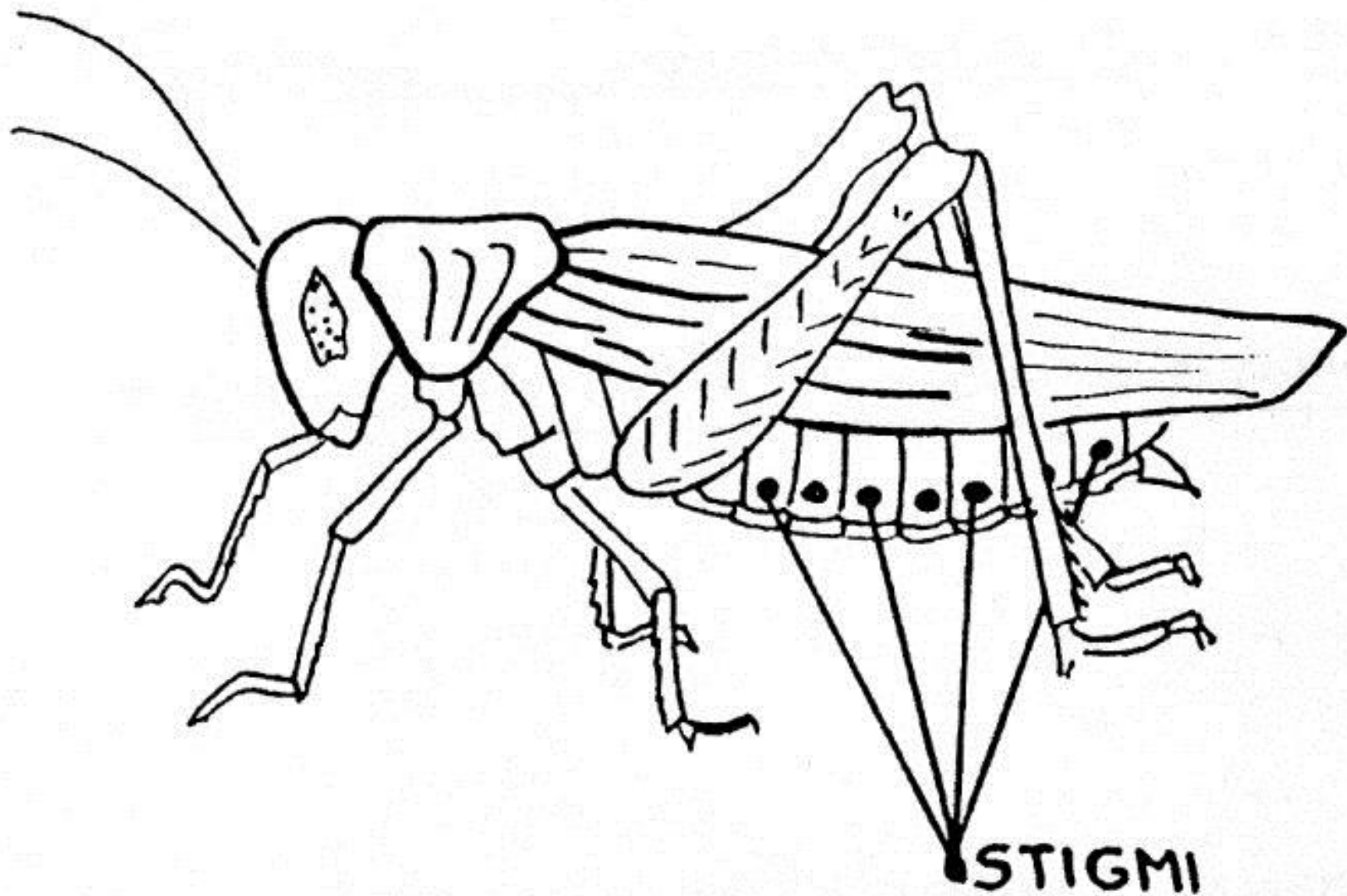


Apparato boccale di tipo pungente-succhiatore (zanzara)



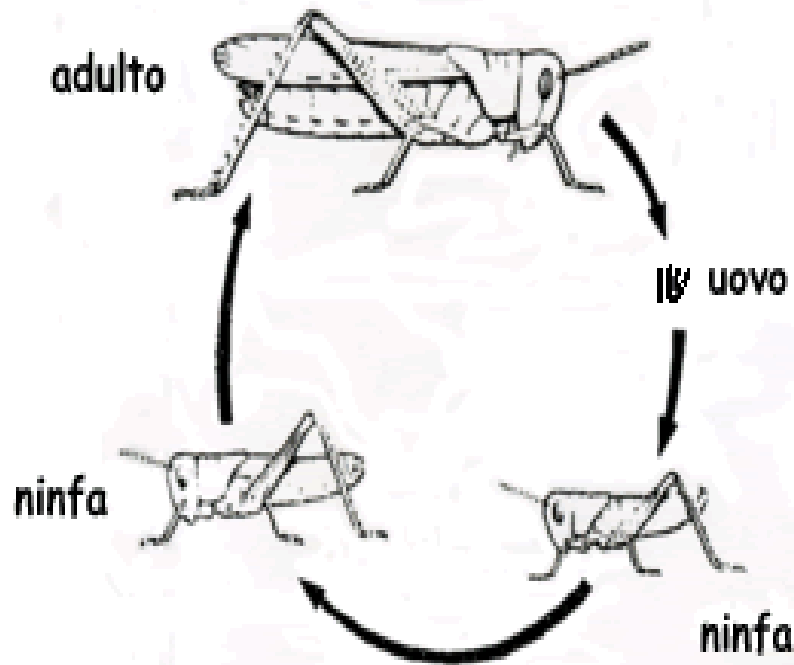




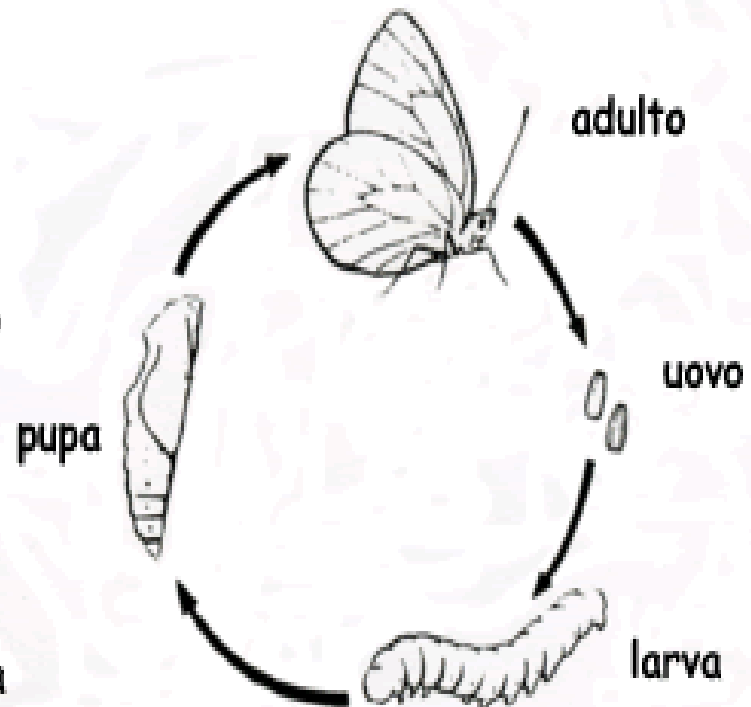


**STIGMI**

## Ortottero

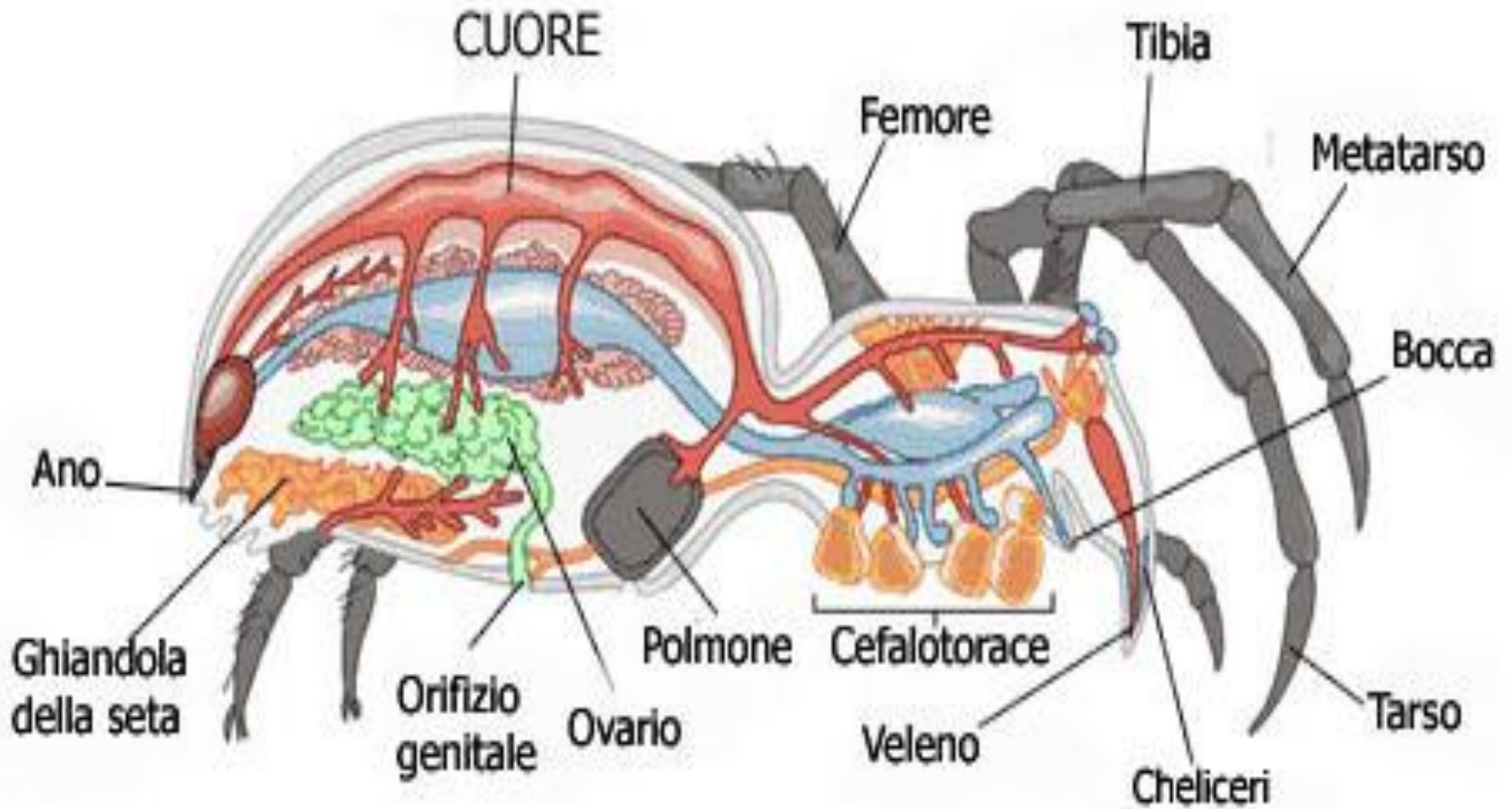


## Lepidottero



Lo sviluppo di un ortottero (insetto esopterigote) e di un lepidottero (insetto endopterigote)

# ARACNIDI



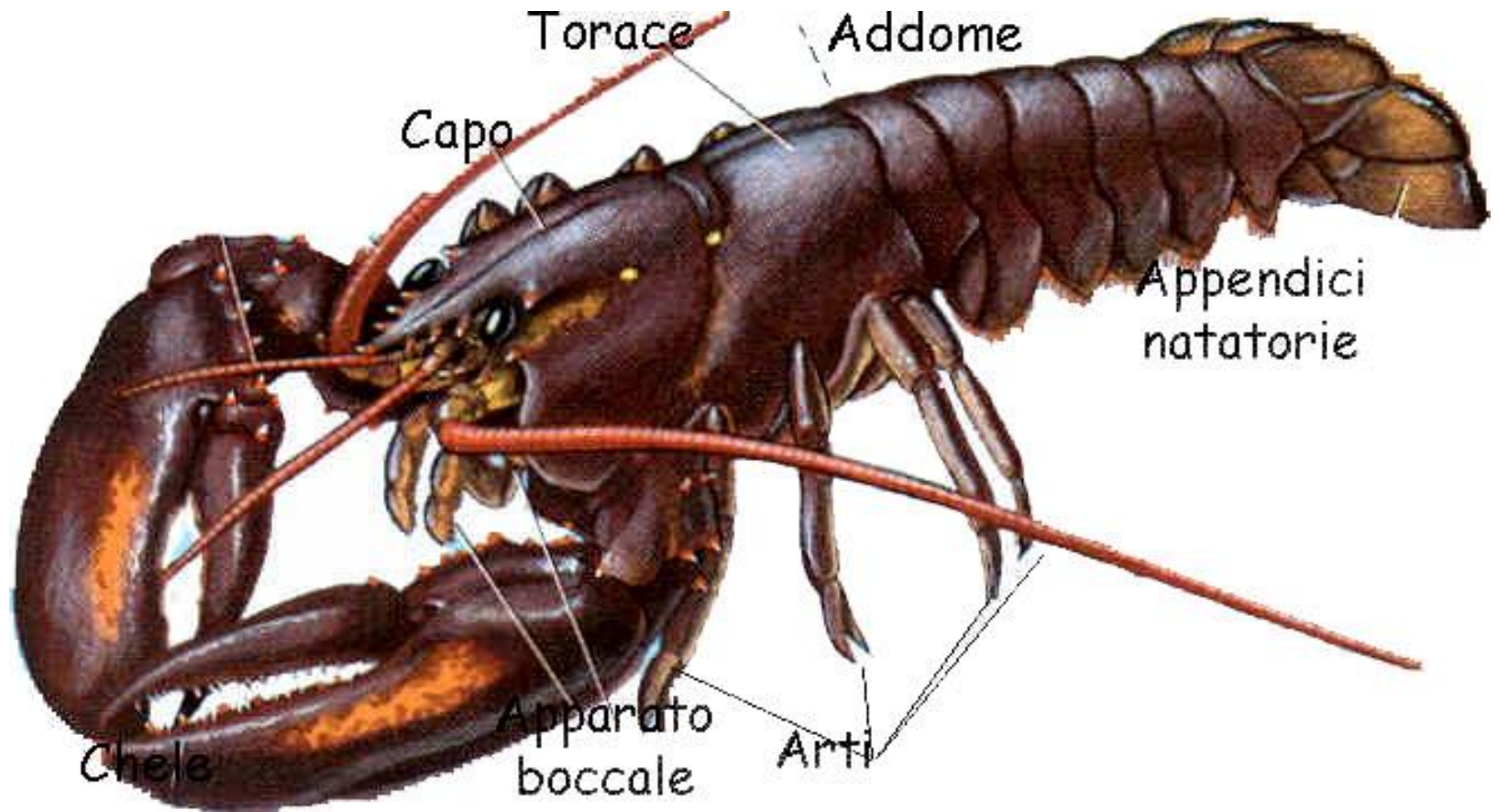


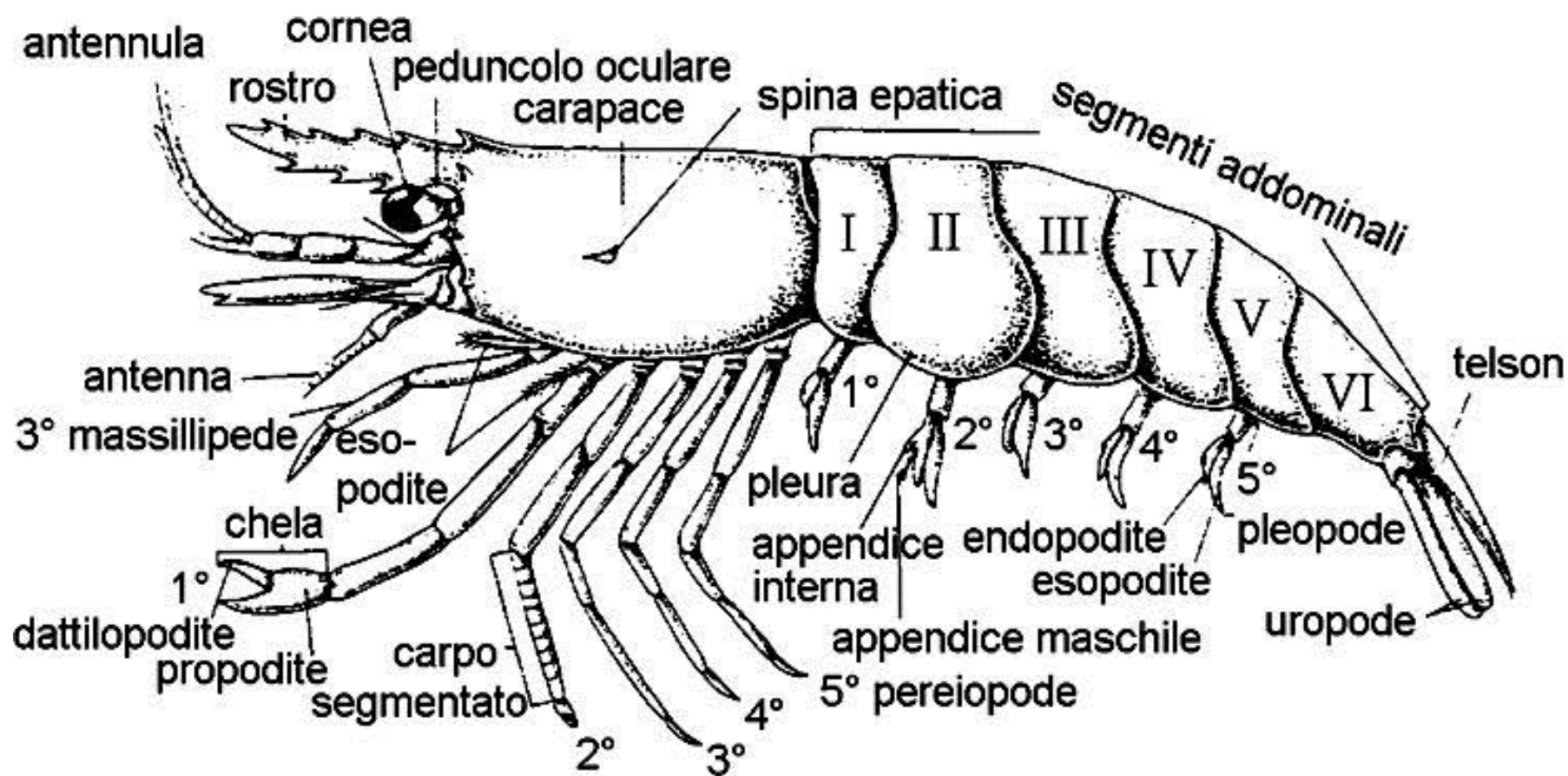






# CROSTACEI







# Miriapodi



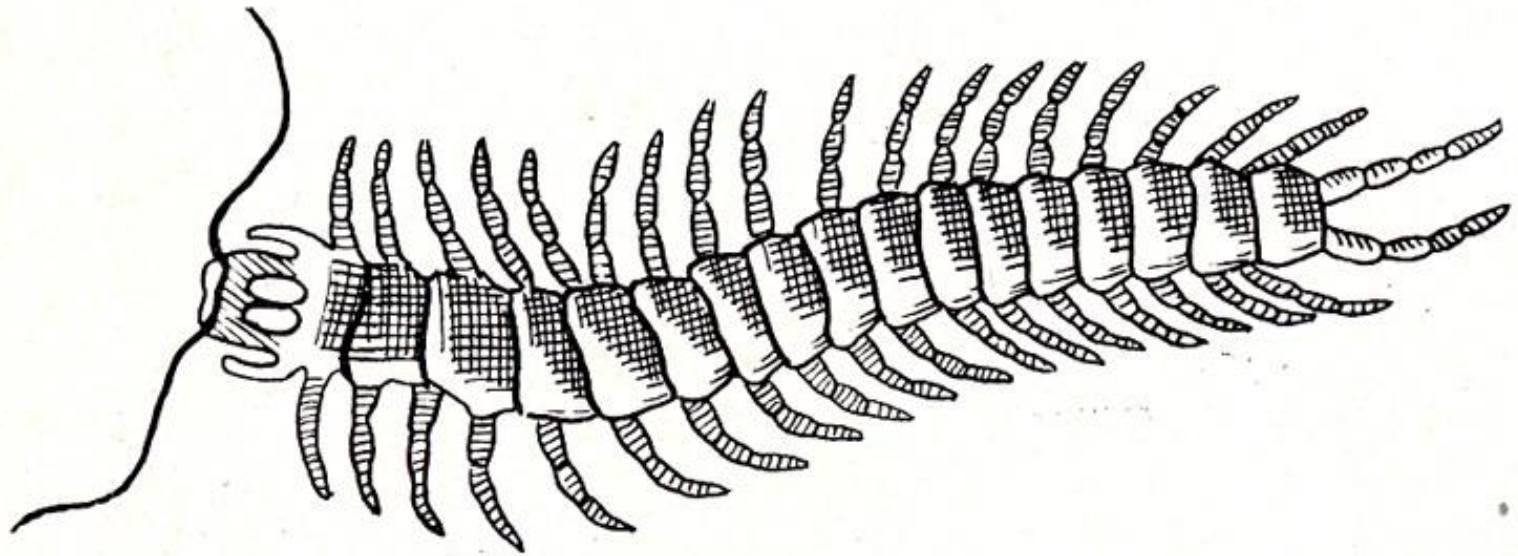
Hanno il corpo  
diviso in **capo** e  
**tronco**.

Il capo ha un paio  
di antenne e una  
bocca adatta a  
masticare il cibo.



Sono artropodi terrestri con il corpo suddiviso in molti segmenti, ognuno fornito di uno o due paia di zampe.  
Vi appartengono i millepiedi e i centopiedi.





La **scolopendra** è un miriapodo dal corpo piatto allungato, di color giallo-bruno. Ogni segmento del suo corpo porta un paio di zampe, una a destra e una a sinistra. La troverete sotto i sassi, in luoghi aridi e caldi.

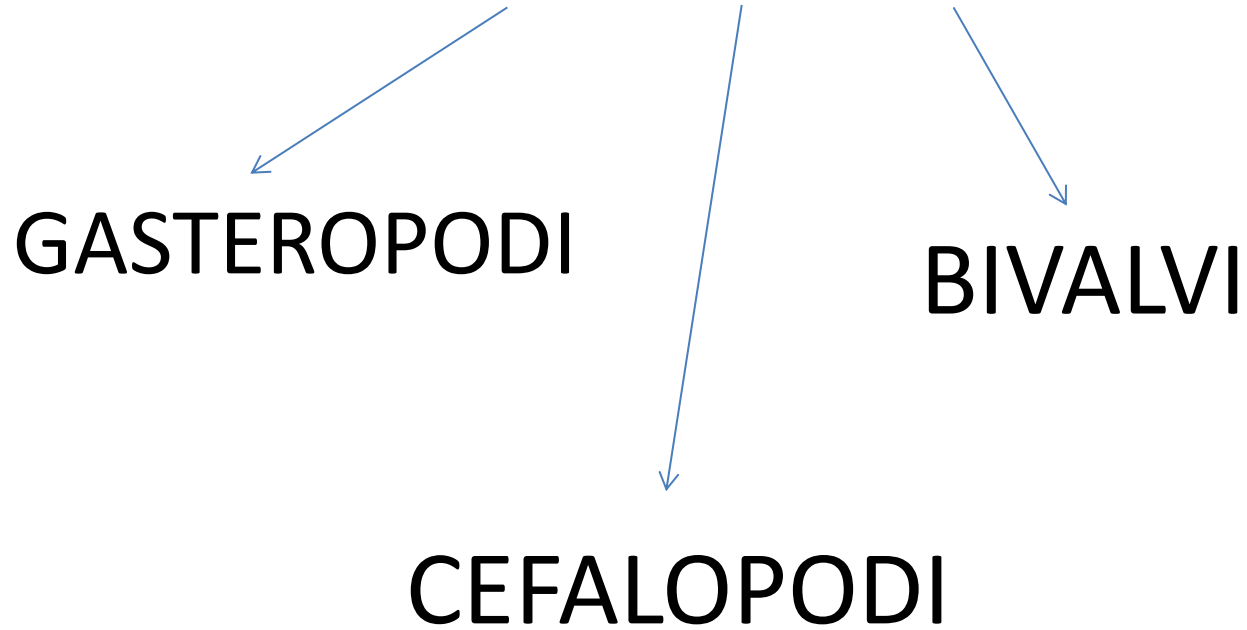
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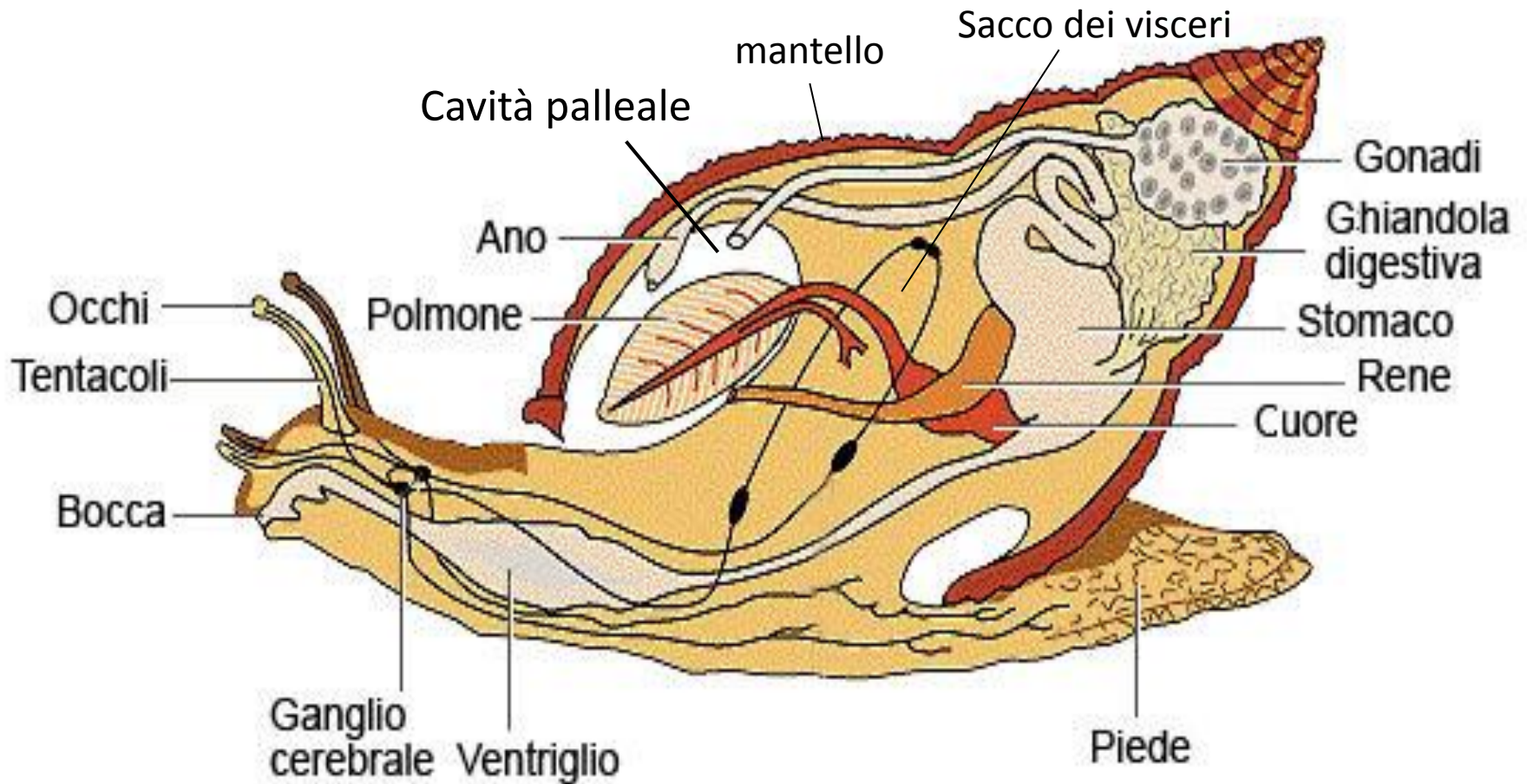
# MIRIAPODI

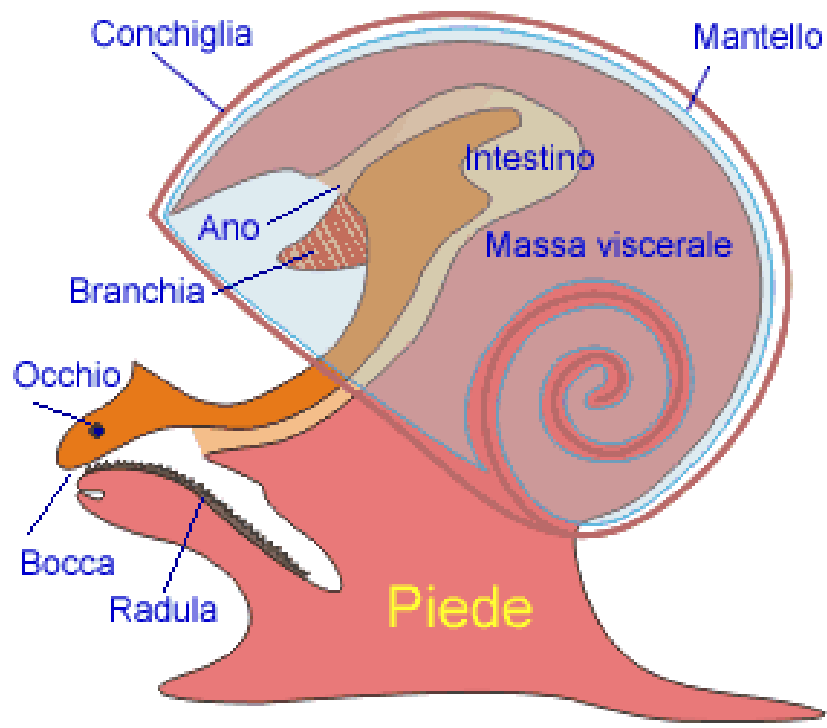
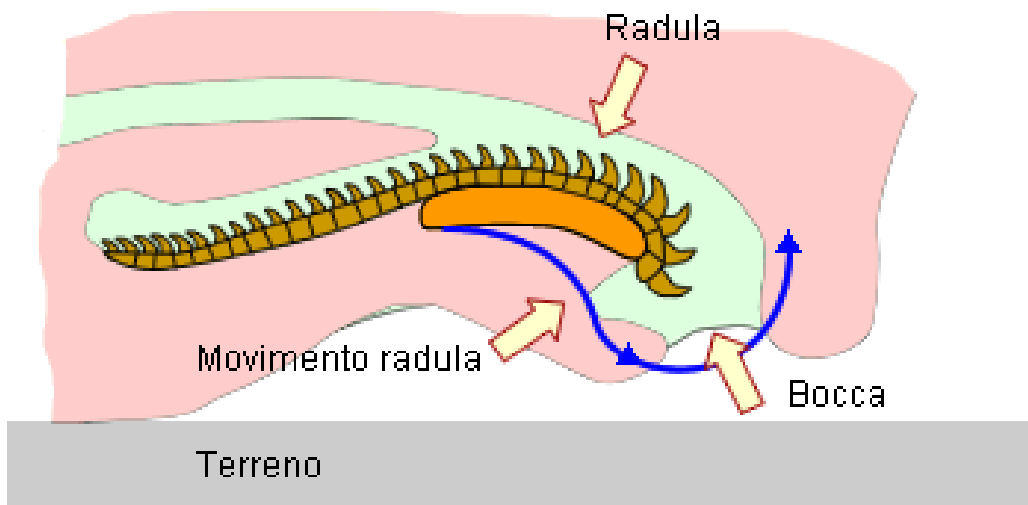


# I MOLLUSCHI

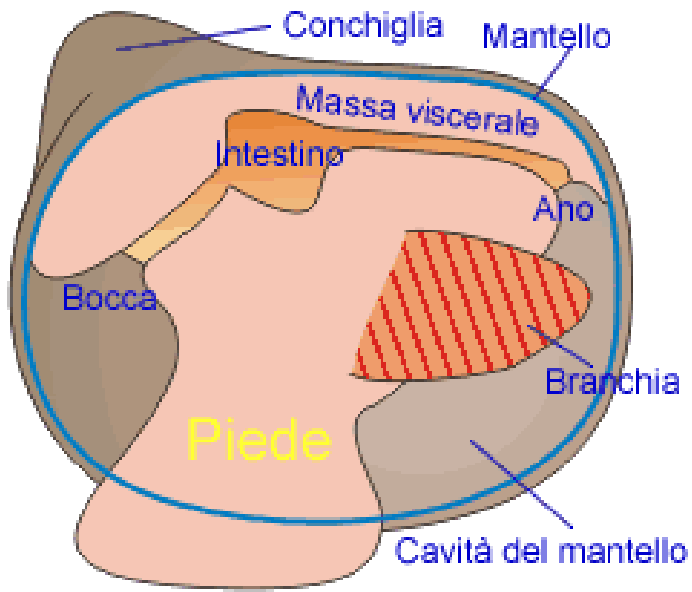
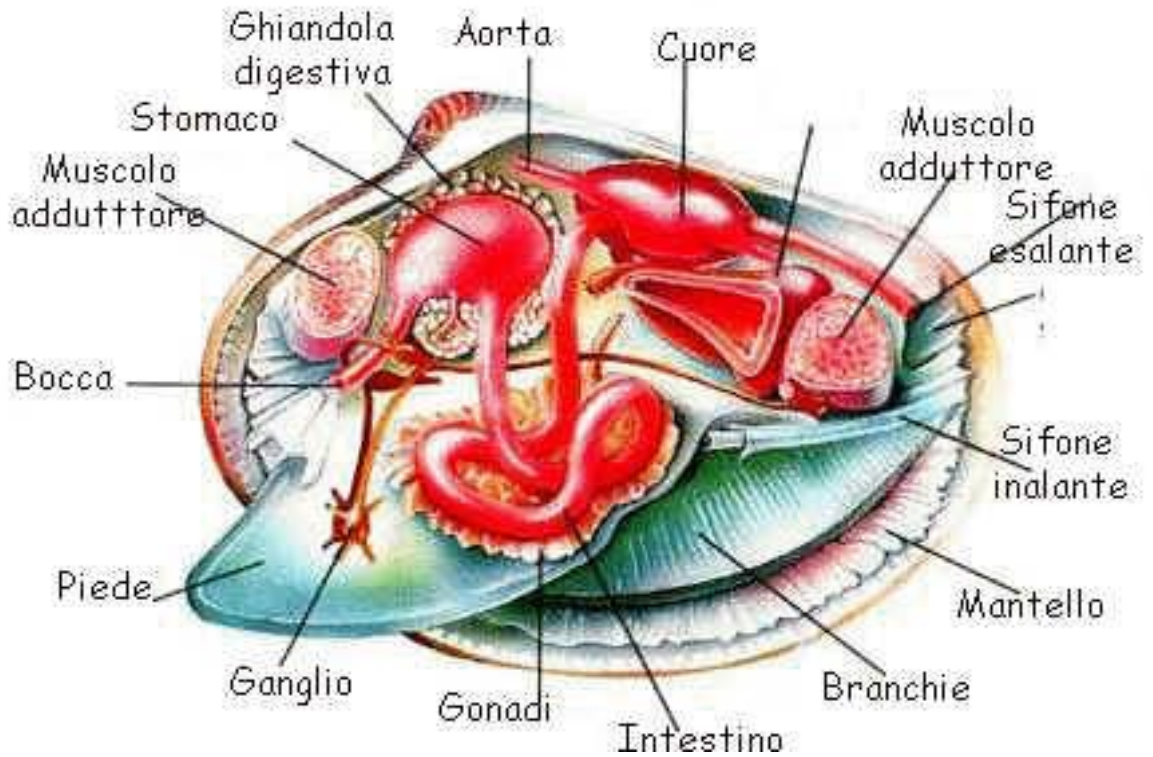


# GASTEROPODI



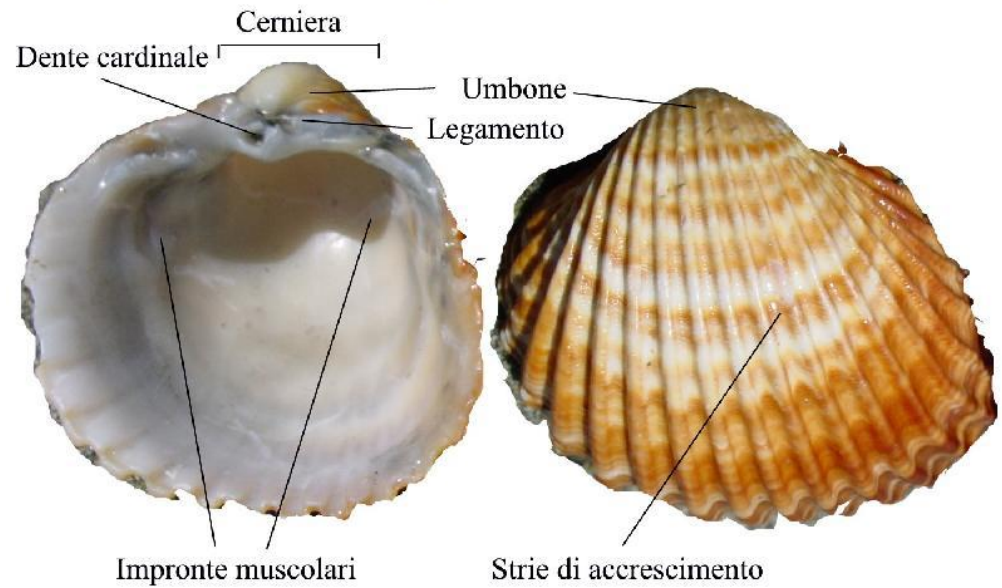


# I BIVALVI



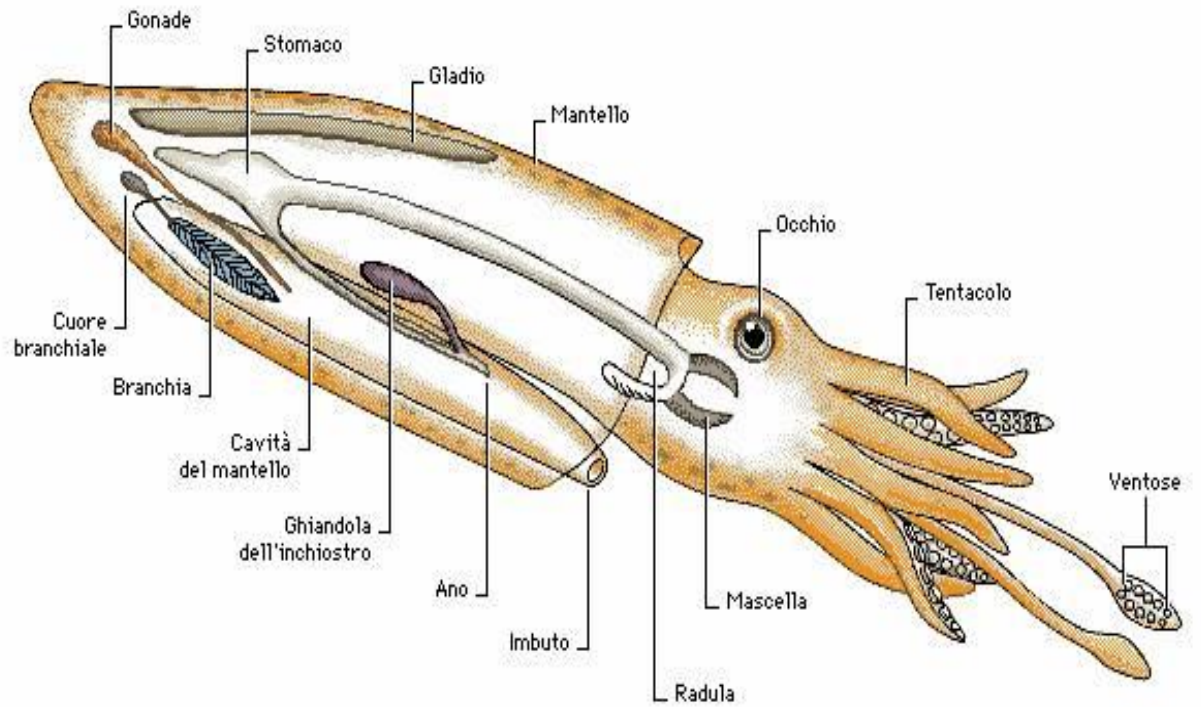
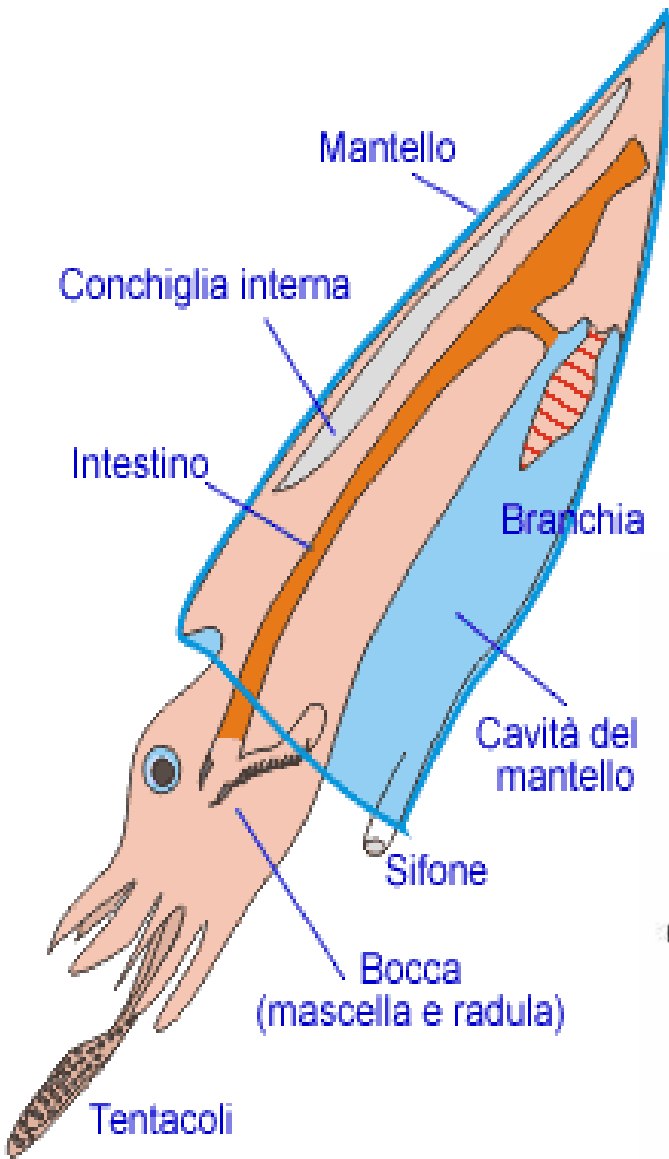


### Morfologia di un Bivalve





# CEFALOPODI







POLPO



CALAMARO



POLPO  
MIMETIZZATO