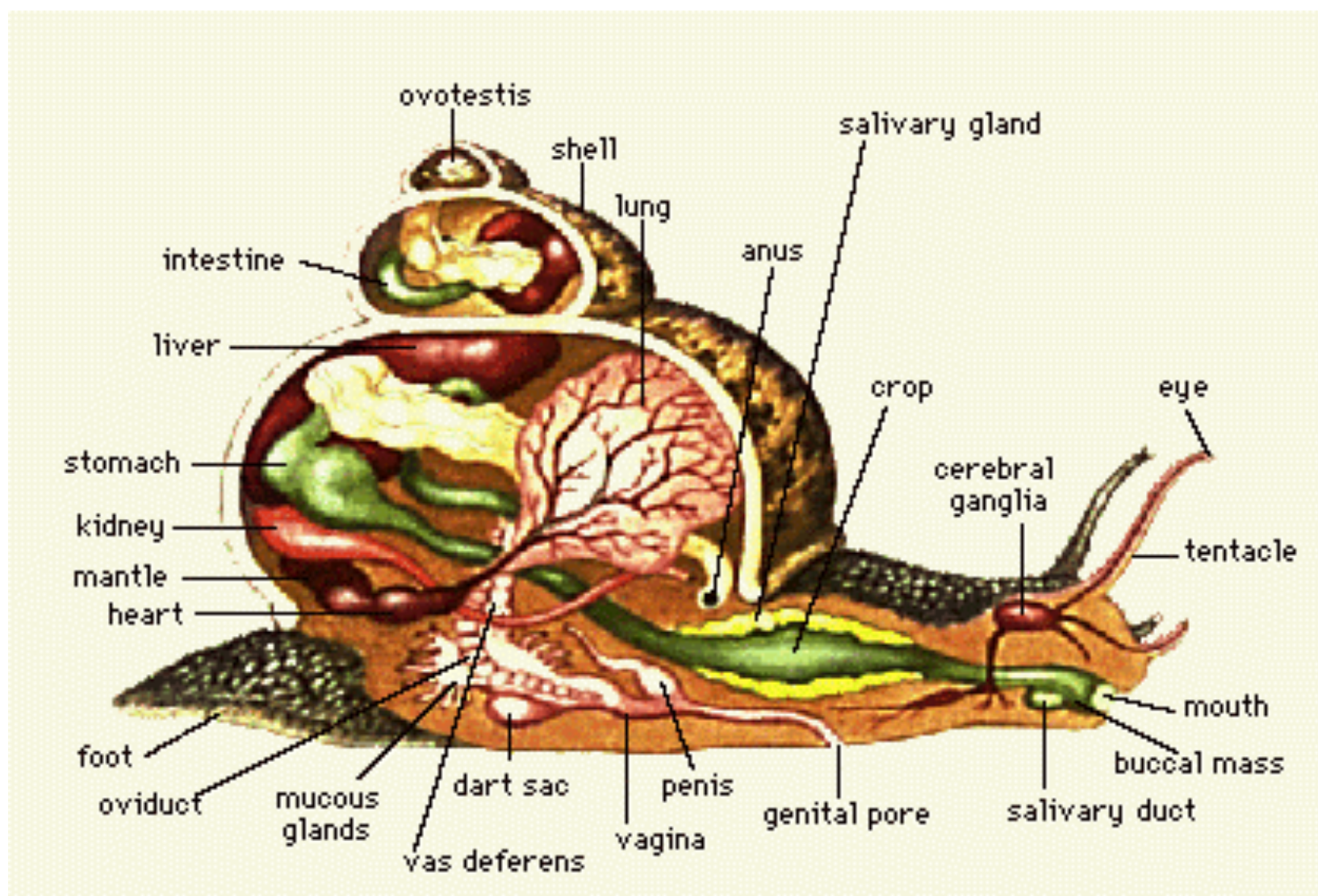
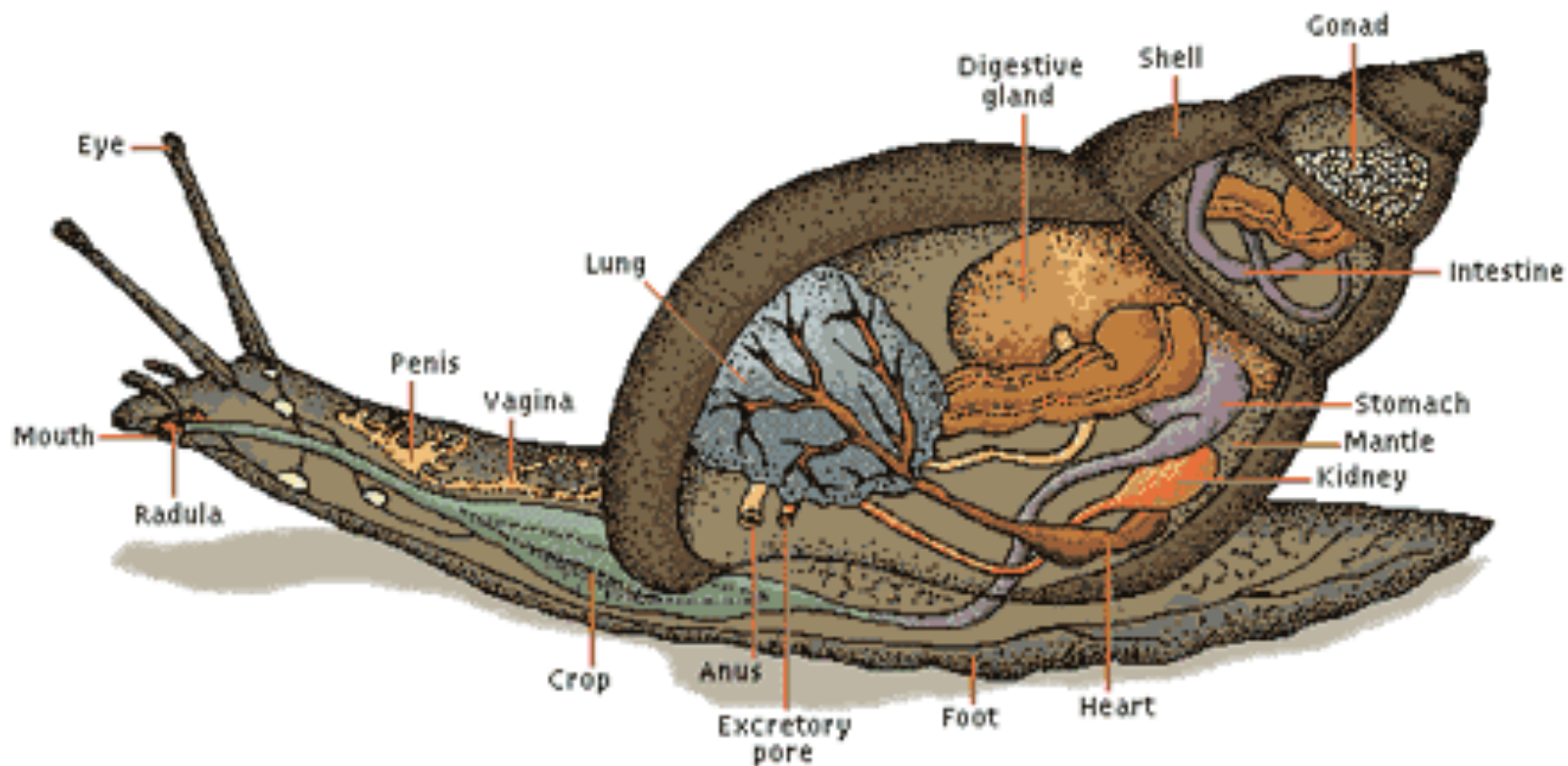


**Figure 1.** Radula of *Pomacea canaliculata*.





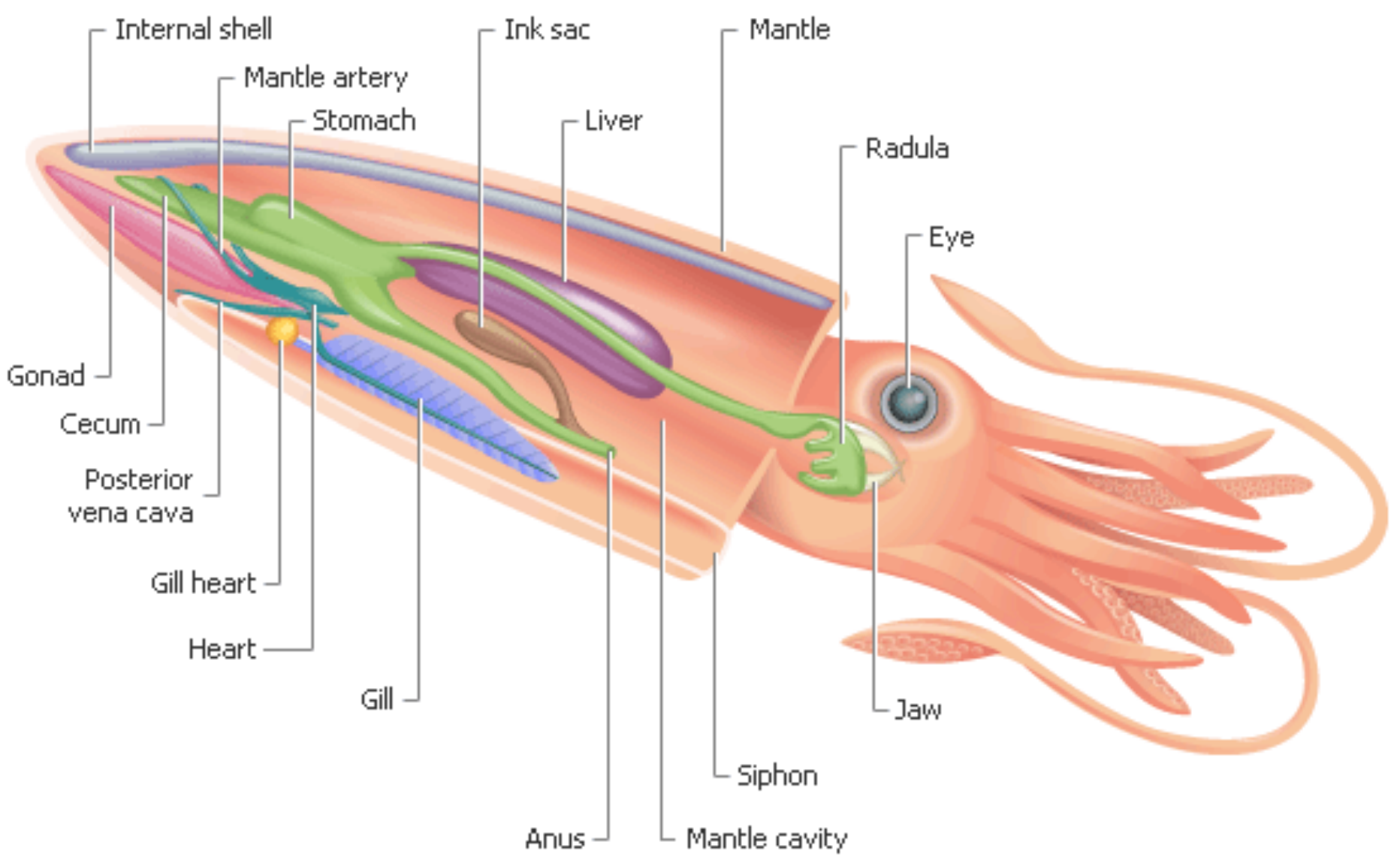


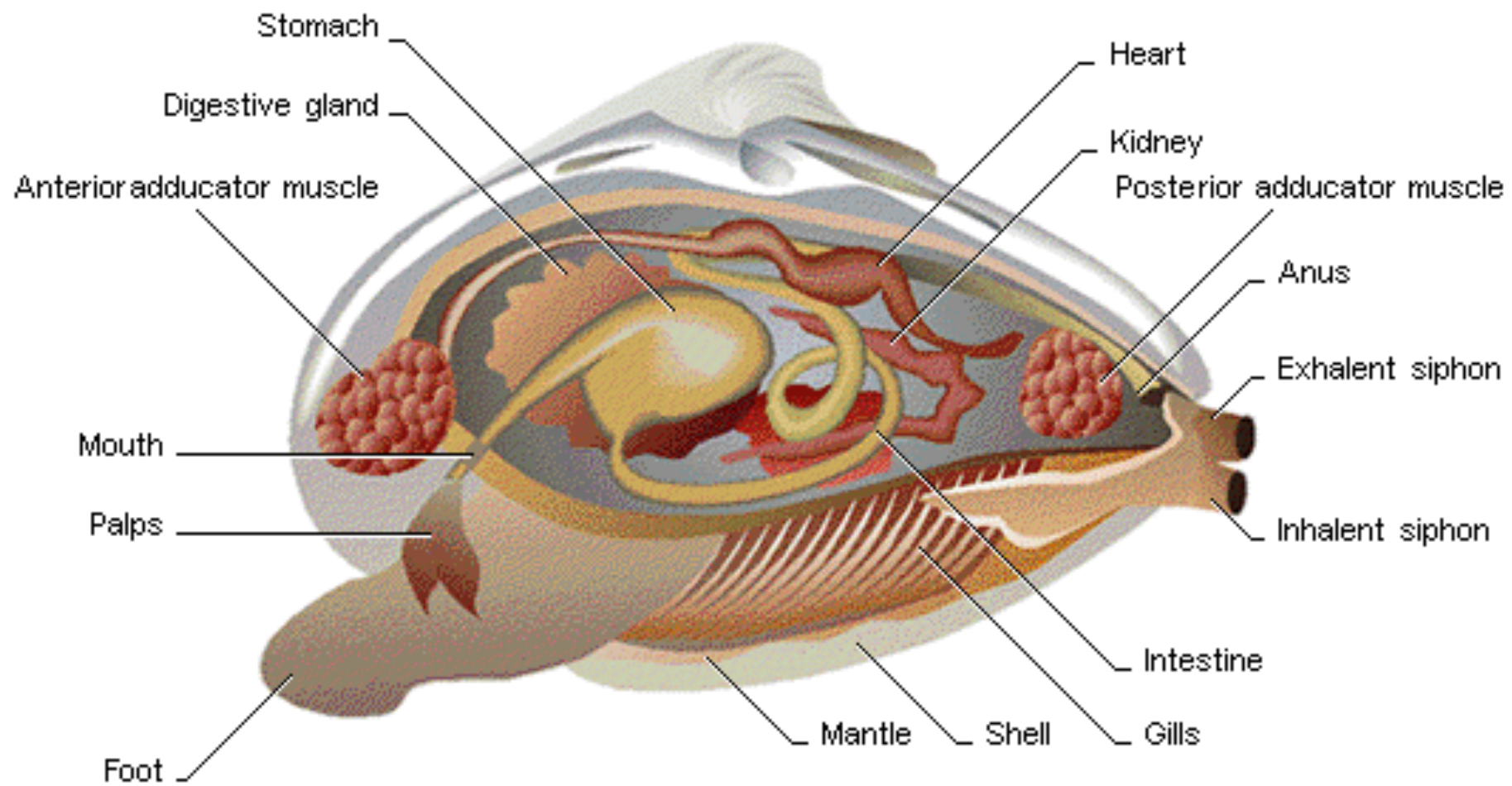


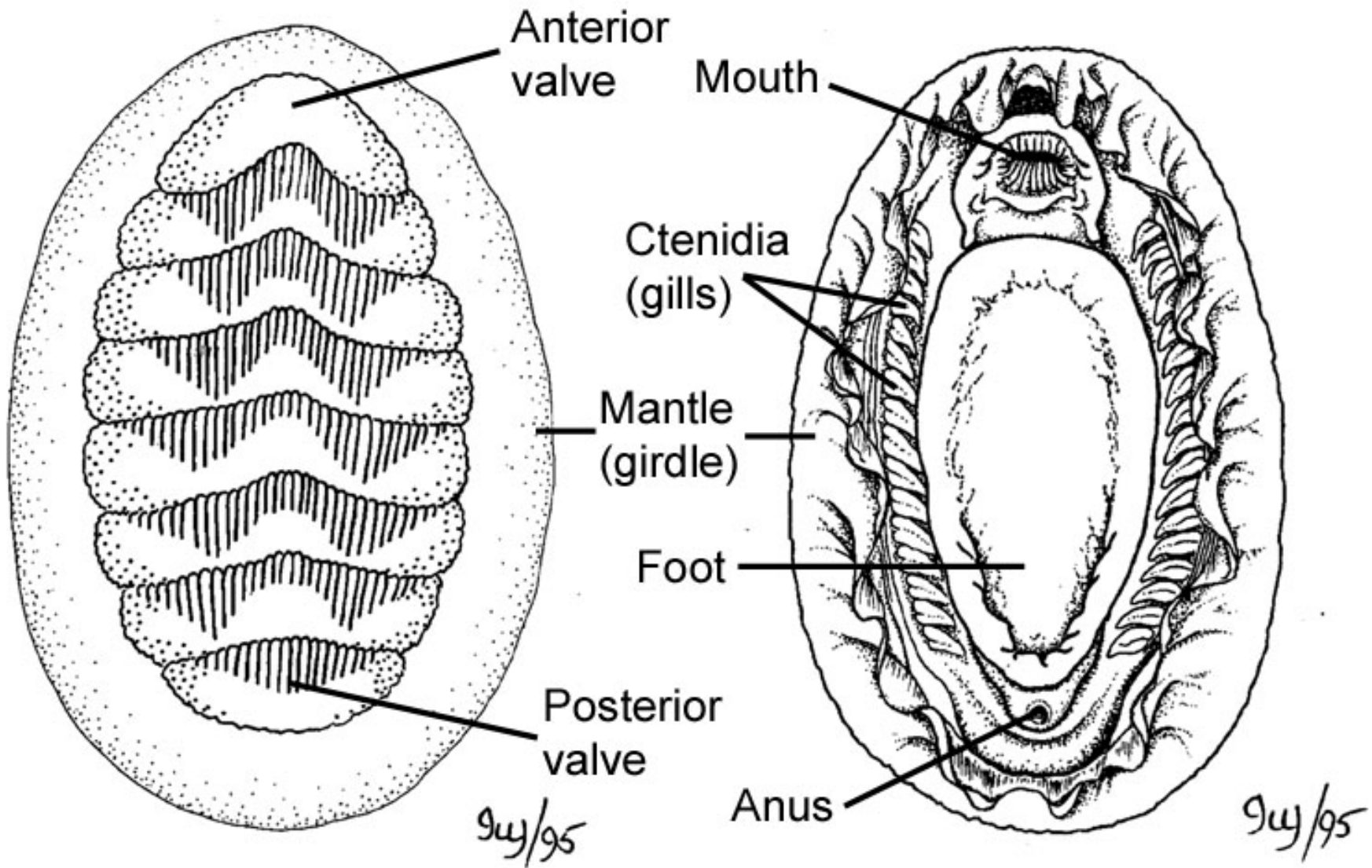
T. KUBOERA/NSMJ/AP











# Arthropoda



- Subphylum Trilobitomorpha
  - Trilobita – trilobites (extinct)
- Subphylum Chelicerata
  - Arachnida – spiders, scorpions, etc.
  - Xiphosura – horseshoe crabs
  - Pycnogonida – sea spiders
  - Eurypterida – sea scorpions (extinct)
- Subphylum Uniramia
  - Chilopoda – centipedes
  - Diplopoda – millipedes
- Subphylum Hexapoda
  - Insecta – insects
- Subphylum Crustacea
  - Branchiopoda – brine shrimp etc.
  - Cephalocarida – horseshoe shrimp
  - Maxillopoda – barnacles, fish lice, etc.
  - Malacostraca – lobsters, crabs, shrimp, etc.

# Kingdom Animalia

## Phylum Arthropoda

### Subphyla Trilobita

extinct



### Subphylum Crustacea

crabs, crayfish, pillbugs, waterfleas, copepods



### Subphylum Uniramia

### Subphylum Chelicerata

#### Class Xiphosura

horseshoe crabs



#### Class Chilopoda

centipede



#### Class Diplopoda

millipede



#### Class Insecta

#### Coleoptera

beetles



#### Hymenoptera

bees, wasps, ants



#### Orthoptera

grasshoppers



#### Diptera

flies & mosquitoes



#### Lepidoptera

butterflies & moths

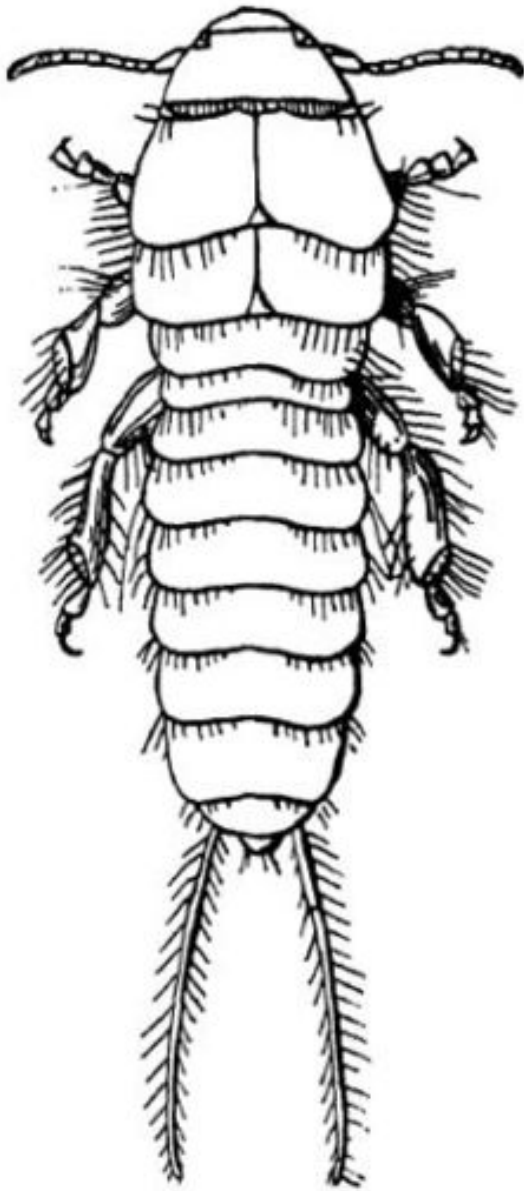


#### Class Arachnida

spiders, scorpions, ticks



\*not all insect orders shown



Head

Thorax

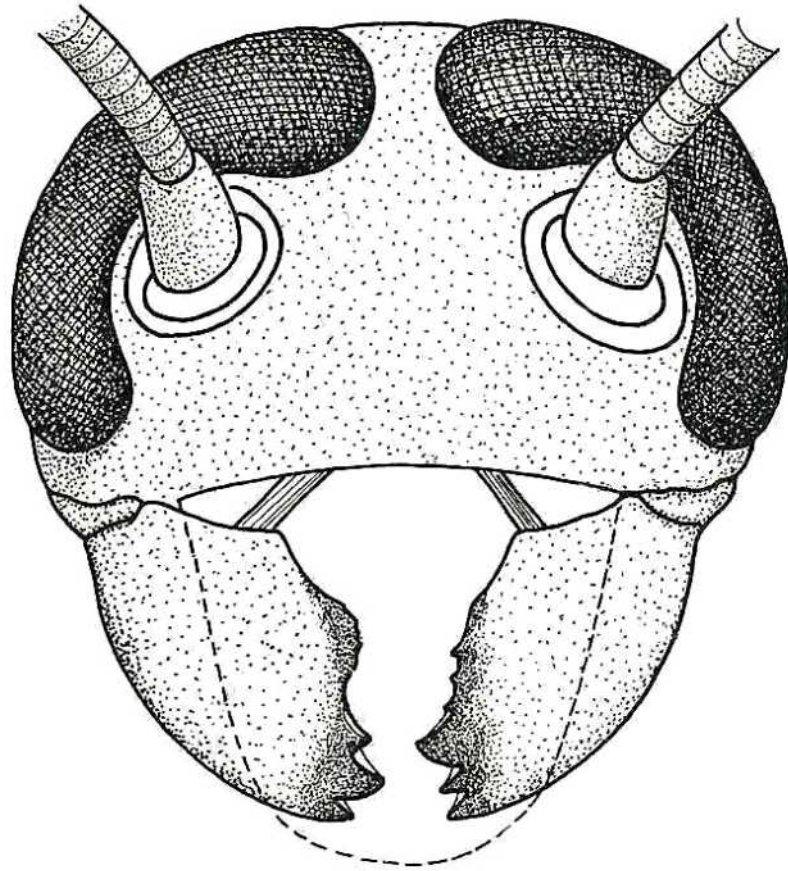
Abdomen

*Hemimerus Hanseni.*

(After Hansen.)



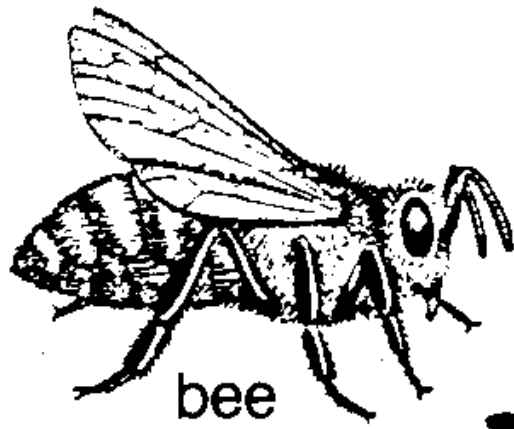




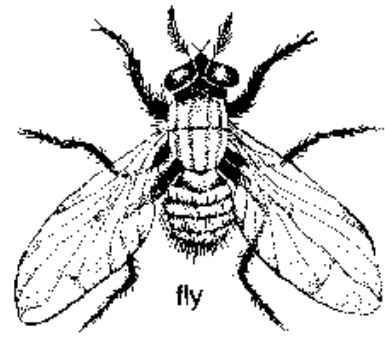
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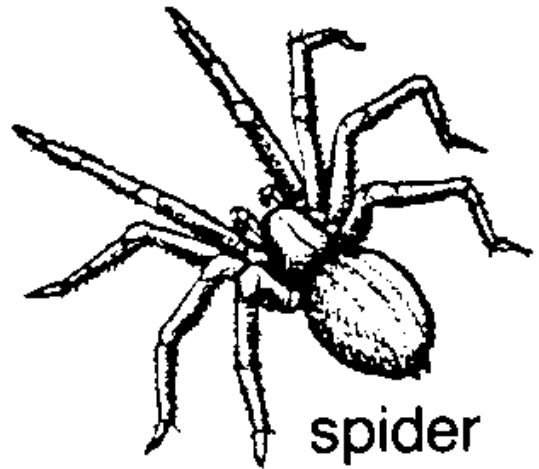




bee



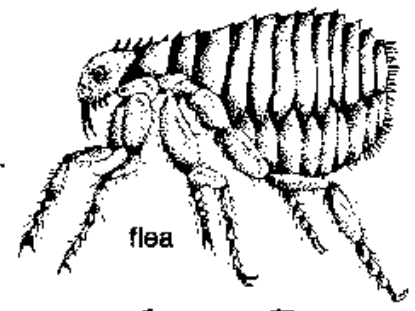
fly



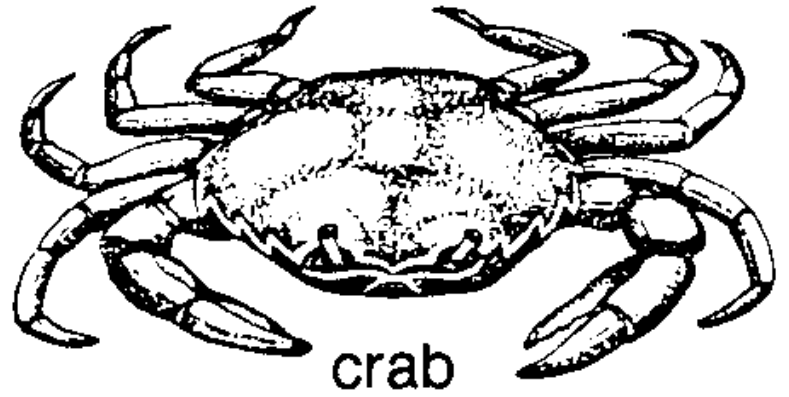
spider



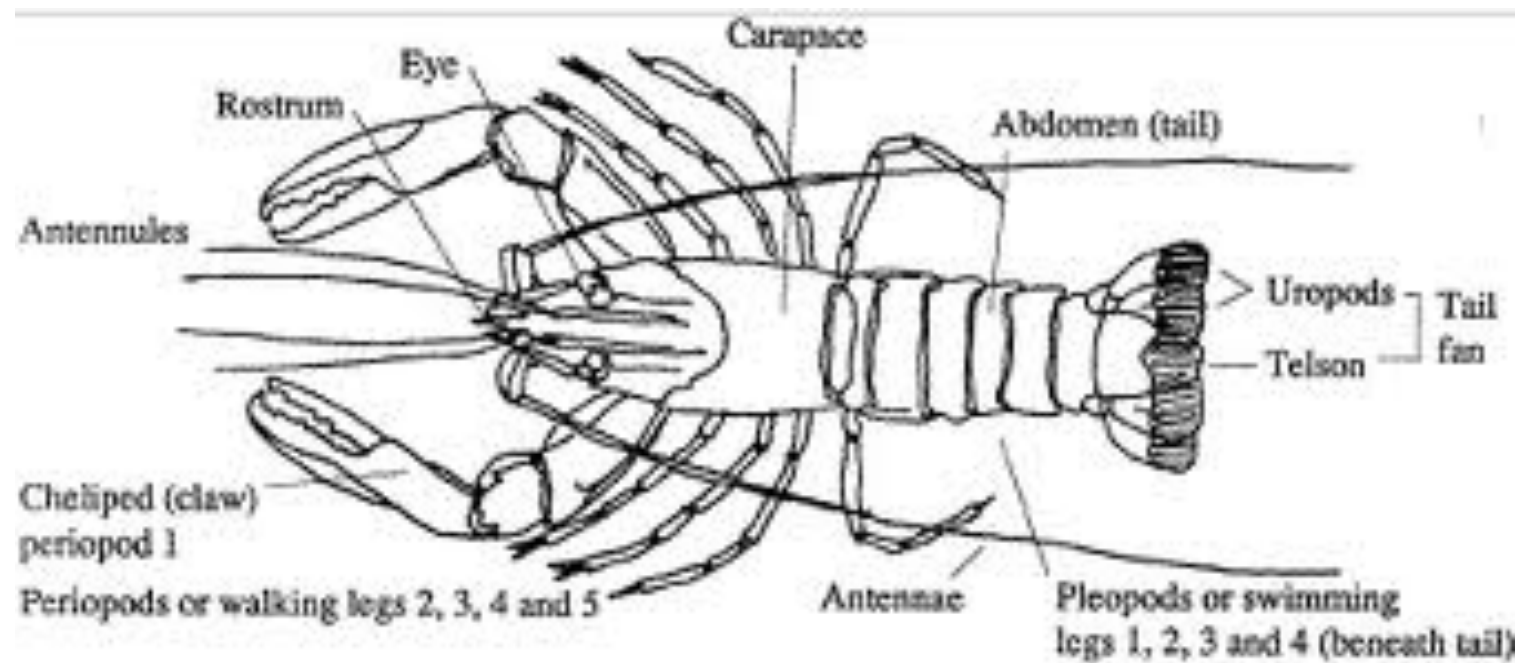
flea



Examples of some arthropods



crab



Key:

flexion



extension

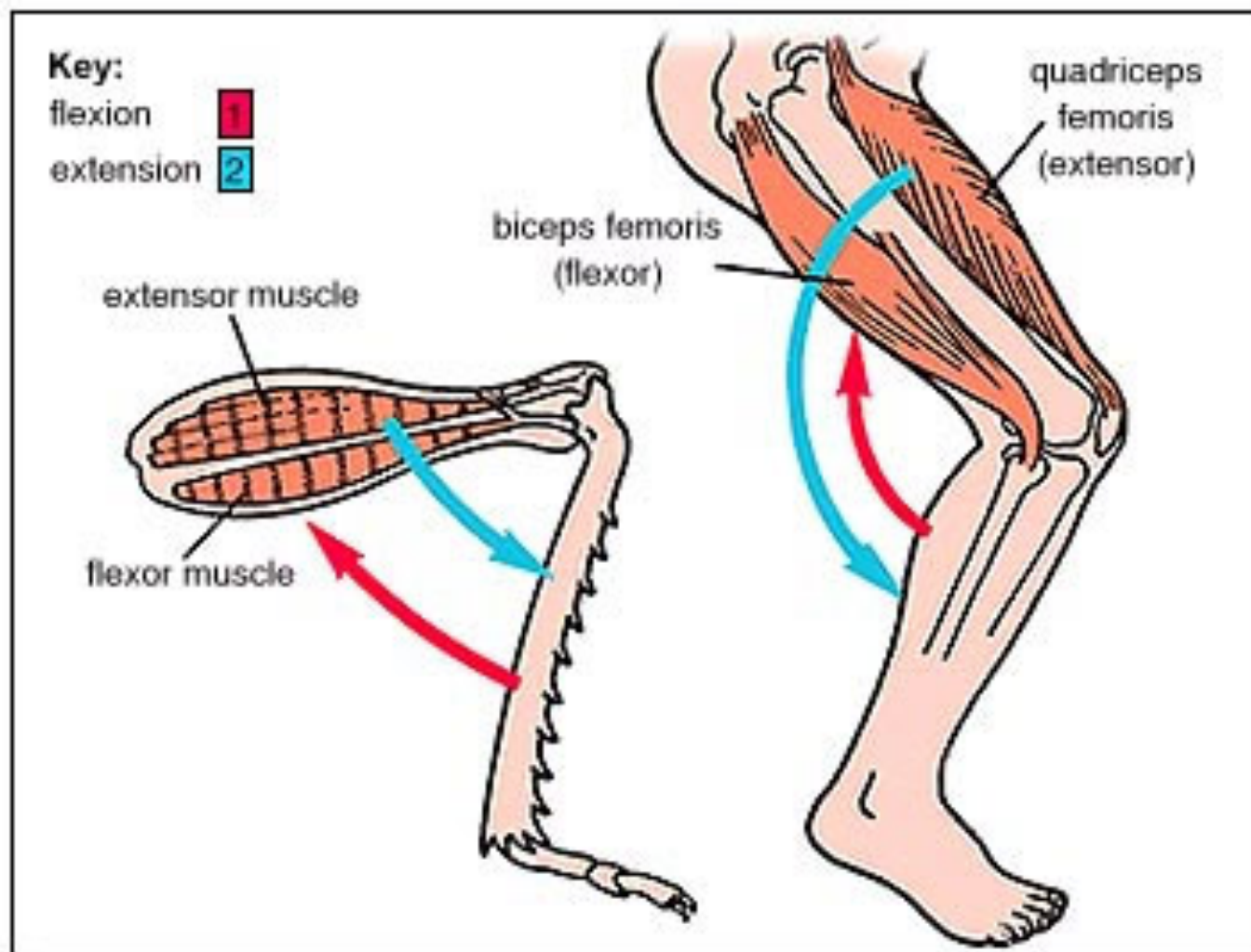


extensor muscle

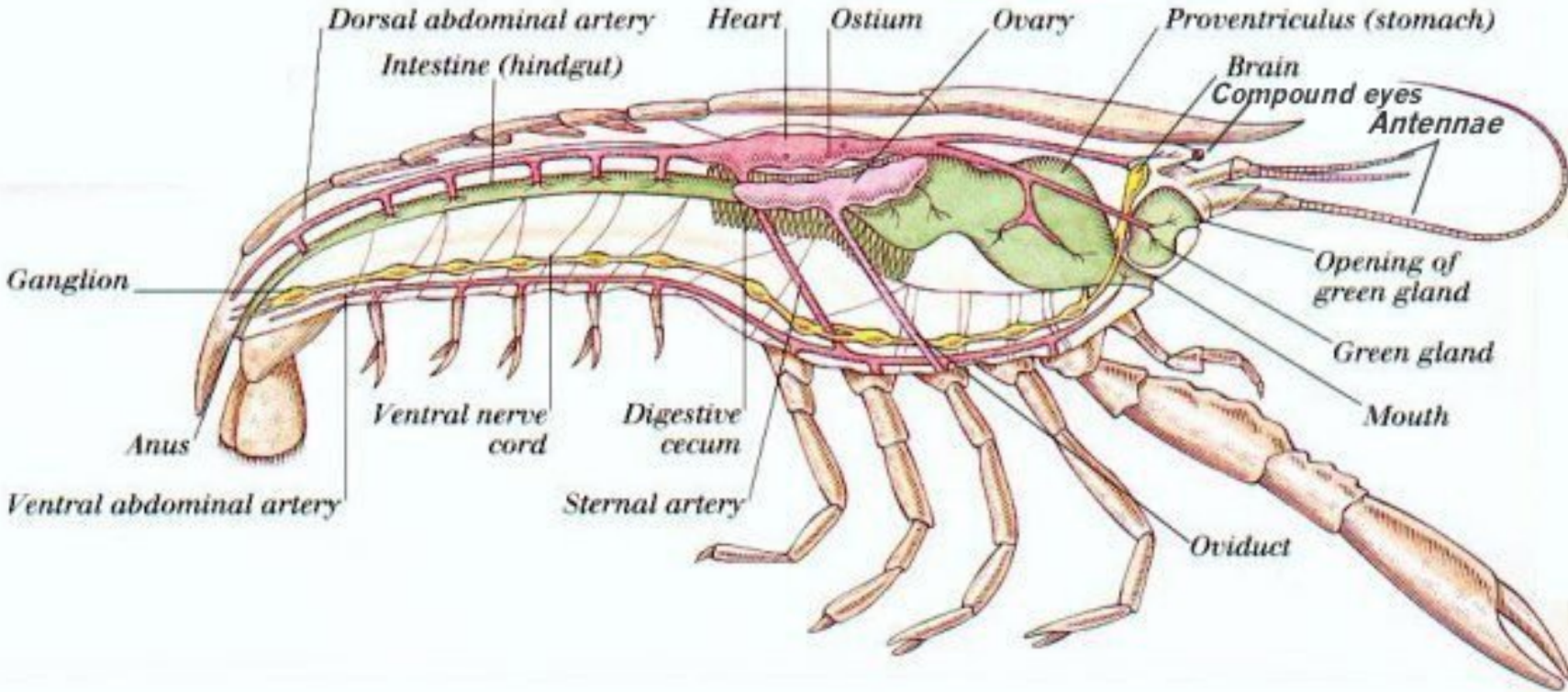
flexor muscle

biceps femoris  
(flexor)

quadriceps  
femoris  
(extensor)



**INTERNAL ANATOMY OF A FEMALE CRAYFISH**







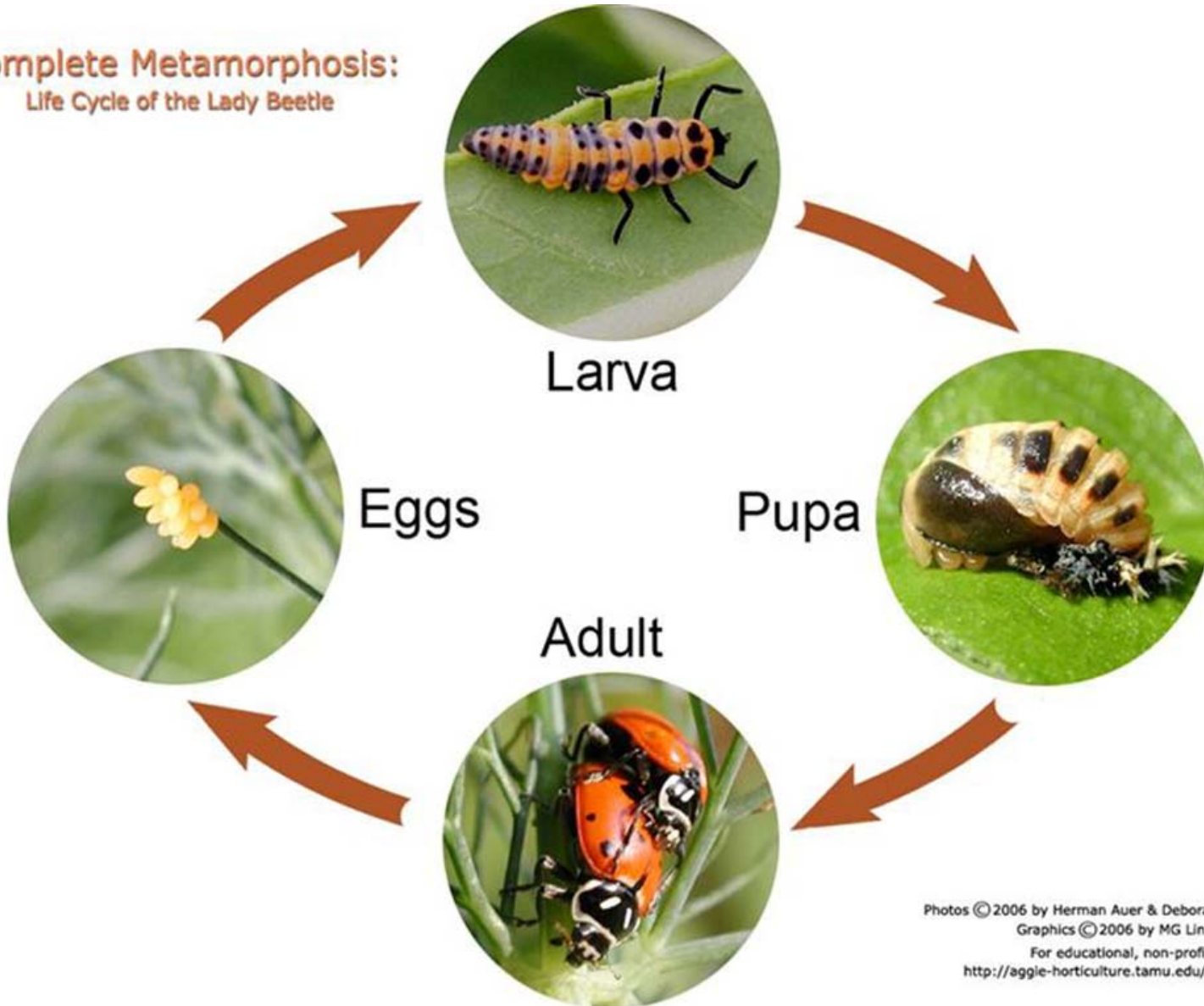








**Complete Metamorphosis:**  
Life Cycle of the Lady Beetle



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