

ATOMIC ENERGY CENTRAL SCHOOL, INDORE

MODULE 4.3

UNIT 1 : DIVERSITY IN THE LIVING WORLD

CHAPTER 4 ANIMAL KINGDOM



Dentalium



Chiton



Octopus



Unio



Sepia



Limnaea



Pearl Oyster



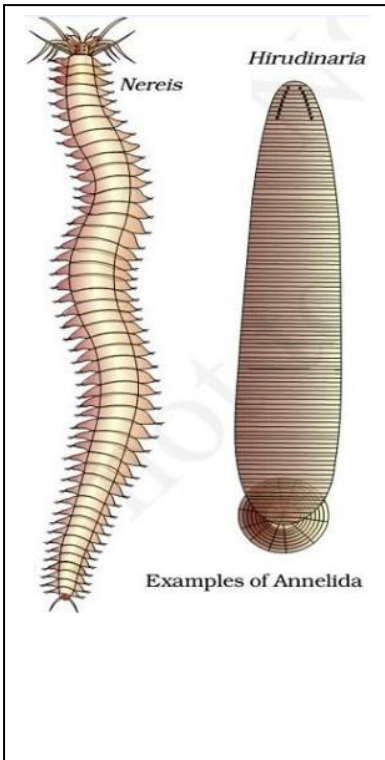
Land Snail

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Animal Kingdom Classification System



Phylum Annelida

- ❖ Aquatic or terrestrial.
- ❖ Free living or parasitic.
- ❖ Organ system level body bilateral symmetry and
 - Triploblastic coelomate.
- ❖ Nephridia for excretion.
- ❖ Ventral double Nerve cord.
- ❖ Monoecious or Dioecious.
- ❖ Reproduction - Sexual. eg.
- ❖ Earthworm(*Pheretima*), *Nereis* etc.
- ❖ Metameric segmentation.

Phylum Arthropoda

(Jointed Legs)

- ❖ Largest phylum.
- ❖ Bilateral symmetry, Triploblastic, segmented coelomate.
- ❖ Body - Head, Thorax and Abdomen(three parts).
- ❖ Blood without haemoglobin and circulatory system open.
- ❖ Respiration by gills, book lungs and trachea.
- ❖ Excretion by malpighian tubules.

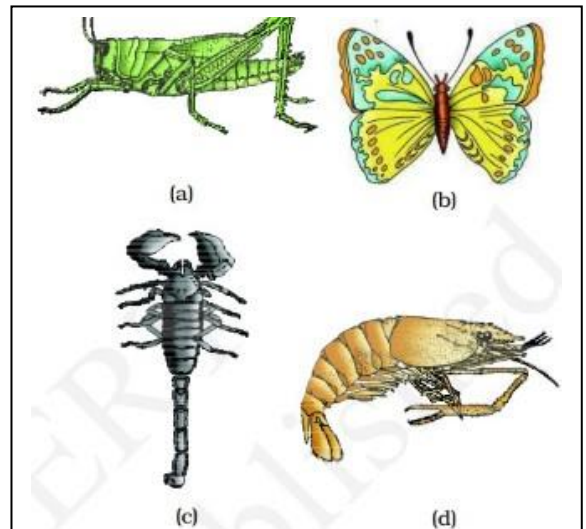


Figure 4.12 Examples of Arthropoda :
(a) Locust (b) Butterfly
(c) Scorpion (d) Prawn

Phylum Mollusca

Soft body animals. Second largest phylum.

Aquatic, bilateral symmetry, triploblastic, coelomate. Body unsegmented divided into head, muscular foot and visceral hump.

Soft mantle over visceral hump. Respiration and excretion through gills.

Unisexual.

Sensory tentacles on head and Radula in mouth.

Oviparous.

-eg. *Pila*, *Octopus* etc

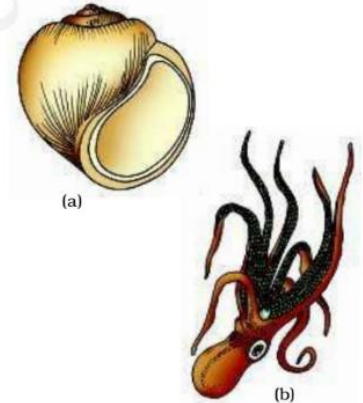


Figure 4.13 Examples of Mollusca :
(a) *Pila* (b) *Octopus*

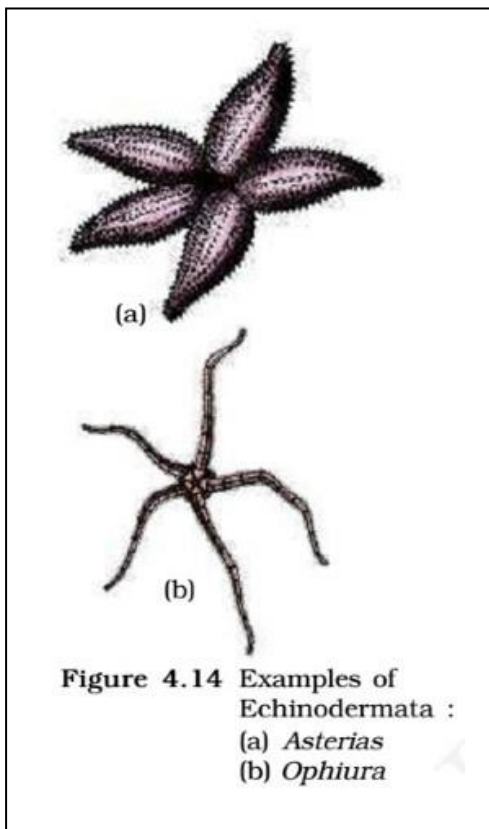


Figure 4.14 Examples of Echinodermata :
(a) *Asterias*
(b) *Ophiura*

PHYLUM ECHINODERMATA

Body surface spiny, (due to calcareous ossicles)

Marine , organ system level, adult radially symmetrical, triploblastic coelomate.

Mouth ventral

Water vascular system present for locomotion, capture and transport of food and respiration.

Sexes separate fertilization external, development indirect

e.g. *Asterias* (Starfish), *Sea urchin* (*Echinus*), etc.

PHYLUM HEMICHORDATA

Marine

Bilateral symmetry, triploblastic, coelomate

Body

Proboscis

Collar

Trunk

Circulatory system open

Gills for respiration

Proboscis gland for **excretion**

Sexes separate fertilization external, development indirect, e.g. *Balanoglossus*.

References

1. NCERT. BIOLOGY TEXTBOOK FOR CLASS XI
2. CONCEPTS OF BIOLOGY (R.L. KOTPAL / BENDRE/TYAGI)

<https://www.ruf.rice.edu/~bioslabs/studies/invertebrates/kingdoms.html>