

PHYLUM MOLLUSCS

#INVERTEBRATES SERIES

BY ZOOLOGIST NETWORK

Molluscs (also known as mollusks) are soft-bodied, bilaterally symmetrical, segmented, coelomate animals; usually shelled having a mantle, ventral foot, anterior head, and a dorsal visceral mass.

Phylum Mollusca (Mollusks) Characteristics

- 1) They are essentially aquatic mostly marine, few freshwater and some terrestrial form.
- 2) They may be found as hidden parasites in the interior of other animals.
- 3) They vary in size from giant squids and clams to little snails, a millimeter long.
- 4) They have at least two characters radula and mantle not found elsewhere.
- 5) The body is soft, unsegmented (except in Monoplacophora), bilaterally symmetrical, coelomate, triploblastic.
- 6) They have tissue-system grade of body organization
- 7) The body consists of head, foot, mantle, and the visceral mass.
- 8) The body is clothed with one-layered often ciliated epidermis.
- 9) The body is commonly protected by an exoskeleton calcareous shell of one or more piece secreted by the mantle.
- 10) Head is distinct, bearing mouth, eyes, tentacles and other sense organs except in pelecypoda and scaphopoda.
- 11) The ventral body is modified into a muscular plough-like surface, the foot which is variously modified for creeping, burrowing and swimming.
- 12) Mantle or pallium is a fold of a body wall that leaves between itself the main body, mantle cavity.
- 13) The visceral mass contains the vital organs of the body in the compact form taking the form of dorsal humps or dome.
- 14) The body cavity is hemocoel. The coelom is reduced and represented mainly by the pericardial cavity, gonadal cavity, and nephridia.
- 15) The digestive tract is simple with anterior mouth and posterior anus but in gastropods, scaphopods, and cephalopods the intestine becomes U-shaped bringing anus to anterior part.
- 16) Rasping organs, radula usually present, except in pelecypoda.
- 17) The circulatory system is open type except in cephalopods.
- 18) Respiratory organs contain numerous gills or ctenidia usually provided with osphradium at the base. The lung is developed in terrestrial forms.
- 19) Respiration is direct or by gills or lungs or both.
- 20) Haemocyanin is their respiratory pigments.
- 21) Excretion is by paired metanephridia (kidney).
- 22) The nervous system consists of paired cerebral, pleural, pedal and visceral ganglia joined by longitudinal and transverse connections and nerves. Ganglia usually form a circumenteric ring.
- 23) Sense organs consist of eyes, statocysts, and receptors for touch, smell, and taste.
- 24) Sexes are usually separate (dioecious) but some are monoecious (hermaphroditic).
- 25) Fertilization is external or internal.