

Reading Guide: Chapter 7 – Marine Animals Without Backbones part 1
Sponges and Cnidarians (p 115-122)

1. What is the difference between an invertebrate and a vertebrate animal?
2. Why are sponges considered among the most structurally simplest multicellular organisms?
3. Define sessile: _____
4. Where do sponges get their scientific name Porifera?
5. What is the function of collar cells or choanocytes?
6. Compare suspension feeding, filter feeding, and deposit feeding.
7. Many sponges have the ability to reproduce asexually. Being that asexual reproduction produces basically clones, how might this type of reproduction affect the evolution of sponges?
8. One of the main characteristics of being an animal is the ability to move. Sponges don't move. Can you think of some reasons (at least two) as to why they are not considered plants?

9. Color the picture below.

SPONGE MORPHOLOGY.

BODY WALL_A

SPICULE_{A'}

OSTIUM_E

FILTER CHAMBER_D

ATRIUM_F

OSCULUM_G

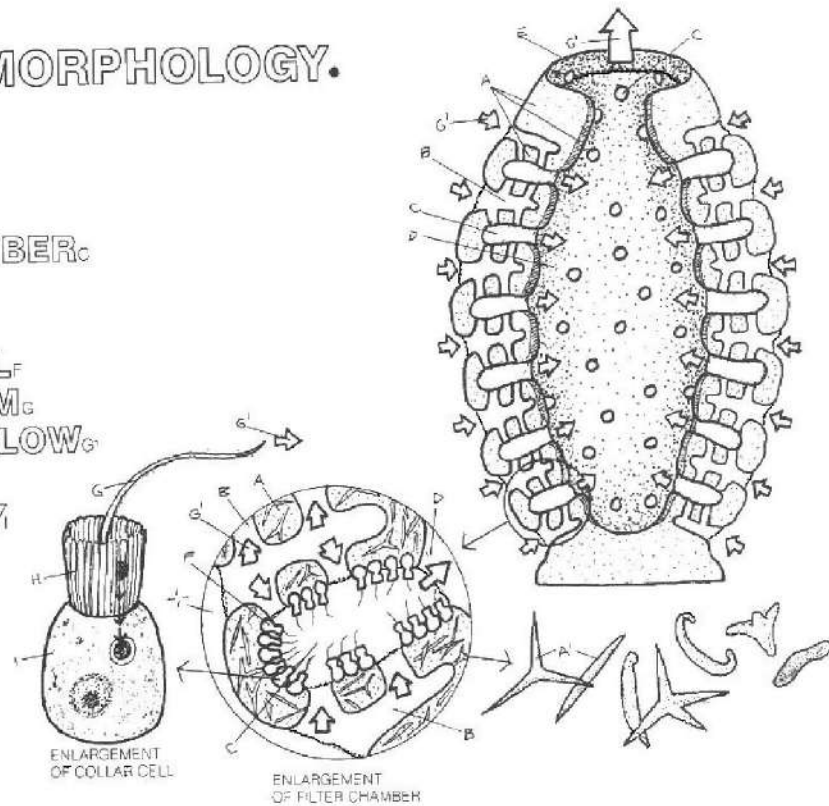
COLLAR CELL_F

FLAGELLUM_G

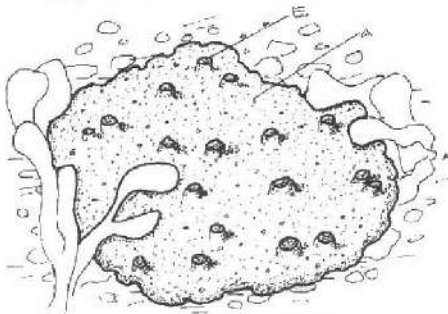
WATER FLOW_C

COLLAR_H

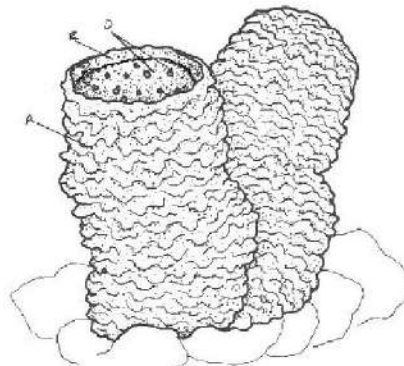
CELL BODY_I



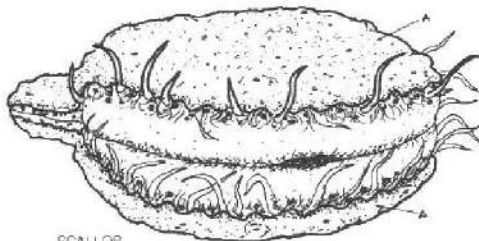
SPONGE TYPES.



ENCRUSTING *

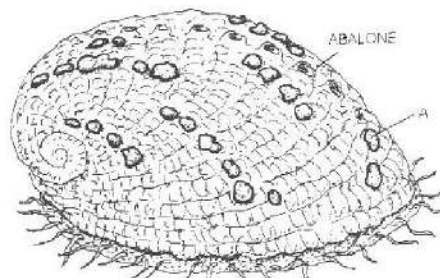


TUBULAR *



SCALLOP

PECTEN *

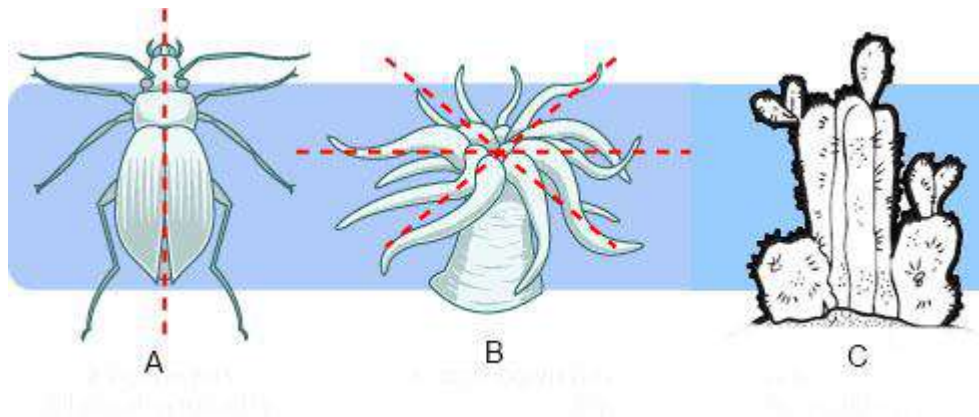


ABALONE

BORING *

10. What evolutionary step between sponges and cnidarians?

11. In the picture below, identify **radial symmetry**, **bilateral symmetry**, and **asymmetry**



12. What type of symmetry do cnidarians have? _____

13. One of the most distinguishing characteristics of cnidarians are their nematocysts. What are nematocysts?

14. What are the two basic forms of cnidarians?

15. Fill in the table below.

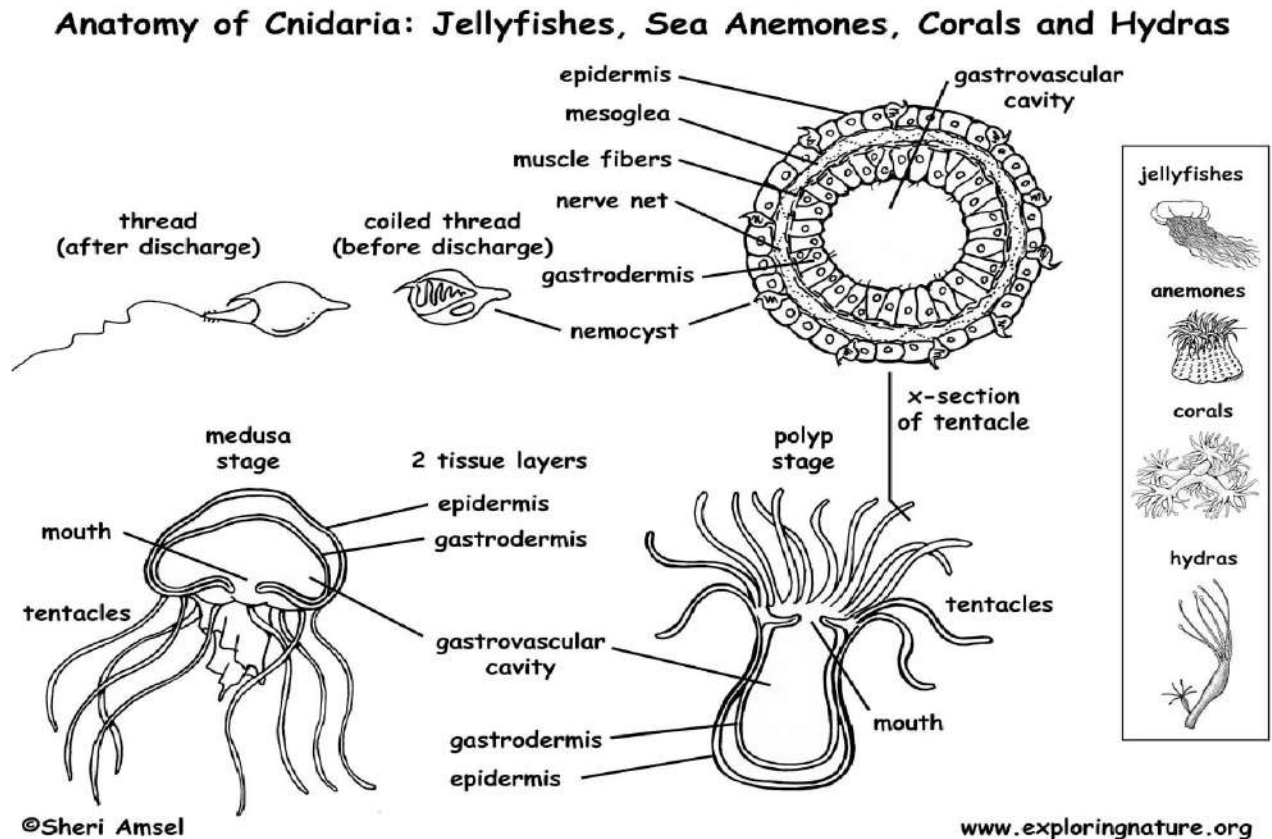
Types of Cnidarians	Unique Characteristics	Example of organism in group
Hydrozoans		
Scyphozoans		
Anthozoans		

16. **TRUE or FALSE** (circle one). Cnidarians are herbivores.

17. Describe the nervous system of the cnidarians.

(CONTINUE ON BACK)

18. Color the picture below



e Case of the Killer Cnidarians (page 122)

1. **TRUE or FALSE** (circle one) The stings of most cnidarians are harmless to humans.
2. Where are Portuguese man-of-war found?
3. How far can the Portuguese man-of-war tentacles reach? _____
4. Describe some of the symptoms people have when they have been stung by the Portuguese man-of-war.
5. What should you do if you are stung?
6. The box jellyfish (*Chironex fleckeri*) is known for causing death after a person has been stung. What do the people die from?