Ecology of Porifera

Sponges are ideal habitats for marine animals because they are irregularly shaped and many are large. They also form partnerships of many photosynthetic bacteria, algae, and plant-like protists. These provide food and oxygen for the sponge and the sponge provides protection in return. They get enough light to carry out photosynthesis by having some spicules that look like antennae, which focuses and directs light to the cells. That is important because it allows them to live in a wider range of habitats.

Comparison of Porifera and Cnidaria

Both the sponges and jellyfish are similar in that they resperate, circulate, and excrete the same way. But there are some differences of the two. One is that jellyfish have natocytes to paralyze their prey. They also have nerve nets, statocyst, and ocelli. The jellyfish have two stages; polyp and medusa. The polyp stay on the ground, like the sponge, but the medusa floats in the ocean. But otherwise they are very similar.

Comparison of Annelids to Porifera and Cnidaria

Annelids are more advanced than the porifera and the cnidaria. They have a segmented body and a true coelom. They also have a closed circulatory system. They have a brain and several nerve cords. Lastly some worms are hermaphrodites.

Comparison of Mollusks with the Above Animals

Mollusks are even more complex than the poriferans, cnidarians, and annelids. For one thing, they have four different parts of the body parts; the foot, mantel, shell, and visceral mass. Also, there is a wide variety of food that each type of animal can eat. If the mollusk lives in the water, then it has gills. But if it lives on the land, then it breathes by having its mantle cavity filled with blood vessels. Mollusks can either have a simple or complex nervous system and it reproduces sexually by either internal or external fertilization.

Comparison of Arthropods with Mollusks

Arthropods are the most complex organisms we have dissected so far. They have less body segments but with more specialized appendages than mollusks. They breathe by using tracheal tubes. They also excrete waste using malpighian tubules. They have a lot more sophisticated nervous system than the mollusks. Lastly, they reproduce by internal fertilization, but some males are able to place sperm packets on the ground and females pick it up.