freshwater sponge

representative species

Kingdom:	Animalia
Division/Phylum:	Porifera - sponges

Features

Freshwater sponges have no true tissues or organs. They are sessile, living on the bottom. Their cells are supported by a skeleton of fibers (spongin), spicules, a combination of these, or with no skeleton at all. Their outer skin is tough with tiny pores through which water flows by the action of flagella. The size, shape, and color of individual sponges vary. They may grow as a sheet growing under a rock in the water, a mass around an object like a stick, or upright with branching stalks.

Natural History

Freshwater sponges grow attached to objects on the bottom of a clear water body. They provide habitat for many other organisms. Sponges filter microscopic food particles – bacteria, algae, microscopic animals – from the water and may receive food from symbiotic organisms such as green algae or dinoflagellates. Most are hermaphrodites, producing both male and female reproductive cells, but at different times. Individuals are capable of reproducing at three years of age. Sperm are released into the water in a cloudlike mass. These sperm are captured by females of the same species to fertilize their eggs. If an egg is fertilized, it will develop into a ciliated larva. The larva is released in some species and retained for a while by others. When the larva is released and settles to the bottom, it develops into a juvenile sponge. Sponges also may reproduce asexually by producing buds or gemmules (packets of several cells of various types in a protective covering which are produced when conditions are poor for survival, e.g., drought, winter).

Habitats

Mississippi River; Missouri River; interior rivers and streams; natural lakes and prairie marshes; constructed lakes, ponds, and reservoirs

Iowa Status

common; native

Iowa Range

statewide

Bibliography

Iowa Department of Natural Resources. 2001. *Biodiversity of Iowa: Aquatic Habitats* CD-ROM.