ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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Bryozoans in New Hampshire Lakes

Introduction

During the summer of 2006, numerous large gelatinous balls—looking very much like alien creatures—were sighted in Rand Pond in Goshen. These "alien-like creatures" were simply bryozoans; an aquatic invertebrate (an animal with no backbone) which is sometimes called a "moss animal." They are sighted frequently throughout New Hampshire, although it is difficult to predict which lakes will have bryozoans in any given year.

Bryozoans come in many different shapes and sizes. Some bryozoans are very small and wispy, while others form large gelatinous balls that can be up to two feet in diameter!

A freshwater bryozoan. Photo Credit UMASS.

While there are more than 5,000 bryozoan species worldwide, only about 50 species inhabit freshwater, all of the other species prefer marine environments. Bryozoans also have an extensive fossil record dating back 500 million years with more than 15,000 different species. They outdate dinosaurs by 270 million years, and are some of the oldest creatures on Earth.

Biology of a Bryozoan

A bryozoan is a colonial animal similar to coral. A colonial animal is made up of many individuals who all perform certain tasks to maintain the function of the group. The individual animal in a bryozoan is called a zooid and it is only about one millimeter long. Considering how simple the individual is, the colony is quite complex. A bryozoan has an outer layer that protects a digestive tract. Bryozoans are filter feeders that eat phytoplankton (algae) and detritus (organic matter from dead plants and animals.) The mouth has a crown of tentacles, which direct food to the mouth. A large colony can filter a significant amount of water in a day. This can be very good for a lake with too much algal growth.

The bryozoan forms statoblasts to survive the winter. A statoblast has a tough outer layer that protects a single zooid with its food supply. The statoblast can survive both drying-out and freezing. When the water warms up in the spring, the protective layer is shed and the zooid inside begins copying itself to create a new colony.

Habitat and Predators

Freshwater bryozoans prefer still to slow-moving water because they are delicate and easily broken apart by strong currents. Bryozoans also prefer nutrient-enriched water because of the plentiful supply of plankton. Bryozoans are immobile and attach to rocks, submerged trees, docks, or anything stable that is underwater. The predators of freshwater bryozoans are mainly fish, but raccoons also like to eat the gelatinous species.

Bryozoans and Human Health

Bryozoans are not hazardous to human health and do not indicate a pollution problem. Because bryozoans are filter feeders, they may actually help clean the water.

Conclusion

Now that you know a little bit more about these animals, you should consider yourself lucky if you find bryozoans in your lake. Not only are they unique and one of nature's oldest animals, they may actually be beneficial by helping to clean the water of the lake.

References/More information:

- Northern State University – Bryozoans: Moss Animals
- Missouri Department of Conservation – Bryozoans (Moss Animals)
- University of California, Berkeley - Introduction to the Bryozoa