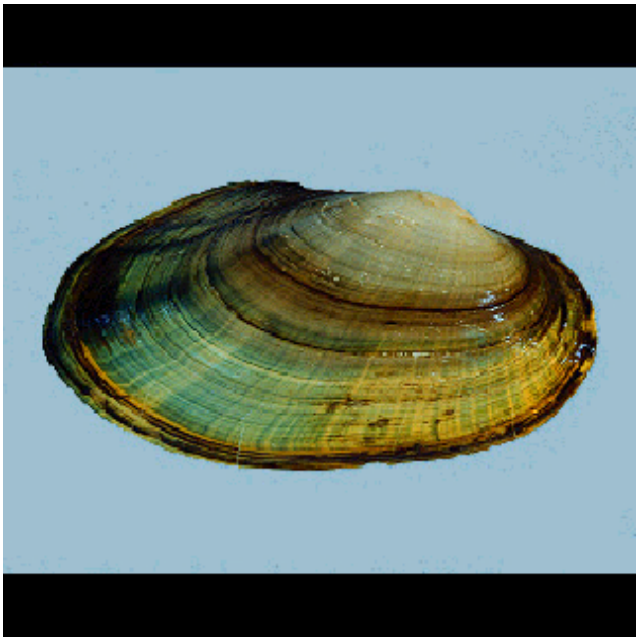

cylindrical papershell (cylinder)

Anodontoides ferussacianus

Kingdom: Animalia
Division/Phylum: Mollusca
Class: Bivalvia

Features

The cylindrical papershell or cylinder mussel has a thin, elongate, oval shell that is “inflated” in females and older males. The anterior end is rounded and the posterior is bluntly pointed. The ventral margin may be slightly curved, straight, or even curved toward the hinge side. The ridge on the posterior end is rounded and prominent. It is swollen in females. The outside of the shell is smooth and shiny. It is yellowish green, green, or brown and lighter on the umbo (hump near the hinge). Fine green rays are more concentrated on the posterior half of the shell. (These may disappear in older shells.) Cylindrical papershells may reach three inches long.

Natural History

The cylindrical papershell is found in small creeks and the headwaters of larger streams in mud and sand. It is a threatened species in Iowa. Its distribution in Iowa is not well documented. Freshwater mussels have an elaborate reproductive system. During spawning, males release sperm into the water. The sperm are drawn inside the female's shell, where they fertilize eggs in her body. The fertilized eggs develop into larvae (glochidia) and are stored for a time in the female's gills. When the glochidia mature, the female generally expels them into the water where they must attach as parasites to the gills or fins of fish. Larvae remain on the host fish for a period of weeks or months. Young mussels then detach from their host and drop to the bottom of the body of water. Host fish for this mussel species include several small stream fish. Mussels are filter-feeders, bringing in water and the organic matter it contains through the incurrent siphon, filtering the particles out, then sending the rest of the water away from the body through the excurrent siphon. Particles filtered include plankton and detritus. Mature mussels spend most of their lives, which range from 10 to 100 years, partially or wholly buried in the bottom substrate.

Habitats

interior rivers and streams; constructed lakes, ponds, and reservoirs

Iowa Status

threatened; native

Siltation and other unknown water quality impacts from changing land use have greatly impacted mussel populations. Populations of some fish species which served as hosts for mussels have declined.

Iowa Range

northern half of Iowa excluding northeast Iowa; outlying population in east-central Iowa

Bibliography

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