



Spectaclecase (*Cumberlandia monodonta*)

Common Name
Spectaclecase

Scientific Name
Cumberlandia monodonta



A young and a mature spectacle case mussel.
Photo by USFWS; Nick Rowse

The spectaclecase is a freshwater mussel that the U.S. Fish and Wildlife Service has **proposed** to list as an **endangered species**.

Appearance

The spectaclecase is a large mussel that can grow to at least 9 inches in length. The shape of the shell is elongated, sometimes curved, and somewhat inflated (hence its name).

Range

Historically, the spectaclecase was found in at least 44 streams of the Mississippi, Ohio, and Missouri river basins in 15 states. Today, the spectaclecase has been extirpated from 4 states and is found in only 19 streams. Its current range includes Alabama, Arkansas, Illinois, Iowa, Kentucky, Minnesota, Missouri, Tennessee, Virginia, West Virginia, and Wisconsin. With few exceptions, spectaclecase populations are highly fragmented and restricted to short stream reaches.

Reproduction

The life cycle of most freshwater mussels is complex and includes a stage that is parasitic on fish or other host species. Initially, males release sperm into the water current. As female mussels siphon water for food and respiration, they also siphon sperm that

fertilizes their eggs. Within special gill chambers, fertilized eggs develop into microscopic larvae called glochidia. Female mussels expel mature glochidia, which then must attach to the gills or fins of a specific species, usually a fish, to complete development into a juvenile mussel. If glochidia successfully attach to a host, they mature into juvenile mussels within a few weeks and then drop off. If they land in a suitable area, they continue to grow and mature. Using fish (or other aquatic species) as a host allows mussels to move upstream and populate habitats they could not otherwise reach. The host species for spectaclecase are unknown.

As a group, mussels are long-lived, with individuals living up to several decades, and possibly up to 100 to 200 years in extreme instances. The oldest documented spectaclecase was thought to be 70 years old.

Habitat

Spectaclecase mussels are found in large rivers where they live in areas sheltered from the main force of the current. This species is usually found in clusters in firm mud and in sheltered areas, such as beneath rock slabs, between boulders, and even under tree roots.

Feeding Habits

Adults are suspension-feeders, siphoning in water and feeding on the suspended algae, bacteria, detritus, microscopic animals, and dissolved organic material. Adult mussels spend their entire lives partially or completely buried within the substrate. The shell of a young spectaclecase mussel is smooth and solidly light yellow, tan, or brown, becoming rough and dark brown to black as the mussel ages.

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