

Pygmy Madtom

Noturus stanauli



The pygmy madtom (*Noturus stanauli*), is a type of catfish (family Ictaluridae), a family of fish easily recognized by whiskerlike barbels extending from their upper jaw. The pygmy madtom is the smallest madtom species known.

Adults are less than 2 inches (50 millimeters) long.

Described in 1980 by David Etnier and Robert Jenkins, the pygmy madtom is dark brown dorsally (on its back from nose to tail and down its sides), while its belly is nearly white.



illustration: Joseph R. Tomelleri©

not actual size

at one time) varied from 10 in the first spawn to 19 eggs in the second. The male guards the nest, which occupies a cavity under a rock or similar shelter. Food appears to be aquatic insect larvae. Madtoms are generally

madtoms collected in the Duck were sampled in 1993.

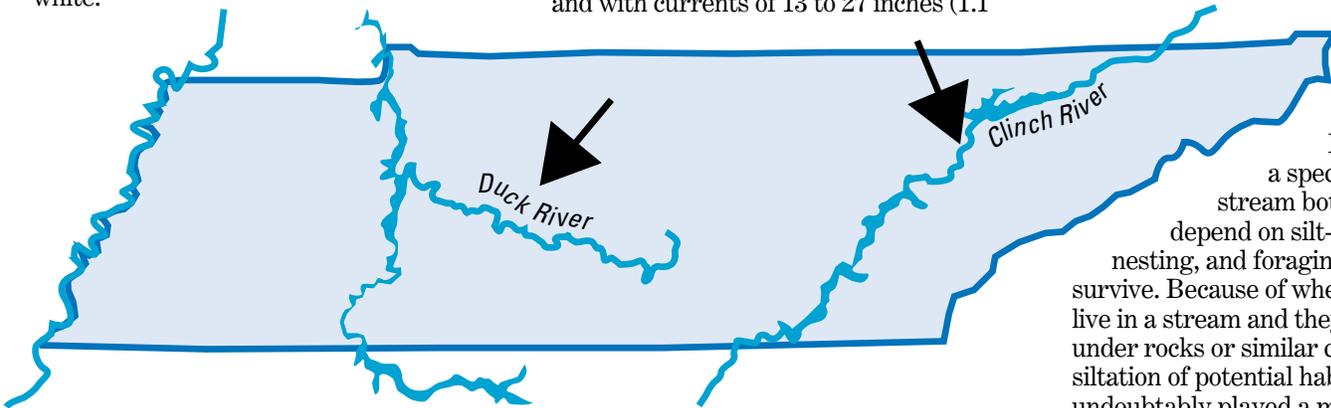
Pygmy madtoms inhabit shoal areas of medium-sized rivers with gravel substrates, from 8 to 40 inches (0.6 to 3.3 feet) deep, and with currents of 13 to 27 inches (1.1

thought to be nocturnal, however, there is evidence from laboratory observations that they may be crepuscular (most active at dusk and dawn).

Madtoms as a group are among the most imperiled species in North America due to two factors:

First, madtoms are a species that live only on stream bottoms (benthic) and depend on silt-free spawning,

nesting, and foraging habitats to survive. Because of where pygmy madtoms live in a stream and they lay their nests under rocks or similar cavities, prevalent siltation of potential habitat has undoubtedly played a major factor in their imperilment. Second, madtoms are highly social creatures that rely on their highly-developed olfactory senses to smell and find mates and possibly food. "Olfactory noise" in the form of organic pesticides and other chemicals that hinders the madtom's ability to smell may be contributing to the imperilment of madtoms. In addition, benthic fishes and medium sized stream habitats tend to be inordinately imperiled in the U.S.



The pygmy madtom is known only from two short stream reaches in the lower Duck (Hickman and Humphries Counties) and middle Clinch (Hancock County) Rivers in the Tennessee River system, Tennessee. These sites are separated by 650 miles of mostly impounded Tennessee River habitat.

The pygmy madtom is a federally endangered species, listed in 1993 because of threats it faced from water quality deterioration and pollution, its restricted geographic range, and its resulting vulnerability to catastrophic events such as a chemical spill.

One of the rarest fishes in North America, about 25 museum specimens of pygmy madtom are known, and only about 50 specimens have ever been collected. Approximately one in two collecting efforts produces any pygmy madtoms in the Clinch River; and one in four efforts produces them in the Duck River. The last pygmy

to 2.3 feet) per second. They've generally been collected near stream banks. The most imperiled madtom species tend to inhabit the best remaining stream reaches in terms of habitat quality (e.g., relatively silt-free, stable substrates, high water quality).

A highly diverse number of fish species are associated with pygmy madtom habitat. The Duck River in the vicinity of pygmy madtom habitat supports over 90 species. The Clinch River harbors about 80 fish species and has the highest number of federally listed mussels (18 species) of any stream in the world.

Very little is known about pygmy madtom life history. Indications are that they live 1+ years. In captivity, a pair of pygmy madtoms collected in March 2000, spawned (deposited eggs) twice, once in late June/early July, the second time in late July. Clutch size (the number of eggs produced

The successful captive propagation of a pair of pygmy madtoms in 2000 by Conservation Fisheries, Inc., a non-profit organization, presents a unique opportunity to augment the Clinch River population (add the captive reared young back to the existing population, where the parent stock was obtained). Thirteen juvenile madtoms are being kept in aquaria, several of which are available for release.