Cape Fear Shiner

(*Notropis mekistocholas*)

Description

The Cape Fear shiner (*Notropis mekistocholas)* is a small (about two inches long), yellowish minnow with a black band along the sides of its body. The fins are yellow and somewhat pointed. The upper lip is black, and the lower lip bears a thin black bar along its margin.

Habitat

The species is generally associated with gravel, cobble, and boulder substrates, and is known to inhabit slow pools, riffles, and runs. These areas occasionally support American water willow (*Justicia americana*), which may be used by the minnow as cover or protection from predators. The Cape Fear shiner can be found swimming in schools of other minnow species but is never the most abundant species.

During the spawning season, Cape Fear shiner adults move to slower flowing pools to lay eggs on the rocky substrate.

Cape Fear shiner habitat in the Rocky River. Photo by David Rabon/USFWS

Captive Population of Cape Fear shiners. Photo by Conservation Fisheries, Inc.

Juveniles are often found in slack water, among large rock outcrops of the midstream, and in flooded side channels and pools.

Life History

The Cape Fear shiner is thought to live to about three years of age in the wild. In captivity, however, the minnow can live to six years of age. Reproductive maturity is reached after the first year. Adults lay eggs in the spring and summer (May - July), when water temperatures are warm. Eggs hatch about three days after being laid, but the fry continue to gain nourishment from the yolk sack for another five days.

Distribution

The Cape Fear shiner is endemic to the upper Cape Fear River basin in the Central Piedmont of North Carolina. Currently, five populations of the species are known from the mainstream reaches and the tributaries of the Deep, Haw, and Rocky Rivers in Chatham, Harnett, Lee, Moore, and Randolph counties. The total number of shiners in each population is not known, but all populations appear to be small.

Cape Fear shiner range within North Carolina

Threats

Like many endangered aquatic species, the Cape Fear shiner is threatened with habitat loss and degradation. The species' habitat becomes unsuitable when the water flow or water levels change. This can be caused by

Carbonton Dam located on the Deep River separates two populations of the Cape Fear shiner. Photo by Mike Wicker/USFWS

fluctuations in water released from dams or physical alteration of the stream.

Pollution is another cause of habitat degradation. The Cape Fear shiner is sensitive to chemicals found in fertilizers, pesticides, and other sources that pollute water. These and other pollutants include water runoff from farms, municipalities and businesses and their associated infrastructure.

Other threats to the Cape Fear shiner include the introduction of nonnative fish to North Carolina rivers which can cause increased predation on the shiner.

Conservation

To help secure the future of the Cape Fear Shiner, the U.S. Fish and Wildlife Service added the shiner as an endangered species to the Federal Endangered and Threatened Species List in 1987. The United States Congress, recognizing that many of our Nation's valuable plant and wildlife resources have been lost and that others are imperiled, passed the Endangered Species Act in 1973 to provide a means to help preserve species and their habitats for future generations.

In addition, approximately 17 river miles of the Deep River, Rocky River, Fork Creek, and Bear Creek have been designated as Critical Habitat for the Cape Fear shiner.

Preventing further habitat deterioration and restoring past habitats will help ensure the future of the Cape Fear shiner.

What You Can Do

• Support measures related to keeping our streams and lakes clean, such as land-use planning that overtly maintains vegetated riparian buffers and water quality.

• Plant and maintain native vegetation along streams and creeks. These "vegetated buffers" prevent the erosion of soil and sediments into the water after heavy rains, keeping the stream clear and clean.

• Be careful when using and disposing toxic substances such as motor oil, pesticides, fertilizers, and other chemicals near creeks and streams. Always follow the instructions for chemical use, and properly dispose of any remaining material and the container.

• Keep livestock out of rivers and streams. Livestock can damage the stream banks by eating the bank vegetation and by causing erosion of the bank. Livestock and their waste can also pollute the water.

• Watch for fish kills, illegal dumping of waste, unusual water color or smell, and other changes in the river's condition. Report environmental emergencies (e.g., fish kills, oil or chemical spills) affecting water resources to the N.C. Division of Emergency Management at 1-800-858-0368.

Additional Information

For additional information about the Cape Fear shiner, visit our website at http://nc-es.fws.gov.

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