



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 its sides. The fins are yellow and somewhat pointed. The upper lip is black, and the lower lip has 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 later, 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, Cape

Fear shiners are known from the mainstem and some tributaries of the Deep, Rocky, Haw, and Cape Fear Rivers in Chatham, Harnett, Lee, Moore, and Randolph counties. The total number of shiners throughout their restricted range is not known.



Cape Fear shiner range within North Carolina

Threats

Like many imperiled aquatic species, the Cape Fear shiner is threatened with habitat loss and degradation. The species' habitat becomes unsuitable when flow or water levels change from dams or other stream alterations. These isolate shiners into small pockets of suitable habitat, thus making them vulnerable to extirpation.



Carbonton Dam on the Deep River, before and during its demolition. The dam's removal allowed Cape Fear shiner movement between two previously separated subpopulations. Photos by Mike Wicker/USFWS

Pollution also causes habitat degradation. Chemicals in fertilizers, pesticides, wastewater and other sources, especially at high concentrations, can reduce growth and survival of Cape Fear shiners. Pollutants enter rivers from stormwater and sediment running off roads, agricultural fields, and developed areas. Another threat is the introduction of nonnative fish which can cause increased predation on shiners.

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. 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 as 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.

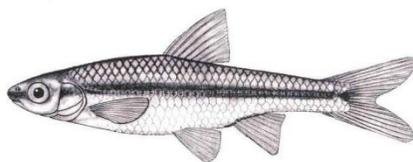
Partners in Restoration

In 2005 Restoration Systems of Greensboro worked with others to demolish Carbonton Dam on the Deep River. After removal, Cape Fear shiners moved into newly suitable habitat near the old dam. The dam's removal allowed Cape Fear shiners to occupy 47 continuous miles of the Deep River between High Falls Dam in central Moore County and Lockville Dam in eastern Lee County.

Carbonton dam removal is one recent restoration success story. Preventing further habitat loss and restoring past habitats will help ensure the future of the Cape Fear shiner.

Cape Fear shiner conservation partnerships are growing and active participants include:

- NC Wildlife Resources Commission
 - NC Natural Heritage Program
 - NC Parks and Recreation
 - Chatham Conservation Partnership
 - Triangle Land Conservancy
 - Haw River Assembly
 - NC Zoological Park
 - Conservation Fisheries, Inc.
- Citizens like you!!!*



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What You Can Do

- Support measures related to keeping our streams and lakes clean, such as land-use planning that overtly maintains forested 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 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 trampling and eating the bank vegetation, 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://www.fws.gov/raleigh/species/es_cfshiner.html