

# Niangua darter

*Etheostoma nianguae*

## Guidelines for Landowners Using Conservation Practices

### Missouri Department of Conservation

Common name ▪ Niangua darter  
Scientific name ▪ *Etheostoma nianguae*  
State status ▪ Endangered  
Federal status ▪ Threatened

#### Ecology

Niangua darters are a “Missouri endemic species”, meaning they occur only in Missouri. They inhabit clear upland creeks and small- to medium-sized rivers of the Osage River basin. Niangua darters are found near the bottom in shallow run and pool margins with silt-free gravel and rock bottoms. Adults move from these habitats to gravel riffles prior to spawning during mid-March to early June. Niangua darters can live four or more years, but few survive longer than two years. Young darters reach sexual maturity after one year. Adults are commonly 2.6 to 4.4 inches in length. Niangua darters eat the nymphs of stoneflies and mayflies and other aquatic insects.

#### Reasons for Decline

The Niangua darter’s distribution has been fragmented and reduced during the last 30 years due to habitat loss from reservoir construction, poorly-designed road crossings, and reduced water quality. Reservoirs and low water road crossings have isolated populations of Niangua darters and restricted them from dispersing between suitable habitats. Land clearing and increased amounts of sediment and nutrients have also caused declines in Niangua darter populations. Current threats to Niangua darters include improper and untimely gravel and sand removal, loss of streamside vegetation, fertilizer and pesticide run-off, increased nutrients from livestock and human waste, and increased siltation and sedimentation.



Photo Credit: Missouri Department of Conservation

#### Recommendations

The Niangua darter is a valuable indicator species that responds negatively to stream degradation, especially increases in silt and nutrient loads. Practices that stabilize and improve Niangua darter habitat will benefit numerous other aquatic species.

Efforts should be made to ensure our waterways are healthy through protection and/or restoration of habitat for this and other aquatic species.

Avoid constructing stream crossings. If unavoidable, culverts and stream crossings should be constructed with the same bottom elevation as the existing streambed to avoid restricting flow and obstructing fish passage. Bank stabilization materials should consist only of rock, clean broken concrete or similar materials free of pollutants, silt and extraneous debris including exposed rebar. Erosion and sediment controls should be implemented, maintained and monitored for the duration of a project.

Follow proper sand and gravel removal procedures outlined in the Missouri Instream Sand and Gravel Removal Guidelines prepared by the Missouri Departments of Conservation and Natural Resources. Guidelines include the following: leave a minimum 20-foot buffer zone between the water line and the excavation area, do not mine within 20 feet of streamside vegetation, and do not alter stream channels. In addition, do not remove gravel during the Niangua darter spawning season (March 15 to June 15).

Re-establish and maintain forested riparian corridors at least 100-foot wide along streams to reduce erosion and capture nutrient rich runoff. Exclude livestock with fences to allow the area to naturally re-vegetate. Discourage cattle from using streams

and move watering areas into pastures and away from streams.

Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers.

Consider the balance between adverse and beneficial practices when determining the overall effect of a conservation practice.

### Beneficial Practices

- Limit livestock access to streams.
- Nutrient and pest management on adjacent agricultural fields that results in reduced opportunities for contamination of runoff.
- Protection and restoration of riparian corridors along streams.
- Practices that control erosion and prevent sediment delivery to the aquatic system.

### Adverse Practices

- Sand and gravel removal beyond the excess material on adjacent unconsolidated bars.
- Stream channelization.
- Unmanaged application of pesticides, animal waste or fertilizers.
- Uncontrolled livestock access to forested riparian corridors and streams.
- Project activities that occur below the high bank between March 15 and June 15, the spawning period of this fish.
- Constructing dams and other impoundment structures on streams.
- Improper erosion and sediment control.
- Culverts, fords, and stream crossings that create a barrier to fish passage or restrict stream flow.
- Unnecessary vehicle and equipment stream crossing.
- Removing or degrading the riparian corridor near springs and along streams.

### Information Contacts

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Policy Coordination Section  
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Jefferson City, MO 65102-0180  
Telephone: 573-751-4115

<http://www.mdc.mo.gov/nathis/endangered/>

Missouri Department of Natural Resources  
Division of Environmental Quality  
P.O. Box 176  
Jefferson City, MO 65102-0176  
Telephone: 800-361-4827 / 573-751-1300  
<http://www.dnr.mo.gov/env/index.html>

U.S. Army Corps of Engineers  
Regulatory Branch  
700 Federal Building  
601 E. 12th Street  
Kansas City, MO 64106-2896  
Telephone: 816-389-3990  
<http://www.nwk.usace.army.mil/>

U.S. Environmental Protection Agency  
Water, Wetlands, and Pesticides Division  
901 North 5<sup>th</sup> Street  
Kansas City, KS 66101  
Telephone: 913-551-7003 / 800-223-0425  
<http://www.epa.gov/region7/>

U.S. Fish and Wildlife Service  
Ecological Services Field Office  
101 Park DeVille Dr., Suite A  
Columbia, MO 65203  
Telephone: 573-234-2132  
<http://www.fws.gov/midwest/partners/missouri.html>

### Legal

The Missouri Department of Conservation prepared these guidelines for conservation practices with assistance from other state agencies, contractors, and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat.

Compliance with these management guidelines is not required by the Missouri wildlife and forestry law or by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.

“State Endangered Status” is determined by the Missouri Conservation Commission under constitutional authority, and specific requirements for impacts to such species are expressed in the Missouri Wildlife Code, rule 3 CSR 10-4.111.

Species listed under the Federal Endangered Species Act must be considered in projects receiving federal funds or requiring permits under

the Clean Water Act, with compliance issues resolved in consultation with the U.S. Fish and Wildlife Service.