

Redfin Darter

Etheostoma whipplei

Guidelines for Landowners Using Conservation Practices

Missouri Department of
Conservation



Photo Credit: Missouri Department of Conservation

Common name ▪ Redfin Darter
Scientific name ▪ *Etheostoma whipplei*
State status ▪ Endangered
Federal status ▪ None

Ecology

The redfin darter's range includes parts of southeastern Kansas, southwestern Missouri, northern Arkansas and along the northern edge of the Gulf Coast. In Missouri, they prefer gravel and shale riffles in small- to medium-sized prairie and Ozark border rivers. Very little is known about the life history of the redfin darter, but they likely forage on aquatic insects and spawn during April. Adults typically reach a length of 1.8 to 2.5 inches.

Reasons for Decline

Although there is no indication that redfin darters were ever more abundant in Missouri than they are currently, they are part of a distinctive and important fish fauna that is rare throughout their historical range. Activities such as construction of dams and impoundments, improper and untimely sand and gravel removal, pollutants resulting from lead-zinc mining, agricultural runoff containing pesticide chemicals, and waste from livestock may damage current and potential habitat.

Recommendations

To ensure the long-term survival of the redfin darter in Missouri, it is important that current and potential habitat be protected. To do this, project activities should minimize impact to streams and riparian corridors. 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 stream flow and obstructing fish passage. A bridge would be more appropriate than placement of a culvert due to the potential of passage restrictions for this species. Dams should not be constructed in those streams where this species occurs.

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 redfin darter spawning season (March 15 to June 15).

Limit clearing of vegetation, including standing and downed timber, to that which is absolutely necessary for construction purposes. Re-establish and maintain forested riparian corridors at least 100-foot wide along streams to reduce erosion and capture nutrient rich runoff. Discourage cattle from using streams and exclude livestock with fences to allow the area to naturally re-vegetate. 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.
- Protection and restoration of riparian corridors along streams.
- Nutrient and pest management on adjacent agricultural fields that results in reduced opportunities for contamination of runoff.
- Practices that control erosion and prevent the delivery of sediment to the aquatic system will prove beneficial to this species.

Adverse Practices

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

Information Contacts

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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 5th 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 DeVillie 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.