

Hellbenders

Cryptobranchus alleganiensis

Best Management Practices

Missouri Department of Conservation

Common name ▪ Ozark Hellbender
Scientific name ▪ *Cryptobranchus alleganiensis bishopi*
State status ▪ Endangered
Federal status ▪ Candidate

Common name ▪ Eastern Hellbender
Scientific name ▪ *Cryptobranchus alleganiensis alleganiensis*
State status ▪ Endangered
Federal status ▪ None



Ozark Hellbender by Jeff Briggler, MDC

Ecology

The eastern and Ozark hellbenders are two subspecies of salamander found in Missouri. The eastern hellbender's range stretches from southern New York to northeastern Mississippi and northern Alabama and Georgia and into Missouri. Ozark Hell benders are only found in Missouri and Arkansas. Both are permanently aquatic and restricted to rivers

in the Ozark Plateau region of Missouri. Eastern hellbenders are known to occur in the Meramec River, Big River, Gasconade River, Osage Fork of the Gasconade River, Big Piney River, and Niangua River. Ozark hellbenders are known to occur in the Current River, Jacks Fork River, Eleven Point River, North Fork of the White River, and Bryant Creek. Hellbenders are strongly associated with cold water habitat throughout these river systems. They prefer clear creeks and rivers, usually in habitats with large shelter rocks and water below 20 degrees Centigrade.

They have a broad, flat head with very small, lidless eyes and color varies from reddish-brown to dull gray-brown. Male hellbenders create nest under submerged large logs or flat rocks. Females lay eggs under flat rocks in rivers in late summer or autumn and males guard the developing eggs. Larvae will hatch in about 4 to 6 weeks and will lose their gills about 2 years after hatching. Adult hellbenders breathe through their skin. Adult hellbenders may live longer than 25 years reaching a length of 11.5-20 inches. Crayfish is the most common prey although scavenged fish and other invertebrates may also be eaten. The Hellbenders are primarily nocturnal but can occasionally be seen during the day, especially during the breeding season.



Eastern Hellbender by Jeff Briggler, MDC

Reasons for Decline

The primary reason for the decline of this species is human induced habitat alteration. Other potential threats include the following: impoundment creation, ore and gravel mining, silt and nutrient runoff from agriculture and industry, den site disturbance from recreation use of rivers and non-native species. Stream impoundment causes the loss of shallow-water riffles and buries rocks in silt. Many people mistakenly kill hellbenders because of the myth that they are poisonous.

Recommendations

Hellbenders remain active throughout the year in riffle sections of open water and maintain their home territories year-round. For this reason, activities should be avoided that change physical characteristics of rivers and streams and alter the flow of water for long periods of time. Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers.

Beneficial Practices

- Practices that will increase siltation or erosion should be avoided. Erosion and sediment controls should be implemented, monitored and maintained for the duration of the project.
- Avoid crossing streams; if unavoidable use temporary crossings that do not restrict water flow.
- Avoid removing or altering the riparian corridor between streams.
- Avoid removing large rocks and downed timber within the channel
- Conduct an evaluation for the presence of hellbenders prior to the construction of bridges, accesses, or other projects.

- Before non-native species are introduced contact the Endangered Species Coordinator.

Adverse Practices

- Creating dams and impoundments in areas where hellbenders occur.
- Channel alterations that limit or eliminate shallow waters and remove cover rocks.
- In-stream gravel mining in streams and river systems where hellbenders occur.

Information Contacts

For further information regarding regulations for development in wetlands, rivers and streams, contact:

Missouri Department of Conservation
Policy Coordination Section
P.O. Box 180
2901 W. Truman Blvd
Jefferson City, MO 65102-0180
Telephone: 573/751-4115

Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, MO 65102-0176
Telephone: 573/526-3315

U.S. Army Corps of Engineers
Regulatory Branch
700 Federal Building
Kansas City, MO 64106-2896
Telephone: 816/983-3990

U.S. Environmental Protection Agency
Water, Wetlands, and Pesticides Division
901 North 5th Street
Kansas City, KS 66101
Telephone: 973/551-7307

U.S. Fish and Wildlife Service
Ecological Services Field Office
101 Park DeVillie Dr., Suite A
Columbia, MO 65203
Telephone: 573/234-2132

Legal

These Best Management Practices were prepared by the Missouri Department of Conservation 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 Best Management Practices is not required by the Missouri wildlife and forestry law nor 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 3CSR10-4.111.

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.

Comment [JB1]: Eastern Hellbender by Jeff Brigler, MDC