



Copperbelly Water Snake

Nerodia erythrogaster neglecta

The northern population of the copperbelly water snake is listed as threatened under the Endangered Species Act. “Threatened” means likely to become endangered in the foreseeable future. “Endangered” means in danger of becoming extinct. Identifying, protecting, and restoring endangered and threatened species is a primary objective of the U.S. Fish and Wildlife Service.

What is the Copperbelly Water Snake?

Appearance: The copperbelly water snake is a non-venomous snake that grows 2 to 4 feet in length. It has a solid dark (usually black) back with a bright orange-red belly. Females grow larger than males; most copperbellies over 30 inches long are females.

Habitat: Copperbelly water snakes need a mosaic of shallow wetlands or floodplain wetlands surrounded by forested uplands. Seasonally flooded wetlands without fish are favored foraging areas, and copperbellies frequently move from one wetland to another. Copperbellies hibernate, often in crayfish burrows, in forested wetlands and immediately adjacent forested uplands. They remain underground from late October until late April.

Reproduction: After emerging from their hibernation sites, copperbellies become more active as the weather warms. Courtship and mating occur in spring and young snakes are born in the fall near or in the winter burrow. The average litter size is not known.



Photo by R.W. Van Devender

The northern population of the copperbelly water snake is found in Hillsdale County, Michigan; Williams County, Ohio; and Steuben County, Indiana.

Feeding Habits: Frogs and tadpoles are the copperbelly water snake’s main prey. It hunts on land and in shallow water and favors seasonal wetlands where frogs, toads, and salamanders lay their eggs. In addition to large numbers of prey, the gradual drying of these wetlands provides excellent feeding conditions as tadpoles become stranded.

Range: The copperbelly water snake is found in two geographically separated areas. The northern population segment includes southern Michigan, northeastern Indiana and northwestern Ohio. Surveys of this population segment over the last 20 years have shown a continuing decline in the overall number of snakes. At present, only five small sub-populations persist within the tri-state area.

The copperbelly water snake is found in a second geographic area that

includes portions of southern Indiana, southern Illinois, and northwestern Kentucky. The southern population segment is not protected by the Endangered Species Act.

Why is the Copperbelly Water Snake threatened?

Only a couple hundred snakes remain in the northern population segment. This ongoing decline can be attributed, in part, to:

Habitat Loss and

Fragmentation: Wetlands used by copperbelly water snakes have been altered by people for agriculture, roads, housing, flood control, and other development. Because it needs many wetlands interspersed among uplands over a large area, the copperbelly is especially vulnerable to habitat fragmentation. When a large block of suitable habitat is divided into smaller pieces and separated by agricultural fields,

towns, and roads, the fragments of habitat can no longer support a copperbelly population.

Collection: Copperbelly water snakes are collected because of their rarity, large size, unique color, and value in the pet trade. Under the Endangered Species Act, collection is illegal without a permit from the U.S. Fish and Wildlife Service. Permits are issued only when the collection of individual snakes will benefit the conservation of the species.

Predation: A copperbelly water snake travels often during spring, summer, and fall. It moves to different wetlands as water levels and food availability change and then travels to and from its hibernation site. When moving to different locations, these snakes are vulnerable to predators (e.g., skunks, raccoons, raptors, and snapping turtles), especially if the snakes must travel across cleared areas, such as roads, mowed areas and farmlands.

What is being done to prevent extinction of the Copperbelly Water Snake?

Listing: The northern population segment of copperbelly water snake gained protection under the Endangered Species Act when it was listed as threatened on February 28, 1996. Under this Act, it is illegal to harm, harass, collect, or kill the copperbelly within this Distinct Population Segment (north of 40° north latitude; approximately Indianapolis, Indiana).

Recovery Plan: As required under the Endangered Species Act, we prepared a Copperbelly Water Snake Recovery Plan that describes and prioritizes actions needed to help this population segment survive and avoid extinction. Conservation partners are working together to carry out conservation actions identified in this plan.

Research: Researchers have studied the copperbelly water snake and will continue to learn more about its life history and habitat requirements to help determine how to stop the continued decline of the northern population segment.

Habitat Protection: Working in voluntary cooperation with local communities and private landowners, copperbelly habitat (wetlands and adjacent upland woods) can be protected and improved. Funding from federal and state programs as well as conservation organizations has been used to restore wetlands, plant trees, and offer land protection in key areas. Habitat improvement and protection for copperbellies will also help frogs and turtles, ducks and deer, and variety of other wildlife.

What can I do to help prevent the extinction of the Copperbelly Water Snake?

Learn: Learn more about the copperbelly water snake and other endangered and threatened species. Understand how our choices in land use can lead to the destruction of habitat, which in turn leads to loss of endangered and threatened species and our nation's plant and animal diversity. Tell others about what you have learned.

Conserve: Protecting and improving habitat is often the best way to benefit endangered or threatened species, including the copperbelly. Actions taken to restore wetlands, plant trees, and reduce habitat fragmentation are essential to the long-term survival of the copperbelly in the northern part of its range. Technical assistance and cost share may be available through government programs to assist with these efforts.

Engage: If you think you have seen a copperbelly in Hillsdale County, Michigan, Williams County, Ohio or Steuben County, Indiana, please

report sightings (with a photograph if possible) by sending an e:mail to the Fish and Wildlife Service at copperbelly@fws.gov.

Please - only report sightings from these or adjacent counties. At this time, we do not have staff to respond to sightings outside of this area.

What are the benefits of helping an endangered or threatened species?

Supports other wildlife: Actions taken to provide habitat for the copperbelly and other listed species also benefit a variety of wildlife that uses similar habitat.

Supports community interests: Preserving habitat often helps to maintain good water quality and open space. These factors are important to the "quality of life" in many communities.

Provides economic return: Government funds are often available to support habitat conservation and restoration programs that benefit endangered or threatened species. Use of these funds to help listed species may also assist private landowners with achieving their goals on their property. In addition, communities that have "adopted" a species have often benefitted from tourism dollars.

U.S. Fish & Wildlife Service
5600 American Blvd. West,
Suite 990
Bloomington, Minnesota 55437
612/713-5350
<http://www.fws.gov/midwest/endangered>