



## Fish

## Resource Brief

### Importance

Fish and aquatic communities are excellent indicators of watershed health and water quality. They are sensitive to many factors including pollution, stream physical habitat, and diseases and invasive organisms.

Fish are also a vital part of ecosystems, consuming plankton, crustaceans, insects, and other organisms and in turn providing food for birds of prey, river otters, raccoons, and other creatures.

### Inventory and Monitoring

Assessment of fish populations is part of a broader effort by the National Capital Region Network (NCRN) Inventory & Monitoring (I&M) program to assess the condition of streams and watersheds.

While fish monitoring is not conducted in the C&O Canal National Historical Park (CHOH)<sup>1</sup>, a significant inventory effort was made by NCRN between 2002 and 2004. The primary objective of the inventory was to establish species distributions and to provide an ecological assessment of water resources using an index of biotic integrity (IBI).

This brief presents a full species list of the fish found during inventory efforts at CHOH. Other inventory outcomes including Fish Index of Biotic Integrity (FIBI) scores, and discussion of data gathered was previously published in an report by Raesly in 2004 (see References, on reverse) and is not repeated here. This data was also published in the 2014 Natural Resource Condition Assessment for C&O (see References) with a series of maps depicting FIBI scores geographically along the length of the park.

<sup>1</sup> A large number of wadeable streams cross CHOH, but are only on park property for a few hundred meters at most. As a consequence, the park has little influence over any stream, and each stream influences only a small portion of the park.



Margined madtom (*Noturus insignis*) were found during fish sampling at C&O Canal National Historical Park.

Photo: <http://cnre.vt.edu/efish/>,  
Bob Jenkins & Noel Burkhead

### Discussion

NCRN inventory efforts collected 61 species within and adjacent to the park including several rare species. Two cold-water species with relict distributions in the mid-Atlantic region were found in small, spring-fed streams in the upper Potomac basin in Washington County, MD: the checkered sculpin (*Cottus n. sp.*) and the pearl dace (*Margariscus margarita*). Another cold-water species of conservation interest that occurs in CHOH is the brook trout (*Salvelinus fontinalis*). We found a small isolated population in an unnamed tributary to the Potomac River at Pigman's Ferry Campground W Oldtown, Maryland.

Warmwater species of conservation significance that are present in CHOH are the comely shiner (*Notropis amoenus*) and the white catfish (*Ameiurus catus*).

[See reverse for species list.]

### More Information

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<http://science.nature.nps.gov/im/units/ncrn>

[http://science.nature.nps.gov/im/units/ncrn/monitor/stream\\_survey/index.cfm](http://science.nature.nps.gov/im/units/ncrn/monitor/stream_survey/index.cfm)



## Species List

[All fish found at C&O Canal NHP during inventory efforts by NCRN I&M.]

American eel (*Anguilla rostrata*)  
banded killifish (*Fundulus diaphanus*)  
black crappie (*Pomoxis nigromaculatus*)  
blacknose dace (*Rhinichthys atratulus*)  
bluegill (*Lepomis macrochirus*)  
Blue Ridge sculpin (*Cottus caeruleomentum*)  
bluntnose minnow (*Pimephales notatus*)  
\*brook trout (*Salvelinus fontinalis*)  
brown bullhead (*Ameiurus nebulosus*)  
\*brown trout (*Salmo trutta*)  
central stoneroller (*Campostoma anomalum*)  
\*chain pickerel (*Esox niger*)  
channel catfish (*Ictalurus punctatus*)  
checkered sculpin (*Cottus* n. sp.)  
comely shiner (*Notropis amoenus*)  
common carp (*Cyprinus carpio*)  
common shiner (*Luxilus cornutus*)  
creek chub (*Semotilus atromaculatus*)  
creek chubsucker (*Erimyzon oblongus*)  
cutlip minnow (*Exoglossum maxillingua*)  
eastern mosquitofish (*Gambusia holbrooki*)  
eastern mudminnow (*Umbra pygmaea*)  
eastern silvery minnow (*Hybognathus reguis*)  
fallfish (*Semotilus corporalis*)  
fantail darter (*Etheostoma flabellare*)  
fathead minnow (*Pimephales promelas*)  
golden redhorse (*Moxostoma erythrurum*)  
golden shiner (*Notemigonus crysoleucas*)  
goldfish (*Carassius auratus*)  
greenside darter (*Etheostoma blennioides*)  
green sunfish (*Lepomis cyanellus*)  
\*largemouth bass (*Micropterus salmoides*)  
longear sunfish (*Lepomis megalotis*)  
longnose dace (*Rhinichthys cataractae*)  
marginated madtom (*Noturus insignis*)  
northern hogsucker (*Hypentelium nigricans*)  
pearl dace (*Margariscus margarita*)  
Potomac sculpin (*Cottus girardi*)  
pumpkinseed (*Lepomis gibbosus*)  
rainbow darter (*Etheostoma caeruleum*)  
\*rainbow trout (*Oncorhynchus mykiss*)  
redbreast sunfish (*Lepomis auritus*)  
river chub (*Nocomis micropogon*)  
rock bass (*Ambloplites rupestris*)  
rosyface shiner (*Notropis rubellus*)  
rosyside dace (*Clinostomus funduloides*)  
satinfin shiner (*Cyprinella analostana*)  
shielded darter (*Percina peltata*)  
silverjaw minnow (*Notropis buccatus*)  
\*smallmouth bass (*Micropterus dolomieu*)  
spotfin shiner (*Cyprinella spiloptera*)  
spottail shiner (*Notropis hudsonius*)  
sunfish hybrids (*Lepomis hybrids*)  
swallowtail shiner (*Notropis procne*)  
tessellated darter (*Etheostoma olmstedii*)  
\*walleye (*Stizostedion vitreum*)  
warmouth (*Lepomis gulosus*)  
white catfish (*Ameiurus catus*)  
white crappie (*Pomoxis annularis*)  
white sucker (*Catostomus commersonnii*)  
yellow bullhead (*Ameiurus natalis*)  
yellow perch (*Perca flavescens*)

\*indicates game fish

## References:

- NCRN Monitoring Information for Fish, Physical Habitat, and Aquatic Macroinvertebrates. [http://science.nature.nps.gov/im/units/ncrn/monitor/stream\\_survey/index.cfm](http://science.nature.nps.gov/im/units/ncrn/monitor/stream_survey/index.cfm).
- Raesly, R.L, et al. 2004. Inventory and Biological Monitoring of Fishes in National Parks of the National Capital Region. <https://irma.nps.gov/App/Reference/Profile/580767>.
- Thomas, J.E. et al. 2014. Chesapeake and Ohio Canal National Historical Park Natural Resource Condition Assessment: National Capital Region. Natural Resource Report NPS/CHOH/NRR-2014/760. National Park Service, Fort Collins, Colorado. <https://irma.nps.gov/App/Reference/Profile/2206698>.