



STREAM FISHES OF OHIO *field guide*

DIVISION OF WILDLIFE



INTRODUCTION

STREAM FISHES OF OHIO

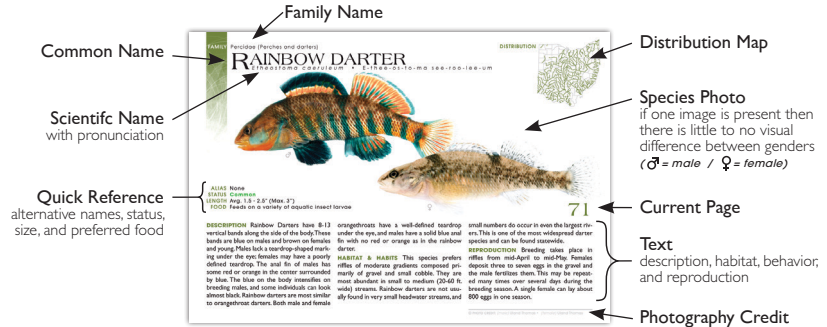
Text by: Brian Zimmerman

Ohio's diverse landscape is laced with over 60,000 miles of streams, and these aquatic habitats are among our most important landscape features. Over 170 species and subspecies of fish inhabit our lakes and waterways; a fabulous diversity of one of our most interesting groups of animals.

Stream Fishes of Ohio includes the most common species found in the Buckeye State. We hope that this booklet helps increase your understanding of the fascinating underwater world that lies beneath the surface of Ohio's myriad creeks and rivers. This publication was made possible in part through donations to the Wildlife Diversity Fund, purchases of the Ohio Wildlife Legacy Stamp, and donations to the Ohio Income Tax Checkoff (line for optional donation on your Ohio state income tax form).

This booklet is produced by the ODNR Division of Wildlife as a free publication. **This booklet is not for resale.** Any unauthorized reproduction is prohibited. All images within this booklet are copyrighted by the Division of Wildlife and it's contributing artists and photographers. For additional information, please call 1-800-WILDLIFE.

HOW TO USE THIS BOOK



The ODNR Division of Wildlife is the state agency responsible for managing Ohio's fish and wildlife resources. The primary source of funding for the division comes from the sale of hunting and fishing licenses, federal excise taxes on hunting, fishing, and shooting equipment, and donations from the public. We care about all wildlife and maintaining stable, healthy wildlife populations. Our challenge is to balance the needs of wildlife, habitat, and people.

STREAM FISHES OF OHIO

TABLE OF CONTENTS

04 Fish Watching	07 Ohio Basins	77 Funding & References
05 Stream Ecology & Conservation	08 Principal Rivers & Streams	78 Anatomy & Glossary
06 Types of Streams	10 Species Accounts	80 Sportfish State Records

SPECIES ACCOUNTS

NORTHERN LAMPREYS

- 10 Least Brook Lamprey

STURGEONS

- 11 Shovelnose Sturgeon

PADDLEFISHES

- 12 Paddlefish

GARS

- 13 Longnose Gar

FRESHWATER EELS

- 14 American Eel

CARP & MINNOWS

- 15 Tonguetied Minnow
- 16 Creek Chub
- 17 Hornyhead Chub
- 18 Striped Shiner
- 19 Central Stoneroller Minnow
- 20 Spotfin Shiner
- 21 Bluntnose Minnow
- 22 Streamline Chub
- 23 Suckermouth Minnow
- 24 Western Blacknose Dace
- 25 Longnose Dace
- 26 Redside Dace
- 27 Southern Redbelly Dace
- 28 Redfin Shiner
- 29 Scarlet Shiner
- 30 Sand Shiner
- 31 Silverjaw Minnow
- 32 Popeye Shiner

SUCKERS

- 33 Creek Chubsucker
- 34 Northern Hog Sucker
- 35 Common White Sucker
- 36 Quillback Carpsucker
- 37 Golden Redhorse
- 38 River Redhorse
- 39 Smallmouth Redhorse

NORTH AMERICAN CATFISH

- 40 Channel Catfish
- 41 Flathead Catfish
- 42 Stonecat Madtom
- 43 Tadpole Madtom
- 44 Brindled Madtom
- 45 Mountain Madtom
- 46 Yellow Bullhead

TOPMINNOWS

- 47 Blackstripe Topminnow

PIKES

- 48 Grass Pickerel

MUDMINNOWS

- 49 Central Mudminnow

CHAR, SALMON, TROUT, & WHITEFISH

- 50 Brook Trout

TROUT-PERCHES

- 51 Trout-perch

NEW WORLD SILVERSIDES

- 52 Brook Silverside

STICKLEBACKS

- 53 Brook Stickleback

SCULPINS

- 54 Mottled Sculpin

SUNFISH

- 55 Rock Bass
- 56 Smallmouth Bass
- 57 Spotted Bass
- 58 Orangespotted Sunfish
- 59 Longear Sunfish
- 60 Green Sunfish

DARTERS & PERCH

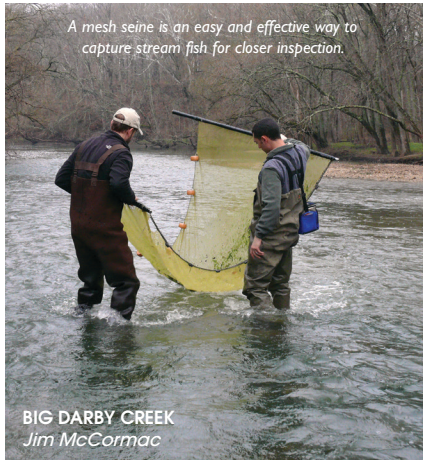
- 61 Eastern Sand Darter
- 62 Johnny Darter
- 63 Fantail Darter
- 64 Banded Darter
- 65 Greenside Darter
- 66 Variegated Darter
- 67 Tippecanoe Darter
- 68 Bluebreast Darter
- 69 Spotted Darter
- 70 Orangethroat Darter
- 71 Rainbow Darter
- 72 Blackside Darter
- 73 Dusky Darter
- 74 Logperch Darter
- 75 Slenderhead Darter
- 76 Sauger

ON THE COVER
RAINBOW DARTER | PHOTO BY JIM MCCORMAC

4

FISH WATCHING

Fish are far more challenging to observe than deer in a meadow, birds at your feeder or butterflies in the garden. For those willing to wet their feet, it is possible to “fish-watch,” and admire these fascinating creatures in their natural habitats. If the water is reasonably clear, it is surprising how well fish can be observed, and how many of them can be identified with practice. Stream species such as creek chub, black-striped topminnows, and long-nosed gar are often easy to see and recognize. Even various darter species can be observed as they forage in shallow riffles.



To really get a handle on what lurks in the depths, professionals such as Ohio Division of Wildlife fisheries biologists use an electroshocker. This device sends an electrical current into the stream, which in turn stuns any fish within a small radius. Biologists can easily net the stunned fish, collect data, and release the animals unharmed. However, this method requires extensive training and special permits, and is out of reach for most people.

An easier – and legal – way to capture fish for observation is to use a seine, such as the one being used in the accompanying photo. Many species of fish are easy to capture in this way, allowing them to be closely inspected. This booklet can be used to help identify them. Always keep captured fish moist and not out of the water for extended periods. After examination, they can be released unharmed.

⚠ NOTE ⚠

Collecting fish by any means, even for short-term examinations, and eventual release requires an Ohio fishing license. Part of the funds generated by license sales goes towards stream conservation, research, and education. Never keep state-listed endangered or threatened species.

ADDITIONAL RESOURCES

Ohio’s many waterways contain species not identified in this booklet. The Ohio Division of Wildlife offers a free online *A - Z Species Guide* containing information on all common and native fishes. Visit wildohio.gov to search the *A - Z Species Guide* and reference Ohio’s current fishing laws.

For additional information on Ohio’s fishes and fishes across the country visit nanfa.org. The North American Native Fishes Association (NANFA) is a not-for-profit, tax-exempt corporation dedicated to the appreciation, study, and conservation of the continent’s native fishes.



A male restdace being released in a Cuyahoga River tributary

5 STREAM ECOLOGY AND CONSERVATION

EVERYBODY LIVES DOWNSTREAM

Good stream stewardship is vital to the conservation of our natural resources. By safeguarding waterways, not only do we protect the fishes and other aquatic organisms that live in them, but overall water quality is improved, and that affects everyone in the watershed.

The simplest way to protect streams is to protect riparian buffers – the natural stream-side vegetation. Plants hold and stabilize stream banks, shade and cool the water, and provide valuable habitat for a variety of terrestrial animals. Many plants are specifically adapted to live along streams, such as the sycamore. These giant trees in turn often support specialized animals such as the beautiful yellow-throated warbler (once known as the sycamore warbler).

Fish play important roles within the stream. They are voracious predators of insects and other invertebrates, and in turn serve as food for other animals. Birds such as great blue herons, green herons, and belted kingfishers are prolific consumers of fish. Many mammals also eat fish, including mink, raccoons, and river otters. Fish are essential in the lifecycles of many freshwater mussels as well. In one of nature's odder reproductive systems, fish-dependent

mussels blast larval mussels, known as glochidia, into the gills of a suitable host fish. The young mussels are protected within the fish gills, and once they mature to a certain point, drop off and begin an independent life on the stream bottom.



SYCAMORE TREE
Jim McCormac

White and brown-barked sycamore trees are a common sight along streams, and play an important role in stream ecology.

The Ohio Division of Wildlife has long played a strong role in the conservation of the state's streams and fisheries. In fact, the Division originally formed in 1873 as the Ohio Fish Commission. To this day, fisheries management is one of the Division of Wildlife's major missions, involving two research stations, six fish hatcheries, and numerous ongoing research and survey projects. The Division of Wildlife is also actively involved in various stream restoration and habitat acquisition projects, which often involve a variety of outside partners.

YOU CAN HELP

One of the easiest ways to support stream conservation is to buy a fishing license. Part of your investment helps to pay for fish conservation, habitat restoration, research, and education. Also consider the purchase of an Ohio Wildlife Legacy Stamp. Stamp proceeds go to endangered species research, land acquisition, and the production of educational materials such as this free booklet. Information about fishing licenses, the stamp, and the Ohio Division of Wildlife can be found at wildohio.gov.

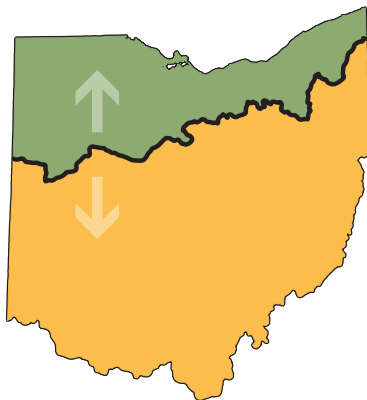


6

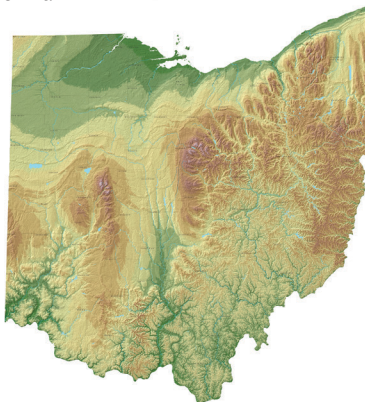
TYPES OF STREAMS

There are approximately 3,300 named streams in Ohio, and they encompass everything from tiny rivulets to the mighty Ohio River. Ohio is divided into two drainages: Ohio River, and Lake Erie. The southern two-thirds (seen below in yellow) of the state's streams flow into the Ohio River, and ultimately into the Mississippi River and the Gulf of Mexico.

Streams in the northern one-third of Ohio (seen below in green) enter Lake Erie, and their waters eventually enter the Niagara River, flow into Lake Ontario, then the St. Lawrence River, and on into the Atlantic Ocean.



Even the biggest rivers have to begin somewhere, and the uppermost reaches of a waterway is termed a headwater stream. Sometimes called “runs,” headwater streams typically drain less than 20 square miles and can often be jumped or easily waded. When two or more headwater streams join, a creek is formed. Creeks are usually small or medium-sized streams and drain less than 700 square miles. They are probably the most commonly explored type of waterway, and frequently contain riffles, pools, and other aquatic habitats used by most of the fishes included in this booklet.



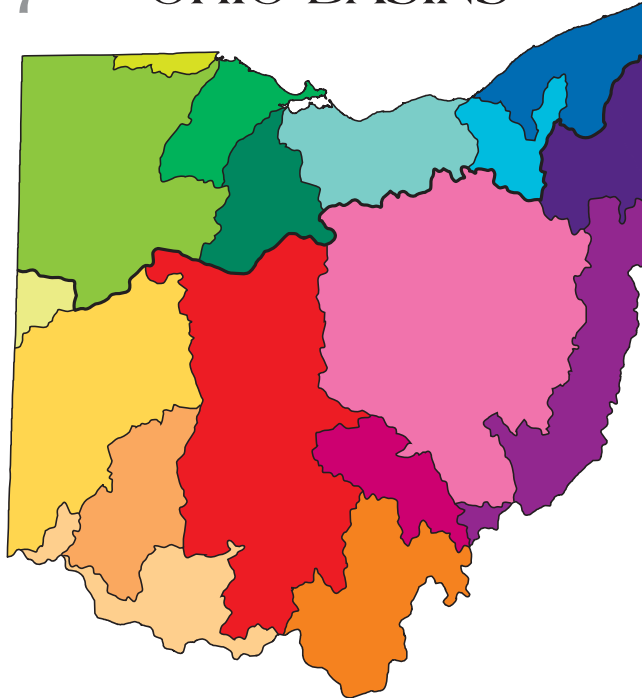
ELEVATION MAP OF OHIO
ODNR Geological Survey

The ultimate phase of headwater streams and creeks is rivers. Our largest streams, rivers usually are over 100 miles in length, drain watersheds of over 700 square miles, have high flow rates, and deepwater habitats. The largest Ohio rivers include the Great Miami, Maumee, Muskingum, Ohio, and Scioto rivers.

A prairie-type headwater stream fed by cold spring water slices through Liberty Fen State Nature Preserve in Logan County.



7 OHIO BASINS



A drainage basin acts as a funnel, collecting the surface water within an area covered by the basin and channelling it towards a single point. Each drainage basin is separated topographically from adjacent basins by a geographical barrier such as a ridge, hill or mountain, which is known as a water divide.

OHIO RIVER DRAINAGE

- Wabash Basin
- Great Miami Basin
- Ohio River West Basin
- Little Miami Basin
- South Point Basin
- Scioto Basin
- Hocking Basin
- Muskingum Basin
- Ohio River East Basin
- Mahoning Basin

LAKE ERIE DRAINAGE

- Lake Erie East Basin
- Cuyahoga Basin
- Lake Erie Central Basin
- Sandusky Basin
- Portage Basin
- Maumee Basin
- Ottawa Basin

Watershed management is the process of implementing means to sustain or enhance watershed functions that affect the plant, animal, and human communities within that basin boundary.

NORTH AMERICA BASINS

OCEAN BASINS

PACIFIC OCEAN DRAINAGE

- Yukon River Basin
- Pacific Shoreboard
- Colorado River Basin
- Columbia River Basin

ARCTIC OCEAN DRAINAGE

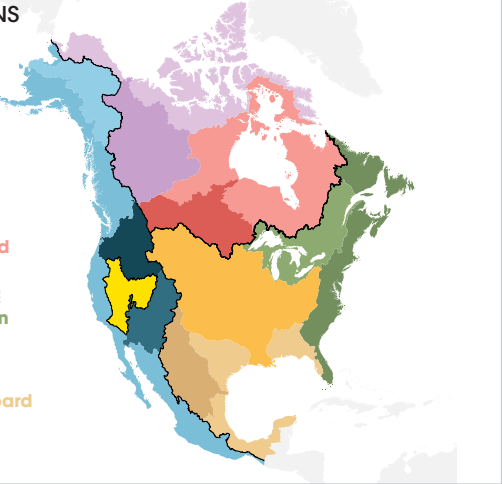
- Arctic Shoreboard
- Mackenzie River Basin
- Hudson Bay Shoreboard
- Nelson River Basin

ATLANTIC OCEAN DRAINAGE

- St. Lawrence River Basin
- Atlantic Shoreboard
- Mississippi River Basin
- Rio Grande Basin
- Gulf of Mexico Shoreboard

ENDORHEIC BASINS

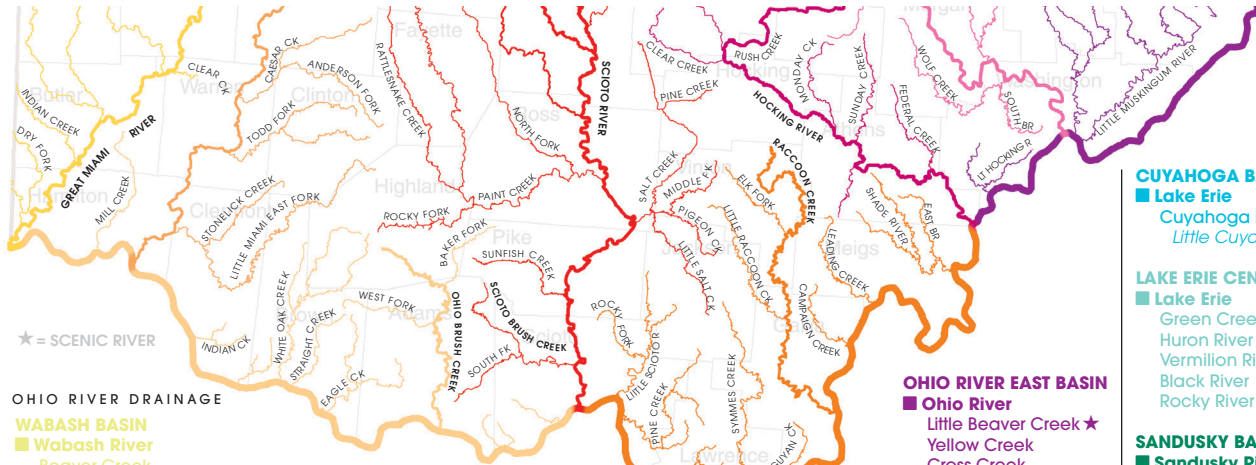
- The Great Basin



8

PRINCIPAL RIVERS AND STREAMS





★ = SCENIC RIVER

OHIO RIVER DRAINAGE

WABASH BASIN

- **Wabash River**
- Beaver Creek

GREAT MIAMI BASIN

- **Great Miami River**
- Loramie Creek
- Stillwater River
- Spring Creek
- Honey Creek
- Wolf Creek
- Twin Creek
- Clear Creek
- Seven Mile Creek
- Indian Creek
- Dry Fork
- Mad River

OHIO RIVER WEST BASIN

- **Ohio River**
- Mill Creek
- Indian Creek
- White Oak Creek
- Straight Creek
- Eagle Creek
- Ohio Brush Creek
- West Fork
- Baker Fork

LITTLE MIAMI BASIN

- **Little Miami River ★**
- Little Miami East Fork
- Todd Fork
- Caesar Creek

SOUTH POINT BASIN

- **Ohio River**
- Little Scioto River
- Pine Creek
- Ice Creek
- Symmes Creek
- Indian Guyan Creek
- Raccoon Creek
- Campaign Creek
- Leading Creek
- Shade River

SCIOTO BASIN

- **Scioto River**
- Scioto Brush Creek
- Sunfish Creek
- Salt Creek

- Paint Creek
- Rattlesnake Creek
- Rocky Fork
- Deer Creek
- Big Darby Creek ★
- Little Darby Creek ★
- Little Walnut Creek
- Big Walnut Creek
- Alum Creek
- Blacklick Creek
- Olentangy River ★
- Wheatstone Creek
- Mill Creek
- Bakes Creek
- Little Scioto

HOCKING BASIN

- **Hocking River**
- Federal Creek
- Sunday Creek
- Monday Creek
- Clear Creek
- Rush Creek

MUSKINGUM BASIN

- **Muskingum River**
- Wolf Creek
- South Branch
- Moxahala Creek
- Jonathan Creek
- Licking River
- Rocky Fork
- Wills Creek
- Walhonding River
- Kokosing River ★
- North Branch ★
- Mohican River ★
- Killbuck Creek
- Apple Creek
- Tuscarawas River
- Stillwater Creek
- Conotton Creek
- Sugar Creek
- Sandy Creek

OHIO RIVER EAST BASIN

- **Ohio River**
- Little Beaver Creek ★
- Yellow Creek
- Cross Creek
- Short Creek
- Wheeling Creek
- McMahon Creek
- Captina Creek
- Sunfish Creek
- Little Muskingum River
- Little Hocking River

MAHONING BASIN

- **Beaver River (PA)**
- Mahoning River
- Mosquito Creek
- Meander Creek
- Eagle Creek
- Shenango River (PA)
- Pymatuning River
- Yankee Creek

LAKE ERIE DRAINAGE

LAKE ERIE EAST BASIN

- **Lake Erie**
- Chagrin River ★
- Grand River ★
- Ashtabula River ★
- Conneaut Creek ★

- CUYAHOGA BASIN**
- **Lake Erie**
- Cuyahoga River ★
- Little Cuyahoga River

LAKE ERIE CENTRAL BASIN

- **Lake Erie**
- Green Creek
- Huron River
- Vermilion River
- Black River
- Rocky River

SANDUSKY BASIN

- **Sandusky River ★**
- Wolf Creek
- Honey Creek
- Tymochtee Creek
- Broken Sword Creek

PORTAGE BASIN

- **Portage River**
- Portage River
- Middle Fork
- East Branch
- Muddy Creek

MAUMEE BASIN

- **Maumee River ★**
- Tiffin River
- St. Joseph River
- St. Marys River
- Auglaize River
- Blanchard River
- Ottawa River
- Swan Creek

OTTAWA BASIN

- **Ottawa River**
- Ten Mile Creek

FAMILY Petromyzontidae (Northern Lampreys)

LEAST BROOK LAMPREY

Lampetra aepyptera • Lam-pet-ra e-pip-ter-ah

DISTRIBUTION



10

ALIAS Lamprey
STATUS Common
LENGTH Avg. 4-6" (Max. 7")
FOOD Organic matter and microscopic organisms

DESCRIPTION All lampreys have a long eel-like body and no scales. They have segments of muscles that are visible along their body called myomeres, and a jawless mouth. In larval lampreys, called ammocoetes, their mouth is not fully developed, very small, and hidden between folds of skin. Adults have a disc-shaped mouth with varying amounts of teeth depending on the species. The least brook lamprey has a deeply notched dorsal fin, separating it into two distinct parts. They have 54-62 myomeres (muscle segments) between the last gill opening and the anus. The disc-like mouth of the adults contains large teeth only in the center. Any teeth on the outer portion of the disc are very small and difficult to see. Adults are dark tan above and lighter below prior to spawning. During spawning,

adults become blue-black in color. The least brook lamprey is most similar to the American brook lamprey and sea lamprey in Ohio. The sea lamprey is much larger reaching an adult size of as much as 25 inches and is a light brown with darker speckles or blotches. Both the American brook and sea lampreys have more than 62 myomeres between the last gill opening and the anus. All other Ohio lamprey species have only a single long dorsal fin.

HABITAT & HABITS All non-parasitic lampreys require two distinctly different habitats that are connected by free-flowing (free of dams) stretches of streams. Adults are found in clear brooks with fast flowing water and either sand or gravel bottoms. Juveniles or ammocoetes are found in sluggish water, where they bury themselves in soft substrate of medium to large streams. The least brook lamprey is native to the Ohio River drainage. This is Ohio's most common lamprey. In some areas, such as the

Hocking Hills region, large spawning groups can be witnessed in very small rocky streams in the spring.

REPRODUCTION Least brook lamprey spawn in March and April in shallow pits that are excavated near the upper ends of gravel riffles. These pits are created communally with as many as 20 individuals constructing one pit. They use their suction-cup-like mouth to move stones away to form the pit. A single female can deposit as many as 1,100 eggs. After hatching, the ammocoetes burrow into the sediment. During this phase, least brook lamprey eat organic particles strained from bottom sediments and the water, as well as microscopic organisms. After at least three years, the ammocoetes transform into a non-parasitic adult in the late summer or fall. Adults remain in the smaller streams and do not feed. The following spring they spawn and then die shortly after.



only in the center. Any teeth on the outer portion of the disc are very small and difficult to see. Adults are dark tan above and lighter below prior to spawning. During spawning,

FAMILY Acipenseridae (Sturgeons)

SHOVELNOSE STURGEON

Scaphirhynchus platyrhynchus • Skaf-ih-rin-kus plat-oh-rin-kus

DISTRIBUTION



ALIAS None

STATUS Endangered

LENGTH Avg. 18-30" (Max. 36")

WEIGHT Avg. 1-5 lbs (Max. 10 lbs)

FOOD Freshwater mussels, snails, and other aquatic invertebrates

DESCRIPTION The shovelnose sturgeon is a native species and is the smallest sturgeon species found in North America. Their snout is broad and flat which gives them the name "shovelnose," and the body is covered in armored plates rather than scales. The only other similar species in Ohio is the lake sturgeon, a rare species of Lake Erie.

HABITAT & HABITS The shovelnose sturgeon is a large river species that prefers sand and gravel substrates with rather fast current. Historically they were abundant in the Ohio River

all the way upstream to the Pennsylvania line. They steadily decreased in abundance in the Ohio River after 1910 when the present day lock and dam system was first constructed. Today shovelnose sturgeon are a rare find in Ohio. Small numbers can still be found in the Ohio River from Portsmouth to the Indiana line and in the lower Scioto River. If captured they must be released immediately because of their endangered status.

REPRODUCTION The largest females produce a maximum of 50,000 eggs. Spawning occurs

over gravel substrates in swift current from April through June when water temperatures range from 65 to 70 °F. Female shovelnose sturgeon are reported to reach sexual maturity at five to seven years of age and do not spawn every year. Aging studies from the Mississippi River report fish greater than age 12 are rare. This suggests that most female shovelnose sturgeon likely spawn only three to four times in their life. Young sturgeon hatched in the spring reach lengths of six to eight inches by October of their first year.

11

FAMILY Polyodontidae (Paddlefish)

PADDLEFISH

Polyodon spathula • Pol-ee-oh-don spath-u-la

DISTRIBUTION



12

- ALIAS** Spoonbill
STATUS Threatened
LENGTH Avg. 24-48" (Max. 60")
WEIGHT Avg. 5-20 lbs (Max. 150 lbs)
FOOD Paddlefish filter zooplankton and small insect larvae from the water with their long gill rakers

DESCRIPTION Paddlefish are unique with their long paddle-shaped snout. They have a large mouth with no teeth, very small eyes and no scales. The skeleton is made completely of cartilage. There is no other North American fish species that resembles them.



HABITAT & HABITS Paddlefish are found in the Ohio River and up to the first dam on its larger tributaries. They prefer the sluggish pools and backwater areas of these rivers and streams. Historically they were much more common and could be found as far up the Ohio River as Pennsylvania. It is also probable that there was a small population in Lake Erie at one time. Today paddlefish are most often seen in the Ohio River from Portsmouth downstream to the Indiana state line.

REPRODUCTION Paddlefish spawn in the spring during periods of high flow. The female scatters eggs over submerged gravel and cobble bars. The young hatch and drift down stream to deeper pools with slow water.

FAMILY Lepisosteidae (Gars)

LONGNOSE GAR

Lepisosteus osseus • Lep-ih-sos-tee-us oss-ee-us

DISTRIBUTION



ALIAS Needlenose gar
STATUS Sportfish
LENGTH Avg. 24-36" (Max. 50")
WEIGHT Avg. 2-7 lbs (Max. 25 lbs)
FOOD Small fish, primarily minnows or gizzard shad

DESCRIPTION The longnose gar has a very long and narrow snout containing many needle-like teeth. Their body is long and cylindrical, covered with diamond-shaped, hard, non-overlapping scales. They are olive or brownish colored on their back with a white belly. When caught from clear waters they often have numerous dark spots on their sides, fins, and tail. Longnose gar have a much longer snout than any other species of gar. Additionally they have fewer spots than the spotted gar, but typically more than the shortnose gar.

HABITAT & HABITS Longnose gar are by far the most common species of gar found in Ohio. They can be found in both the Lake Erie

and Ohio River drainages. Gar occupy medium to large rivers and prefer areas of little or no flow with clear water. They are also found in the harbors, bays, and other backwaters of Lake Erie. All species of gar have a specialized air bladder that gives them the ability to breathe air. They can often be seen briefly poking their beak from the water as they take in a gulp of air. Even though gar can breathe air they are not obligated to do so and also have fully functional gills like other fish.

REPRODUCTION Spawning takes place in late May or early June, often in shallow riffles. Longnose gar migrate into smaller streams to spawn. Larger females are often chased by two

or more smaller males during courtship. The rather large eggs are sticky and adhere to the substrate or aquatic plants. One female produces about 30,000 eggs a year; they hatch about a week after being laid. Newly hatched gar of all species have an adhesive disc on the top of their head which they use to anchor them selves to objects until their yolk sac is absorbed and they begin feeding. Longnose gar attain a length of 12-15 inches in their first year. Males mature at two to three years of age and a length of about 24 inches. Females mature at three to four years of age and a length of 28 or more inches.

13

FAMILY Anguillidae (Freshwater Eels)

AMERICAN EEL

Anguilla rostrata • An-gwil-ah ros-tray-ta

DISTRIBUTION



ALIAS Eel, freshwater eel

STATUS Threatened

LENGTH Avg. 15-40" (Max. 52")

WEIGHT Avg. 1-3 lbs (Max. 7 lbs)

FOOD Fish or crayfish, but will feed upon anything they can overpower

DESCRIPTION American eels are brownish, with a slender snake-like body and a small pointed head. The dorsal fin is long, extending more than half the length of the body and connecting the tail and anal fins. They have short rounded pectoral fins and no pelvic fins. The mouth has numerous small teeth. Adult eels are very muscular and difficult to hold because they secrete a slimy substance when threatened. Male eels grow to about 18 inches, but females can reach up to 52 inches in length.

HABITAT & HABITS The American eel may be found at times in any stream in Ohio, and in Lake Erie. They occur most often in moderate or large rivers with continuous flow and moderately clear water. While in fresh water, eels are secretive and hide in deep pools around cover, sometimes burying themselves during the day and coming out to feed at night.

REPRODUCTION Adult American eels migrate to the Sargasso Sea, a calm area in the southeast section of the Atlantic Ocean, to spawn and then die. The female lays up to four million buoyant eggs, which are fertilized by the male. After hatching, young eels migrate toward North America and enter freshwater systems. They mature while migrating upriver.

14

FAMILY Cyprinidae (Carp and Minnows)

TONGUETIED MINNOW

Exoglossum laurae • Ex-oh-glos-um lor-ee

DISTRIBUTION



15

ALIAS None
STATUS Threatened
LENGTH Avg. 3-5" (Max. 6")
FOOD Various aquatic invertebrates

DESCRIPTION The Western tonguetied minnow gets its name from its odd mouth. Most minnows have fleshy lips on both the upper and lower jaw. However, in this species only the outer one-third of the lower lips on either side of the mouth are covered with fleshy lobes. The center of the lower jaw projects forward as a bony sheath without fleshy lips. The odd mouth is subterminal and rather small. This species has a dark slate-gray to brown back, lighter gray or brown sides with purplish flecks or reflections, and a white or light cream-colored belly. Young Western tonguetied minnows have a faint mid-lateral stripe which is very faded or absent in adults.

HABITAT & HABITS The Western tonguetied minnow is only found in southwest Ohio in the Great Miami and Little Miami river systems. They were once well distributed in the upper portion of both of these river systems, but today can only be found in the Mad River and associated tributaries. There may still be a few in the extreme upper portion of the Little Miami River. This species is very intolerant of turbid waters and needs a clean gravel and pebble stream bottom. They also rely on forested and undercut stream banks, and alternating riffle-pool habitats. Lastly, they may need somewhat cooler water temperatures than the average Ohio stream has in summer.

REPRODUCTION The Western tonguetied minnow spawns in May when water temperatures reach 60 degrees F. Males construct large nests made by placing small pebbles in a rectangular pile. This pile, which lies perpendicular to the flow of the stream, can be one to four feet long and 8-18 inches wide. Spawning occurs above this nest and males continue to pile more pebbles on top of the nest between spawning events. Once spawning is finished the nest and eggs are left unguarded.

FAMILY Cyprinidae (Carp and Minnows)

CREEK CHUB

Semotilus atromaculatus • Sem-oh-til-us at-ro-mak-u-late-us

DISTRIBUTION



16

ALIAS Chub, horn chub
STATUS Common
LENGTH Avg. 4-8" (Max. 12")
FOOD Feeds on a wide variety of aquatic and terrestrial insect larvae and other invertebrates. Large creek chubs will eat small crayfish and fish

DESCRIPTION Creek chubs have a thick body and a broad head. The mouth is large, and the back end of the upper jaw extends beyond the front edge of the eye. They also have a small flap-like barbel that is often hidden in the groove between the upper jaw and the rest of the head. There is a dark spot on the front edge of the dorsal fin where it attaches to their body. A dark stripe runs the full length of the body. This stripe is darker on young fish and fish caught in clear water; it can be faint or absent on large adults, especially males. Large adult breeding males have a rusty orange-red color to their cheeks, lips, and much of the belly and lower fins. They may also show some of this color on their dorsal fin. Breeding males

also have a dark bar just behind the gills and have many large tubercles on top of the head. The similar river and hornyhead chubs have slightly smaller mouths that end in front of the eye, no dark base at the front of the dorsal fin, and dark edges to their scales, giving them a crosshatched pattern.

HABITAT & HABITS Creek chub are one of the most common fish in Ohio and are found throughout the state. They are most abundant in small streams where they are often the top predator. This is a tolerant species that can withstand a wide variety of water conditions.

REPRODUCTION Creek chubs spawn in early spring when water temperatures reach 55 degrees F. The males select spawning sites

in small streams in smooth water with gravel substrate near a riffle. Males dig a pit by sweeping their tail against the stream bed and moving gravel away with their mouth. After spawning occurs they fill in the pit, burying the eggs, with small pebbles creating a mound. The male will then dig a new pit immediately downstream of the pile of pebbles. As spawning continues this activity creates a ridge of pebbles that can be a foot across and several feet long. Many other smaller species of fish will sneak in and spawn in the chub nest. Thus, they take advantage of the way the male creek chub aggressively defends the nest, which ensures their eggs are protected as well.

FAMILY Cyprinidae (Carp and Minnows)

HORNYHEAD CHUB

Nocomis biguttatus • No-ko-mis big-u-tate-us

DISTRIBUTION



17

ALIAS Chub

STATUS Common

LENGTH Avg. 4-7" (Max. 9")

FOOD Various aquatic invertebrates, and terrestrial insects that fall in the water

DESCRIPTION Hornyhead chub have a fairly large mouth that ends before it reaches the front of the eye. There is a small barbel in the rear corner on each side of the head. Dark edges rim the scales, which lends a cross-hatched pattern to the body. The dark brown contrasts with lighter brown or gold sides and a cream colored belly. A dark stripe down the side is most visible on young and non-breeding adults. The fins, particularly the tail, often have a slight red or orange tinge to the otherwise brown coloration. Hornyheads differ from the closely related river chub in having a shorter snout, slightly more terminal mouth, and a dark spot at the base of the tail which is most apparent in young and females. Adult breeding males differ from river chub in having a bright red spot behind the eye. Their breed-

ing tubercles (horn-like projections) on top of the head extend from slightly in front of the eye to well behind the eye above the gill covers. Hornyhead chubs can also be mistaken for creek chubs. However, those have a larger mouth extending just beyond the front edge of the eye, a dark base to the front edge of the dorsal fin, and lack the crosshatched body pattern formed by dark scale edges.

HABITAT & HABITS Hornyhead chub are found in small to medium-sized streams with a gravel or sand bottom. They are found in smaller streams than the closely related river chub and usually larger streams than creek chub. They also prefer slower currents than river chub. In Ohio they are common in the upper portion of Big and Little Darby Creeks, the up-

per Auglaize River, and the upper portion of the Cuyahoga River.

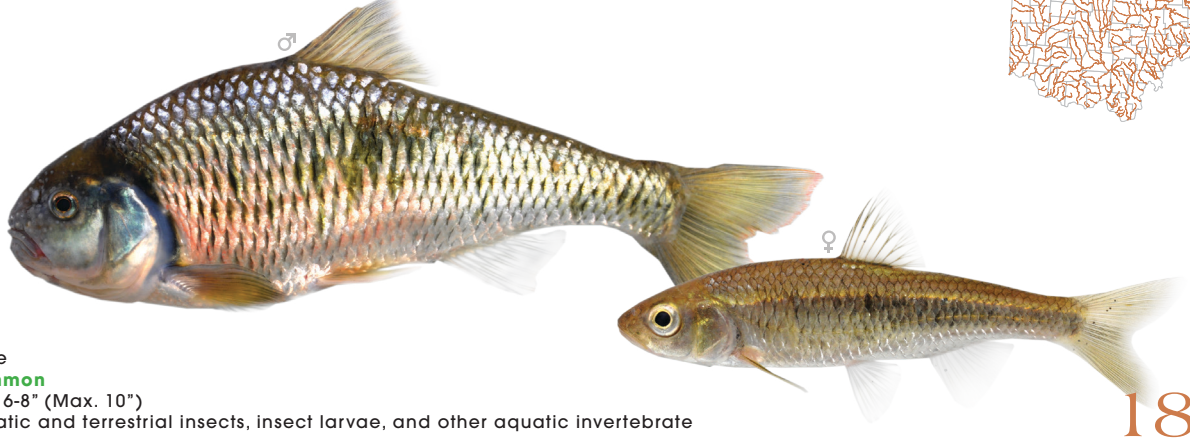
REPRODUCTION Hornyhead chubs spawn in April and May. The males select spawning sites in calm water with gravel substrate just above or below a riffle. At these sites, males build a mound by stacking up a pile of pebbles with their mouth. They spawn above this nest and continue to add to it between spawning events. As spawning continues this activity creates a round pebble mound that can be one to two feet across and six to eight inches high. Many other smaller species of fish will also sneak in and spawn in the nest of the chub. Thus, they take advantage of the way the male chub aggressively defends the nest, which ensures their eggs are protected as well.

FAMILY Cyprinidae (Carp and Minnows)

STRIPED SHINER

Luxilus chrysocephalus • Lux-il-us kry-so-cef-al-us

DISTRIBUTION



ALIAS None

STATUS **Common**

LENGTH Avg. 6-8" (Max. 10")

FOOD Aquatic and terrestrial insects, insect larvae, and other aquatic invertebrate

DESCRIPTION The striped shiner is deep-bodied and slab-sided. These minnows have large scales and silvery sides with a darker back. Their name stems from the series of dark stripes that run down the back. These stripes join in the center of the back behind the dorsal fin, forming "V" shapes. There are usually a few dark scales which look like dark blotches on the sides. The common shiner, which is only found in northern Ohio, is very similar. The best way to distinguish the two is to look at the back scales immediately behind the head. On a striped shiner these are relatively evenly

sized. On the common shiner they are smaller and appear squished together. Breeding male striped shiners become bright pinkish-red on their sides, lower fins, and rear edge of their tail. Small pointy tubercles also form on their head, which they use to defend territories from rival males.

HABITAT & HABITS Striped shiners are found throughout Ohio in small to medium streams. They prefer streams with relatively clear water and clean gravel and sand substrates. They are much more abundant than the similar common

shiner. Most of their time is spent in deeper pools, and they can often be seen eating insects off the surface. Striped shiners are frequently caught by fishermen.

REPRODUCTION Striped shiners spawn in large schools near riffles. Males dig shallow pits with their tails in coarse sand or fine gravel substrates. Many females then scatter their eggs into these shallow nests. After spawning, the adults return to deeper pools where they spend most of their time. After hatching the young drift downstream and frequent the edges of pools in shallow water.

© PHOTO CREDIT: (male) Brian Zimmerman • (female) Brian Zimmerman

FAMILY Cyprinidae (Carp and Minnows)

DISTRIBUTION

CENTRAL STONEROLLER MINNOW

Campostoma anomalum • Cam-pos-to-ma a-nom-al-um



ALIAS Dough belly, racehorse chub, rofgut minnow, steel-backed chub, stone lугers, stoneroller, tallow-mouth minnow

STATUS Common

LENGTH Avg. 3-5" (Max. 7") *Males are usually larger than females*

FOOD Algae and detritus that they scrape from rocks, logs, and other submerged objects with the spade-like extension of their lower jaw

19

DESCRIPTION Stonerollers are moderately stout brownish minnows with small eyes and short, rounded fins. The snout is bluntly rounded and projects beyond the nearly horizontal mouth. Their mouth is always white in color. Young and non-breeding adults usually have dark blotches over much of their body. Large breeding males have some orange and black on fins, large pointed tubercles on their head, and reddish-orange eyes.

HABITAT & HABITS The stoneroller is found throughout Ohio in moderate to high-gradient streams with sandy to gravelly substrate. They prefer areas where riffles and pools alternate in rapid succession. However, stonerollers are very tolerant and can survive in almost any stream with an adequate food supply. This is one of the most common species of stream fish in the state.

REPRODUCTION Stonerollers spawn between March and late May. Males dig spawning pits near riffles and aggressively defend their chosen site from other males. Females remain in deeper water near the spawning pits, and enter them individually or in groups to deposit eggs. The adhesive eggs become lodged in the gravel and are abandoned prior to hatching. Most stonerollers become sexually mature in their second or third summer.

© PHOTO CREDIT: (male) Uland Thomas • (female) Brian Zimmerman

FAMILY Cyprinidae (Carp and Minnows)

SPOTFIN SHINER

Cyprinella spiloptera • Sih-prih-nel-ah spil-op-ter-ah

DISTRIBUTION



ALIAS None

STATUS **Common**

LENGTH Avg. 2-4" (Max. 5")

FOOD Various aquatic invertebrates

DESCRIPTION Spotfin shiners are silver-blue with a darker back and light cream-colored belly. They are laterally compressed and have a distinctive diamond-shaped crosshatching pattern on the sides created by dark scale edges. There is a dusky blotch on the webbing of the dorsal fin near the midsection of the three rear fin rays. Additionally, this species has eight anal fin rays. Breeding male spotfin shiners have intensely steel-blue sides, and fins flushed with

white. The closely related steelcolor shiner differs by having a rounded rear edge to the dorsal fin, dark speckles of pigment in the front half of the dorsal fin, nine anal fin rays, and a slightly deeper body. Additionally, breeding male steelcolor shiners have a red-tipped snout and fins flushed with yellow rather than white. Breeding males of both species have white tips to the fins which are often visible to an observer above the water's surface.

HABITAT & HABITS Spotfin shiners are found throughout Ohio in a wide variety of habitats. They often become very abundant in areas with poor habitat for other species. They are one of the few minnow species able to thrive in Ohio's many reservoirs.

REPRODUCTION Spotfin shiners spawn in crevices between rocks or in bark on submerged fallen trees. Spawning takes place throughout the warmer months of the year starting in late May or early June.

20

FAMILY Cyprinidae (Carp and Minnows)

BLUNTNOSE MINNOW

Pimephales notatus • Pim-ef-al-ees no-tate-us

DISTRIBUTION



21

ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 4.5")
FOOD Algae, aquatic insect larvae, diatoms, small crustaceans, and other invertebrates

DESCRIPTION The bluntnose minnow has a stout half ray in front of the typical eight rays on the dorsal fin. The scales on the back between the head and dorsal fin are small and appear squished together. There is a dark spot of pigment on the first two or three dorsal rays about midway up the fin. This species has a rounded head and slightly subterminal mouth. There are dark edges to the scales which gives a crosshatched pattern over much of the body. Breeding males can be very dark in coloration, and have three rows of large pointed tubercles on the snout. They also have a spongy pad on the back between the head and dorsal fin. The bluntnose minnow differs from the closely

related fathead minnow by a dark mid-lateral stripe that runs from the snout to the tail, terminating in a dark tail spot. This stripe can be absent in fish from turbid waters, but the black spot is usually still visible. They also have a complete lateral line, which the fathead minnow does not have. Another closely related species, the bullhead minnow, differs by having a shorter, thicker body, and a dark crescent-shaped mark on the side of the snout. Both bullheads and fatheads lack the dark scale edges that give the bluntnose minnow a crosshatched appearance.

HABITAT & HABITS The bluntnose minnow is found throughout Ohio. It occupies a broad

range of habitats including lakes, ponds, rivers, and streams. They prefer shallow areas of clear water with sand and gravel bottoms.

REPRODUCTION Bluntnose minnows spawn repeatedly starting in May and continue into August. Males select the spawning site, usually under logs, branches or rocks in shallow water. They will also use artificial spawning sites in old tiles or pipes. Females lay adhesive eggs on the underside of the spawning structure. The male then aggressively defends the spawning site from other fish. Males also use the large spongy pad on the top of their body to clean the eggs the female has laid on the underside of the select object.

FAMILY Cyprinidae (Carp and Minnows)

STREAMLINE CHUB

Erimystax dissimilis • Er-im-ee-stax dis-im-il-iss

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-4" (Max. 4.5")
FOOD Various aquatic invertebrates such as stonefly or mayfly larvae

DESCRIPTION This is a small species of chub with no markings on the fins and a single small barbel in each of the rear corners of its mouth. Streamline chubs have a subterminal mouth, and a long slender body shape which gives it the "streamline" part of its name. They differ from the closely related gravel chub by having a series of 7-11 distinct dark dashes along the sides, a longer, more slender body, and bright

silvery sides rather than light straw-brown body coloration.

HABITAT & HABITS Streamline chub are found in medium to large streams and rivers in the Ohio River basin. They are highly intolerant of clayey silt and other pollutants, making this species a good indicator of high quality streams. Streamlines frequent areas of swift current near riffles, in one to four feet

of water over a clean gravel bottom. They are often found in slightly smaller streams than the closely related gravel chub. Streams with good populations of streamline chub in Ohio include the Kokosing River and Big Darby Creek.

REPRODUCTION Streamline chub likely spawn in spring or early summer, but little is known about their reproductive biology.

22

FAMILY Cyprinidae (Carp and Minnows)

SUCKERMOUTH MINNOW

Phenacobius mirabilis • Fen-ah-kobe-ee-us mer-ab-il-iss

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-4" (Max. 5")
FOOD Various aquatic invertebrates

23

DESCRIPTION Suckermouth minnows get their name from their distinctly subterminal mouth. This gives them the appearance of a small sucker. However, all species of suckers have the anal fin positioned closer to the tail and have more than eight dorsal fin rays. Suckermouth minnows have a narrow dark stripe down the side which ends in a dark spot at the base of the tail. Immediately above this dark line is a narrow gold line. They have a darker gray or brown back and a light cream to white belly. The sides of the body can be silvery or

light brown and there are no spots or other distinct markings on the fins.

HABITAT & HABITS Suckermouth minnows are found in medium to large rivers in swift riffles and gravel runs. They are very tolerant of turbidity and actually seem to have a preference for murky waters. Only when the swift riffles become covered in silt do they disappear from a given locality. Historically this species was probably not found in Ohio and may have been limited to the plains west of the Mississippi River. As prairies and forests were

cleared and streams and rivers became more turbid, the suckermouth minnow expanded its range eastward. The first individuals were found in Illinois and Indiana in 1876. Ohio's first specimens date from 1920. Since that time they have spread throughout Ohio and are common in many larger streams and rivers, particularly in the western part of the state.

REPRODUCTION Suckermouth minnows spawn in gravel riffles in April and May. No parental care is given to the eggs or young.

FAMILY Cyprinidae (Carp and Minnows)

WESTERN BLACKNOSE DACE

Rhinichthys obtusus • Rhy-nik-thees ob-toos-us

DISTRIBUTION



ALIAS Riffle dace

STATUS Common

LENGTH Avg. 2-3" (Max. 4")

FOOD Aquatic insect larvae and other invertebrates

DESCRIPTION Western blacknose dace have an olive to dark brown back, lighter sides, and a cream-colored belly. They also have black blotches scattered across their back and sides, and a dark mid-lateral stripe from the snout to the base of the tail. This stripe is black or brown in females (and young) and rusty red in males. The snout is relatively long, and the mouth is slightly subterminal. Like other species of dace, they have very small scales which lends a scaleless appearance. They differ from

the closely related longnose dace by having a shorter snout, larger eye, and a distinct mid-lateral stripe.

HABITAT & HABITS The blacknose dace is found in small streams and brooks in Ohio that have moderate or high gradients, clear waters, and clean substrates of sand, gravel, and cobble. These fish are typically found in fast water where there are overhanging roots or undercut banks. They can also be found in riffles hiding under large rocks or boulders. This species

is more tolerant of increased water turbidity than other Ohio stream dace, but disappears if riffle substrates become too silted.

REPRODUCTION Western blacknose dace spawn during spring and early summer in riffles over shallow gravel. Most spawn at two years of age and live for three or four years. Unlike other species of dace the two Ohio *Rhinichthys* species do not spawn in the nests of larger minnow species.

24

FAMILY Cyprinidae (Carp and Minnows)

LONGNOSE DACE

Rhinichthys cataractae • Ry-nik-thees cat-ar-ak-tee



DISTRIBUTION



ALIAS Riffle dace

STATUS Special interest

LENGTH Avg. 2-4" (Max. 5")

FOOD Various aquatic invertebrates such as stonefly or mayfly larvae

25

DESCRIPTION Longnose dace have a long snout that projects well beyond the tip of the lower jaw, resulting in a subterminal mouth. They also have a rather long and streamlined body. As with other dace species, they have very small scales, which creates a scaleless appearance. Longnose dace are olive to dark brown above, with black blotches, lighter brown sides, and a cream-colored belly. There are two light spots at the front and back base of the dorsal fin, visible when looking down on the fish. Males have red or orange lips, rear edge of gills, and base of all their lower fins.

The two light spots by the base of the dorsal fin are also often red or orange on males. They differ from the closely related Western blacknose dace by having a longer snout, smaller eye, and no distinct lateral stripe.

HABITAT & HABITS Longnose dace occur in rocky streams with steep gradients and swift currents. They can also be found in large lakes with rocky wave-swept shorelines. Longnose dace are found in small streams in the Chagrin River watershed, a few other small eastern Lake Erie tributaries, and in several small streams draining into the upper Ohio River.

In these streams they are found in the swiftest riffles. They can also be found along rocky shorelines of eastern Lake Erie. Here they are only found during the colder months of the year, and it is suspected they migrate to deeper waters during summer.

REPRODUCTION Longnose dace spawn during spring in fast riffles over shallow gravel. Most spawn at two years of age and live for three or four years. Unlike other species of dace, the two Ohio *Rhinichthys* species do not spawn in the nests of larger minnow species.

FAMILY Cyprinidae (Carp and Minnows)

REDSIDE DACE

Clinostomus elongatus • Clih-nos-to-mus e-lon-gate-us

DISTRIBUTION



ALIAS None

STATUS Common

LENGTH Avg. 3-4" (Max. 5")

FOOD Insects and various other aquatic invertebrates

26

DESCRIPTION The reddsidedace is a strikingly colored fish with a distinctive wide red band on its sides. This band, which extends from just behind the eye to the front edge of the anal fin, is a light red or pink on non-breeding fish and bright carmine-red on breeding males. Unlike most minnow species, the band is only slightly less intensely colored on breeding females. Above this band is a thin gold line which runs from the eye to the base of the tail. Above the gold line the back is dark olive-brown to deep green. Below the red band, the belly is white or light cream, and the fins have no spots or other distinct markings. Redside dace have a long

narrow body with very small scales, a large eye, and a distinctive large upturned mouth. The closely related rosidedace differs by being suffused with red or pink along the entire lower side, and the red reaches beyond the front of the anal fin. Rosidedace also have a smaller mouth, deeper body, and larger scales.

HABITAT & HABITS The reddsidedace is an indicator of very high quality small streams. This species is intolerant of turbidity and silt. They are attracted to deep pools with an abundance of woody debris. The small streams they frequent typically have rather high gradients, very clear cool water, and are in heavily forested

watersheds. This species is found in the eastern half of the state, with the exception of the Mad River in west-central Ohio.

REPRODUCTION Redside dace spawn in groups in late April or early May. Like many species of small minnows, they usually spawn in the nest of larger minnows or suckers. Creek chub, striped shiners, common shiners, and common white suckers are common hosts. These nests are found near fast riffles in coarse sand or fine gravel. Redside dace leave the eggs to be guarded by the larger host species and provide no parental care.

FAMILY Cyprinidae (Carp and Minnows)

SOUTHERN REDBELLY DACE

Chrosomus erythrogaster • Kro-so-mus er-ith-ro-gas-ter

DISTRIBUTION



ALIAS None

STATUS Common

LENGTH Avg. 2-3" (Max. 3.5")

FOOD Feeds in groups along the bottom on detritus (decaying organic matter) and some aquatic invertebrates

DESCRIPTION Southern redbelly dace have extremely small scales, which lends them a scaleless appearance. They have a distinctive coloration, unlike any other Ohio species of minnow and a relatively small terminal mouth. There is a row of small dark blotches down the center of the back, starting just behind the head and extending to the tail. A thin dark stripe extends from head to tail along the upper sides. Immediately below that is a wide silvery-gold stripe that runs from the eye to the tail. A second dark stripe goes completely around the tip of the nose, across the gills, and all the way down the sides to the tail. The lower sides and belly are white to yellowish-cream in young and non-breeding adults. The fins are light yellow to whitish and are nearly transpar-

ent. Breeding males are bright red across the entire belly and throat to the edge of the lower dark stripe. The fins are often bright lemon-yellow and sometimes there is a red spot at the base of the dorsal fin. Breeding females also have some red on their belly and yellow on fins, but they are not as distinctively colored.

HABITAT & HABITS Southern redbelly dace prefer small headwater streams with clear unpolluted water. Many of these streams are less than five feet wide and have moderate to high gradients with well developed pools and riffles. Suitable streams are found in shady, forested areas where the dace typically occupy pools with some flow and an abundance of hiding places such as undercut banks, down trees, and logs. This species relies heavily on the pres-

ence of these habitat features to sustain large populations. They are found throughout much of the state, but are absent in northwest Ohio where small streams tend to be sluggish with few riffles.

REPRODUCTION Southern redbelly dace spawn in large groups in late April or early May. Like many smaller species of minnows, they usually spawn in the nest of larger fish. Common hosts include creek chub, striped shiners, common shiners, and common white suckers. These nests are found near fast riffles in coarse sand or fine gravel. The eggs are left to be guarded by the host species and no parental care is provided.

FAMILY Cyprinidae (Carp and Minnows)

REDFIN SHINER

Lythrurus umbratilis • Lith-rur-us um-brat-il-us

DISTRIBUTION



28

ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 3.5")
FOOD Various aquatic invertebrates

DESCRIPTION Redfin shiners have a dark blotch at the front base of the dorsal fin. This species is laterally compressed and has a deep body. The sides are silver-blue with a darker back and a lighter white or cream belly. Breeding males can become bright shiny blue with red fins. Females sometimes become pale red on the fins, but it is much less visible than that of males. Redfin shiners differ from the closely related scarlet shiner by having a deeper body,

no distinct saddle bars, and by having more anal fin rays on average (11-13, usually 11).

HABITAT & HABITS Redfin shiners are found in sluggish sections of small to medium streams and are rather tolerant of turbid water and some siltation. They can also occur in larger rivers, but if so they are usually scarce. Redfins are most common in the Maumee, Portage, and Sandusky river systems of northwest Ohio, but can be found throughout the Lake

Erie drainage, and in the Ohio River drainage in southeast Ohio. In southwest Ohio they are replaced by the closely related scarlet shiner.

REPRODUCTION Spawning occurs throughout late spring and summer over clean sand or fine gravel substrates. Redfin shiners will often use the nests of larger minnow species or even sunfish for spawning, but are not obligated to do so.

FAMILY Cyprinidae (Carp and Minnows)

SCARLET SHINER

Lythrurus fasciolaris • Lith-rur-us fas-ee-oh-lar-is

DISTRIBUTION



29

ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 4")
FOOD Various aquatic invertebrates

DESCRIPTION Scarlet shiners have a dark blotch at the front base of the dorsal fin. This species is laterally compressed and has a rather long slender body. They have 4-11 distinct saddle bands over the back and upper sides (more visible on males). The sides are silver-blue, contrasting with a darker back and lighter white or cream belly. Breeding males can be bright shiny blue with bright red fins. Females can develop some faint red coloration on the

fins, but it is much less visible than that of males. Scarlet shiners differ from the closely related redbfin shiner by having a more slender body, 4-11 distinct saddle bars, and by having fewer anal fin rays on average (9-11, usually 10).

HABITAT & HABITS Scarlet shiners are found in sluggish pools of small to medium-sized streams and are not tolerant of turbid water or silt. They can also occur in larger rivers, but if so, usually in low numbers. They are found in

southwest Ohio from the Scioto River drainage westward, and are replaced by the closely related redbfin shiner in the rest of Ohio.

REPRODUCTION Scarlet shiners spawn throughout late spring and summer over clean sand or fine gravel substrates often in swift riffles. They will often use the nests of larger minnow species for spawning, but are not obligated to do so.

FAMILY Cyprinidae (Carp and Minnows)

SAND SHINER

Notropis stramineus • No-tro-pis stra-min-ee-us

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 3.5")
FOOD Various aquatic invertebrates

DESCRIPTION Sand shiners are a small silvery minnows, usually with seven anal fin rays. They have no distinct stripe along the sides, but do have a stripe down the center of the back. This stripe stops in a wedge-shaped spot in front of the dorsal fin and then continues behind the dorsal fin, but does not encircle the base of the fin. The fins are transparent with no dark markings. The scales along the lateral line just

behind the head are nearly as wide as they are tall. Sand shiners differ from mimic, channel, and ghost shiners by having a rather distinct stripe down the center of the back, lack of a stripe along the sides, and have only seven rather than eight anal rays. Additionally, ghost shiners have a deeper body and longer fins.

HABITAT & HABITS Sand shiners are found throughout Ohio in medium to large rivers

and streams. They are most abundant in pools in streams with sand or fine gravel substrates and low or moderate turbidity. They are more tolerant of turbid water than the similar mimic shiner.

REPRODUCTION Sand shiners spawn in late spring and early summer, scattering eggs over a sand or gravel substrate. No parental care is given.

30

FAMILY Cyprinidae (Carp and Minnows)

SILVERJAW MINNOW

Notropis buccatus • No-tro-pis boo-kot-us

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 4")
FOOD Insect larvae and other aquatic invertebrates

DESCRIPTION The silverjaw minnow is small and silvery with distinctive head features. The ventral and lower sides of the head have silvery plates that reflect the numerous internal tubular channels. These channels are thought to be a series of sensory organs that help the fish detect prey items on and just under the surface of sand. No other Ohio minnow species has this feature. The upper jaw is longer than the lower jaw, and the underside of the head is flattened. The sides of the head angle inward

towards the top. The eyes are positioned near the summit of the head; thus, the pupils can be seen when looking down on the fish, and the rather silvery body is darker on the back with lighter sides and belly. Silverjaw minnows are most similar to the bigmouth shiner, which has a very similar body shape, but lacks the plating on the lower jaw. Silverjaws also superficially resemble the trout-perch, which is not a minnow and can be separated by the presence of an adipose fin, which all minnows lack.

HABITAT & HABITS The silverjaw minnow is found throughout Ohio in medium to small streams, almost exclusively in areas with a sandy bottom. They are very common where appropriate habitat is present and large schools can often be found.

REPRODUCTION Silverjaw minnows spawn between April and June in shallow areas near gravel riffles, over coarse sand or pea-sized gravel.

31

FAMILY Cyprinidae (Carp and Minnows)

POPEYE SHINER

Notropis ariommus • No-tro-pis air-ee-om-us

DISTRIBUTION



ALIAS None

STATUS Endangered

LENGTH Avg. 2-3" (Max. 3.5")

FOOD Various aquatic invertebrates and terrestrial insects that fall in the water or fly just above the surface

DESCRIPTION Popeye shiners are small silvery minnows with a dusky tip to the lower jaw and a faint dusky stripe along the sides that is most visible near the tail. They have a very large eye and terminal mouth. All the fins are transparent with no distinct markings and there are nine anal fin rays. Popeye shiners can also be distinguished by an obvious dip in the lateral line through the center part of the body.

The similar bigeye shiner has only eight anal rays, a more distinct stripe along the side, and a less prominent dip in the lateral line.

HABITAT & HABITS This species is found in clear, unsilted water in medium-sized streams. These streams usually have slow to moderate flow and many long sluggish pools in which the popeye shiners reside. This species was

thought to have disappeared from Ohio prior to 1900 until a population was discovered in Scioto Brush Creek in southern Ohio in the mid 1980s.

REPRODUCTION Popeye shiners are assumed to reproduce in spring or summer, but little is known about their reproductive activities or requirements.

32

FAMILY Catostomidae (Suckers)

WESTERN CREEK CHUBSUCKER

Erimyzon claviformis • Er-ih-my-zon cla-vi-for-mis

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 4-6" (Max. 8")
FOOD Various aquatic invertebrates

DESCRIPTION Creek chubsuckers are a small species of sucker with a dark golden-bronze back and upper sides, and a cream or white belly. The edges of their scales have dark margins, creating a cross-hatched appearance over much of the body. The mouth is subterminal, and there are usually 9-10 dorsal rays. Adults have a series of five to eight faint dark saddles over the back and upper sides. Below these saddles there is a series of blotches which may be fused into a broad and usually faint stripe. Adult males have a hooked or falcate anal fin and when breeding

they have three tubercles on each side of the snout. Young chubsuckers have a distinct black stripe down the side and are often mistaken for small minnows. They also have a black leading edge to their dorsal fin. The closely related lake chubsucker can be distinguished by its more terminal mouth, usually 11 or 12 dorsal rays, and a slightly deeper body.

HABITAT & HABITS Creek chubsuckers are found in sluggish prairie streams with clear waters and an abundance of aquatic vegetation. They occur over areas of sand, fine gravel, or organic debris that are free of clayey silt. This

species was much more numerous historically in western Ohio than it is today. It can still be found in numbers in some of the higher quality prairie streams in western Ohio.

REPRODUCTION Creek chubsuckers spawn in April in small streams. Like many other sucker species, two males will press a single female between them as all three fish vibrate and shake their tail. This is done over fine gravel or sand substrates and the fish's movements cause the eggs to become buried. No parental care is given.

FAMILY Catostomidae (Suckers)

NORTHERN HOG SUCKER

Hypentelium nigricans • Hi-pen-tel-ee-um ny-grih-kans

DISTRIBUTION



ALIAS None

STATUS Common

LENGTH Avg. 10-15" (Max. 24")

WEIGHT Avg. <1 lbs (Max. 4 lbs)

FOOD Use their mouth to overturn rocks and stir up sediment as they seek aquatic insects and other invertebrates

DESCRIPTION Northern hog suckers have a bony head that tapers abruptly into a slender body, and a very distinctive large sucker mouth. Their eyes are positioned on top of the head with a depression between them. Hog suckers are a mottled reddish brown with four to six dark saddles or bands across their back.

HABITAT & HABITS Relatively clear streams with clean substrates free of silt are the preferred habitat. Hog suckers prefer fast riffles during most of the year, but are found in pools during the colder months. Like most suckers, they often migrate long distances to spawn in smaller streams in spring. Northern hog suckers are native throughout Ohio and are a common species.

REPRODUCTION Hog suckers spawn in April or early May. A female and often several males stir up the bottom sediments to form a slight depression where the eggs are deposited. Spawning can last for an extended period with the female laying eggs at irregular intervals. Young are often found at the edge of pools over a sandy substrate.

34

FAMILY Catostomidae (Suckers)

COMMON WHITE SUCKER

Catostomus commersonii • Ka-tos-to-mus ka-mer-so-nee-eye

DISTRIBUTION



ALIAS None

STATUS Common

LENGTH Avg. 10-20" (Max. 25")

WEIGHT Avg. <1 lbs (Max. 5 lbs)

FOOD Consumes a wide variety of items including, but not limited to mollusks, insects, diatoms, crustaceans, protozoa, and some plant material

35

DESCRIPTION Common white suckers have a long slender body with light brown sides and a white belly. The mouth is small and subterminal, and this species has smaller scales (55-85 along lateral line) than all other Ohio suckers except the longnose sucker. The dorsal fin and tail fin are a slate-gray color. All other fins are white, yellow, or light brown. Breeding males have a rosy or pinkish stripe along their upper sides and a dark back. Young white suckers have dark blotches over their back and sides. White suckers differ from the closely-related longnose sucker by having a shorter snout and

fewer lateral line scales. It is also much more common and widely distributed in Ohio than is the longnose.

HABITAT & HABITS Common white suckers are not habitat-specific and can be found in nearly every lake, reservoir, river, and stream in Ohio. The largest Ohio population is found in Lake Erie, and in early spring large numbers of white suckers migrate up tributary streams to spawn. White suckers also are very tolerant of pollution, turbidity, and low oxygen levels.

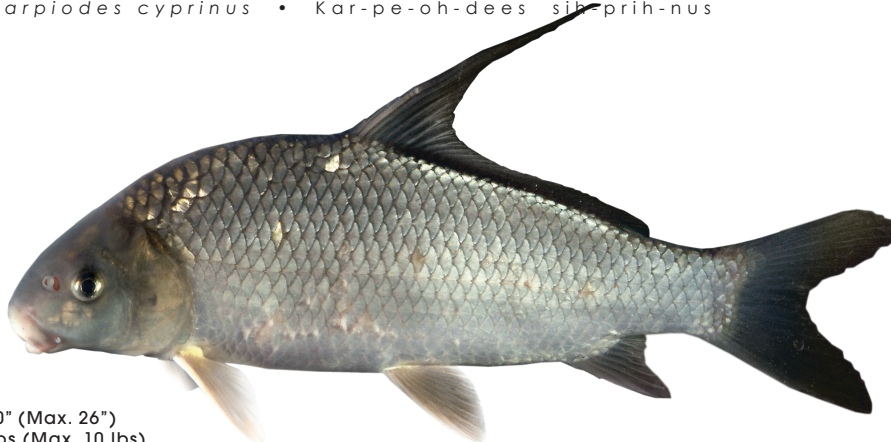
REPRODUCTION Common white suckers spawn from April to early May when they run upstream, usually at night. They seek areas with swift water and gravelly substrates, upon which they randomly spread their eggs. Females can lay between 20,000 to 50,000 eggs. The young hatch and remain in the gravel for one to two weeks before migrating downstream at night. Larval white suckers feed on protozoa, diatoms, and small crustaceans. As the young grow, the mouth migrates to the underside of the fish, thus allowing the sucker to feed on the bottom.

FAMILY Catostomidae (Suckers)

QUILLBACK CARPSUCKER

Carpiodes cyprinus • Kar-pe-oh-dees sih-prih-nus

DISTRIBUTION



36

ALIAS None
STATUS Common
LENGTH Avg. 15-20" (Max. 26")
WEIGHT Avg. 1-4 lbs (Max. 10 lbs)
FOOD Small crustaceans and other aquatic invertebrates, protozoa, and filamentous algae

DESCRIPTION Quillback carpsuckers have a small subterminal mouth. The back is moderately arched and the lateral line is nearly straight. They are silvery on the sides with a white belly, and the lower fins can be orange or yellow. The tail and dorsal fins are gray to silver in color. The first several rays of the dorsal fin form a long quill. Unlike the river and highfin carpsuckers, they have no fleshy knob on the front edge of the lower lip. There are two subspecies of quillback carpsuckers found in Ohio: central quillback carpsucker (*Carpiodes cypri-*

nus hinei) and Northern quillback carpsucker (*C. c. cyprinus*). Northern quillback carpsuckers are deeper-bodied and have smaller eyes than the central quillback carpsuckers.

HABITAT & HABITS Northern quillback carpsuckers are found only in Lake Erie and the first mile or two of some of its larger tributaries. They can be found throughout the lake, but are most common in depths of 15-25 feet. The central quillback carpsucker is found throughout inland Ohio in most streams and

rivers. They are most common in low-gradient streams of northwestern and southeastern Ohio. They can also be common in some of Ohio's larger reservoirs. Both adults and young often feed in large schools, moving slowly over a sand or gravel bottom.

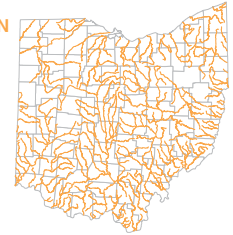
REPRODUCTION Quillback carpsuckers spawn between early April and late May. The eggs are randomly deposited over a sand or mud bottom and left in quiet water. Females lay between 15,000 to 60,000 eggs.

FAMILY Catostomidae (Suckers)

GOLDEN REDHORSE

Moxostoma erythrurum • Mox-oh-sio-ma er-ith-rur-um

DISTRIBUTION



ALIAS Redhorse, sucker

STATUS Common

LENGTH Avg. 12-18" (Max. 26")

WEIGHT Avg. 1-2 lbs (Max. 4.5 lbs)

FOOD Larval insects, snails, small mollusks, and other aquatic invertebrates

DESCRIPTION The golden redhorse has an olive-colored back and white belly with gold to bronze sides and a slate-gray tail. Their dorsal fin is slightly concave. The rear edge of the lips forms a slight "V" shape. There are 39-42 scales along the lateral line. The black redhorse is more slender in appearance, with the back edge of the lips forming a straight line, and it has 44-47 scales along the lateral line. Silver redhorse are very deep-bodied, the rear edge of the lower lips form a deep "V" and they have

a convex dorsal fin. Ohio's other four species of redhorse have red tails.

HABITAT & HABITS The golden redhorse is found throughout Ohio and occurs in all but the smallest streams and rivers. They also are found in Lake Erie and larger reservoirs that have a stream or river feeding them. It is the most common and least sensitive to poor environmental conditions of Ohio's seven species of redhorse.

REPRODUCTION Golden redhorse spawn in April and May when the water temperature reaches 50 degrees F. They make large migrations from rivers and reservoirs to smaller streams where they spawn at night in shallow riffles. Two males will press a single female between them while all three fish vibrate as eggs and sperm are released. They provide no parental care. The young can often be seen in large schools, often in a mix of various redhorse species, feeding along sandy bottoms in pools.

37

FAMILY Catostomidae (Suckers)

RIVER REDHORSE

Moxostoma carinatum • Mox-oh-sto-ma kar-in-ate-um

DISTRIBUTION



ALIAS Redhorse, sucker

STATUS Species of concern

LENGTH Avg. 18-26" (Max. 32")

WEIGHT Avg. 3-7 lbs (Max. 12 lbs)

FOOD Larval insects, snails, small mollusks, and other aquatic invertebrates

DESCRIPTION The river redhorse has a relatively large head and eyes, and a bright red tail. The rear edge of the dorsal fin is nearly straight to slightly concave. River redhorse occur in both the Lake Erie and Ohio River drainage basins. The similar greater redhorse has a more rounded head, smaller eye, and a slightly convex rear edge to the dorsal fin. Shorthead and smallmouth redhorse have smaller heads, more slender bodies, and con-

cave dorsal fins. Ohio's other three redhorse species have slate-gray tails.

HABITAT & HABITS River redhorse are found in only the largest rivers of the Ohio and Lake Erie drainage systems. They frequent deep pools with moderate current over bedrock or gravel substrate. River redhorse are intolerant of pollution and turbid water and are an indicator of good water quality.

REPRODUCTION Spawning occurs in April and May. They migrate into smaller streams and spawn at night near the ends of shallow riffles. Two males will press a single female between them while all three fish vibrate as eggs and sperm are released. They bury their eggs in fine gravel with their tails. No further parental care is given.

38

FAMILY Catostomidae (Suckers)

SMALLMOUTH REDHORSE

Moxostoma breviceps • Mox-oh-sto-ma breh-vih-seps

DISTRIBUTION



ALIAS Redhorse, sucker

STATUS Common

LENGTH Avg. 12-16" (Max. 20")

WEIGHT Avg. 1-2 lbs (Max. 3 lbs)

FOOD Larval insects, snails, small mollusks, and other aquatic invertebrates

DESCRIPTION This species was recently given specific recognition. It was long considered a subspecies of the shorthead redhorse (*M. macrolepidotum*). Smallmouth redhorse have a small head, long slender body, deeply concave dorsal fin and a bright red tail. The body is gold to silver on the sides with a darker olive-brown back. They differ from the similar shorthead redhorse in having a shorter and more deeply concave dorsal fin. The smallmouth redhorse is only found in the Ohio River and its tributar-

ies. Shorthead redhorse occur in Lake Erie and its tributaries. Greater and river redhorse have larger heads, deeper bodies, and nearly straight dorsal fins. Ohio's other three redhorse have slate-gray tails.

HABITAT & HABITS Smallmouth redhorse are found in the Ohio River and in other large streams and rivers in the Ohio River drainage basin. They prefer relatively shallow water and swift currents in areas with a clean sand or gravel substrate free of clay or silt. Smallmouth

redhorse are intolerant of pollution and turbid water and are an indicator of good water quality.

REPRODUCTION Spawning occurs in April and May. They migrate into smaller streams and spawn at night at the ends of shallow riffles. Two males will press a single female between them while all three fish vibrate as eggs and sperm are released. They bury their eggs in fine gravel with their tails. No further parental care is given.

39

FAMILY Ictaluridae (North American Catfishes)

CHANNEL CATFISH

Ictalurus punctatus • Ik-tal-ur-us punk-tate-us

DISTRIBUTION



adult



juvenile

40

ALIAS Spotted cat, silver cat, squeaker cat

STATUS Sportfish

LENGTH Avg. 15-25" (Max. 40")

WEIGHT Avg. 2-10 lbs (Max. 37 lbs)

FOOD Omnivorous and will eat a wide variety of items including insect larvae, crayfish, mollusks, fish (dead or alive), and even fruits and berries

DESCRIPTION The channel catfish, like other catfish, has no scales, a single bony spine in each pectoral fin and the dorsal fin, and eight barbels around the mouth. They have a deeply forked tail and the upper jaw is longer than the lower jaw. The dorsal and pectoral spines are sharp and deeply serrated, and the anal fin is curved and has between 24 and 30 rays. The body can be blue, gray, silver, or blackish. The belly is usually white or cream. Small indi-

viduals are usually silvery and often have many black spots on their sides. Some anglers mistakenly call large channel catfish with few or no spots blue catfish, but that species has an anal fin with a straight edge and more than 30 rays.

HABITAT & HABITS Channel catfish are native to Ohio and occur statewide in large streams, rivers, and lakes. They are also stocked in many farm ponds where they do well, but rarely reproduce. Channel catfish prefer areas with

deep water, clean gravel or boulder substrates and low to moderate current. However, they are tolerant of a wide range of conditions.

REPRODUCTION Channel catfish begin spawning when water temperatures reach 70 degrees F. They use natural cavities, undercut banks and muskrat burrows as nests. The female lays a gelatinous mass containing between 8,000 to 15,000 eggs and the parents remain to fan the eggs and guard the young after hatching.

© PHOTO CREDIT: (adult) Uland Thomas • (juvenile) Uland Thomas

FAMILY Ictaluridae (North American Catfishes)

FLATHEAD CATFISH

Plyodictus olivaris • Ply-oh-dik-tus ol-ih-var-is

DISTRIBUTION



ALIAS Mudcat, shovelhead, yellow catfish
STATUS Sportfish
LENGTH Avg. 20-40" (Max. 60")
WEIGHT Avg. 10-40 lbs (Max. 60-80 lbs)
FOOD Feeds almost entirely on live fish

DESCRIPTION The flathead catfish is the only North American catfish species whose lower jaw is longer than the upper jaw. Their head is flattened between the eyes and they have a very large mouth. This is also the only large catfish with a square tail. Body color is usually yellow-olive or a brown with dark brown blotches, and the belly is yellow or yellowish-white.

HABITAT & HABITS Adults prefer deep sluggish pools with cover such as submerged logs and brush piles. They are found in large rivers in Ohio and are most abundant in the Maumee, Muskingum, Scioto, and Ohio rivers. Flatheads also occur in most of the larger reservoirs in the state.

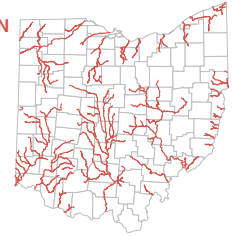
REPRODUCTION Flathead catfish spawn when water temperatures reach 70 degrees F. They build nests in dark secluded shelters such as natural cavities, undercut banks, or near large submerged objects. The eggs are laid in a compact golden-yellow mass which the male fans continuously. The egg mass may contain as many as 100,000 eggs. After hatching, the young remain near the nest for several days in a large compact school.

FAMILY Ictaluridae (North American Catfishes)

STONECAT MADTOM

Noturus flavus • No-tur-us fla-vus

DISTRIBUTION



ALIAS Madtom, beetle-eye

STATUS Common

LENGTH Avg. 4-8" (Max. 12")

FOOD Insect larvae, crayfish and other crustaceans, and small fish

DESCRIPTION The stonecat madtom can be various shades of brown, with a white or cream belly. The adipose fin is attached to the tail with no free rear edge. Fins are paler than the body and stonecats sometimes have two or three lighter brown or yellowish saddle-like markings across the back. The edges of the fins are often outlined with lighter brown, yellow, or white. The body is long and slender, and the upper jaw protrudes beyond the lower jaw. The rear edge of the pectoral spines is straight, not deeply serrated.

HABITAT & HABITS Stonecat madtoms are primarily a riffle-dwelling species. They are most abundant in medium to large rivers in areas with moderately fast current and large boulders and slabs. They are also found in Lake Erie around the islands and reefs of the Western Basin, and along rocky shorelines. Stonecats spend the day hiding under large flat rocks and come out at night to feed. This species is found throughout Ohio and is the most common of Ohio's six species of madtoms.

REPRODUCTION Stonecat madtoms begin spawning when water temperatures reach about 80 degrees F. The female lays a gelatinous round mass containing about 500 eggs on the underside of flat stones. One of the parents guards the eggs until hatching. Young stonecats are often found in shallower and swifter water than the adults.

42

FAMILY Ictaluridae (North American Catfishes)

TADPOLE MADTOM

Noturus gyrinus • No-tur-us jy-rin-us

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 5")
FOOD Various aquatic invertebrates

DESCRIPTION The tadpole madtom can be various shades of brown or yellow-brown. There are no dark markings on their body. They are darkest on the back, becoming lighter on the sides and fading into a white or yellow belly. The adipose fin is completely connected to the tail, which is large and rounded, creating a tadpole-like appearance. The rear edge of the pectoral spines is straight, not deeply serrated.

HABITAT & HABITS Tadpole madtoms occur in areas with little or no current. They prefer sluggish streams or rivers, swamps, marshes or natural lakes, and often hide in thick vegetation in areas with a soft mud or muck bottom. The tadpole madtom is one of three rather common madtom species found in Ohio. They are common in the northwestern part of the state, but isolated populations occur statewide.

REPRODUCTION Tadpole madtoms spawn in early summer when water temperatures approach 80 degrees F. The sticky eggs are attached to the underside of a rock, log or submerged root. The male then guards the eggs until they hatch.

43

FAMILY Ictaluridae (North American Catfishes)

BRINDLED MADTOM

Noturus miurus • No-tur-us my-ur-us

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-4" (Max. 5.5")
FOOD Various aquatic invertebrates

DESCRIPTION The brindled madtom is a small catfish with a rounded tail. The adipose fin has a dark saddle that goes up to and across the top edge of the fin. There is also a blackish blotch on the top of the dorsal fin. Body coloration is light brown with several dark strongly contrasting saddles or blotches down the back. The sides are speckled with light and dark brown dots and the belly is cream or white. The rear edge of the pectoral spines are deeply serrated. Brindled madtoms differ from

mountain and Northern madtoms by having dark pigment on the top edge of the dorsal fin.

HABITAT & HABITS Brindled madtoms are found throughout Ohio, and are common in areas with suitable habitat. They prefer areas with a clean sand or gravel bottom and avoid sites with a soft mud, muck, or silt-covered bottom. They are most common in medium-sized streams and often frequent the edge of pools in roots, leaf litter, brush piles or other

debris. Brindled madtoms are not typically found in fast current like some other madtom species. They are one of three relatively common species of madtoms in Ohio.

REPRODUCTION The brindled madtom spawns in early summer when water temperatures approach 80 degrees F. Females attach their sticky eggs to the underside of a rock, log, or submerged root. The male then guards the eggs until they hatch.

44

FAMILY Ictaluridae (North American Catfishes)

MOUNTAIN MADTOM

Noturus eleutherus • No-tur-us el-ee-oo-ther-us

DISTRIBUTION



ALIAS None
STATUS Threatened
LENGTH Avg. 2-3" (Max. 5")
FOOD Various aquatic invertebrates

DESCRIPTION The mountain madtom is a small catfish with an almost square tail. Their adipose fin is not attached to the tail. There is some pigment on the adipose fin, but it is relatively clear with no distinct dark saddle-like marking on top of the fin. They differ from the very similar Northern madtom in not having a distinct dark vertical bar or crescent in the center of the tail. Mountains are often more uniformly colored with less distinct dark saddles over the back than Northern or brindled

madtoms. This species has some dark pigment in the dorsal fin, but it does not extend to the top edge of the fin as it does on brindled madtoms. Body color can be various shades of brown or tan, often with some darker brown speckling on the sides. The belly is white or cream-colored, and the rear edge of the pectoral spines is deeply serrated.

HABITAT AND HABITS The mountain madtom occurs in deep swift riffles of large rivers, usually in and around cobbles and boulders. In

Ohio this species had been reduced to a few remnant populations, but improvements in water quality appear to be allowing populations to expand. Relatively large populations now occur in parts of the Little Miami, Muskingum, Walhonding, and Tuscarawas rivers.

REPRODUCTION The mountain madtom spawns in early summer under large rocks in riffles. The male guards the eggs until they hatch.

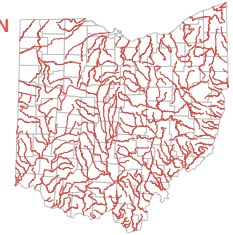
45

FAMILY Ictaluridae (North American Catfishes)

YELLOW BULLHEAD

Ameiurus natalis • Am-ee-ur-us nā-tal-iss

DISTRIBUTION



ALIAS Bullhead, mudcat, yellow cat

STATUS Sportfish

LENGTH Avg. 6-15" (Max. 18")

WEIGHT Avg. .5-1.5 lbs (Max. 3.5 lbs)

FOOD Will eat a wide variety of items including fish, crayfish, and aquatic insects. They often scavenge for dead fish and other animals

DESCRIPTION The yellow bullhead has a moderately serrated rear edge to the pectoral spines and a rounded tail. They have a unicolored body that ranges from dark brown to golden-yellow, with a white or yellow belly. The anal fin (25-28 rays) is significantly longer than the black or brown bullhead. The base of the four chin barbels are often entirely white, but can be yellow.

HABITAT & HABITS The yellow bullhead is most common in small streams or shallow ponds and lakes with clear water and dense aquatic vegetation. They are most common in the western part of Ohio, but occur statewide. Yellow bullheads can hybridize with black and brown bullheads, but rarely do so.

REPRODUCTION Bullheads build nests in natural cavities or make saucer-shaped depressions near submerged cover such as tree roots or sunken logs. Females usually deposit between 300 to 10,000 eggs in the nest. At least one of the parents remains to fan and guard the nest. After hatching, the young swim around in a dense cluster and are guarded by the male for several weeks.

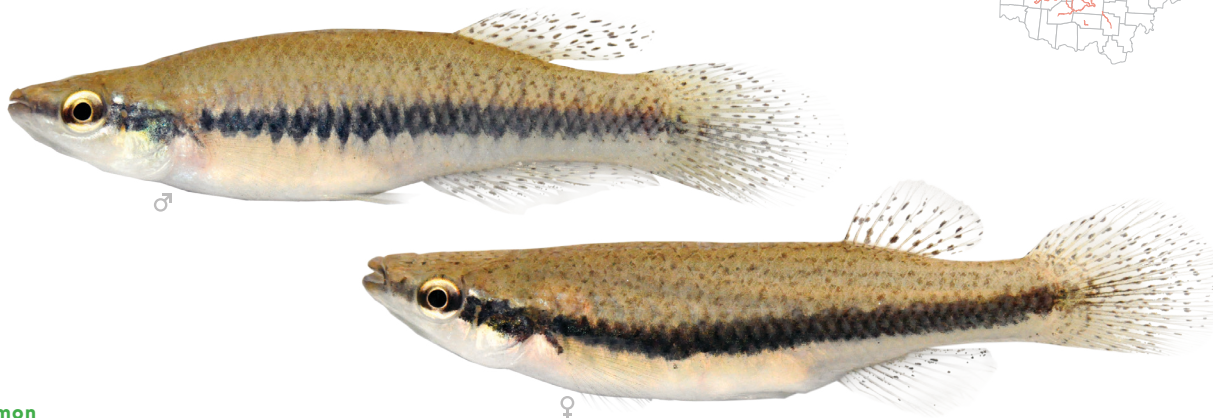
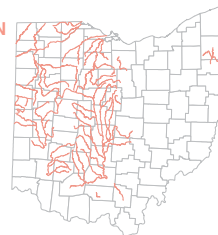
46

FAMILY Fundulidae (Topminnows)

BLACKSTRIPE TOPMINNOW

Fundulus notatus • Fun-do-lus no-tate-us

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-2.5" (Max. 3.5")
FOOD Mosquito and midge fly larvae

47

DESCRIPTION The blackstripe topminnow is a small fish that is often seen swimming just under the water's surface. They can be identified from a distance by the bright gold spot on the top of the rather flat head. There is a dark stripe starting on the lips which runs through the eye and all the way to the tail. This stripe is straight on females, but has jagged edges on males, which often makes it appear to be com-

prised of many small thin vertical bars. They have small dark spots on their dorsal, anal, and tail fins which are more distinct on males. Also, the dorsal and anal fins are short and rounded on females and long and pointed on males.

HABITAT & HABITS Blackstripe topminnows are found in sluggish sections of streams, often near aquatic vegetation. They can also be found in permanent wetlands and lakes. The size of

the stream or water body is less important than the presence of shallow slack water areas with some vegetation. They are abundant in the western half of the state.

REPRODUCTION Blackstripe topminnows lay their adhesive eggs on vegetation throughout the summer months. They will spawn multiple times and do not provide any care for the eggs or young.

© PHOTO CREDIT: (male) Brian Zimmerman • (female) Brian Zimmerman

FAMILY Esocidae (Pikes)

GRASS PICKEREL

Esox americanus vermiculatus • E-sox ah-mer-ih-can-us ver-mik-u-late-us

DISTRIBUTION



ALIAS Redfin pickerel, mud pickerel, grass pike
STATUS Common
LENGTH Avg. 6-10" (Max. 12")
FOOD Primarily eats fish, but will eat crayfish, frogs, and larger types of aquatic insect larvae

DESCRIPTION The grass pickerel, like other pike species, has a long tubular body. There is a dark teardrop under the eye and a pale stripe against a darker background down the center of the back, and a pattern of blotches or vertical lines on the sides. Grass pickerel can be distinguished from Northern pike or muskellunge by the lack of spots or dark markings on the fins. Chain pickerel differ by having a chain-like pattern of large oblong spots on the sides, a more deeply forked tail, and a longer snout.

HABITAT & HABITS Grass pickerel are most common in clear waters with an abundance of dense aquatic vegetation. They can be found in sluggish streams, permanent wetlands, and natural lakes. Grass pickerel are intolerant of turbidity and areas that have been extensively channelized or ditched for drainage purposes.

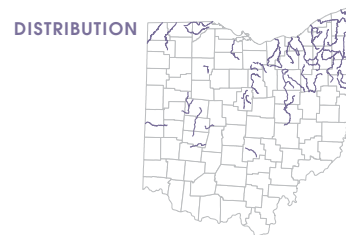
REPRODUCTION Grass pickerel spawn in the spring when water temperatures range from 43 to 53 degrees F. They migrate upstream, sometimes for long distances, in search of shallow backwaters with dense vegetation. Females scatter their eggs over vegetation and neither sex provides any parental care for the young. The young feed on insect larvae and other aquatic invertebrates until they are large enough to switch over to feeding on small fish. This usually occurs in early June when they reach a length of about two inches.

48

FAMILY Umbridae (Mudminnows)

CENTRAL MUDMINNOW

Umbralimi • Um-bra lee-me



ALIAS Pygmy pike

STATUS **Common**

LENGTH Avg. 2-3" (Max. 5")

FOOD Various aquatic invertebrates

49

DESCRIPTION The central mudminnow is a small fish with a rounded tail. The dorsal, anal, and pelvic fins are all positioned toward the rear of the body, which is mottled with various shades of brown. There is a dark vertical bar just in front of the base of the tail, and the belly is dirty cream, light brown, or yellow. Breeding males have a vivid white or blue sheen to the anal and pelvic fins. Central mudminnows have no spines in any of their fins and they have no lateral line. Additionally they have scales on their head and gill covers. The closest relatives

to the mudminnows are the pikes; as a result mudminnows are sometimes referred to as "pygmy pike".

HABITAT & HABITS Central mudminnows are found in swamps, marshes, bogs, and slow moving streams. These areas must have an abundance of aquatic vegetation and a soft bottom composed of dark organic muck and debris free of yellow clay and silt. In these areas central mudminnows burrow into the bottom tail first. They lie in wait watching for insect larvae or other small aquatic invertebrates to swim

past, which they ambush and capture. Central mudminnows are often found in areas where no other fish can survive because of their ability to breathe air and burrow into the mud to survive dry spells. They are primarily found in the northern part of Ohio, but some isolated populations do exist in southern Ohio.

REPRODUCTION Central mudminnows spawn from late March to early April. Details of spawning are unclear, but some sources suggest that both parents guard a nest site in or near vegetation.

© PHOTO CREDIT: (male) Uland Thomas • (female) Uland Thomas

FAMILY Salmonidae (Char, Salmon, Trout, and Whitefish)

BROOK TROUT

Salvelinus fontinalis • Sal-vel-in-us fon-tin-al-iss

DISTRIBUTION



ALIAS Brook char, speckled trout

STATUS Threatened

LENGTH Avg. 6-8" (Max. 12")

FOOD Insects, other aquatic invertebrates, and some small fish

DESCRIPTION Brook trout have a typical trout-shaped body with an adipose fin between the dorsal and tail fin. A distinguishing characteristic is the white leading edge on the pectoral, pelvic, and anal fins. The rest of the fins are yellowish or reddish. Additionally, the back is heavily covered with vermiculation or 'wormy' marks. There are no black or brown spots on the head, back or caudal fin.

HABITAT & HABITS The brook trout is the only trout native to the inland waters of Ohio. In the mid-1800s it was found in the northeastern portion of the state in the Chagrin River and in a small creek in Ashtabula County. It was thought that the native populations had died out, but in 1972 they were found in two small streams. These two populations were then proven to be native stock by genetic testing in 1993. Then in 1997 a reintroduction program began which resulted in the establishment of 10 reproducing populations in northeast Ohio.

Brook trout require very cold, clear water to become successfully established. In Ohio, this habitat is only available in very small spring-fed streams that are completely buffered by forest.

REPRODUCTION Brook trout usually spawn between September and December. Females lay several thousand eggs in the gravel of cold water streams. After hatching, brook trout feed on insect larvae and other aquatic invertebrates. Brook trout become sexually mature at age one and generally do not live past age four.

50

FAMILY Percopsidae (Trout-perches)

TROUT-PERCH

Percopsis omiscomaycus • Per-kop-sis o-mih-sko-may-kus

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-4" (Max. 5")
FOOD Insect larvae, crustaceans, and other invertebrates

DESCRIPTION Trout-perch, as the name suggests, exhibit characteristics of both trout and perch. It is the only Ohio species of fish with an adipose fin like a trout and rough scales like a perch. There is a row of spots down the center of the back and a row along each side. There are additional spots scattered on the upper sides between these two rows. The up-

per sides and back are straw-yellow, and there is normally a silvery streak down the sides. The belly is white or cream-colored.

HABITAT AND HABITS Trout-perch are almost always found in areas with a sandy bottom. They are common in Lake Erie and the lower sections of its larger tributaries. They can also be found in large sluggish pools of streams and rivers elsewhere in the state. They

are most common in southeast Ohio and are absent from the northwest part of the state, except in lower reaches of Lake Erie tributaries such as the Maumee River. Trout-perch tend to stay in deeper water during the day and move into shallows at night to feed.

REPRODUCTION Spawning occurs between May and August over sand and fine gravel substrates.

51

FAMILY Atherinopsidae (New World Silversides)

BROOK SILVERSIDE

Labidesthes sicculus • Lab-ih-des-thees sik-u-lus

DISTRIBUTION



ALIAS None

STATUS **Common**

LENGTH Avg. 2-3" (Max. 4.5")

FOOD Tiny crustaceans, insect larvae (especially midges), and small flying insects

DESCRIPTION Brook silversides are long, slender, and translucent. The head is long and flattened above with an elongate snout that forms a pointed beak. These features make them well-adapted to feeding just under the surface. There are two dorsal fins positioned above a long anal fin, which is unique among Ohio fishes. Their overall coloration is pale green, sometimes olive, with a transparent body and a silvery lateral stripe along the sides.

HABITAT & HABITS The brook silverside can be found across the state. It prefers clear, vegetated lakes with bottoms comprised of clean sand, gravel or organic muck. Stream populations are usually found in slow-moving clear streams that have some aquatic vegetation. They are not tolerant of turbid waters.

REPRODUCTION Brook silverside spawn during the spring and early summer in and around vegetation, or in streams over clean gravel in moderate current. Each egg has an adhesive filament that functions as an anchoring device. Young silversides grow rapidly, attaining their maximum length in the first year.

52

FAMILY Gasterosteidae (Sticklebacks)

BROOK STICKLEBACK

Culaea inconstans • Koo-lee-ah in-kon-stans

DISTRIBUTION



- ALIAS** None
STATUS Common
LENGTH Avg. 1.5 - 2.5" (Max. 3")
FOOD Insect larvae, crustaceans, snails, and other aquatic invertebrates

DESCRIPTION This species is easily identified by four to six completely separated dorsal spines. This is the only fish in Ohio with separated dorsal spines. Each pectoral fin also has a sharp stout spine. In addition, it is a small fish and has no scales.

HABITAT & HABITS The brook stickleback is found in small streams in northeast Ohio and the Mad River system. They prefer cold clear water with submerged vegetation. This species is tolerant of high alkalinity and acidic water, but is very intolerant of turbid water.

REPRODUCTION Brook stickleback spawn from late April to mid-June when water temperatures range from 40 to 70 F°. The males select and defend territories in which to build their nests, which are constructed of pieces of dead vegetation and leaf litter. Females then lay up to 250 adhesive eggs. Sticklebacks usually become sexually mature at one year, and most do not live past their second year.

53

FAMILY Cottidae (Sculpins)

MOTTLED SCULPIN

Cottus bairdii • Kot-us baird-ee-eye

DISTRIBUTION



ALIAS Great Lakes Mottled Sculpin, Northern Mottled Sculpin

STATUS Common

LENGTH Avg. 2-4" (Max. 5")

FOOD Crustaceans, small fish such as darters, and various aquatic invertebrates

DESCRIPTION The mottled sculpin and other sculpin species have no scales. Their eyes are positioned on top of the rather large head, and they have a relatively large mouth. The second dorsal fin and anal fin are rather long, and the pectoral fins are large and fanlike. Mottled sculpins have three to four dark saddles straddling the back and extending down the sides. They have a single straight spine just in front of the gill opening on either side of the head, and an incomplete lateral line. As the name suggests, this species has a mottled pattern of brown, gray, and black, with a lighter cream belly. There is also a dark vertical bar at the

base of the tail. Breeding males usually have a bright orange band on the outer edge of their small rounded first dorsal fin. There are two subspecies of mottled sculpin in Ohio: the Northern (*Cottus b. bairdii*) and Great Lakes (*C. b. kumlieni*). The Great Lakes subspecies has less distinct markings and a shorter lateral line, and is only found in the deeper eastern waters of Lake Erie. Mottled sculpins differ from the closely related spoonhead sculpin by having an incomplete lateral line and straight spines on the sides of the head.

HABITAT & HABITS Mottled sculpins are found in small cool streams and also have a

preference for relatively clear waters. They do not require water as cold as trout do, but don't tolerate the warmer temperatures found in larger streams in Ohio. This species is well distributed throughout the state, but are uncommon in the northwest part of Ohio.

REPRODUCTION Mottled sculpins spawn in early spring. Females deposit a mass of approximately 200 eggs on the underside of a flat rock. Males guard the spawning site for the three to four weeks it takes for the eggs to hatch. Soon after hatching the young disperse and no further parental care is given.

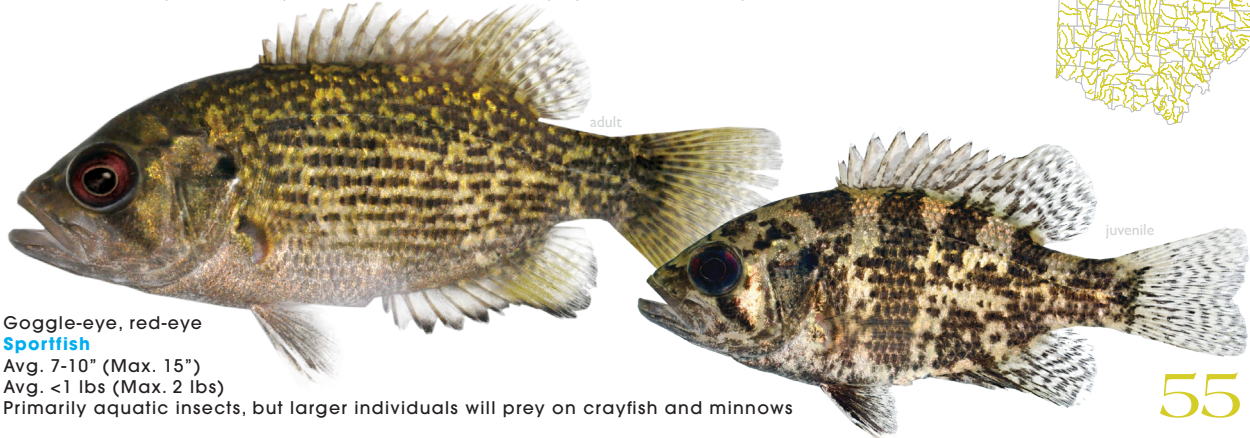
54

FAMILY Centrarchidae (Sunfishes)

ROCK BASS

Ambloplites rupestris • Am-blo-PLY-tees roo-pes-triss

DISTRIBUTION



55

ALIAS Goggle-eye, red-eye

STATUS Sportfish

LENGTH Avg. 7-10" (Max. 15")

WEIGHT Avg. <1 lbs (Max. 2 lbs)

FOOD Primarily aquatic insects, but larger individuals will prey on crayfish and minnows

DESCRIPTION Rock bass are not as deep-bodied as bluegill or redear sunfishes, but are deeper-bodied than largemouth or smallmouth bass. This species can change its overall coloration from light to dark very quickly to blend in with their surroundings. They can range from light silver with rows of dark spots along their body to very dark with large dark blotches. Rock bass also have a very large mouth and red eyes. They are most similar to warmouth sunfish, which have three anal spines – rock bass have six. Rock bass have a dark teardrop under the eye and a black margin to the fins. Warmouth lack the teardrop and have a light

margin to the fins that can be white, orange, yellow or red.

HABITAT & HABITS Rock bass prefer clear streams and rivers with a rocky bottom. They often hide near large boulders, rock piles, or tree roots. Also look for them near steep drop-offs at the edge of deep pools. They are rarely found in Ohio reservoirs, and when they are present only small populations are found along steep rocky shorelines in some of the largest reservoirs. The warmouth sunfish can be found more frequently in smaller lakes and reservoirs, usually associated with brush

piles or dense rooted aquatic vegetation. Rock bass are also common in Lake Erie, especially around the islands and other rocky areas of the Western Basin.

REPRODUCTION Male rock bass build nests over gravel substrate in a slight current, frequently next to a large boulder. Females then deposit up to 10,000 eggs in a nest, often with more than one female using the same nest. Males remain over the nest to fan the eggs and maintain water flow over the eggs until they hatch in three to four days. Rock bass typically reach maturity in three years.

FAMILY Centrarchidae (Sunfishes)

SMALLMOUTH BASS

Micropterus dolomieu • My-krop-ter-iss dol-o-mew

DISTRIBUTION



ALIAS Bronzeback, brown bass, brownie, smallie, black bass

STATUS Sportfish

LENGTH Avg. 12-15" (Max. 24")

WEIGHT Avg. 1-2 lbs (Max. 10 lbs)

FOOD Feed primarily on crayfish and other large aquatic invertebrates. Will also feed on small fish and flying insects that fall on the water's surface

56

DESCRIPTION Smallmouth bass have a fairly large mouth that extends to the eye, but not beyond it when the mouth is closed. This characteristic distinguishes it from the largemouth bass, in which the back of the mouth does extend past the eye. Young smallmouth and spotted bass have orange in the center of the tail; juvenile largemouth bass do not. The smallmouth bass has dark vertical bars along its side with a brown or bronze background.

HABITAT & HABITS Smallmouth bass thrive in streams with gravel or rock bottoms with a visible current. They outnumber largemouth

bass in most streams and rivers in Ohio. In southern Ohio, smallmouth are less frequent than spotted bass in some of the largest rivers such as the Muskingum, Scioto, and Ohio. Smallmouth bass are common in Lake Erie, especially around the islands and reefs of the Western Basin and along rocky shorelines. In the Ohio River, they are most common in tail waters of the locks and dams where there is swift flow and rocky shorelines. They can also be found in some of Ohio's reservoirs, especially those with steep drop-offs and rocky shorelines. Smallmouth bass do poorly in

smaller lakes and reservoirs that are shallow with soft substrates, and abundant aquatic vegetation.

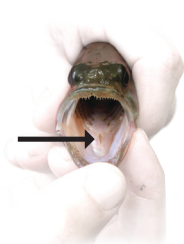
REPRODUCTION Spawning occurs in May and early June when water temperatures range from 55 to 65°F. Nests are built in gravelly or rocky substrates in 2 to 20 feet of water. The female lays between 2,000 to 15,000 eggs. The male guards the nest and the fry for a short time. Young smallmouth feed on zooplankton and midge larvae.

FAMILY Centrarchidae (Sunfishes)

SPOTTED BASS

Micropterus punctulatus • My-krop-ter-iss punk-tu-lay-tiss

DISTRIBUTION



57

ALIAS Kentucky bass, spot, black bass

STATUS Sportfish

LENGTH Avg. 10-15" (Max. 21")

WEIGHT Avg. <1 lbs (Max. 5 lbs)

FOOD Feeds primarily on crayfish and other large aquatic invertebrates.

They also feed on small fish and flying insects that fall on the water's surface

DESCRIPTION Spotted bass have a fairly large mouth that extends to the eye, but not beyond its rear edge when the mouth is closed. This characteristic distinguishes it from the largemouth bass, in which the back of the mouth does extend past the eye. Spotted bass also have a rough patch of small teeth on the center of their tongue; largemouth bass lack this feature. Young spotted and smallmouth bass have an orange patch in the center of their tail; juvenile largemouth bass do not. Spotted bass are similar in coloration to largemouths, and both have a black stripe that extends laterally down the side of the body rather than the vertical bars of a smallmouth bass. Spotted and

largemouth bass are also lighter in color than smallmouth bass with more of a green or silvery background color rather than bronze or brown. There are rows of spots on the lower sides below the dark lateral stripe; these are faint or absent on largemouth bass.

HABITAT & HABITS Spotted bass are native to the Ohio River drainage, but not the Lake Erie drainage in Ohio. Their preferred habitat is long deep pools of medium to large streams and rivers. They avoid the shallow, heavily vegetated sluggish waters preferred by largemouth bass, and the swift rocky waters preferred by smallmouth bass. They are most common in the Ohio River and some of its larger tributar-

ies such as the Scioto, Muskingum, and Hocking rivers. They are also found in some of the larger southern Ohio reservoirs such as East Fork and Caesar Creek. In reservoirs spotted bass are typically found near steep drop-offs along shorelines.

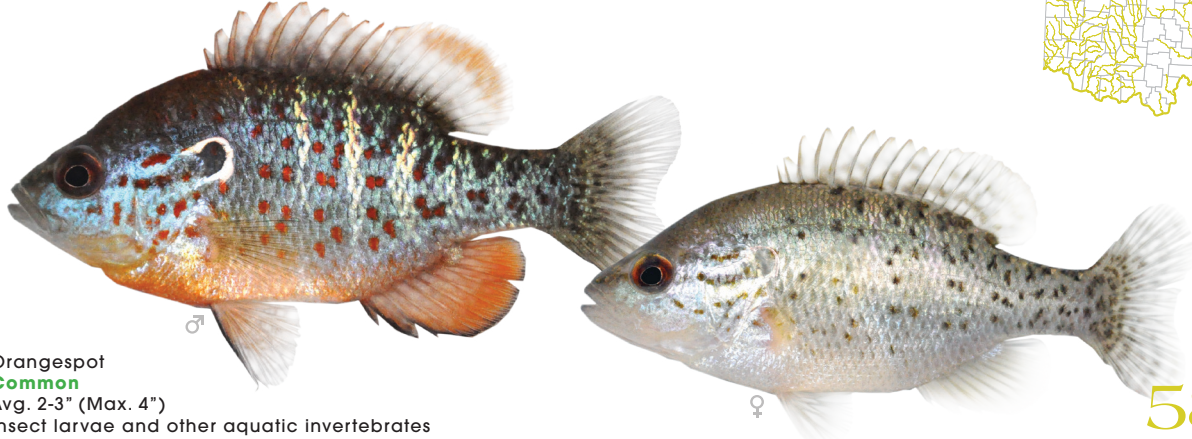
REPRODUCTION Spotted bass spawn between mid-April and mid-June. The males construct nests over rocky or gravelly substrate near cover. They will spawn in deeper water than largemouth and smallmouth bass, sometimes at depths of up to 40 feet. Females lay between 1,100 and 47,000 eggs. Males guard the eggs and fry for a short time after they hatch.

FAMILY Centrarchidae (Sunfishes)

ORANGESPOTTED SUNFISH

Lepomis humilis • Leh-po-miss hoo-mil-iss

DISTRIBUTION



ALIAS Orangespot

STATUS Common

LENGTH Avg. 2-3" (Max. 4")

FOOD Insect larvae and other aquatic invertebrates

DESCRIPTION The orangespotted sunfish is a small fish, rarely caught on hook and line. They have an intermediate-sized mouth that extends to the front edge of the eye, but not much beyond that point. The short rounded pectoral fins and black opercles (ear flap) are outlined in white. The male has orange dorsal, anal and pelvic fins and the anal and pelvic are usually outlined in black. Males have metallic blue sides with orange spots scattered across the sides and cheeks. They also often have three to six silvery vertical bars, usually with a purple sheen. Males have an orange belly and

red-orange eyes. Female orangespotted sunfish are much duller. Their belly and pelvic fins are white or cream colored. The rear edge of the soft part of the dorsal fin usually has a few small dark spots. The rest of the dorsal and all other fins are clear, and their sides are silvery, often with a purple sheen. Instead of orange spots they have rusty brown spots scattered across the sides and cheeks.

HABITAT & HABITS The range of the orangespotted sunfish has been gradually expanding eastward since the early 1900s when it was first found in Ohio. Since that time they have

expanded from the western edge of Ohio across the entire state. The orangespotted sunfish has a preference for turbid water and is most abundant in large muddy rivers and reservoirs. Streams and rivers that contain orangespotted sunfish populations typically are very sluggish (low gradient) systems.

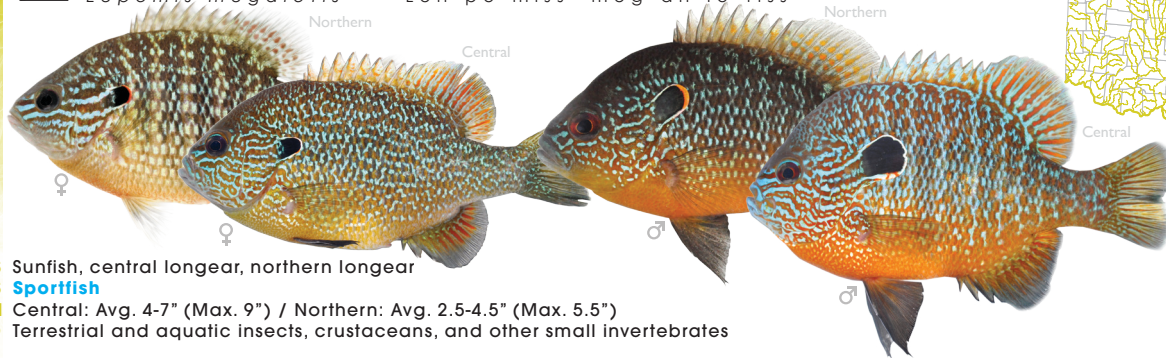
REPRODUCTION Like most species of sunfish, male orangespots build a nest in shallow water. Spawning takes place from early June to early August and the male guards the eggs and young until they leave the nest. Orangespotted sunfish often mature in one year.

© PHOTO CREDIT: (male) Brian Zimmerman • (female) Brian Zimmerman

FAMILY Centrarchidae (Sunfishes)

LONGEAR SUNFISH

Lepomis megalotis • Leh-po-miss meg-ah-lo-tiss



ALIAS Sunfish, central longear, northern longear

STATUS Sportfish

LENGTH Central: Avg. 4-7" (Max. 9") / Northern: Avg. 2.5-4.5" (Max. 5.5")

FOOD Terrestrial and aquatic insects, crustaceans, and other small invertebrates

59

DESCRIPTION Longear sunfish are deep, slab-sided fish with a small mouth. They get their name from their long ear flap, or opercle, which is mostly black with a white margin. There are two subspecies found in Ohio, the Northern longear sunfish and the Central longear sunfish. The opercle of the Central longear usually runs parallel to the body and may have several small red spots in the white margin. The opercle of the Northern longear is smaller and often points backward at an upward angle rather than being parallel. Northern longears also have a large red spot at the back edge of the opercle. Longear sunfish have blue wavy lines running from the mouth to the rear edge of the gill cover. The back is olive-green with blue-green specks on the side, and

the belly is orange, red or yellow. Breeding males are brilliantly colored with the red and blue coloration on their face and body becoming more intense during this period. Females are less intensely colored and do not have as long of an opercle as males. The pumpkinseed sunfish has a similar body shape and coloration, but never has a long opercle flap and is typically found in lakes rather than streams like the longear sunfish.

HABITAT & HABITS Longears favor slow to moderate streams of medium size with clean gravel substrate. They spend most of their time in pools near beds of aquatic vegetation, or other forms of cover such as roots, brush piles, and cut banks. Central longear are found primarily in the southwest portion of the state

and are common in the Scioto, Little Miami, and Great Miami river systems. Northern longear are only found in the Lake Erie drainage, in parts of the Maumee, Sandusky, and Grand river systems.

REPRODUCTION Longear sunfish spawn in groups, but do not form large colonies like bluegill. Males select a spawning site in shallow water and build a nest on gravel substrate, usually near cover. They spawn multiple times once the water temperature reaches the low 70s, between mid-May and mid-August. A single large female can lay over 22,000 eggs. Males aggressively guard the nest and eggs until shortly after hatching. Longear sunfish take two to three years to mature.

© PHOTO CREDIT: (Northern female) Uland Thomas • (Central female / Northern male / Central male) Brian Zimmerman

FAMILY Centrarchidae (Sunfishes)

GREEN SUNFISH

Lepomis cyanellus • Leh-po-miss sy-an-el-us

DISTRIBUTION



ALIAS Sunfish, green ball

STATUS Sportfish

LENGTH Avg. 3-7" (Max. 10")

WEIGHT Avg. <.5 lbs (Max. 1 lbs)

FOOD Aquatic insect larvae, insects that fall on the water's surface, snails, crayfish, and some small fish

60

DESCRIPTION Green sunfish have a moderately compressed body, but are not as deep-bodied as bluegill and other sunfish species. They have a large mouth and the upper jaw extends back to the middle of the eye. The pectoral fins are short and rounded. Green sunfish have a dark olive-green body with iridescent blue lines on the cheek. They also have rows of small iridescent blue speckles on the body. All of the fins, except the pectoral fins, have an orange, yellow, or white outline. They often have a black spot near the back of the dorsal and anal fins where they attach to the body. The

opercle (ear flap) is black and sometimes has a thin white to yellow-orange margin.

HABITAT & HABITS Green sunfish are native to Ohio and are found throughout the state. They are very tolerant of poor water quality and are often the only sunfish found in muddy waters. They do have a strong preference for structure such as rocks, logs, or brush piles. They are often the only sunfish found in very small streams. Both green sunfish and bluegill readily hybridize with other species of sunfish, most often each other. Hybrids between other sunfish species are relatively rare.

REPRODUCTION Green sunfish are communal spawners with males constructing nests in shallow water from mid-May to August. The female lays between 2,000 to 26,000 eggs. Males defend the nest for the three to five days it takes the eggs to hatch, and then will try to entice another female to deposit a new batch of eggs in the nest. Green sunfish tend to spawn in shallower water, and dig deeper nests than bluegill. Male green sunfish can sometimes be found trapped in their nest if there is a sudden drop in water level, as they often build their nests very close to shore.

FAMILY Percidae (Perches and darters)

EASTERN SAND DARTER

Ammocrypta pellucida • Am-oh-crip-ta pel-oo-sid-ah

DISTRIBUTION



ALIAS None
STATUS Species of concern
LENGTH Avg. 2-3" (Max. 3.5")
FOOD Midge larvae and other aquatic invertebrates

61

DESCRIPTION The Eastern sand darter is a long narrow fish. They have a distinct row of 12-16 dusky spots down the center of the back, which split into two rows along the dorsal fins. There is also a row of 9-14 oblong dusky spots along the sides. Sand darters are light yellow or tan on the back with lighter white or silvery sides and belly. They have no scales on the lower half of their sides and belly. This species has an over all translucent appearance, and there are no obvious differences in coloration between males, females, and young.

HABITAT & HABITS The Eastern sand darter is found in sluggish sections of streams and rivers where the bottom is composed of clean sand. They are intolerant of silt or mud covering the substrate and often disappear from streams where excessive siltation is a problem. Sand darters spend much time buried in the sand with only the tip of the snout and eyes exposed. From hiding, they watch for passing prey and quickly dart out, grab the food, and then burrow back into the sand. This species

is found in both the Lake Erie and Ohio River drainage. They are most abundant in medium to large streams that stay relatively clear and have an abundance of clean silt-free sand.

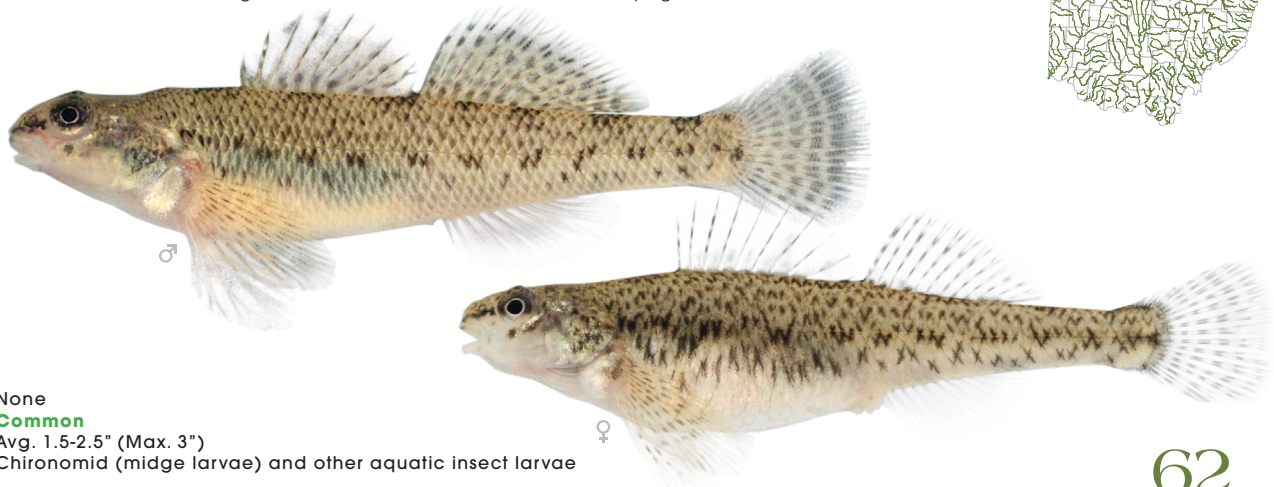
REPRODUCTION Eastern sand darters spawn later in the year than many darter species. Gravid females can sometime be found as late as August. Spawning more typically occurs in June or early July. The fish bury their eggs in sand and no further parental care is given.

FAMILY Percidae (Perches and darters)

JOHNNY DARTER

Etheostoma nigrum • E-thee-os-to-ma ny-grum

DISTRIBUTION



ALIAS None

STATUS **Common**

LENGTH Avg. 1.5-2.5" (Max. 3")

FOOD Chironomid (midge larvae) and other aquatic insect larvae

62

DESCRIPTION Johnny darters can be identified by the series of black "w" or "x" shapes scattered across their sides. Some of these marks form a line, giving the appearance of a broken lateral stripe. Another key feature is the lack of bright coloration. They have many dark speckles on both dorsal fins and the tail, and the snout does not project beyond the upper jaw. Breeding males can have a blackish head, fins, and several black bars along the sides. Johnny darters are similar in appearance

to greenside and channel darters. Greenside darters typically have bright green on their sides, a red band on the first dorsal fin, and their snout overhangs the upper jaw. The channel darter is only found in very large rivers and has a dashed stripe along the lateral line formed by oblong-shaped markings.

HABITAT & HABITS Johnny darters inhabit streams and rivers of all sizes, and frequent pools and other slackwater habitats over sand and gravel substrates. They are also one of

two darter species often found in Ohio's reservoirs - the other is the logperch darter. In reservoirs they are usually found in proximity to sandy beaches.

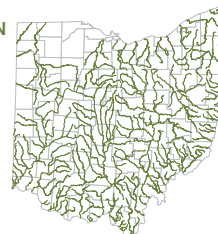
REPRODUCTION Johnny darters spawn on the underside of flat rocks in the spring. Males prepare a nest site and females lay 30-100 eggs. Several females may spawn in the nest of a single male. The male then stays to guard the eggs until they hatch.

FAMILY Percidae (Perches and darters)

FANTAIL DARTER

Etheostoma flabellare • E-thee-os-to-ma flab-el-ar-ee

DISTRIBUTION



63

ALIAS None

STATUS **Common**

LENGTH Avg. 2-3" (Max. 3.5")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION Fantail darters are long and slender-bodied with a rounded tail. The mouth is terminal and the snout is pointed. There are no bright colors on the body, only shades of brown. Fantails have 10-15 dark vertical bars along their sides which usually extend up over the back. They also have many small dark spots on their second dorsal and tail fins that form wavy lines, and a faint teardrop under the eye. Breeding males develop light-colored round knobs on the tips of the spines of the first

dorsal fin. It is thought that these knobs mimic eggs, to make it appear that a male already has eggs in his nest to encourage females to lay more eggs. The vertical bars on breeding males are often very dark and distinct. Breeding males often develop a very dark head.

HABITAT & HABITS Fantail darters are well distributed throughout Ohio. They are most abundant in small to medium streams approximately 20-40 feet wide. Fantails prefer slower riffles or pools, where they lurk under flat slabs

of rock. This species is rather tolerant of pollution and turbid waters, and is usually the last darter species to disappear from badly polluted streams.

REPRODUCTION Fantail darters spawn on the underside of flat rocks in the spring. Males prepare a nest site and females lay their eggs on the roof of the small cave under the rock the male has selected. Several females may spawn in the nest site of a single male. The male then guards the eggs until they hatch.

© PHOTO CREDIT: (male) Uland Thomas • (female) Uland Thomas

FAMILY Percidae (Perches and darters)

BANDED DARTER

Etheostoma zonale • E-thee-os-to-ma zo-nal-ee

DISTRIBUTION



64

ALIAS None

STATUS **Common**

LENGTH Avg. 1.5-2.5" (Max. 3")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION The banded darter is rather short and stubby. The similar greenside darter has a longer, more slender body shape. Banded darters have a rusty red band at the base of the first dorsal fin, and many small spots that often form rows on the second dorsal fin and tail. There are four to seven darker saddle markings straddling the back and a distinct dark teardrop marking under the eye. Breeding males have 8-13 bright green narrow vertical bands running from the head to the base of the tail. Male greensides have four to seven similar bands that are much thicker, and typi-

cally more distinct on the rear half of their body. The rusty band on the first dorsal fin of breeding male banded darters is bright brick red. Female bandeds also have green bands, but they are faint compared to those of a male. The young lack green bands, but the four to seven saddles on their back and teardrop under the eye are distinctive.

HABITAT & HABITS Banded darters are diverse in habitat choices, occupying small creeks to large rivers. They are most abundant in swift riffles of medium-sized streams where the rocks are covered with filamentous algae.

Banded darters are one of the most common darter species found in Ohio. However, they are only found in the Ohio River drainage and are absent from streams that drain into Lake Erie.

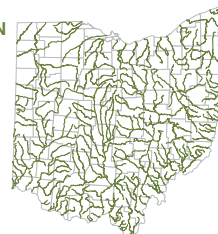
REPRODUCTION Banded darters spawn from mid-April to mid-May. The adhesive eggs are attached to filamentous algae and aquatic mosses that grow on the surface of rocks. Once the eggs are laid the male guards the area for a short time, but provides no further parental care for the young.

FAMILY Percidae (Perches and darters)

GREENSIDE DARTER

Etheostoma blennioides • E-thee-os-to-ma blen-ee-oh-eye-dees

DISTRIBUTION



65

ALIAS None

STATUS **Common**

LENGTH Avg. 3-4" (Max. 5")

FOOD Aquatic invertebrates including various fly larvae and snails

DESCRIPTION Greenside darters have a blunt rounded snout that sometimes protrudes beyond the tip of the upper lip. The mouth is very small and subterminal. This species is rather long and slender, with large rounded pectoral fins. Females, juveniles, and non-breeding males have 4-10 "v" or "w" shaped marks along their sides. On breeding males, these marks become dark green bands. The fins and head can also be bright green and there is a red band along the base of the first dorsal fin. Greenside darters closely resemble banded and Johnny darters. Banded darters have a similar color pattern,

but are not as long and slender, only reach a maximum of three inches, and do not have a bluntly rounded snout that overhangs the upper jaw. Johnny darters, even when in breeding condition, have no bright colors on the body and are smaller than greensides.

HABITAT & HABITS Greenside darters are found throughout Ohio, in both the Lake Erie and Ohio River drainages. They are found in medium to large streams and were common around the Lake Erie Islands before the invasion of round gobies. When breeding, greenside darters use fast deep riffles. The rest of

the year they prefer slower water, even pools, especially near emergent vegetation such as water-willow or lizard's-tail.

REPRODUCTION Adults spawn in deep fast riffles in April when water temperatures are between 55 and 65 degrees F. The eggs are attached to strands of filamentous algae and aquatic moss. The male then defends the area where the eggs were laid, but does not provide any care for the young after hatching. Young greenside darters spend much of their time in shallow water with a sandy substrate, often in or around emergent vegetation.

© PHOTO CREDIT: (male) Uland Thomas • (female) Uland Thomas

FAMILY Percidae (Perches and darters)

VARIEGATE DARTER

Etheostoma variatum • E-thee-os-to-ma var-ee-ate-um

DISTRIBUTION



66

ALIAS None

STATUS Common

LENGTH Avg. 2.5-3.5" (Max. 4.5")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION The variegate darter is a relatively large darter species. Markings include a red-orange band on the outer edge of the first dorsal fin. This is followed by a clear space, then a blue-green band, another clear space, and lastly a rusty red-brown band at the base of the fin. There are scattered red spots on the second dorsal fin, pectoral fins and tail which often form rows. The very large pectoral fins are used to prop the fish in place on the bottom of the stream in fast riffles. Variegate darters have four to six dark saddles that straddle

the back. Typically three or four of these saddles are very dark and clearly visible. Breeding males have a large bright red-orange patch on their sides. There are also alternating wide blue-green and thin blotchy red-orange vertical bars between the red-orange patch and the tail. Male variegates have a blue-green anal fin. Females are less brightly colored, but do have faint blue-green and red-orange alternating bars on the back half of the body.

HABITAT & HABITS Variegate darters occur in medium to large streams and rivers. They occupy swift riffles with gravel, cobble,

or boulders on the stream bottom. This species typically inhabits the fastest section of a riffle. Variegates are found in the Ohio River basin only and are well distributed in most of the major river systems in that drainage. This fish is an indicator of good water quality and is most abundant in high quality streams such as the Kokosing and Little Miami rivers, and Big Darby Creek.

REPRODUCTION Spawning occurs from mid-April to mid-May. Females lay eggs in riffles, burying them in sand or gravel. They provide no further parental care for the eggs or young.

© PHOTO CREDIT: (male) Brian Zimmerman • (female) Brian Zimmerman

FAMILY Percidae (Perches and darters)

TIPPECANOE DARTER

Etheostoma tippecanoe • E-thee-os-to-ma tip-eh-can-oo

DISTRIBUTION



67

ALIAS None
STATUS Threatened
LENGTH Avg. 1-1.5" (Max. 2")
FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION Tippecanoe darters are tiny; adults never reach a length of more than two inches, and are usually 1.5 inches or less. This species has two distinctive light spots on the base of the tail that are close together, creating an hour-glass shaped marking. Just in front of these light spots is a dark vertical bar that is also often broken into two spots, the lower one being larger than the one above it. Male Tippecanoes are a golden-brown body overall, and often have multiple dark vertical bars along the sides which are most visible near the tail. The lower sides and throat are bright orange, and the breast is blue or black. All fins are outlined with a wide golden-orange margin. The webbing between the first two to three spines of their first dorsal fin is darkly pigmented near the base of the fin, forming a dark blotch. The center portion of the pelvic fins is blue-black. Female Tippecanoe darters have an

overall brown coloration with a light cream belly. Females also have dark vertical bars on their sides that are most visible near the tail, but they are usually less distinct than those on a male. Females have fins that are clear with many dark spots that often form rows.

HABITAT & HABITS The Tippecanoe darter is found in medium to large streams and rivers in the Ohio River drainage. They occur in riffles of moderate current with a substrate of gravel and small cobble-sized rocks. Most of their time is spent in crevices between rocks, and because of their small size Tippecanoes are often difficult to find. Tippecanoe darters historically occupied the Walhonding River and the lower Muskingum River of the Muskingum drainage, and the Olentangy River, Big Walnut Creek, Big Darby Creek, and Deer Creek of the Scioto River drainage. Since the early 1980s this species has made an impressive expansion

in the Scioto River drainage. They can now be found in nearly every major tributary of the Scioto River, and the main stem of the Scioto River from Columbus to the Ohio River. Unfortunately, Tippecanoes appear to have been extirpated from the Muskingum River drainage, with the exception of a small population in the lower reaches of the Muskingum River. Numerous dams probably prevent further upstream expansion in the Muskingum River.

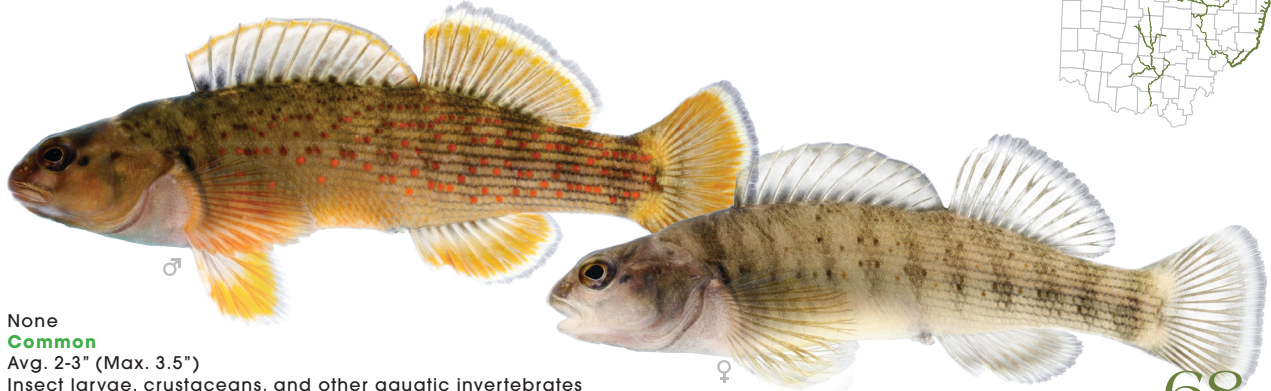
REPRODUCTION Tippecanoe darters spawn later in the summer than most species of darters. It is not uncommon to find gravid females into August. Most spawning probably occurs from late June through early August. Males guard small territories, usually in 6-12 inches of water, near the ends of riffles. Eggs are guarded by the male until they hatch. No further parental care is given after the eggs hatch.

FAMILY Percidae (Perches and darters)

BLUEBREAST DARTER

Etheostoma camurum • E-thee-os-to-ma cam-ur-um

DISTRIBUTION



68

ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 3.5")
FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION The bluebreast darter has a blunt snout and 7-10 dark saddles straddling the back. The narrow spaces between these saddles are much lighter than the rest of the fish. There are 8-12 vague vertical bars along their side, which are most visible near the tail. Bluebreasts also have many thin horizontal stripes along the sides. The outer edge of the fin is dark-margined, followed by a thin white line just inside this margin. The first dorsal fin is marked with a dark blotch near the base of the fin, on the webbing between the first two to three spines. The closely related spotted darter lacks the dark fin margins, has a point-

ed snout, and smaller eyes. Male bluebreasts have numerous small round red spots scattered along the sides. They also have an orange patch on the lower sides and a blue throat and breast. Females lack red spots and an orange patch. The blue throat and breast are also absent or much less vividly colored. Additionally, females have dark spots along the sides that are less numerous and uniform in shape, and larger than the red spots of the males.

HABITAT & HABITS Bluebreast darters occur in medium to large streams and rivers, but only in the Ohio River drainage. At one time they had become quite rare in the state

and were only found in limited portions of the Muskingum and Scioto river drainages. Fortunately, as a result of improved water quality, the bluebreast darter has made an impressive recovery. They can now be found in every major tributary of the Scioto River from Columbus to the Ohio River. They have also made a similar expansion in the Muskingum River drainage.

REPRODUCTION Bluebreast darters spawn in June and July. Females bury their eggs in gravel in fast riffles. Males guard a small territory around the spawning site until the eggs hatch, after which no further parental care is provided.

FAMILY Percidae (Perches and darters)

SPOTTED DARTER

Etheostoma maculatum • E-thee-os-to-ma mak-u-late-um

DISTRIBUTION



69

ALIAS None

STATUS **Endangered**

LENGTH Avg. 2-3" (Max. 4")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION The spotted darter has a sharply pointed snout and a rounded tail. They are typically dark brown with a series of 7-10 dark saddles crossing the back. The narrow spaces between these saddles are much lighter than the rest of the fish. There are many narrow dark stripes running horizontally along the sides which are most visible near the tail. The outer edge of all fins is light-colored with no dark margins. The closely related bluebreast darter has distinct dark outer margins on all fins, a larger eye, and a blunt, rounded snout. Male spotted darters have many small round bright red spots on the sides of the body that are uniform in size and shape. Both dorsal fins and the tail are dusky at the base and fade to light yellow on the outer edges. The pectoral, pelvic, and anal fins are also dusky at the

base, fading to green with white outer edges. Females are very different in coloration than males. They have dark spots on the sides that are less numerous and usually larger than the red spots on a male, and not as uniform in size or shape. All of their fins are light yellow or brown, with dark spots on both dorsal, tail, and anal fins. Female spotted darters often have faint dusky vertical bands on the back half of the sides and a teardrop under the eye.

HABITAT & HABITS Spotted darters occur in medium-sized rivers and streams. They typically occupy areas of swift current at the end of a riffle where there are many very large boulders or flat slabs of rock. Most of their time is spent hiding under the upstream edge of large rocks, watching for prey. In Ohio, the spotted darter was historically found in parts of the

Mahoning, Muskingum, and Scioto river drainages. Today they are still found in sections of Big Darby Creek, Paint Creek, and Little Walnut Creek of the Scioto River drainage. They are also found in limited areas of the Kokosing and Walhonding rivers of the Muskingum River drainage. No spotted darters have been found in the Mahoning River drainage since the 1850s. This species is an indicator of very high quality streams.

REPRODUCTION Spotted darters spawn in June and July. Males guard territories underneath the upstream edge of large rocks. Females lay adhesive eggs on the underside of these rocks. Males will often mate with multiple females, and guard the eggs until they hatch. After the eggs hatch no further parental care is given.

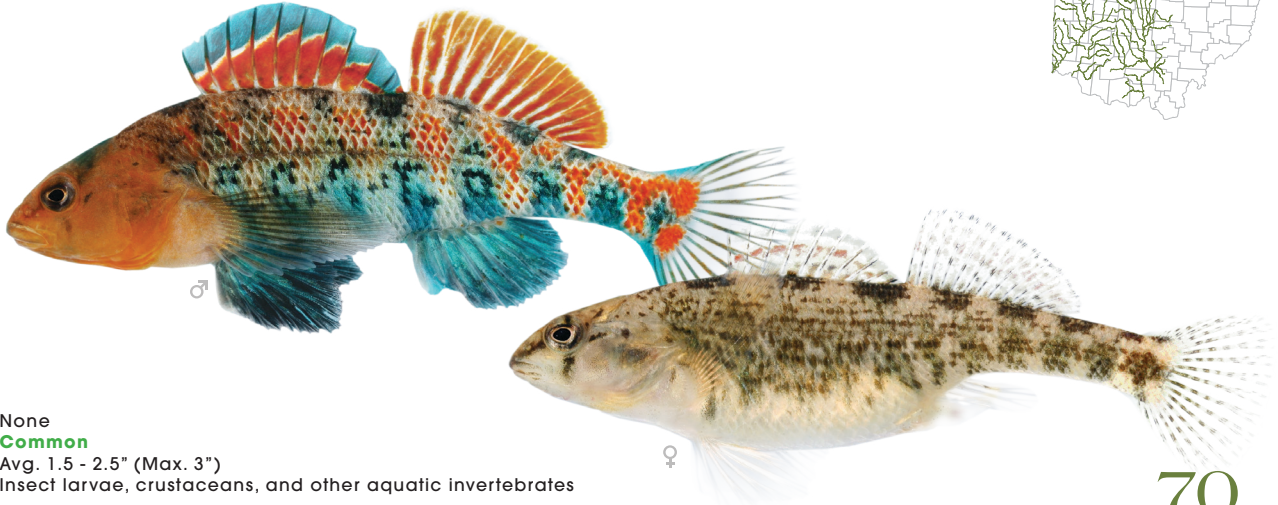
© PHOTO CREDIT: (male) Brian Zimmerman • (female) Brian Zimmerman

FAMILY Percidae (Perches and darters)

ORANGETHROAT DARTER

Etheostoma spectabile • E-thee-os-to-ma spek-fab-il-ee

DISTRIBUTION



ALIAS None

STATUS **Common**

LENGTH Avg. 1.5 - 2.5" (Max. 3")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION Orangethroat darters have five to seven vertical bars on the rear half of their sides. These bars do not go all the way up and over their back like those of the very similar rainbow darter. The bars are blue on males and dark brown on females. Additionally, orangethroats have blotchy horizontal lines along the sides, just behind the gills. These lines are more prominent on females. There is also a distinct teardrop marking under the eye which

is blue and sometimes blurred on males, and dark brown to black on females. The anal fin has no red or orange like that of the rainbow darter. Instead, it is clear on females and blue on males. Male orangethroats have an orange throat and belly, the spaces between the vertical bars are flushed with red or orange, and there is red and blue on the two dorsal fins.

HABITAT & HABITS This is a species of small headwater streams that are usually less than

10 feet wide. Orangethroat darters are typically found in slow riffles with fine gravel or coarse sand substrates. The distribution of this species has changed little over time. They are found primarily in the western half of the state.

REPRODUCTION Orangethroat darters breed in shallow riffles from mid-April to mid-May. Females deposit three to seven eggs in the substrate and males fertilize them. This can be repeated many times over several days.

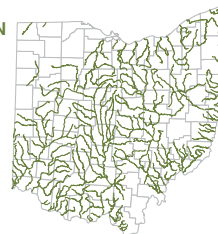
© PHOTO CREDIT: (male) Uland Thomas • (female) Uland Thomas

FAMILY Percidae (Perches and darters)

RAINBOW DARTER

Etheostoma caeruleum • E-thee-os-to-ma see-roo-lee-um

DISTRIBUTION



71

ALIAS None

STATUS **Common**

LENGTH Avg. 1.5 - 2.5" (Max. 3")

FOOD Feeds on a variety of aquatic insect larvae

DESCRIPTION Rainbow Darters have 8-13 vertical bands along the side of the body. These bands are blue on males and brown on females and young. Males lack a teardrop-shaped marking under the eye; females may have a poorly defined teardrop. The anal fin of males has some red or orange in the center surrounded by blue. The blue on the body intensifies on breeding males, and some individuals can look almost black. Rainbow darters are most similar to orangethroat darters. Both male and female

orangethroats have a well-defined teardrop under the eye, and males have a solid blue anal fin with no red or orange as in the rainbow darter.

HABITAT & HABITS This species prefers riffles of moderate gradients composed primarily of gravel and small cobble. They are most abundant in small to medium (20-60 ft. wide) streams. Rainbow darters are not usually found in very small headwater streams, and

small numbers do occur in even the largest rivers. This is one of the most widespread darter species and can be found statewide.

REPRODUCTION Breeding takes place in riffles from mid-April to mid-May. Females deposit three to seven eggs in the gravel and the male fertilizes them. This may be repeated many times over several days during the breeding season. A single female can lay about 800 eggs in one season.

FAMILY Percidae (Perches and darters)

BLACKSIDE DARTER

Percina maculata • Per-sy-na mak-u-late-ah

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 2-3" (Max. 4")
FOOD Insect larvae, crustaceans, and other aquatic invertebrates

72

DESCRIPTION Blackside darters have a series of black blotches down the sides that often form a lateral stripe. Their blotches are never taller than they are wide. This species differs from the very similar dusky and longhead darters in having a dark blotch on the front lower portion of the first dorsal fin. Blackside darters have a prominent teardrop marking under the

eye and a dark blotch in the center at the base of the tail. Blacksides always lack bright colors on their body.

HABITAT & HABITS Blackside darters are found throughout Ohio, and occur in all drainages. They are typically found in medium-sized streams, and prefer areas with sluggish current and an abundance of brush, roots or other

woody debris. Blacksides prefer slightly shallower and slower moving water than the dusky darter.

REPRODUCTION Blackside darters spawn in spring. They lay their eggs in riffles, burying them in sand or gravel. They provide no further parental care for the eggs or young.

FAMILY Percidae (Perches and darters)

DUSKY DARTER

Percina sciera • Per-sy-na scler-ah

DISTRIBUTION



ALIAS None

STATUS Common

LENGTH Avg. 3-4" (Max. 5")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

DESCRIPTION The dusky darter is one of Ohio's larger species of darters. A series of dark blotches down the sides often forms a line in females or young. Large males can be very dark, and the blotches on their sides form dark vertical bars that are taller than their width. This species never has bright colors on the body. They differ from the very similar blackside darter in having three dark blotches at the base of the tail placed vertically above one another. The bottom two blotches are often fused together. They also differ from both

blackside and longhead darters by lacking a well developed tear drop marking under the eye. The dusky darter has only small dots on their first dorsal and other fins. The blackside darter has a large dark blotch on the front lower portion of the first dorsal fin.

HABITAT & HABITS The dusky darter occurs in medium to large streams and rivers. At one time their population had been reduced to three streams in the Scioto River system. Today they are found throughout much of the Ohio River drainage including such river sys-

tems as the Muskingum, Scioto, Walhonding, Hocking, and Raccoon Creek. They are also found in the Maumee drainage of northwest Ohio, primarily in the Tiffin and St. Joseph rivers. Dusky darters are found in areas with moderate to swift current near submerged brush, roots or other woody debris, typically in two to four feet of water.

REPRODUCTION The dusky darter spawns in spring. They bury their eggs in coarse sand or gravel in riffles and no further parental care is given.

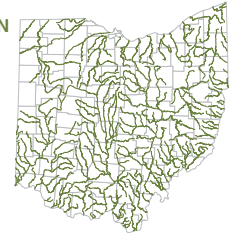
73

FAMILY Percidae (Perches and darters)

LOGPERCH DARTER

Percina caprodes • Per-sy-na kap-ro-dees

DISTRIBUTION



ALIAS None
STATUS Common
LENGTH Avg. 3-5" (Max. 7")
FOOD Feed on a wide variety of invertebrates including mayfly, stonefly, and midge larva

74

DESCRIPTION The logperch darter is pale yellow to olive with numerous, narrow brown vertical bars on the sides. There is usually a dusky bar beneath the eye and a small black spot at the base of the tail fin. They have a small mouth and a very pointed snout. The snout is used to flip over rocks to search for food.

HABITAT & HABITS Logperch frequent sites with considerable sand, gravel or rocky areas

in lakes or medium to large streams and rivers. They are one of two darter species that are common in Ohio's reservoirs; the other is the Johnny darter. Logperch are found throughout the state in both the Lake Erie and Ohio River drainages.

REPRODUCTION Logperch spawn in late spring. Males gather in large schools near sandy substrates while females remain out-

side the school until they are ready to spawn. When ready, the females swim through the school and at least one male will follow. Both fish will then partially bury themselves in the sand and extrude and fertilize the eggs. About 10 to 20 eggs are released at each spawning, and a female will spawn multiple times. They are capable of laying 1,000 to 3,000 eggs.

FAMILY Percidae (Perches and darters)

SLENDERHEAD DARTER

Percina phoxocephala • Per-sy-na fox-oh-sef-ah-la

DISTRIBUTION



ALIAS None

STATUS Common

LENGTH Avg. 2.5-3.5" (Max. 4")

FOOD Insect larvae, crustaceans, and other aquatic invertebrates

75

DESCRIPTION The slenderhead darter has a pointed snout and long narrow body. There are 14-22 dark blotches down the center of the back. There is also a row of 11-16 blotches along the sides that are taller than wide and connected by a thin lateral stripe. The first dorsal fin has a dark brown band near the base and an orange band near the outer edge. The second dorsal fin and tail have many small spots, often forming rows. The rest of the fins

are transparent. Overall body color is light tan with a cream-colored belly. On breeding males the orange band on the dorsal fin is more intensely colored and thicker. Males also can develop a dark dusky coloration to their body which often hides many of the blotches on their back and sides.

HABITAT & HABITS Slenderhead darters are found in areas of moderate current over sand

and gravel bottoms. They occur in the larger rivers of southern Ohio including the Scioto, Muskingum, Hocking, Little Miami, and Great Miami rivers.

REPRODUCTION Slenderhead darters spawn between late April and early June. They lay their eggs in riffles, burying them in sand or gravel. They provide no further parental care for the eggs or young.

FAMILY Percidae (Perches and darters)

SAUGER

Sander canadense • San-der can-a-h-dens-ee

DISTRIBUTION



ALIAS Jack salmon

STATUS Sportfish

LENGTH Avg. 9-15" (Max. 24")

WEIGHT Avg. <1 lbs (Max. 7 lbs)

FOOD Primarily small fish, but will also eat crayfish and large insect larvae such as mayflies

76

DESCRIPTION The sauger is similar in appearance to walleye or the hybrid between the two, the saugeye. This species has many dark spots on the dorsal fin, often forming rows. The first dorsal fin is usually relatively clear and it lacks a large dusky area at the rear base of the fin as in walleye. Overall body coloration is bronze or brown, compared to the usual gray or silver color of a walleye. The sauger has large dark oblong blotches on the sides of the body which are more visible when the fish are sitting

still. Sauger lack large white edges to the lower part of their tail and anal fin like a walleye; at best they have a very thin light edge that is often yellowish.

HABITAT & HABITS Sauger were historically abundant in Lake Erie, the Ohio River and their larger tributaries. Today the sauger is still common in the Ohio River and its larger tributaries upstream to the first dam. In Lake Erie and its tributaries they have become rather rare, but small numbers are still present. Saugers prefer

murky rivers or large shallow lakes. They tend to favor more turbid water than walleye, as well as shallower depths.

REPRODUCTION Sauger spawn in the spring when water temperatures reach the upper 40s. Females lay between 10,000 to 50,000 eggs. The eggs are adhesive and stick to vegetation, sticks, and stones, and hatch in about 10 days. Saugers are migratory and large upstream spawning runs occur in early spring. No parental care is given to the young.

© PHOTO CREDIT: Uland Thomas

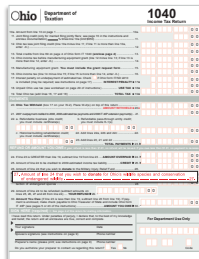
77 PUBLICATION FUNDING

Funding for this publication was provided by donations to the state income tax checkoff program, sales of the cardinal license plate and the Ohio Wildlife Legacy Stamp.

To purchase a Legacy Stamp, call the Division of Wildlife at: **1-800-WILDLIFE** or visit the web at **wildohio.gov**



To make a donation: go to the second page of the 1040 income tax form for the **tax checkoff program**



To purchase a license plate: visit your local registrar's office or call **BMV** at **1-888-PLATES3**



For more information about Ohio's native wildlife, please contact the Division of Wildlife:

1-800-WILDLIFE

(1-800-750-0750 Ohio Relay TTY only)

wildohio.gov

To mail a donation, send to:

Wildlife Diversity Fund

2045 Morse Road Bldg G.
Columbus, OH 43229-6693



OTHER OHIO WILDLIFE BOOKLETS

Pub 5127 - Stream Fishes of Ohio

Pub 5140 - Common Spiders of Ohio

Pub 5204 - Butterflies & Skippers of Ohio

Pub 5320 - Dragonflies & Damselflies of Ohio

Pub 5334 - Sportfish of Ohio

Pub 5344 - Mammals of Ohio

Pub 5348 - Amphibians of Ohio

Pub 5349 - Warblers of Ohio

Pub 5354 - Reptiles of Ohio

Pub 5414 - Common Birds of Ohio

Pub 5418 - Waterbirds of Ohio

Pub 5423 - Owls of Ohio

Pub 5467 - Moths of Ohio

Pub 5473 - Common Lichens of Ohio

Pub 5488 - Common Bees & Wasps of Ohio

Pub 5494 - Spring Wildflowers of Ohio

REFERENCES

A Field Guide to Freshwater Fishes

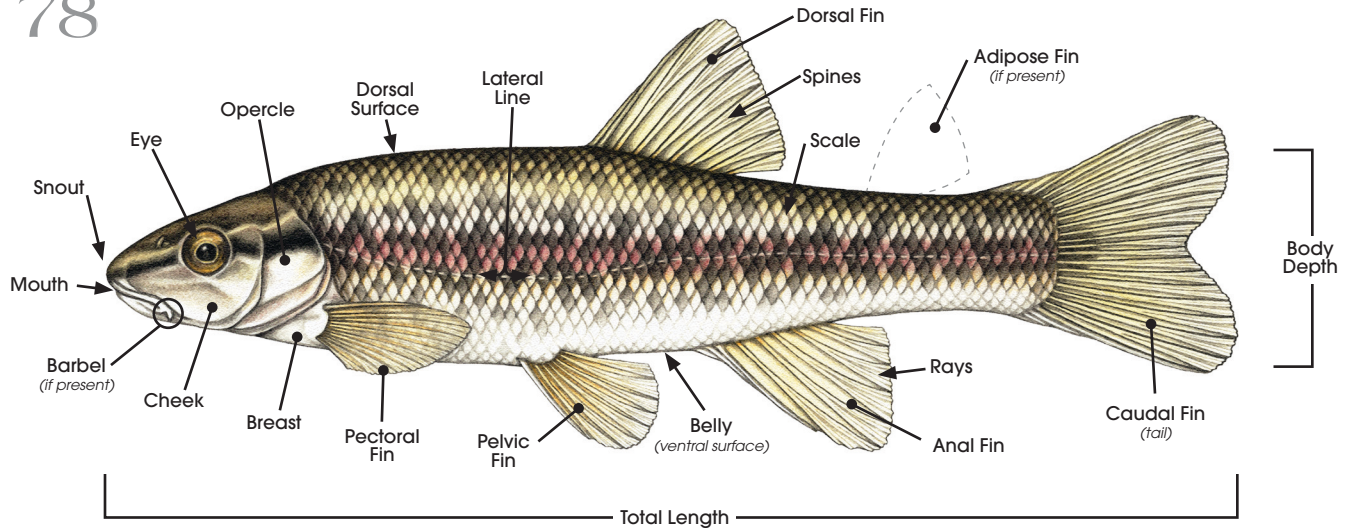
1991. Lawrence Page and Brooks Burr.
Peterson Field Guides, Houghton Mifflin, New York.

The Fishes of Ohio

1981. Milton B. Trautman.
The Ohio State University Press, Columbus, Ohio.

A Guide to Ohio Streams

2000. Randall E. Sanders (Ed.).
Ohio Chapter of the American Fisheries Society, Columbus, Ohio.



GLOSSARY

ADIPOSE FIN: Fleshy and soft fin on the back, between the dorsal and caudal fins

AIR BLADDER: An internal organ that holds air and helps regulate buoyancy.

AMMOCOETE: The larval stage of a lamprey.

ANAL FIN: Stiff fin on underside of fish, just forward of the tail.

BARBEL: A whisker-like projection near the mouth, notable in catfish.

BARS: Vertical line(s) of pigment on the sides of fish.

CARTILAGE: Rigid connective tissue that forms skeletal and other supporting structures.

CAUDAL FIN: The tail fin, or tail.

CHANNELIZE: The process of dredging and ditching free-flowing streams into linear waterways.

COBBLE: A class of rocks, larger than gravel and typically rounded.

CONCAVE: Dish-shaped, or curving inward.

CONVEX: Dome-shaped, or curving outward.

DEEP-BODIED: Refers to fishes that are tall from top to bottom, and typically narrow in width.

DETRITUS: Decaying organic matter, such as leaves, on a stream bottom.

DORSAL: Upper surface of a fish.

DORSAL FIN: The fin that is top and center. Often the largest and most conspicuous fin. Can be both a soft and spiny portion or even 2 separate fins on some species such as sunfish or darters.

EXTIRPATED: Locally extinct; gone from a particular region, but still present elsewhere.

FALCATE: Sickle-shaped.

GILL: Respiratory organ that extracts dissolved oxygen from water. Typically located just behind the head on either side of the body.

GRADIENT: Refers to the drop in elevation of a stream, which affects the stream's flow rate.

GRAVID: Pregnant and distended with eggs or young.

HEADWATER STREAM: The uppermost reaches of a stream, or smallest size class of stream.

INVERTEBRATE: Animals such as insects that lack a backbone.

LATERAL LINE: Series of sensory pores used to detect movement, vibration or even electrical impulses in the surrounding water. Lateral lines are usually visible as faint lines running lengthwise down each side, from the vicinity of just behind the gills to the base of the tail.

LATERALLY COMPRESSED: Thin-bodied or flattened from side to side.

MYOMERE: Zigzag-shaped muscle fibers or segments.

OPERCLE: A flap of hard bony tissue that covers and protects the gills. Appears ear-like in sunfishes.

PARASITE: An organism, such as some lamprey species, that preys on a host organism from which it derives necessary nutrients.

PELVIC FIN: Paired fins near the underside of the body, forward of the anal fin and behind pectoral fins. Can be almost directly below pectoral fins on some species such as sunfish and darters.

PELVIC FIN: Paired fins near the underside of the body, forward of the anal fin and behind pectoral fins.

POOL: Areas of deeper slack water in a stream, typically lying between riffles.

RAY: Bony rod-like supports that brace fin tissue.

RIFFLE: Shallow areas of rapid flow, typically with gravelly or rocky bottoms.

SADDLE: Dark markings that cross a fish's back from side to side, and suggest the appearance of a saddle.

SCALE: Small but highly variable often roundish plates arranged in overlapping rows and serving to protect a fish's skin. Absent in some fishes; greatly enlarged into armored plates in others.

SERRATE: Sharp-toothed or spiny, as in margins of some fins.

SILT: Fine sediments or soil particles.

SLAB-SIDED: Refers to a fish's sides when they are flat and tall from top to bottom.

SNOUT: Foremost nose-like structure of a fish that contains the mouth.

SPAWNING: The act of depositing eggs or young; fish eggs are spawn or roe.

STRIPE: Horizontal line(s) of pigment often running from just behind the gills to the base of the tail.

SUBSTRATE: The composition of a stream or lake bottom.

SUBTERMINAL MOUTH: A mouth in which the tip of the snout projects above and beyond the mouth.

TERMINAL MOUTH: A mouth which is located at the extreme tip of the snout.

TUBERCLE: Small warty bumps; often forming on chubs, minnows and some other fishes, especially males, when they enter breeding condition.

TURBIDITY: A condition in which water is clouded by suspended solids or silts.

VENTRAL: The bottom surface of a fish.

VERMICULATION: Squiggly lines of pigment, often wormy in appearance.

ZOOPLANKTON: Tiny animals of great diversity that float freely in water, and are often invisible to the naked eye.



DIVISION OF WILDLIFE

OHIO DEPARTMENT OF NATURAL RESOURCES
WILDOHIO.GOV • 1-800-WILDLIFE



OUR MISSION

To conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all.

The ODNR, Division of Wildlife is the state agency responsible for managing Ohio's fish and wildlife resources. The primary source of funding for the Division comes from the sale of hunting and fishing licenses, federal excise taxes on hunting, fishing, and shooting equipment, and donations from the public. We care about all wildlife and maintaining stable, healthy wildlife populations. Our challenge is to balance the needs of wildlife, habitat, and people.

LITTLE BEAVER CREEK *Jim McCormac*

Little Beaver Creek in Columbiana County is one of only two Ohio rivers designated as wild. Extensive forests buffer the stream and keep water quality high.

OHIO SPORTFISH RECORDS

SPECIES	WEIGHT	LENGTH	PAGE
Longnose Gar	25 lbs	49"	13
Channel Catfish	37.65 lbs	41 1/2"	40
Flathead Catfish	76 lbs	58 5/8"	41
Yellow Bullhead	4.25 lbs	18 1/2"	46
Rock Bass	1.97 lbs	14 3/4"	55
Smallmouth Bass	9.5 lbs	23 3/4"	56
Spotted Bass	5.25 lbs	21"	57
Green Sunfish	0.99 lbs	10 5/8"	60
Longear Sunfish	0.2 lbs	6 1/2"	73
Sauger	7.31 lbs	24 1/2"	76

PUBLICATION 5127 (R0417)

Total Quantities Printed: 25,000 Unit cost: \$0.269 Publication date: 5/17

HUNTING, FISHING, TRAPPING, BIRDWATCHING - THE LOVE OF NATURE ... PASS IT ON!