An Identification Guide to the Fishes of Turkey Creek Preserve, Jefferson County, Alabama

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**Fishes collected at Turkey Creek, Jeff. Co, AL.**
List provided by Dr. Mike Howell of Samford University.

**Cyprinidae:**
- Semotilus atromaculatus - creek chub
- Campostoma oligoplepis - fine-scale stoneroller
- Notropis stilbius - silverstripe shiner
- Luxilus chrysocephalus - striped shiner
- Cyprinella venusta - blacktail shiner

**Fundulidae:**
- Fundulus olivaceus - blackspotted topminnow

**Poeciliidae:**
- Gambusia affinis - mosquitofish

**Catostomidae:**
- Hypentelium etowanum - Alabama hogsucker
- Moxostoma duquesnei - black redhorse
- Moxostoma erythrurum - golden redhorse

**Percidae:**
- Percina nigrofasciata - Blackbanded darter
- Percina kathae - Mobile logperch
- Etheostoma stigmaeum - Speckled darter
- Etheostoma jordani - Bluebreast darter (now Etheostoma douglasi)
- Etheostoma whipplei - Eastern Redfin darter
- *Etheostoma chermocki* - Vermilion darter
- ^Etheostoma phytophilum - Rush darter
- *Etheostoma nuchale* - Watercress darter (introduced by Dr. Howell during 1986 from Roebuck Springs)

**Centrarchidae:**
- Lepomis cyanellus - Green sunfish
- Lepomis macrochirus - Bluegill
- Lepomis microlophus - Redear sunfish
- Micropterus salmoides - Largemouth bass
- Micropterus punctulatus - Spotted bass
- Micropterus coosae - Redeye bass

**Cottidae:**
- Cottus carolinae – Banded Sculpin

*listed by U. S. Fish & Wildlife Service as Endangered
^a candidate species for Federal listing as endangered
Description of Fish Families:

Use these descriptions and the pictures to determine to which family your specimen belongs. Then study the images and descriptions of species in that family to identify your specimen.

Family: Cyprinidae (Minnows). These active small fish are often swimming at or near the surface. They often are found in shallow riffles with rocky or stone bottom. Many species of “shiners” are in this family. Most are predators, feeding on very small insects, though some eat algae or detritus (decaying plant material). Morphology: Minnows have an elongated, streamlined, torpedo-shaped body that helps them swim in rapid currents. Usually they are silvery in color on the sides, while darker along the top.

Family: Fundulidae (Topminnows). The topminnows live near the surface where they hunt small animals. Species in this family are found in a wide array of habitats. Morphology: They look similar to the Cyprinids (minnows), but have rounded tails. The mouth is positioned at the top of the head, and the head and neck are flattened so the fish can swim with its mouth very close to the surface.

Family: Poecilidae (Guppies, Livebearers). These are the guppies, mollies and swordtails you may be familiar with from the aquarium pet trade. Many are colorful, though the native Gambusia less so. These fish prefer slow streams, pools habitats, and ditches. They can tolerate lower oxygen levels than other fish (e.g., Minnows). The native guppy, Gambusia, eats mosquito larvae, among other small invertebrates. Morphology: The bodies of the guppies are less streamlined than the minnows, in part, because they live in slower moving waters. Also note the large anal fin relative to the minnows.

Family: Catostomidae (Suckers). Suckers are omnivorous, feeding on both plants and animals. These species can be found in streams and lakes; thus, they can be founding areas with high or low amounts of oxygen. Morphology: Suckers have a flattened underside for feeding and resting on the river bottom. The large mouth is positioned downward and is extended to feed along stream bottom.

Family: Percidae (Perches, Darters). This large family includes the many species who can be extremely colorful, rivaling the colors of tropical reef fish. These fish are ‘sit and wait’ predators, waiting for the current to bring them food (esp. small invertebrates). When food passes close, they dart upwards to capture it, then return to the stream bottom. Darters typically need swift-moving water with moderate to high levels of oxygen. Morphology: Darters have flat undersides to rest on the stream bottom. Long pectoral (side) fins and tall dorsal (top) fins to help them stay in place on the bottom. They tend to have dark spots, bands, and blotches on the body to camouflage them. Breeding males of some species have spectacular colors in spring and early summer.

Family: Centrarchidae (Sunfishes and Basses). This family includes the perch, bluegill, crappie and basses familiar to many anglers. These fish can be founding water with high or low amounts of oxygen. Morphology: In cross-section, sunfish bodies are deeper than they are wide. This body shape helps them maneuver with agility as they chase larger invertebrates in slow moving or still waters. Some sunfishes can be quite colorful. Basses have a large mouth and are longer than a typical sunfish, in part because they need the extra muscles to chase smaller animals.

More families on next page
**Family: Cottidae (Sculpins).** Sculpins are sit-and-wait predators who rest camouflaged against the stream bottom waiting for unsuspecting prey to venture near. Their preferred habitat is fast-moving waters in streams and rivers. **Morphology:** Sculpins have wide mouths and big heads armored with spines and bony ridges. Their eyes are almost completely on the top of the head.

**Reference and Credits**

Many thanks to Dr. Mike Howell for the list of fish species he has collected at Turkey Creek.

Many thanks to Dr. W. Mike Howell & Dr. Ronald L. Jenkins, Professors of the Department of Biology, Samford University for the use of the images from their websites for BIOL 416, Vertebrate Field Zoology.

Many thanks also to Dr. Megan Gibbons, Professor of the Department of Biology, Birmingham-Southern College for the use of the images from her website for BI 322 Vertebrate Field Zoology.

Images not from the above sources are credited in the species description.

Descriptions of the fishes are from


Fish anatomy figure thanks to EnchantedLearning.com
### Cyprinidae (“sy-prin-i-dee”) – Minnows

<table>
<thead>
<tr>
<th><strong>Species</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
</table>
| *Semotilus atromaculatus* | Creek Chub  
Note dark blotch at base of dorsal fin.  
Top picture thanks to Duane Raver, USFWS |
| *Campostoma oligolepis* | Large-scale Stoneroller  
Flattened bottom profile w/ blunt snout; mouth faces down.  
Fins with orange or pink-orange; Dorsal fin with distinct black band; |
| *Notropis stilbius* | Silverstripe Shiner  
Silvery sides. Note broad silvery-black band from gills to base of tail, becoming an oval spot at base of tail. Back scales well-outlined. |
**Luxilus chrysocephalus**

**Striped Shiner**

Scales taller than they are wide. Pigment on some scales forms crescent-shaped bars that can form an **indistinct dark side stripe**. Breeding male has **Back w/ distinct parallel stripes** ending in a V at tail fin, and rose-red on lower head and scarlet on sides. Little color at other times.

<table>
<thead>
<tr>
<th>Luxilus chrysocephalus</th>
<th><img src="image1" alt="Striped Shiner" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Striped Shiner</strong></td>
<td></td>
</tr>
<tr>
<td>Scales taller than they are wide. Pigment on some scales forms crescent-shaped bars that can form an <strong>indistinct dark side stripe</strong>. Breeding male has <strong>Back w/ distinct parallel stripes</strong> ending in a V at tail fin, and rose-red on lower head and scarlet on sides. Little color at other times.</td>
<td><img src="image1" alt="Striped Shiner" /></td>
</tr>
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</table>

**Cyprinella venusta**

**Blacktail Shiner**

Note large **distinct spot at base of tail**. Breeding males with steel-blue back. Anal and tail fins light yellow and edged in white.

<table>
<thead>
<tr>
<th>Cyprinella venusta</th>
<th><img src="image2" alt="Blacktail Shiner" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blacktail Shiner</strong></td>
<td><img src="image2" alt="Blacktail Shiner" /></td>
</tr>
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<td>Note large <strong>distinct spot at base of tail</strong>. Breeding males with steel-blue back. Anal and tail fins light yellow and edged in white.</td>
<td><img src="image2" alt="Blacktail Shiner" /></td>
</tr>
</tbody>
</table>

**Fundulidae ("Fun–dool–i-dee") – Topminnows**

<table>
<thead>
<tr>
<th>Fundulus olivaceus –</th>
<th><img src="image3" alt="Blackspotted Topminnow" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blackspotted Topminnow</strong></td>
<td><img src="image3" alt="Blackspotted Topminnow" /></td>
</tr>
<tr>
<td><strong>Rounded tail</strong>. Mouth at top of head. <strong>Dark lateral stripe</strong> from head to tail; small <strong>black spots on back</strong>.</td>
<td><img src="image3" alt="Blackspotted Topminnow" /></td>
</tr>
</tbody>
</table>
Poeciliidae (“pē-sil'en-i-dee”) – Guppies, Livebearers

**Gambusia affinis**

Mosquitofish

Image order: female male

Body light brown, with silvery scales near head and on abdomen. Some iridescence during breeding season

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Catostomidae – Suckers (“cat-o-stome- i-dee”)

**Hypentelium etowanum**

Alabama hogsucker

Note blunt head, with mouth at lower position and extended lips; **brown back with distinct dark bars.**
**Moxostoma erythrurum**

**Golden Redhorse**

This and the next species are difficult to distinguish.

**8-9 pelvic fin rays;** lateral line has 39-42 scales. Sides often have dark lateral stripe (not depicted).

Thanks to Ohio Dept of Natural Resources for top image.

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**Moxostoma duquesnei**

**Black Redhorse**

**10 pelvic fin rays;** lateral line has 44-47 scales. Sides silvery to light tan.

Thanks to Ohio Dept of Natural Resources for image.
<table>
<thead>
<tr>
<th><strong>Percidae (&quot;pers-i-dee&quot;) – Darters, Perches</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percina nigrofasciata</strong></td>
</tr>
<tr>
<td><strong>Blackbanded Darter</strong></td>
</tr>
<tr>
<td>Variable color patterns among populations</td>
</tr>
<tr>
<td>depending on color of substrate.</td>
</tr>
<tr>
<td>Usu. <strong>12-15 dark bars</strong> along light green or</td>
</tr>
<tr>
<td>brown or tan sides forming <strong>lateral stripe</strong>.</td>
</tr>
<tr>
<td>Back w/ 6-8 dark ‘saddle’ spots.</td>
</tr>
<tr>
<td><strong>Percina kathae</strong></td>
</tr>
<tr>
<td><strong>Mobile Logperch</strong></td>
</tr>
<tr>
<td>Note <strong>conical snout</strong> extending past upper jaw.</td>
</tr>
<tr>
<td><strong>Vertical banding</strong> along sides with longer</td>
</tr>
<tr>
<td>bands expanded into a diffuse blotch.</td>
</tr>
<tr>
<td>Background color is yellowish brown to yellow-</td>
</tr>
<tr>
<td>green</td>
</tr>
<tr>
<td><strong>Identification Tip:</strong></td>
</tr>
<tr>
<td>Genus <strong>Percina</strong> tend to have mouth more</td>
</tr>
<tr>
<td>closer to the midline of the body, while Genus</td>
</tr>
<tr>
<td><strong>Etheostoma</strong> have mouth closer to bottom of</td>
</tr>
<tr>
<td>the head. Breeding male colors will be</td>
</tr>
<tr>
<td>brightest in spring and early summer, fading</td>
</tr>
<tr>
<td>by fall.</td>
</tr>
<tr>
<td><strong>Etheostoma stigmaeum</strong></td>
</tr>
<tr>
<td><strong>Speckled Darter</strong></td>
</tr>
<tr>
<td>Back w/ 6 dark brown saddle spots and large</td>
</tr>
<tr>
<td>specks. Breeding males: **8 large turquoise</td>
</tr>
<tr>
<td>bars** on sides. <strong>Spiny dorsal fin band colors</strong></td>
</tr>
<tr>
<td>are (fm top to bottom): dark blue, white,</td>
</tr>
<tr>
<td>rusty red, blue, then black.</td>
</tr>
</tbody>
</table>
Speckled Darter
(continued)

Image order:
   Male (top)
   Female (bottom)

*Etheostoma whipplei*

**Eastern Redfin Darter**

Back and sides mottled light olive; lower head, breast, and gill areas are white. Breeding males have scattered large red dots. **Spiny dorsal fin band colors** are (fm top to bottom) blue, thin white, red, clear, red, then white at base. **Tail colors** are (fm outside to inside) blue, thin white, red, white, then a blue base.

Image order:
   Male
   Male
   Female
**Etheostoma chermocki**

**Vermilion darter**

Breeding males: light olive to straw-colored body, with back crossed by eight dark olive saddles. **Brick red and olive-green blotches along lateral line.** Lower sides, **dark vermilion venter (belly), and lower peduncle; Spiny dorsal with cherry-red spot in first segment**, Spiny dorsal and soft dorsal with broad red submarginal band.

Image order:
- Male
- Female

**Etheostoma nuchale**

**Watercress darter**

Up to 9 saddle blotches on the back. Usu. a pale strip on back of neck. Breeding males have a **reddish orange venter** (belly). **Three distinct dark spots along base of tail. Anal fin bright blue**, as are the pelvic fins. Both dorsal fins have colored bands of (fm top to bottom) blue, red, blue, red.

Image Order:
- Male – breeding
- Male – breeding
- Female

Female on next page
Identification Tip: Both of the next two species lack the bright red colors found in breeding males of the above *Etheostoma* species.

### *Etheostoma douglasi*

**Tuscaloosa darter**

Lacks red spots on body, lips, or anal fin, even during breeding season. Breeding males are **olive with 3-11 weakly defined vertical bars**. Back with 8-9 olive saddle blotches. Lower head, breast, and gill cover are **turquoise**. Subterminal red band on spiny dorsal fin. Tail fin has **terminal blue or black band, followed by a yellow band**, then a red band.

### *Etheostoma phytophilum*

**Rush darter**

Darkest blotches on sides, unlike Tuscaloosa darter. Different shape from similar looking Blackbanded darter. No reds or blues on fins or scales. Found in spring upstream from the Preserve, and is not expected at our sample locations.

**Centrarchidae (“Sin-trark-i-dee”) – Sunfish and Bass**
(note: primarily young fish depicted, because they are what we usually catch)

<table>
<thead>
<tr>
<th>Species</th>
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<tbody>
<tr>
<td><strong>Lepomis cyanellus</strong></td>
<td>Green Sunfish</td>
</tr>
<tr>
<td><strong>Pectoral fin short, not extending past nostrils</strong> when bent forward. Body brownish-green on back; sides with rows of small, metallic blue spots toward head and irregularly spaced toward tail. Black spot at rear of dorsal and anal fins appears with age.</td>
<td></td>
</tr>
<tr>
<td><strong>Lepomis macrochirus</strong></td>
<td>Bluegill</td>
</tr>
<tr>
<td><strong>Gill spot always black; juveniles with distinct vertical bands.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pectoral fin long, extending past nostrils</strong> when bent forward</td>
<td></td>
</tr>
<tr>
<td><strong>Lepomis microlophus</strong></td>
<td>Redear Sunfish</td>
</tr>
<tr>
<td><strong>Pectoral fin long, extending past nostrils</strong> when bent forward</td>
<td></td>
</tr>
<tr>
<td><strong>Gill flap with red or orange spot.</strong></td>
<td></td>
</tr>
<tr>
<td>Lower picture thanks to the Native Fish Conservancy’s website.</td>
<td></td>
</tr>
</tbody>
</table>
**Micropterus salmoides**  
**Largemouth Bass**

Area b/n spiny and soft dorsal fin is **deeply notched** compared with the other bass species. **Tongue lacks teeth.**

Irregular lateral stripe.

**Micropterus punctulatus**  
**Spotted Bass**

Irregular lateral stripe in older specimens. **Tooth patch on tongue**

Juveniles have **black spot on tail fin base** bordered with orange.

**Micropterus coosae**  
**Redeye Bass**

Bright **red eye**: upper and lower margins of **tail fin edged in white**

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**Family Cottidae ("kot–i-dee") - Sculpins**
*Cottus carolinae*

**Banded Sculpin**

Note **large head** relative to darters. Brown coloration with very **dark bands** on body.

Viewed from above, **body is triangular** in shape.

Bottom profile of fish is flat.