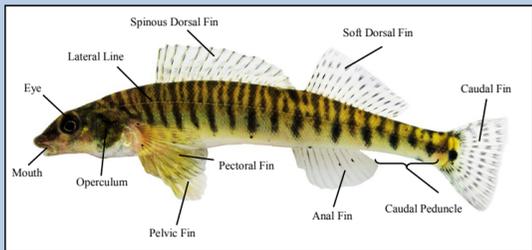


A VOLUNTEER'S FIELD GUIDE TO THE STREAM FISH OF OKLAHOMA

This guide is designed to assist volunteers in the field identification of fish most commonly encountered during Blue Thumb fish collections. You are encouraged to familiarize yourself with the diagram below listing the major parts of a fish's external anatomy as many of these terms will appear in the short descriptions provided for each species. A distribution map, using data collected by the Oklahoma Conservation Commission is included along with a photograph and identifying features for each species. Please note that individuals may be found outside of the observed distribution area.



Next to each fish's common and scientific name is an indication of water quality and habitat degradation tolerances. Tolerance values range from 1 (Intolerant) to 4 (Tolerant) and are categorized using the following scale:

Intolerant (I): 1.0 - 1.7

Moderately Intolerant (MI): 1.8 - 2.5

Moderately Tolerant (MT): 2.6 - 3.3

Tolerant (T): 3.4 - 4.0

¹Jester, D.B., Echelle, A.A., Matthews, W.J., Pigg, J., Scott, C.M., and Collins, K.D. 1992. The fishes of Oklahoma, their gross habitats, and their tolerance of degradation in water quality and habitat. Proceedings of the Oklahoma Academy of Sciences 72: 7-19.

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Orangethroat darter (*Etheostoma spectabile*) Water Quality: MI Habitat: MI

- 7 - 10 dark brown saddles
- 2 orange spots at base of caudal fin
- Dark bars on sides (breeding males with orange between blue/green)
- Found in shallow gravel to rocky riffles, runs and flowing pools, of headwaters, creeks and small rivers
- Dusky teardrop

Redfin darter (*Etheostoma whipplei*) Water Quality: MI Habitat: MI

- Slender darter with pointed snout and large head
- Mottled olive colored body
- Many small spots, red (male) or yellow (female), on side
- Found in sandy to rocky riffles of headwaters, creeks, and small rivers with low to moderate gradients
- Dusky teardrop

Fantail darter (*Etheostoma flabellare*) Water Quality: MI Habitat: I

- Deep-bodied darter with short caudal peduncle
- Banded caudal fin
- Short spinous dorsal fin with gold knobs on dorsal spines
- Lower jaw protrudes beyond upper jaw
- 8-15 crossbars running the length of the body
- Found in gravel to rocky riffles of creeks and small to large rivers with moderate to high gradients

Loggerperch (*Percina caprodes*) Water Quality: MI Habitat: MI

- Oklahoma's largest darter
- Conical snout
- Yellow to olive coloration with 15 - 20 dark bars along side with alternate bars longer and more prominent
- Black spot at the base of the caudal fin
- Found in sandy to rocky riffles and pools in creeks and small to medium rivers; lakes
- Dusky teardrop

Banded sculpin (*Cottus carolinae*) Water Quality: I Habitat: I

- Reddish-brown sculpin with 4 or 5 saddle bars
- Dorsal fins separate to base
- Fins faintly banded except pelvic
- Found in gravel and rubble riffles of headwaters, creeks, and small rivers; springs
- Pelvic fins white

Largemouth bass (*Micropterus salmoides*) Water Quality: MT Habitat: MT

- Slender, elongated sunfish with a large mouth; jaw extends beyond the rear margin of the eye
- Broad, dark band on sides
- Spinous and soft dorsal fins nearly separated by a deep notch
- Found in backwaters and pools of creeks and small to large rivers, usually over mud or sand; ponds and lakes

Spotted bass (*Micropterus punctulatus*) Water Quality: MI Habitat: MI

- Slender, elongated sunfish with a large mouth; jaw extends to the rear margin of the eye
- Tooth patch on tongue
- Spinous and soft dorsal fins broadly jointed
- Found in flowing pools and runs of creeks and small to medium rivers
- Dark blotches on side form band

Smallmouth bass (*Micropterus dolomieu*) Water Quality: I Habitat: I

- Slender, elongated sunfish with a large mouth; jaw never extending beyond the rear margin of the eye.
- Red eye
- No dark band on side
- Spinous and soft dorsal fins broadly jointed
- Found in clear, gravel-bottom runs and flowing pools of small to large rivers; lakes

White crappie (*Pomoxis annularis*) Water Quality: T Habitat: MT

- Silvery appearance
- Faint vertical bars on sides
- 5 - 6 dorsal spines

Black crappie (*Pomoxis nigromaculatus*) Water Quality: MT Habitat: MT

- Dark appearance
- Irregular blotching on sides
- 7 - 8 dorsal spines

Warmouth (*Lepomis gulosus*) Water Quality: MT Habitat: MT

- Red eye
- Tooth patch on tongue
- Brown and yellow streaks extend from eye to rear margin of gill cover
- Mottled coloration
- Spinous and soft dorsal fins broadly jointed
- Found in quiet water areas of streams, usually over mud; ponds and lakes

Bluegill (*Lepomis macrochirus*) Water Quality: MT Habitat: MT

- Deep, slab-sided sunfish with a small mouth
- Large black spot at base of the soft dorsal fin
- Pectoral fin long and pointed, extending past eye when bent forward
- Found in pools of creeks and small to large rivers; ponds and lakes

Green sunfish (*Lepomis cyanellus*) Water Quality: T Habitat: T

- Thick-bodied sunfish with a large mouth
- Large black spot at rear of soft dorsal and anal fin bases
- Pectoral fin short and rounded, not extending past eye when bent forward
- Found in quiet pools and backwaters of sluggish streams; lakes and ponds; often near vegetation
- Blue/green iridescent mottling on head

Longear sunfish (*Lepomis megalotis*) Water Quality: MT Habitat: MT

- Deep-bodied sunfish with a moderately small mouth
- Breeding males with brilliant coloration
- Elongated opercular flap in adults
- Found in rocky and sandy pools of headwaters, creeks, and small to medium rivers, usually near vegetation
- Pectoral fin short and rounded, not extending past eye when bent forward

Orangespotted sunfish (*Lepomis humilis*) Water Quality: T Habitat: MT

- Small sunfish with a moderately large mouth
- Large sensory pits between eyes
- Scattered brown or orange spots on sides
- Found in quiet pools of creeks and small to large, often turbid, rivers, usually near brush
- Pectoral fin short and rounded

Redear sunfish (*Lepomis microlophus*) Water Quality: MT Habitat: MT

- Short opercular flap with a bright red posterior crescent (in adults)
- Sunfish with small mouth
- Pectoral fin long and pointed, extending past eye when bent forward
- Found in vegetated pools, usually with mud or sand bottoms, of small to medium rivers; ponds and lakes

Channel catfish (*Ictalurus punctatus*) Water Quality: MT Habitat: MT

- Slender catfish with gray/blue coloration
- Rounded anal fin
- Deeply forked caudal fin
- Found in deep pools, often with submerged cover, and runs over sand or rocks in creeks and small to large rivers with low to moderate gradients; lakes
- Random spots on sides, except in largest and smallest individuals
- Young have black-tipped fins

Flathead catfish (*Pylodictis olivaris*) Water Quality: MT Habitat: MT

- Large, flat-headed catfish with mottled coloration
- Light colored chin barbels
- Slightly notched caudal fin
- Found in pools with cover in low- to moderate-gradient, small to large rivers; young in rocky and sandy runs and riffles; lakes
- Lower jaw protrudes beyond upper jaw
- Short, rounded anal fin

Yellow bullhead (*Ameiurus natalis*) Water Quality: T Habitat: MT

- Robust catfish with yellow coloration
- Anal fin with 24 - 27 rays
- Caudal fin nearly rounded
- Found in soft-bottomed pools and backwaters of creeks and small to large rivers; ponds, oxbows, impoundments
- Light colored chin barbels

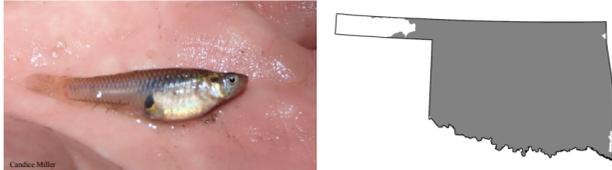
Black bullhead (*Ameiurus melas*) Water Quality: T Habitat: T

- Robust catfish with dark coloration
- Anal fin with 19-23 rays
- Slightly notched caudal fin
- Found in soft-bottomed pools and backwaters of creeks and small to large rivers; ponds, oxbows, impoundments
- Dark colored chin barbels

Slender madtom (*Noturus exilis*) Water Quality: MI Habitat: I

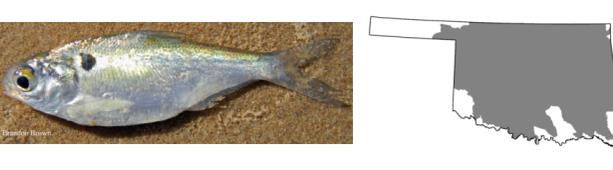
- Slender, unicolored madtom
- Unpaired fins with black margins
- Long, low adipose fin that is slightly notched at the origin of the caudal fin
- Anal fin with 17 - 21 rays
- Fins are not blotched or spotted
- Found in gravel riffles, runs, and flowing pools of clear creeks and medium rivers

Mosquitofish (*Gambusia affinis*) Water Quality: T Habitat: T



- Small, stout livebearer
- Terminal, upturned mouth
- 1-3 rows of black spots on dorsal and caudal fins
- Black anal spot on pregnant females
- Found in backwaters and quiet pools of creeks; ponds and lakes

Gizzard shad (*Dorosoma cepedianum*) Water Quality: MT Habitat: T



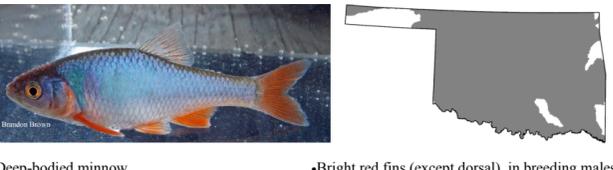
- Silver-blue to silver-white coloration
- Blunt snout with subterminal mouth
- Last dorsal ray long and whiplike
- Large purple/black spot behind gill
- Found in creeks and small rivers with well-developed pools; open water of medium to large rivers; lakes

Central stoneroller (*Camptostoma anomalum*) Water Quality: MI Habitat: MI



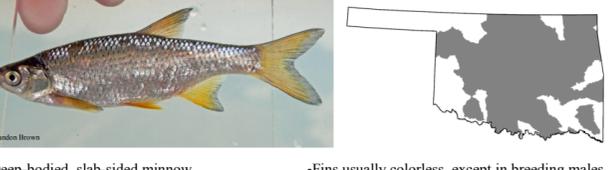
- Slender, brown minnow
- Lower sides and belly silver-white
- Lower jaw with hard cartilaginous ridge
- Short, rounded fins
- Fins are colorless except in breeding males (orange)
- Found in rocky riffles, runs, and pools of headwaters, creeks, and small to medium rivers having moderate to high gradients

Red shiner (*Cyprinella lutrensis*) Water Quality: T Habitat: T



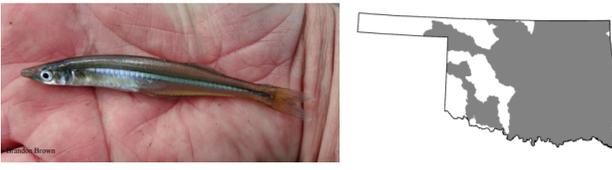
- Deep-bodied minnow
- Diamond-shaped scales
- Small eyes and terminal mouth
- Dusky blue triangular bar behind head on side
- Bright red fins (except dorsal) in breeding males and blue back and sides
- Found in silty, sandy, and rocky pools and runs, sometimes riffles, of creeks and small to medium rivers

Golden shiner (*Notemigonus crysoleucas*) Water Quality: T Habitat: T



- Deep-bodied, slab-sided minnow
- Small, upturned mouth
- Scaleless keel from anus to pelvic fins
- Deeply curved lateral line
- Fins usually colorless, except in breeding males
- Found in vegetated lakes, ponds, swamps, backwaters and pools of creeks and small to medium rivers

Brook silverside (*Labidesthes sicculus*) Water Quality: MT Habitat: MI



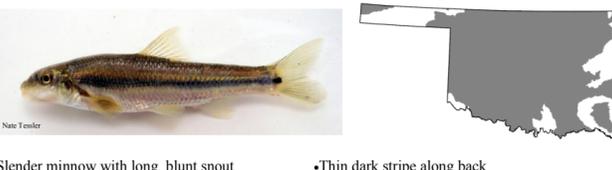
- Slender, silvery fish
- Beak-like snout
- 2 widely separated dorsal fins
- Bright silver stripe along side
- Long sickle-shaped anal fin
- Found in quiet pools of creeks and small to large rivers; ponds and lakes

Longnose gar (*Lepisosteus osseus*) Water Quality: T Habitat: T



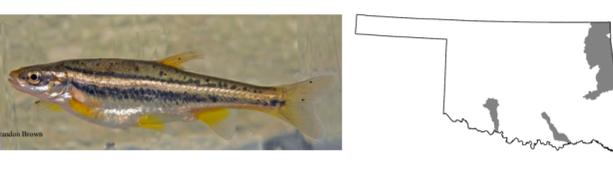
- Slender, cylindrical fish
- Unpaired fins spotted; juveniles with black stripe on side
- Long, narrow snout with large teeth in upper jaw
- Found in sluggish pools, backwaters, and oxbows of medium to large rivers; lakes

Suckermouth minnow (*Phenacobius mirabilis*) Water Quality: MI Habitat: I



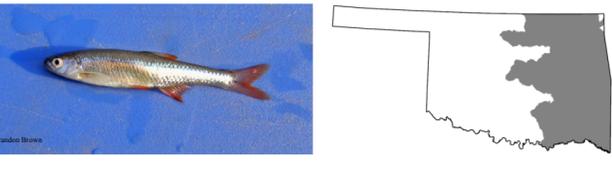
- Slender minnow with long, blunt snout
- Sucker-like mouth
- Dusky stripe along side ending with prominent spot at caudal peduncle
- Thin dark stripe along back
- Darkly outlined scales on back and upper sides
- Found in sand and rubble riffles and runs of creeks and small to large rivers

Southern redbelly dace (*Phoxinus erythrogaster*) Water Quality: I Habitat: I



- Slim minnow with small head and large eye
- Very fine scales
- Breeding fish have bright red undersides and yellow fins
- 2 black stripes along side
- Found in rocky, usually spring-fed pools of headwaters and creeks

Redfin shiner (*Lythrurus umbratilis*) Water Quality: MI Habitat: MI



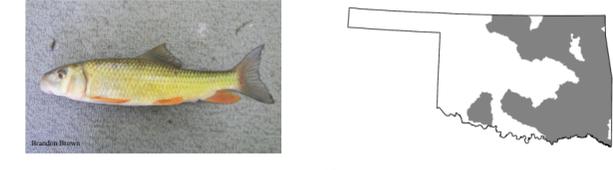
- Deep-bodied, compressed
- Breeding males develop an iridescent blue color and at least some red pigment in the dorsal, anal, and caudal fins
- Dark blotch at dorsal fin origin
- Dusky stripe along back
- Found in quiet to flowing pools of headwaters, creeks, and small to medium rivers

Freshwater drum (*Aplodinotus grunniens*) Water Quality: MT Habitat: MT



- Deep-bodied, silvery fish with subterminal mouth
- Long dorsal fin
- Strongly arched body
- Pointed caudal fin
- Outer pelvic ray a long filament
- Found in medium to large rivers; lakes

Golden redbhorse (*Moxostoma erythrurum*) Water Quality: MI Habitat: MI



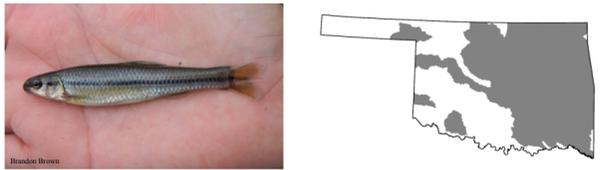
- Stout-bodied sucker with coarse scales
- Lower lips in parallel folds, forming V-shaped angle
- 40-42 scales in lateral line; 9 rays in pelvic fin
- 12 scales around caudal peduncle
- Found in pools, runs, and riffles of creeks and small to large rivers; lakes

Common carp (*Cyprinus carpio*) Water Quality: T Habitat: T



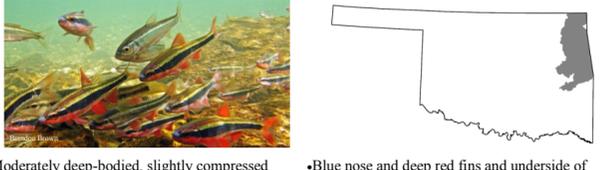
- Deep-bodied minnow with a strongly arched back
- Long dorsal fin, first ray hard and serrated
- Terminal mouth with two pairs of barbels
- Gray to brassy green coloration
- Adult with red-orange caudal and anal fins
- Found in pools of small to large rivers; ponds and lakes

Bluntnose minnow (*Pimephales notatus*) Water Quality: MT Habitat: MT



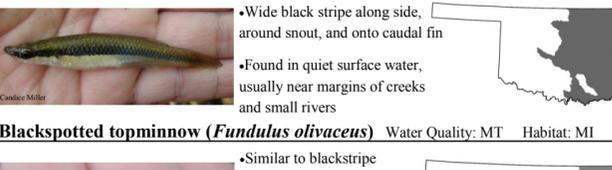
- Narrow but typically conspicuous dusky band extends from the snout to end of caudal peduncle, terminating in a more intensely black spot at the caudal base
- Large eyes
- Slim minnow with blunt snout
- Crowded scales before dorsal fin
- Found in clear rocky streams

Cardinal shiner (*Luxilus cardinalis*) Water Quality: I Habitat: I



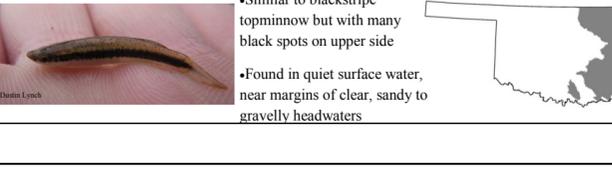
- Moderately deep-bodied, slightly compressed shiner
- Prominent black stripe on sides extends through snout
- Large terminal mouth
- Blue nose and deep red fins and underside of head and belly on breeding males
- Found in rocky runs, riffles, and flowing pools of creeks and small to medium rivers

Blackstripe topminnow (*Fundulus notatus*) Water Quality: MT Habitat: MI



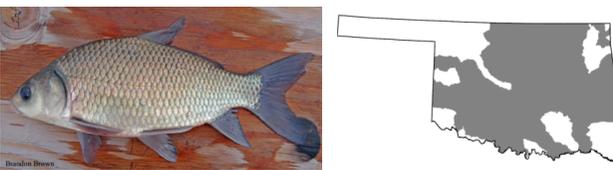
- Wide black stripe along side, around snout, and onto caudal fin
- Found in quiet surface water, usually near margins of creeks and small rivers

Blackspotted topminnow (*Fundulus olivaceus*) Water Quality: MT Habitat: MI



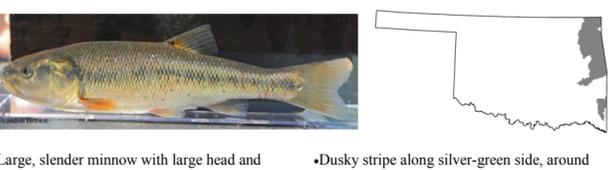
- Similar to blackstripe topminnow but with many black spots on upper side
- Found in quiet surface water, near margins of clear, sandy to gravelly headwaters

Smallmouth buffalo (*Ictiobus bubalus*) Water Quality: MT Habitat: MT



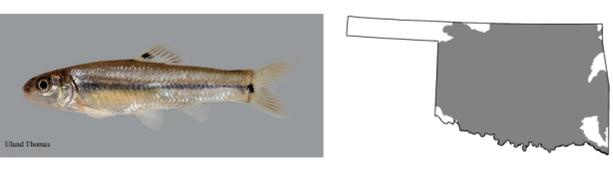
- Deep-bodied sucker with small, horizontal mouth
- Bottom, rear-margin of operculum, semicircular
- Strongly striated upper lip
- Large, dark eye
- Found in pools, backwaters, and main channels of small to large rivers; lakes

Creek chub (*Semotilus atromaculatus*) Water Quality: MI Habitat: MI



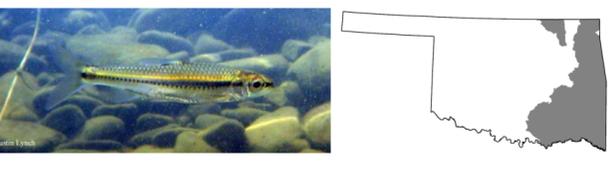
- Large, slender minnow with large head and mouth
- Black spot at the base of the dorsal fin and caudal fin
- Terminal mouth appears to have mustache
- Dusky stripe along silver-green side, around snout, and onto upper lip
- Found in pools of headwaters, creeks, and small rivers

Bullhead minnow (*Pimephales vigilax*) Water Quality: T Habitat: T



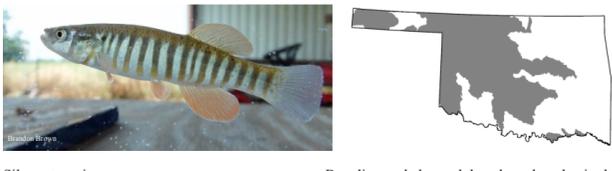
- Large conspicuous black spot at the anterior edge of the dorsal fin
- Crowded scales before dorsal fin
- Large eyes
- Scales darkly outlined
- Found in quiet pools and runs over sand, silt, or gravel, in small to large rivers

Bigeye shiner (*Notropis boops*) Water Quality: MI Habitat: I



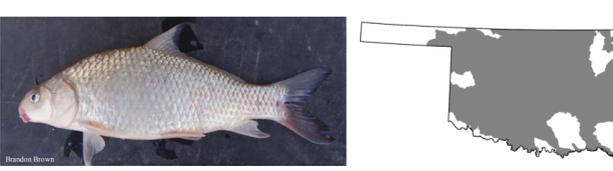
- Slim, compressed shiner with large eye
- Large, oblique, nearly terminal mouth
- Clear stripe above black stripe along silver side and around snout
- Clear fins
- Found in flowing, usually clear and rocky pools of creeks and small to medium rivers

Plains killifish (*Fundulus zebrinus*) Water Quality: MT Habitat: MT



- Silvery topminnow
- 12 or more narrow, vertical bars on sides
- Deep caudal peduncle
- Yellow pectoral fins
- Breeding male has red dorsal, anal, and paired fins
- Found in shallow sandy runs, pools, and backwaters of headwaters, creeks, and small to medium rivers

River carpsucker (*Carpiodes carpio*) Water Quality: T Habitat: T



- Deep-bodied sucker
- Nipple-like projection in lower lip
- Small, conical head with short snout
- Fairly short 1st dorsal ray
- Found in pools and backwaters of creeks and small to large rivers; lakes

Sand shiner (*Notropis stramineus*) Water Quality: MT Habitat: MI



- Fairly robust shiner with relatively large eyes
- Dark stripe on midline of back narrow but expanding into well-defined wedge-spot at front of dorsal fin
- Faintly outlined scales on back and upper sides
- Found in sand to gravel runs and pools of creeks and small to large rivers; lakes

Fathead minnow (*Pimephales promelas*) Water Quality: T Habitat: T



- Small head with terminal mouth
- Moderately deep, robust body
- Crowded scales in front of dorsal fin
- Dark olive coloration
- Dusky stripe along side and back
- Incomplete lateral line
- Found in muddy pools of headwater creeks, and small rivers; ponds

Ozark minnow (*Notropis nubilus*) Water Quality: I Habitat: I



- Slim minnow with relatively small head
- Small, subterminal mouth with pigmented lips
- Small black spot at dorsal fin origin
- Dark-edged scales
- Dusky stripe along silver side
- Found in rocky and sandy runs and flowing pools, often near riffles, or clear fast-flowing small to medium rivers