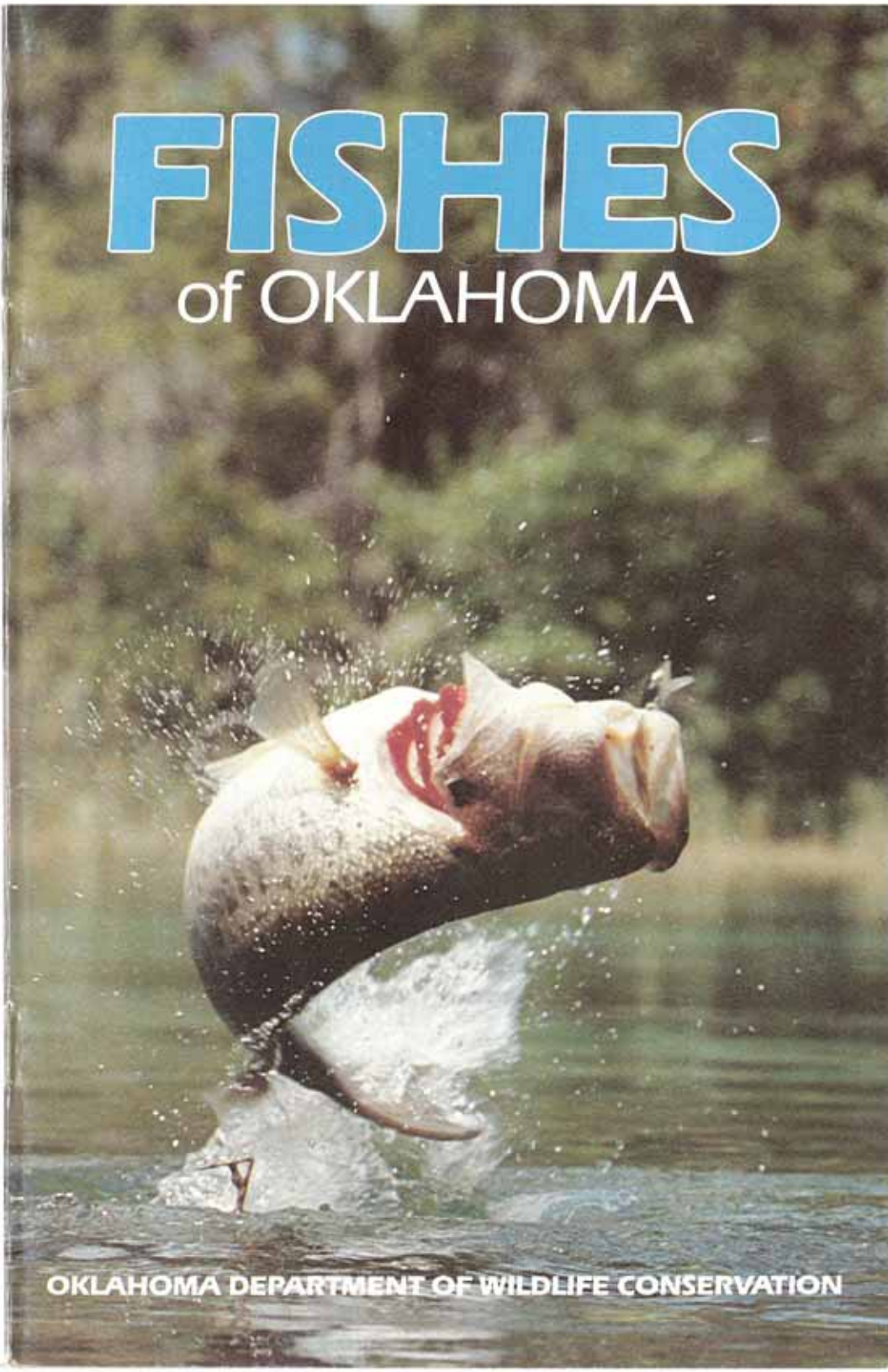
FISHES
of OKLAHOMA



OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION

FISHES of OKLAHOMA

TECHNICAL DATA BY FISHERIES DIVISION

COLOR PLATES BY DUANE RAVER

LINE DRAWINGS BY WALLACE HUGHES

DEPARTMENT OF WILDLIFE CONSERVATION
1801 NORTH LINCOLN BOULEVARD
OKLAHOMA CITY, OKLAHOMA 73105

PREFACE

Oklahoma ranks high among states in the amount of fishable fresh water. There are more than 250,000 farm ponds, 2,000 SCS upstream-flood-control lakes, several hundred miles of rivers and streams and more than 70 lakes and reservoirs, making a grand total of nearly 1.3 million acres of water in Oklahoma.

Even with all this water, good fishing does not just happen. Department of Wildlife Conservation fisheries biologists make extensive research efforts on every body of water to determine what types of management might be needed.

Good fishing comes about as a result of many factors, and these factors will vary widely from one body of water to another. Each pond, lake or reservoir presents a separate and distinct set of problems and conditions. The Department's highly trained and well qualified fisheries biologists determine what needs to be done and carry out management programs to accomplish this aim.

In terms of production, water is very much like land: If fertility is good, fish crops will be good — if fertility is poor, fish crops and fishing will be poor.

Microscopic plants and animals called "plankton" are the basic life-forms in any body of water. A major part of this plankton is algae, microscopic green plants which are responsible for the green color of many ponds and lakes. These are the "grasses" of the water. They are eaten by animal "plankton" and insects. These, in turn, are eaten by small fish. The small fish are eaten by larger fish, thus establishing a "food chain" or "food web." Game fish, like largemouth bass, are at the top of this food-chain. In order to have good largemouth bass fishing, every link in the food chain must be strong.

Anglers play an important role in determining the future of quality fishing simply because of the numbers and sizes of fish they keep. Some lakes will sustain more fishing pressure and harvest than others. That is why biologists recommend different harvest regulations on some lakes to maintain or improve fishing quality.

Oklahoma's fish management program benefits everyone who enjoys water recreation, particularly fishermen. More Sooner anglers catch more and bigger fish every year. This is exactly what the Department's fish management program is designed to do — make Oklahoma fishing more enjoyable — for you.

CONTENTS

Preface 2
Introduction 4
Bass, Largemouth 5
Bass, Smallmouth 6
Bass, Spotted 7
Bass, Striped 8
Bass, Striped Hybrid 10
Bass, White 9
Bass, Yellow 33
Bowfin 24
Buffalo, Smallmouth 30
Bullhead, Black 32
Bullhead, Yellow 32
Carp 28
Carpsucker, River 30
Catfish, Channel 11
Catfish, Blue 12
Catfish, Flathead 13
Crappie, Black 17
Crappie, White 16
Drum, Freshwater 36
Gar, Alligator 24
Gar, Longnose 23
Gar, Shortnose 23
Gar, Spotted 22
Goldeye 26
Herring, Skipjack 25
Lamprey, Chestnut 21
Logperch 35
Minnow, Fathead 29
Mosquitofish 33
Paddlefish 22
Pike, Northern 27
Pickerel, Grass 27
Redhorse, Golden 31
Rock Bass 34
Sauger 36
Shiner, Golden 28
Shiner, Red 29
Shad, Gizzard 25
Shad, Threadfin 26
Sturgeon, Shovelnose 21
Sucker, Spotted 31
Sunfish, Bluegill 18
Sunfish, Green 19
Sunfish, Longear 35
Sunfish, Redear 20
Trout, Rainbow 14
Walleye 15
Warmouth 34
Hypothetical Fish 37
Glossary 38
Checklist 40
Striped Bass Hybrid Identification 44

INTRODUCTION

FISHES OF OKLAHOMA

is published to acquaint the sportsmen of Oklahoma with the fish species they are likely to encounter in our State. Hopefully, it will also serve to bring about an understanding and appreciation of the aquatic world and the creatures that live in it.

The technical classification of fishes is very complex and is not included. However, a check list of the 26 families and about 176 species of fishes that are found in Oklahoma is included. Many of these fishes are quite small and secretive and are known only to fisheries biologists and ichthyologists.

Color plates of the 16 most popular species were drawn from specimens taken from clear water. Colors of fish in nature will vary widely according to the type and turbidity of water from which they are caught, their principal diet and other factors.

Common and scientific names used in this book conform to the American Fisheries Society's standards. Many colloquial names used for some of the species in certain localities are not included.

A glossary of technical terms used in the descriptions of the various species and a hypothetical fish illustrating the various distinguishing morphological structures are in the back of the booklet.

LARGEMOUTH BASS

Micropterus salmoides

DESCRIPTION: Classified as a sunfish rather than a true bass, the largemouth is not typical of its pansized cousins. Often confused with smallmouth and spotted bass, it is easily distinguishable because the upper jaw extends to or beyond the posterior edge of the eye socket. The largemouth's deeply notched dorsal fin will distinguish it from the spotted bass. Also, the spotting below the lateral band is weakly developed, whereas it is plainly in evidence in the spotted bass.

OKLAHOMA DISTRIBUTION: Statewide, in streams, ponds and lakes. Largemouth bass have been stocked extensively.

LIFE HISTORY: Spawning activities begin as water temperatures reach 62 to 65 degrees (April and May in Oklahoma). Characteristic of sunfish, the male scours out a nest which may be two feet in diameter and six inches deep. Nests are usually within 10 feet of the shoreline. The female is coaxed repeatedly to the nest where 2,000 to 7,000 eggs per pound of body weight are deposited and fertilized at the rate of a few hundred per visit. The female and all intruders are then repelled by the male. He diligently guards and fans the eggs to keep them clean during the five-to-ten day incubation period. After hatching, the fry swim in tight schools disbanding when the small fish reach a length of approximately one inch. Largemouths thrive in a shallow, weedy habitat where food and cover are available. Natural food includes crustaceans, insects, crayfish, frogs and fish.

VALUE: Oklahoma's most sought after game fish, largemouths will strike at almost anything that enters their domain. Artificials commonly used include plugs, spinners, spoons, streamers, and plastic worms in all shapes, weights and colors.

SMALLMOUTH BASS

Micropterus dolomieui

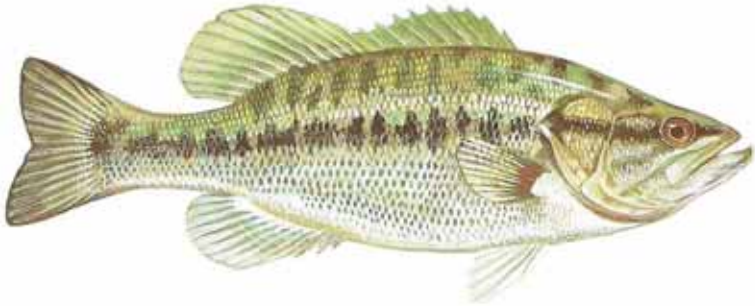
DESCRIPTION: The smallmouth bass is colored brownish-green with overlays of bronze vertical markings. It does not exhibit a lateral band as do the spotted and largemouth basses. The upper jaw does not extend beyond the pupil of the eye in adults. The dorsal fin of the smallmouth is not notched as deeply as that of the largemouth, and the body color is usually lighter. The smallmouth frequently has red eyes.

OKLAHOMA DISTRIBUTION: The smallmouth occurs naturally in many eastern Oklahoma Ozark and Ouachita streams and tributaries. Fishable reservoir populations exist in Grand, Tenkiller and Broken Bow reservoirs.

LIFE HISTORY: The smallmouth normally matures at two years of age. Spawning takes place in the spring when water temperatures reach 60 to 75 degrees F. Nests are built on gravel bars in three to twenty feet of water. A male drives a ripe female to the nest. When she lays her eggs, he searches out another female—often as many as three. Each female lays from 2,000 to 7,000 eggs per pound of body weight. Little or no parental care is provided after hatching. Except for the gold iris in the eyes, smallmouth fry are solid black in color.

VALUE: Reputed by many to be the scrappiest of the bass, the smallmouth fights furiously, jumping and tail-walking when hooked. Found principally in swift, clear water, this species eats practically anything small enough for him to handle. Hellgramites, crayfish, stonecats, nightcrawlers, minnows and the like are highly successful natural baits. Artificials such as plastic worms, bottom-bumping plugs, spinners, jigs and flies also take their share. The smallmouth seems very sensitive to water temperatures. It appears to feed most actively at 65 to 70 degrees F. and will hit best in that temperature range.

SPOTTED BASS



Micropterus punctulatus

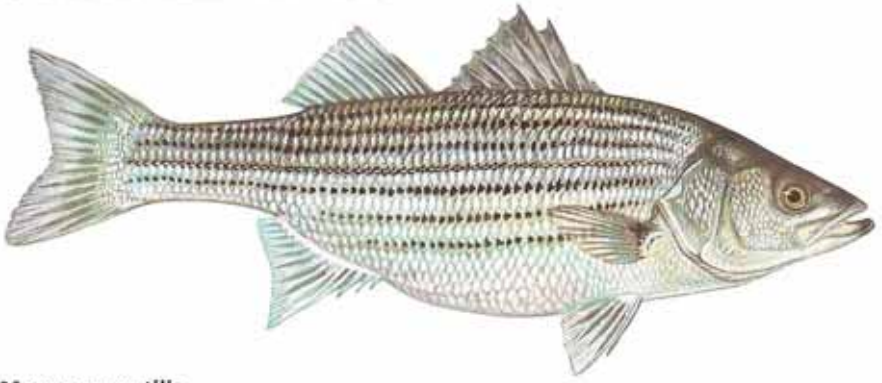
DESCRIPTION: The spotted bass is perhaps best described as an "in-between" species. Its mouth is midway in size between that of the largemouth and smallmouth bass. True to its name, the spotted bass has definite spots along its sides beneath the lateral band. The band itself has diamond-shaped blotches along its length. There are twelve rays in the soft dorsal fin and scales lap up onto the fin. Between the spinous and soft ray portions of the dorsal fin, the notch is not as deep as that of the largemouth.

OKLAHOMA DISTRIBUTION: Common in both the Arkansas and Red River systems the spotted bass shows a preference for clear lakes and streams of eastern Oklahoma.

LIFE HISTORY: Spawns very much like the largemouth. One main difference in these two species is that the spotted bass rarely attains a maximum weight above five pounds. The spotted bass chooses habitat somewhat between that of the largemouth and smallmouth. Its food habits are more characteristic of the smallmouth bass.

VALUE. Although an important game fish in Oklahoma, the spotted bass has not been cultured or stocked widely. In reservoirs, it is seasonal in feeding activities, being caught most frequently during October and November. During that season, a crayfish fished on the bottom and rigged with a slipweight is a deadly lure. Spotted bass are usually caught much deeper than largemouths and tend to school more. In streams, spotted bass are taken frequently, sharing stringers with green sunfish and smallmouth bass.

STRIPED BASS



Morone saxatilis

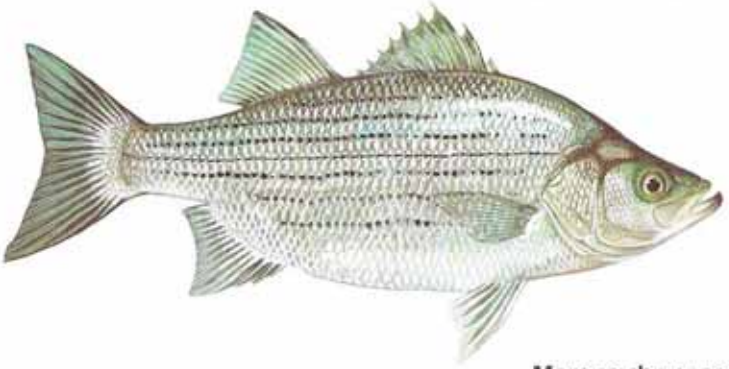
DESCRIPTION: Closely resembling the white bass, the striped bass differs primarily by having double opercular spines on the gill cover, and a more streamlined body and head. Hyoid teeth lie in two parallel patches. The striper body coloration shades from dark olive above through silvery sides and a white belly. Prominent black spots form lines originating behind the head and extend to the tail.

OKLAHOMA DISTRIBUTION: The striper was originally a marine or estuarine species. An anadromous spawner (ascends freshwater streams), it became landlocked in an artificial impoundment near the Atlantic coast. It adapted so well that many states, including Oklahoma, began transplanting stripers. Naturally reproducing populations have developed in Texoma and Keystone lakes and in the Arkansas River Navigation System. Foss, Tenkiller, Canton, Great Salt Plains, Grand, and Kaw lakes have also been stocked.

LIFE HISTORY: A female striper may produce up to five million eggs. These are semi-buoyant and require a moving, unobstructed river for the necessary incubation period. The spawning urge is triggered at 55 to 70 degrees F. water temperature, reaching a peak at about 65 degrees.

VALUE: An unparalleled rod-and-reel trophy growing to more than 40 pounds in fresh water, the striper has proven to be a valuable addition to the sport fishes of Oklahoma. One of the most productive methods of taking stripers is trolling. Favorite lures are deep-running plugs, jigs, topwater plugs, slabs, spoons, spinners, jig and grub combinations, jig and plastic worm combinations and live shad. Aside from the sporting qualities of this fish, its value as a biological control on the almost astronomical numbers of shad in our large impoundments may be equally significant.

WHITE BASS



Morone chrysops

DESCRIPTION: The white bass is one of the three members of the true bass family in Oklahoma; the others being the introduced striped and the native yellow bass. The dorsal fin of the white bass is distinctly separated; the anal fin has three spines and 12 soft rays. Body color is light greenish above, silver sides and white below. As opposed to a double spine on the gill cover in the striper, the white bass has only one spine.

OKLAHOMA DISTRIBUTION: Native to Oklahoma but never in great numbers prior to the construction of large reservoirs. Statewide distribution.

LIFE HISTORY: A very prolific fish, one female white bass can produce up to one million eggs. Reproductive activities are triggered by 50 to 55 degree F. water temperature. Spawning is at random over weeds, debris and rock. When tributary streams are available, this species prefers upstream migration for spawning. No parental care is provided the eggs or young. The natural diet of white bass includes fish (mainly shad), insects and crustaceans.

VALUE: A very important sport fish and of some commercial value. Estimates have been made that 1½ million pounds of white bass are harvested annually from Oklahoma waters by sport fishermen. Due to the short life span and high reproductive capacity, no creel limits are imposed. Fishermen learn early to watch for circling and diving sea gulls and/or surface disturbances as sure signs of schooling shad. Where there are shad, "sandies" are nearby. When they are on a feeding rampage almost any lure presented will be taken, but spoons, spinners, flies and jigs in silver, yellow and white, head the list of preferred artificials. The best natural bait is a live minnow. For good eating, this fish should be fileted, cut in chunks and rolled in batter for deep oil frying.

STRIPED BASS HYBRID

DESCRIPTION: The striped bass hybrid closely resembles both striped bass and white bass making identification very difficult. Distinguishing characteristics of hybrids include distinct stripes along the body (similar to striped bass), deep body shape and a second anal spine two-thirds or more the length of the third spine (similar to white bass). The hybrid has hyoid teeth that lie in two parallel patches, as in the striped bass. Hyoid teeth in white bass lie in one patch and generally have a heart or tear drop shape. (see page 44)

OKLAHOMA DISTRIBUTION: Sooner Lake received the first stocking of hybrids in 1977. Subsequent stockings have been made in various lakes statewide including Konawa, Optima, Ft. Supply, Tom Steed, Altus-Lugert, Overholser, Grand, Heyburn, Atoka, Ft. Cobb, Salt Plains, Waurika and Ellsworth.

LIFE HISTORY: Striped bass hybrids are hatchery produced by crossing a female striped bass with a male white bass. Although both male and female hybrids attain sexual maturity, natural reproduction has not been observed to date. Hybrids appear to prefer areas within lakes and streams similar to striped bass and white bass.

VALUE: As a sport fish, hybrids are probably best known for their rapid growth and good fighting ability. They have attained weights of 6-7 pounds by 3 years of age and 18-20 pounds by 8-9 years of age. Hybrids are a valuable put, grow and take sport fish in lakes having large shad populations but lacking suitable habitat for striped bass and white bass. The most productive method of catching hybrids is by trolling lures similar to those described for taking striped bass and white bass. In Sooner and Konawa Lakes they concentrate below warmwater discharge areas during the winter months where they are easily caught on shad and white grub-tail jigs.

CHANNEL CATFISH

Ictalurus punctatus

DESCRIPTION: Bluish-gray, sometimes greenish-yellow shading to white below, a deeply-forked tail and spotted sides describes the channel catfish. Older specimens that have lost their spots are often confused with the blue catfish, but the rounded anal fin containing 24 to 29 rays pinpoints the channel. Channels seldom exceed 50 pounds, while blues may reach 150 pounds.

OKLAHOMA DISTRIBUTION: Common statewide in streams, ponds and lakes.

LIFE HISTORY: The channel catfish, as its name implies, is typically a stream fish, but has adapted well to man-made lakes and reservoirs. Spawning usually takes place in late May or early June when the water temperature reaches 75 degrees F. Hollow logs, overhanging underwater ledges or holes under mud banks are typical nesting places. Females typically lay about 10,000 eggs each. Males guard the eggs against intruders, including the female. Eggs hatch in six to ten days (temperature-determined). After hatching, the fry are attended a short time by the male as they feed in a dense school.

VALUE: A good scrapper, the channel catfish is a favorite of many anglers, and when taken from clean waters is excellent table fare. The channel is more apt to feed during the daytime than other catfish species and is readily caught on worms, cutbait, liver, and "stink" baits. In clear waters, channels may even rise to a fly and are often taken on deep-running plugs. They are also frequently caught on trotlines. In recent years the channel catfish has become predominant in fish farming.

BLUE CATFISH

Ictalurus furcatus

DESCRIPTION: The blue catfish is a close relative of the channel catfish. The main difference is a greater number of rays (30-36) in the blue's straight edged anal fin. Pale blue in color, except during spring when they become nearly white, particularly in turbid lakes, the blue catfish has a more pronounced hump in its back and has smaller eyes than the channel cat.

OKLAHOMA DISTRIBUTION: Originally restricted to Red River, but now found in most sections of the state due to transplanting. Have adapted particularly well in the Arkansas River System.

LIFE HISTORY: Spawns in sheltered areas similar to the channel catfish. Blue cats feed in swift-flowing rapids and prefer fish or crayfish. Formerly a denizen of large rivers, the blue has adapted well to impoundments. It is the largest of the catfish, reaching 150 pounds. It is intolerant of turbid water, preferring clear, swift streams.

VALUE: A fine food fish as well as a strong fighter, the blue is a highly prized sport fish. It is taken on rod and reel, trotlines, and by "jugging". Natural baits such as cut shad, sunfish, minnows, carp, shrimp, crayfish and the like are most successful for blues. The swift tailwater area below power dams is a good spot to fish for this big scrapper, and reservoir headwaters swollen by spring rains are a sure bet. Trotlines rigged 10 feet or less from the surface are most productive.

FLATHEAD CATFISH

Pylodictis olivaris

DESCRIPTION: The flathead catfish has a distinctly flattened head, a square tail and is brownish with darker brown spots or mottling. He possesses a fairly short anal fin with 14 to 17 rays. The belly is yellowish white.

OKLAHOMA DISTRIBUTION: Common in most large impoundments and streams.

LIFE HISTORY: Little is known of the spawning habits of the flathead, but it is assumed they are similar to the channel. This species prefers a sheltered nesting site and is reported to spawn at night. Unlike the channel catfish, flatheads are not scavengers, feeding mostly on live fish.

VALUE: Considered by many to be the finest table fare available, the flathead is sought eagerly by rod and reelers, trotliners, snaggers and noodlers. They are taken with live bait on trotlines and throwlines. Carp weighing up to a pound have been used for bait for this aquatic glutton which attains weights of 100 pounds or more. Live fish seem to be the most successful bait, with goldfish, green sunfish and bullheads ranking high on the list. Other baits include earthworms and cutbait.

RAINBOW TROUT

Salmo gairdneri

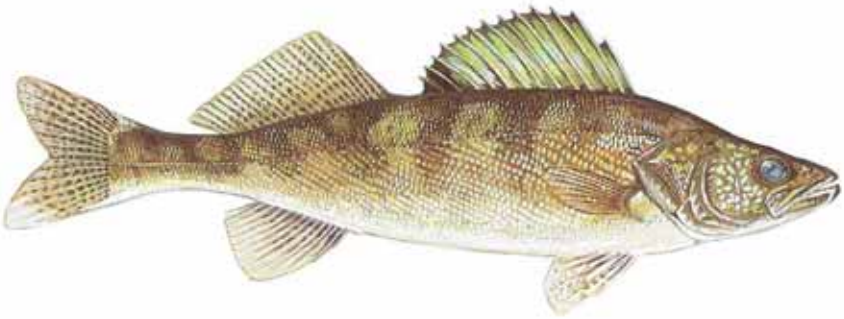
DESCRIPTION: The rainbow trout is one of the most colorful sport fish in Oklahoma. With brownish-green to blue-black shading through silver to white on the belly, the rainbow has a red or pink band along its side when mature. Black or olive colored spots dot most of its body. The pectoral and pelvic fins are tinged with pink.

OKLAHOMA DISTRIBUTION: Year-round "put-and-take" trout fishing is available on the Illinois River in the 7.5-mile stretch below Tenkiller Ferry Dam, and seasonal trout fishing is available on the Blue River Public Fishing and Hunting Area during the winter months each year. Experimental stockings into Broken Bow Reservoir have created a good summer fishery.

LIFE HISTORY: Rainbows normally spawn at water temperatures of 40 to 45 degrees F., and incubation requires 50 days at 50 degrees F. However, there is no natural trout spawning in Oklahoma. The rainbow dines on aquatic insects, such as mayflies, caddis flies, stoneflies, dobsonflies, dragonflies and their larvae, plus mollusks and small fishes.

VALUE: A highly prized fishing trophy and superb table fare, the rainbow is truly a "glamour" fish. While it can be caught on baits such as whole kernel corn, cheese and salmon eggs, purists insist the only way to fish for trout is with flies or small spinners.

WALLEYE



Stizostedion vitreum

DESCRIPTION: The largest member of the perch family, the walleye is an exotic in Oklahoma. Closely resembling our native sauger, the walleye can be distinguished by the white tip on the lower lobe of the caudal fin and by not having spots on the dorsal spine. Walleye have a long, cylindrical body form, large eyes, well-developed teeth and mottled greenish-brown to black coloration, shading to white beneath.

OKLAHOMA DISTRIBUTION: Distribution originated from introductions made during the early 1950s in Canton and Tenkiller Lakes. Since that time, adult walleye have been trapped (principally from Canton Lake), their eggs taken by hand stripping, fertilized and hatched in state fish hatcheries. Most major lakes in Oklahoma have been stocked. Best populations are in the western half of the state.

LIFE HISTORY: Walleye spawn in early March when the water temperature reaches 45 to 50 degrees. Some 25,000 to 50,000 eggs per pound of body weight are produced each year by a single female. Eggs from the female and milt from the male are released simultaneously and fertilized eggs fall between crevices in rock "rip-rap" along the dam.

VALUE: Although walleye are not easy to catch, they are definitely worth the effort. Walleye filet is considered by gourmets to be among the best table fare. Walleye tend to congregate near the bottom on sand bars or near ledges and dropoffs. They are slow and methodical feeders . . . therefore, fishing techniques should be slow. They are also photonegative (shunning light) so night fishing in shallow water should not be overlooked. Baits should be trolled or jigged slowly or allowed to remain stationary for some time. Live minnows, deep-running artificials and jigs seem to give best results.

WHITE CRAPPIE

Pomoxis annularis

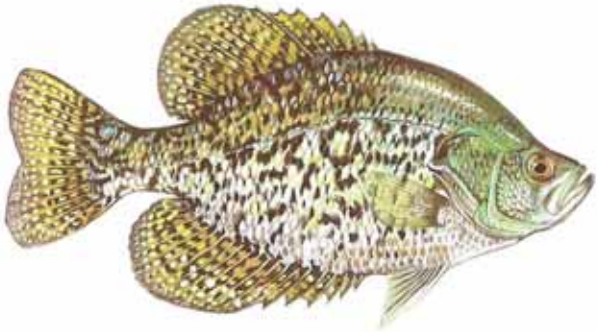
DESCRIPTION: Most like black crappie but differs in having fewer dorsal spines and subsequently shorter dorsal fin. Dorsal spines number 5 or 6. Most often confused with black crappie, especially during spawning season when males of both species exhibit sexual dimorphism. The color pattern of white crappie is generally greenish above, cream or white below with scattered small spots or blotches arranged in more or less vertical bands.

OKLAHOMA DISTRIBUTION: Statewide distribution. Originally a stream fish in Oklahoma, it has adapted well to large, slightly turbid lakes over 500 acres in size.

LIFE HISTORY: Spawning habits of white crappie are similar to other sunfishes but the white crappie usually nests in deeper water. May be solitary or colonial. A female will deposit from 3,000 to 15,000 eggs. Spawning occurs shortly after water temperature reaches 55 to 65 degrees F. Minnows and shad constitute most of the crappie's diet, however, insects, especially mayflies, are important food items when available. Crappie are noted to be cyclic in availability. Not well suited to farm ponds where it tends to overpopulate.

VALUE: The crappie is a favorite winter fish in Oklahoma and is taken on most colors of lead head jigs, and on live minnows. They can be caught trolling spinners, spoons, or bank fishing around natural or manmade brush piles. Numerous fishing barges or docks dot the larger reservoirs enabling anglers to fish in comfort.

BLACK CRAPPIE



Pomoxis nigromaculatus

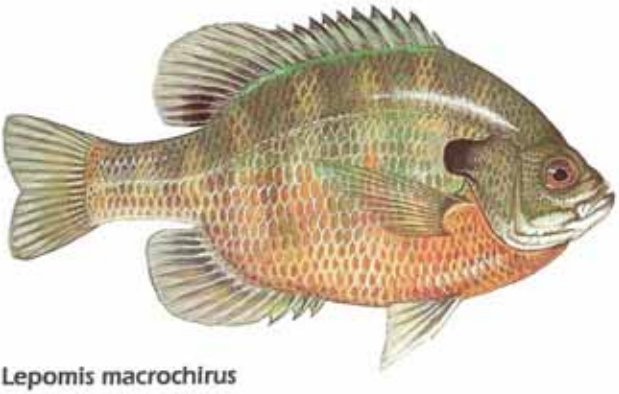
DESCRIPTION: Most like white crappie but differs in having more dorsal spines and subsequently a longer dorsal fin. Dorsal spines number 7 or 8. Most often confused with white crappie, especially during spawning when the males of both species exhibit sexual dimorphism. The color of black crappie is generally greenish above with cream or white below. Black spots and blotches are randomly and profusely scattered along each side of the fish.

OKLAHOMA DISTRIBUTION: Statewide distribution. Originally a stream fish in Oklahoma, it has adapted well to large, clear lakes over 500 acres in size.

LIFE HISTORY: Spawning is similar to white crappie but nests are constructed and eggs deposited at greater depths. Nests are preferably located on sand or gravel in slow moving water 6 to 12 feet deep. A schooling fish throughout life, the black crappie feeds on insects, crustaceans and small fish.

VALUE: The crappie is a favorite winter fish in Oklahoma and is taken readily on most colors of lead-head jigs and on live minnows. Black crappie can be caught by trolling with spinners and spoons, or by bank fishing around natural or man-made brush piles. Numerous fishing barges or docks dot the large reservoirs enabling anglers to fish in comfort.

BLUEGILL



Lepomis macrochirus

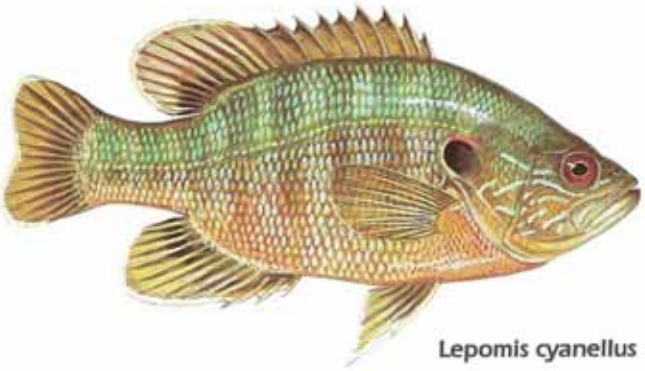
DESCRIPTION: Bluegill coloration varies greatly according to the water in which they are found. Young of the species are usually bluish with dark vertical bars. Adults, especially males, are deep yellow to coppery red, with green to purplish-brown vertical bars. The gill flap is broad and black, and a black spot usually is found on the posterior base of both dorsal and anal fins.

OKLAHOMA DISTRIBUTION: Due to widespread hatchery stockings, this species is found statewide in all types of water.

LIFE HISTORY: Spawning occurs throughout the summer after temperatures reach 75 degrees F. The male prepares a nest by excavating a small depression in sand or gravel. These nests are usually in water one to three feet deep. Bluegill are gregarious spawners constructing colonies of nests on the spawning grounds. After eggs are deposited and fertilized, females are driven from the nests. The male guards the eggs, then leaves the young a few days after hatching. An average female can produce 40,000 or more eggs per season. Young bluegill eat plankton and small crustaceans. As they grow larger their diet includes insects, snails, worms and fish eggs. The average life span is five or six years.

VALUE: The young are important farm pond forage fish for bass and catfish. The bluegill will readily take poppers, wet and dry flies, small spinners and jigs as well as almost any natural bait. Some favorites are: earthworms, grasshoppers, crickets, insect larvae, cut meats, crayfish and catalpa worms. The best bluegill fishing occurs during spring and fall, but they can also be taken by fishing deep with natural bait during hot summer months.

GREEN SUNFISH



Lepomis cyanellus

DESCRIPTION: The large bass-like mouth of the stocky little green sunfish is one of the best ways to identify this species, together with a definite greenish body color and an absence of teeth on the tongue. Additional points of identity are: a black spot on the gill cover, faint vertical body bars, irregular emerald-blue cheek lines and yellowish fin margins.

OKLAHOMA DISTRIBUTION: Probably the most common sunfish species in the state, the green sunfish can be found in a wide variety of habitats, including ponds, lakes, rivers, streams and small creeks.

LIFE HISTORY: Similar to other members of the sunfish family, this species will spawn throughout the summer, and nests may be in colonies. A male builds the nest by fanning out a small depression in the bottom near the shoreline. Eggs are then deposited by the female and fertilized, then she is driven from the nest. Parental care is given by the male during incubation. A large female can produce up to 10,000 eggs per season. Adult green sunfish feed mainly on plankton, insects, crayfish, worms, and small fish.

VALUE: Green sunfish are readily taken on spinning or fly tackle and constitute an important sport fishery in the clear creeks and streams of eastern Oklahoma. Although prominent in clear waters, this species tolerates murky water. It is one of the few panfish that can be taken on spinners, spoons, and surface plugs due to its large mouth. A scrappy fighter when hooked, the green sunfish may weigh up to two pounds. Its flesh is white and well suited to pan frying.

REDEAR SUNFISH

Lepomis microlophus

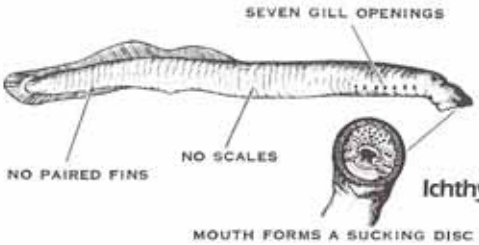
DESCRIPTION: The redear sunfish is a heavy bodied fish much like the bluegill. Distinguishing characteristics include a gill flap edged with red (male) or yellow (female) and very long, pointed pectoral fins. The prominent vertical banding common to the bluegill is lacking on the redear, and the body color of the redear tends to be the lighter of the two.

OKLAHOMA DISTRIBUTION: Statewide

LIFE HISTORY: Spawning habits are very similar to the bluegill, but the redear is not so prolific. Growth is somewhat faster but it does not overpopulate a body of water as readily. Its diet is primarily plankton, bottom organisms, and small fish. Adults prefer mollusks, such as snails, which they crack with specialized pharyngeal teeth.

VALUE: Attaining lengths of up to 12 inches and weights to two pounds, the redear is more difficult to catch than the bluegill. It responds better to natural bait but occasionally takes artificial lures. The redear normally inhabits deeper water than the bluegill and congregates around stumps, logs and roots.

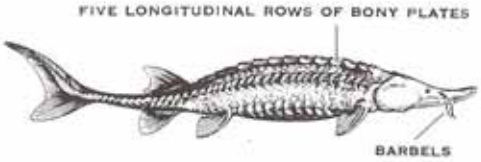
CHESTNUT LAMPREY



Ichthyomyzon castaneus

Description: The chestnut lamprey is a fishlike vertebrate which has no true jaws, a single nostril in the middle of its head, seven gill openings and no paired fins. **Oklahoma Distribution:** Two species in extreme eastern Oklahoma. **Life History:** Lamprey ascend streams to spawn in sand or gravel depressions. Many individuals may use the same nest. The adults die after spawning. Young lamprey form U-shaped burrows in the stream bottom where they strain food from the water through their gills. Adults fasten themselves to other fishes with their sucking-disk mouths and rasp through the skin to feed on blood and flesh. Average length of adults is 10 to 11 inches. The southern brook lamprey (I. gagei) also found in Oklahoma is nonparasitic. **Value:** No commercial or angling value, but important from an academic standpoint. Lamprey are the only examples of jawless vertebrates in Oklahoma.

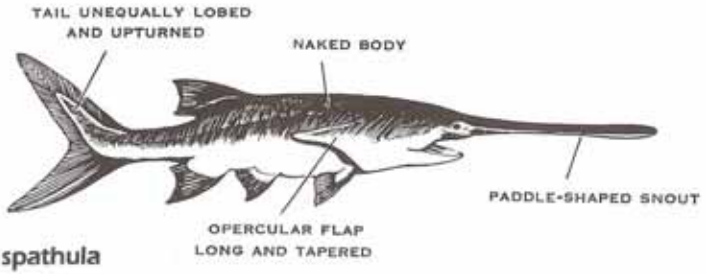
SHOVELNOSE STURGEON



Scaphirhynchus platorynchus

Description: The Shovelnose sturgeon is prehistoric in appearance. It has an elongated body, covered with five rows of bony plates or specialized scales. The mouth is protrusible—an adaption for bottom-feeding. **Oklahoma Distribution:** The shovelnose sturgeon is found in the Red River, especially below Denison Dam. It has also been recorded from the Arkansas River System. **Life History:** Sturgeons are slow growing, and do not attain sexual maturity until 10 to 12 years of age. They are long-lived with some reaching 75 years of age or more. This species seldom exceeds 8 pounds; a four-pound individual is considered large. **Value:** Angling for Oklahoma sturgeon requires baits to be fished on the bottom. Earthworms, scraps of meat, cut baits and balls of dried algae (pond moss) are all good baits. Flesh of sturgeon is of excellent food value and when smoked is considered a gourmet delicacy.

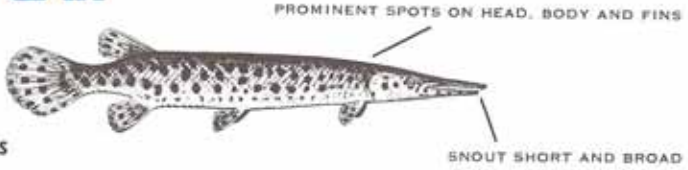
PADDLEFISH



Polyodon spathula

Description: Gill rakers very long and numerous. Teeth occur in young only. Cartilaginous skeleton. Very primitive. "Paddle" apparently serves as sensory organ to detect swarms of plankton and possibly as stabilizer and/or scoop. Lacks scales except on part of tail. Huge mouth. Elongated gill covers. **Oklahoma Distribution:** Arkansas, Red and Little River drainages. **Life History:** Paddlefish feed by straining plankton from the water through the gill rakers. Spawning occurs during spring. Adhesive eggs deposited on gravel, hatch in five to ten days. Growth of 10 to 14 inches the first year is average. Paddlefish may live up to 30 years. **Value:** Heavy snagging tackle with large treble hooks and heavy weights are cast across turbulent water below dams. Retrieve is by long, fast jerks. Specimens to 50 pounds are taken. Flesh of paddlefish is highly palatable, especially when smoked. Best fishery below Grand and Ft. Gibson dams and at the low water dam on the Neosho River (Grand) River near Miami.

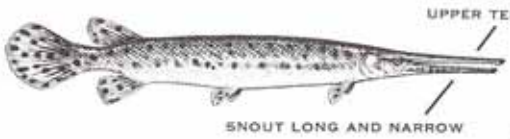
SPOTTED GAR



Lepisosteus oculatus

Description: Similar in appearance to the shortnose gar, but with many well defined round black spots on top of the head, body, and fins, including the pectoral and pelvic fins. Generally less than 8-10 pounds and 36 inches long. **Oklahoma Distribution:** Generally found in the eastern one half of Oklahoma but has been reported as far west as Canton Reservoir. Like other gars, prefers clear sluggish streams and backwaters. **Life History:** Spawns in spring in vegetated shallow water areas scattering the adhesive eggs randomly. Like all gars, the spotted gar has a well developed air bladder and survives in warm water with low dissolved oxygen by breathing air. Preys by sight on fish, capturing the prey with sharp teeth. **Value:** Popular with bowfishermen and anglers using frayed nylon cord as a lure. Powerful swimmer when hooked.

LONGNOSE GAR



Lepisosteus osseus

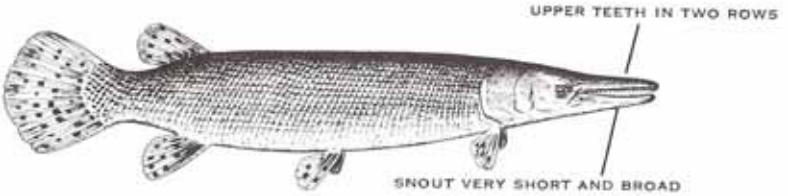
Description: The long narrow snout of this gar is at least 13 times longer than the narrowest width. Spots on body and fins similar to spotted gar, but less conspicuous and usually absent on head. Fins are frequently orange-tinted. Length usually less than 40 to 50 inches. Large teeth in upper jaw. **Oklahoma Distribution:** May be encountered nearly anywhere in the state but is more common in eastern counties. Inhabits a wide variety of waters, from small streams to large reservoirs. **Life History:** Spawning occurs in April and May in shallow water. Adhesive eggs are scattered over vegetation or other structure. The larvae attaches itself to the substrate shortly after hatching by means of a special disk-like organ on the tip of the snout while the fish continues to develop. The attachment organ is subsequently lost as the fish develops the adult form. Feeds mainly on fish, occasionally on insects and crustaceans when young. **Value:** Similar to other gars. Sporty fighter when hooked and sought by bowfishermen, particularly in fast water areas below dams.

SHORTNOSE GAR

Lepisosteus platostomus

Description: The shortnose gar has thick diamond-shaped (ganoid) scales, a short snout and an unspotted, short, slender body. Seldom exceeds four feet in length. **Oklahoma Distribution:** Statewide, prefers clear, slowmoving streams, lakes and backwaters. **Life History:** Spawning occurs during the spring in shallow coves and sloughs. Eggs are dark green and poisonous to man if eaten. Young become solitary early in life, often lying motionless on or near the surface. They can withstand long periods of low oxygen. The species tolerates muddy water better than other gar. Feeds by sight. Fish comprise most of diet. **Value:** Acceptable food value, excellent sportfish, capable of swift, deft movements when hooked. Frayed nylon entangles in gar's teeth and is a popular lure. Another angling technique is to dangle a hooked minnow inside a wire snare. Gar swims through the snare which tightens around its head or body. Popular with bowfishermen.

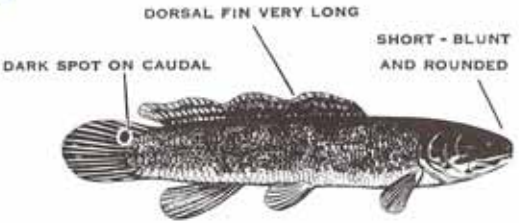
ALLIGATOR GAR



Lepisosteus spatula

Description: A potentially very large gar (world record over 300 pounds, not from Oklahoma) but has short, broad snout with two rows of teeth on the upper jaw. Small alligator gar may be distinguished from other gar by the blackish band along the midside and a narrow, white stripe along midline of back. **Oklahoma Distribution:** Primarily the southeastern one quarter of the state, as far west as Lake Texoma. **Life History:** Although complete life history information is lacking, it is believed that alligator gar spawn in early May in Oklahoma, probably in a manner similar to other gar. Feeds primarily on fish but is known to eat ducks and other water birds. **Value:** Sought by anglers in some areas because of its potentially huge size. Also acceptable food and harvested by some commercial fishing enterprises.

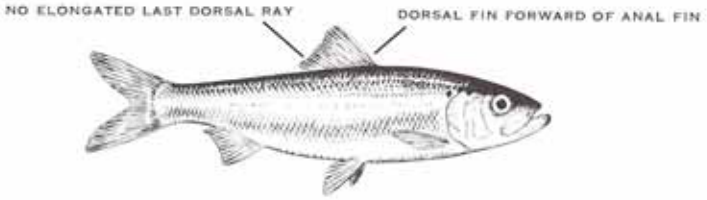
BOWFIN



Amia calva

Description: Blackish-olive with green reticulations. Rasplike teeth on back portion of lower jar. Air bladder functions as a lung, richly supplied with blood and connected to pharynx. Attains length of three feet and can exceed twenty pounds. Single survivor of a large family now found in fossil form in Europe and the United States. **Oklahoma Distribution:** Poteau River and tributaries, lakes and swamps of McCurtain County. **Life History:** Males build nest by biting off vegetation and clearing a bed of soft rootlets, sand, or gravel. Spawning occurs at night. One or more females deposit eggs, that hatch in eight to ten days. Larvae attach to vegetation or lie on their sides until about one-half inch in length. They feed in schools following the male a short time before disbanding. **Value:** A poor food fish but considered a rugged fighter. Fish and crayfish comprise much of the diet.

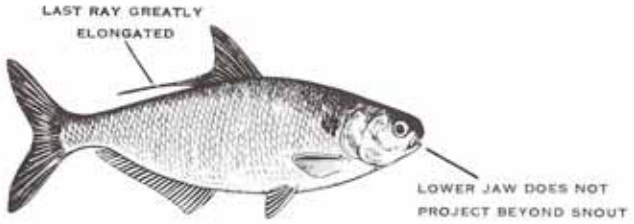
SKIPJACK HERRING



Alosa chrysochloris

Description: This shad-like fish is slender and streamlined with a large terminal mouth. The jaws are weakly toothed, the lower jaw projects out in front of the upper and has dark speckles near tip. Sharp scutes on the midline of belly. Blue-green silvery reflections on upper body shading to silvery-white on sides and belly. Adults larger than 16 inches are uncommon. **Oklahoma Distribution:** Found primarily in extreme eastern counties but in Red River as far west as Lake Texoma. **Life History:** Spawning time and locations are unknown but probably is a continuous spawner from spring through summer. The skipjack feeds on invertebrates and fishes. The fish schools and forces minnow schools to surface, darting into the school capturing prey as they leap in the air, hence their name. **Value:** Prized by trotline and jugline anglers as a baitfish because of its oily flesh.

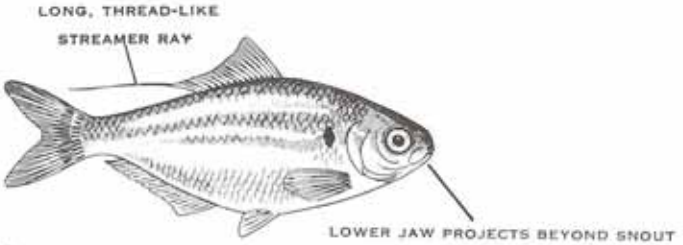
GIZZARD SHAD



Dorosoma cepedianum

Description: Last ray of dorsal fin elongated. Average adult length is 12 inches. Weight one pound. Some reach 18 inches and three pounds. **Oklahoma Distribution:** Common statewide. **Life History:** A very prolific species that provides an abundance of forage in our lakes. Not a plankton feeder as adult. Extracts organic material from mud by straining through very fine gill rakers. Food is ground in gizzard-like stomach. Spawns early spring, April to May. Eggs are scattered at random, settle and adhere to sticks, vegetation or rocks. **Value:** Utilized commercially as animal food. Gizzards and pieces of body used for catfish bait. An important natural forage fish while small.

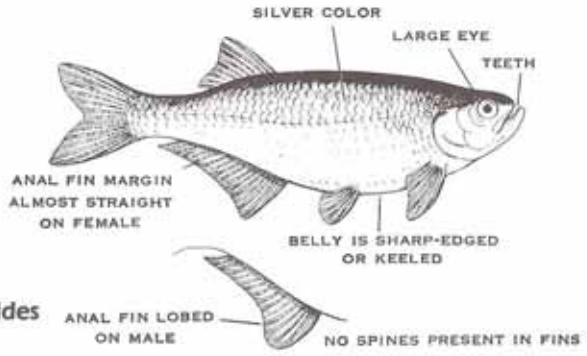
THREADFIN SHAD



Dorosoma petenense

Description: Resembles gizzard shad. Back and caudal fin yellowish on threadfin and bluish on gizzard shad. Fin contains 20 to 25 rays; 31 in gizzard shad. (Quick field identification: rub index finger downward from top of head across closed mouth. If the lower lip catches and mouth opens, it is usually the threadfin.) **Oklahoma Distribution:** Threadfin were not apparent in Oklahoma until 1957. They may have entered Lake Texoma from Red River during the flood of that year. Since that time, attempts have been made to establish the species in other state waters. **Life History:** Feeding and reproduction similar to gizzard shad. Maximum size, 6 to 8 inches. Threadfin shad are extremely sensitive to handling and transporting as well as to winter kill. **Value:** Good bait fish and excellent forage for game fish.

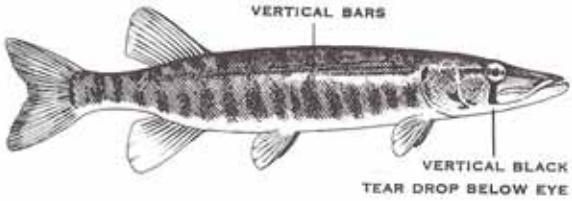
GOLDEYE (TOOTHED HERRING)



Hiodon alosoides

Description: Iris of eye golden. Teeth present on jaws and tongue. Seldom exceeds 12 inches in length. **Oklahoma Distribution:** Once abundant in Lake Texoma; and some of the other large impoundments. **Life History:** Ascends rivers to spawn. Little known of actual spawning habits. Feeds on insects, occasionally small fish and crustaceans enter diet. **Value:** Can be taken on small surface plugs and flies. Considered a delicacy when "hot smoked".

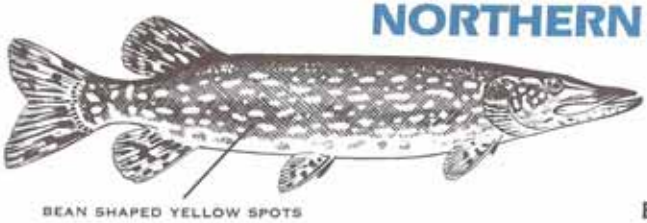
GRASS PICKEREL



Esox americanus

Description: Snout resembles a duck's bill, gill covers completely scaled. Long slender body like northern pike. Seldom exceeds 14 to 15 inches in length. **Oklahoma Distribution:** Known to occur in six southeastern counties (Pittsburg, Latimer, LeFlore, Pushmataha, Choctaw, McCurtain). **Life History:** An early spring spawner (March), it has been known to spawn as early as November and December. Most abundant in headwaters of creeks among dense beds of aquatic vegetation. Other habitats include artificial lakes, natural cutoff lakes, rivers, farm ponds and roadside ditches. Sunfish, crayfish and insects comprise the natural food of adult pickerel. **Value:** Grass pickerel should not be overlooked from the sportfishing viewpoint. On ultra-light tackle this little fish can be a formidable fighter. Small spinners, spoons or miniature plugs fished fast around weed beds or logs will pay off.

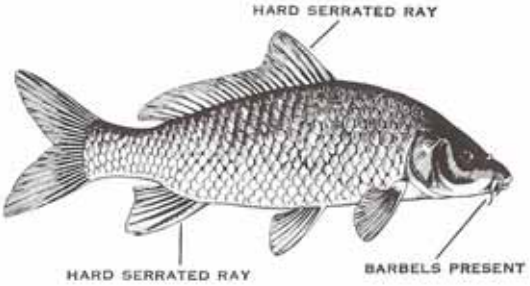
NORTHERN PIKE



Esox lucius

Description: The northern pike has a very elongated, garlike body-shape, a large, flat head and duckbill jaws equipped with well-developed, large, sharp, pointed teeth. A dark green back shading to lighter green on the sides and white belly complete the coloration. Bean-shaped, yellow spots occur on the sides and fins. Most like the native grass pickerel of southeastern Oklahoma, the northern attains a much greater size. **Oklahoma Distribution:** An exotic to Oklahoma, the northern pike was first introduced in Lake Carl Etling during 1965. Numerous smaller lakes ranging from 75 to 900 acres have been stocked with generally poor results. **Life History:** Northern pike spawn as soon as the ice breaks up in early spring. Weedy shallow flats and rising water levels act as stimuli for spawning activities. A fast growing fish, the northern can grow 18 inches or more the first year. **Value:** A voracious, hard-hitting game fish, the northern pike is a prized trophy and fine eating. Northerns will strike almost any bait, especially large spoons and live baits.

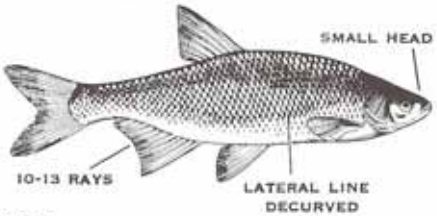
CARP



Cyprinus carpio

Description: Largest member of the minnow family. Weight to thirty pounds or more. Most like goldfish but differs in having two pairs of barbels on the upper jaw and three rows of pharyngeal teeth. Goldfish lack barbels and have one row of "throat" teeth. **Oklahoma Distribution:** Statewide. First introduced to this country from Asia via Germany in 1877. Original stock consisted of three races: normally scaled, partially scaled (mirror carp), and scaleless (leather carp). **Life History:** Spawn in shallow water during April and May. Both sexes thrash water vigorously while spawning. A bottom feeder whose diet is omnivorous as an adult. Insect larvae, plankton, and aquatic plants are ingested. Its feeding activities often muddy otherwise clear waters, much to angler's dismay. **Value:** Marginal commercial value in Oklahoma. A formidable fighter when hooked. Productive baits are doughballs, worms, corn and marshmallows. Flesh is well suited to the pressure cooker for preparing in meat patties, and the brine and smoke method of food preparation.

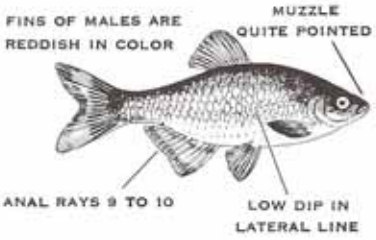
GOLDEN SHINER



Notemigonus crysoleucas

Description: Up to ten inches in length, the golden shiner is readily recognized by its deep laterally flattened body. A fleshy and scaleless keel is located between the pelvic fins and vent. A popular bait minnow—cultured extensively on fish farms. **Oklahoma Distribution:** Statewide, due to plantings and bait use. **Life History:** Pond spawning occurs in weedy areas during the first two months of summer. Eggs are adhesive and remain attached to aquatic plants during incubation. Plankton, insects (larvae and adults), algae and crustaceans are important foods: **Value:** A baitfish. Occasionally hooked while fly fishing. Edible, usually rolled in meal and deep fried.

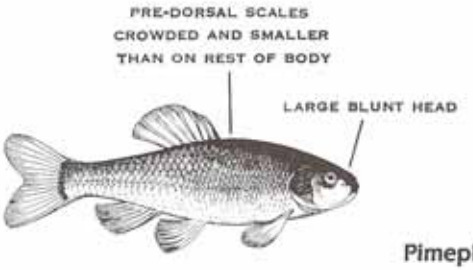
RED SHINER



Notropis lutrensis

Description: A deep-bodied shiner with a poorly developed lateral band. Scales above lateral band well pigmented, presenting a diamond pattern. Breeding males exhibit bright purple shoulder crescents, red fins and tubercles on the head. **Oklahoma Distribution:** Probably the most abundant and widely distributed shiner in the state. Fewer numbers in east where the waters are clearer. **Life History:** Spawning occurs throughout the summer and requires access to aquatic plants or similar objects for egg adherence during incubation. Red shiners feed on plankton primarily. **Value:** A popular baitfish readily available in western Oklahoma to commercial minnow seiners.

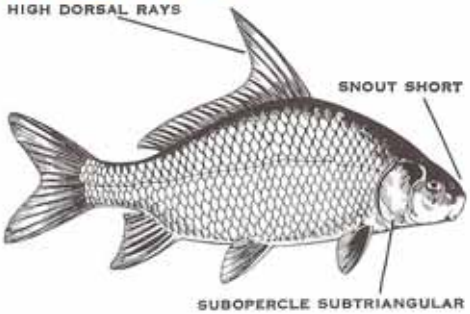
FATHEAD MINNOW



Pimephales promelas

Description: Very blunt head, dark gray or black with three rows of tubercles or hornlike projections crossing the snout in breeding males. A dusky band extends across the middle of the dorsal fin. Maximum size is about three inches. **Oklahoma Distribution:** One of the most tolerant minnows of varied habitat. Statewide distribution in clear or murky ponds, lakes, and streams but less common in strong currents. **Life History:** Spawning occurs throughout the summer. Eggs are deposited on the undersides of floating debris, and the male guards the nest during the 5-6 day incubation period. **Value:** good baitfish, well suited to pond culture requiring a minimum of care.

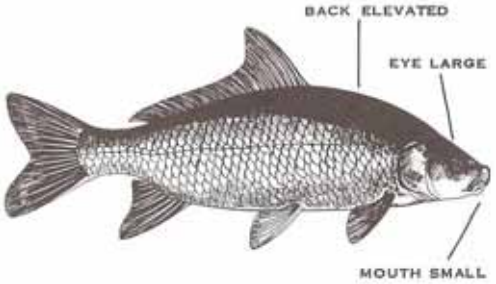
RIVER CARPSUCKER



Carpiodes carpio

Description: Often confused with smallmouth buffalo but has a small knob at tip of lower jaw, silvery coloration. Average weight four pounds. **Oklahoma Distribution:** Common in Red and Arkansas rivers and impoundments. **Life History:** Spawning occurs during May and June. Diet consists of plant and organic matter from bottom ooze. **Value:** No angling value. Commercial value insignificant. When smoked a good food fish.

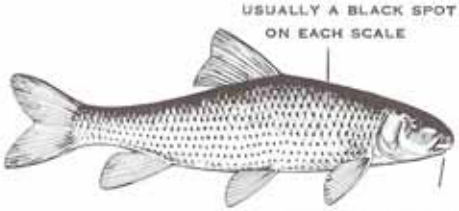
SMALLMOUTH BUFFALO



Ictiobus bubalus

Description: Like river carpsucker but lacks knob at tip of lower jaw. Small mouth with thick lips. Light blue-green in color. Belly white to cream-colored. Smaller than its look alike, the bigmouth buffalo, this fish may average 10-12 pounds. **Oklahoma Distribution:** Statewide. **Life History:** Spawning occurs during early spring in shallow water. Feeds on insect larvae, crustaceans, small mollusks and vegetation. Prefers insects and bottom organisms and clean and deep waters. **Value:** An important commercial fish. Not considered significant to anglers, since few are taken on hook and line. A good food fish except for the many inter-muscular bones.

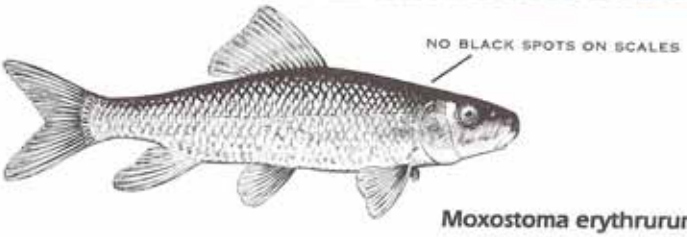
SPOTTED SUCKER



Minytrema melanops

Description: A dark spot on each scale distinguishes this species from other members of the sucker family. It is generally small but, in lake populations, 3-5 pound specimens are not uncommon. **Oklahoma Distribution:** Clear streams and lakes of the eastern third of the state. Intolerant to turbid waters. Good biological indicator: sensitive to pollution. **Life History:** Ascends streams to spawn from late March through May. Food consists of mollusks and insect larvae. **Value:** Insignificant to anglers as well as commercial interests due to small size and limited distribution. Locally, spotted suckers are taken by gigging. The flesh is of good food value, especially when fileted and scored. Inter-muscular bones can then be easily removed after cooking when prepared properly.

GOLDEN REDHORSE



Moxostoma erythrurum

Description: This sucker is more chubby than the spotted sucker, but also coarse-scaled. The lower lips have parallel folds and posterior edges form a V-shaped angle. The short dorsal fin contains 12 or 13 rays and the pelvic fin 9 rays. Generally less than 15 inches long. **Oklahoma Distribution:** Mainly located in eastern and southern streams, prefering pools and slow moving water with hard substrates. **Life History:** Spawns in stream riffle areas during April and May. Feeds on bottom-dwelling insects and mollusks, often in slow foraging schools, with all fish oriented into the current. Young feed also on algae and crustaceans. **Value:** Like other suckers, there is little interest in angling for golden redhorse. Mostly taken by gigging. When scored and fried in deep fat, bones are easily removed and the flesh is very tasty.

BLACK BULLHEAD

Ictalurus melas

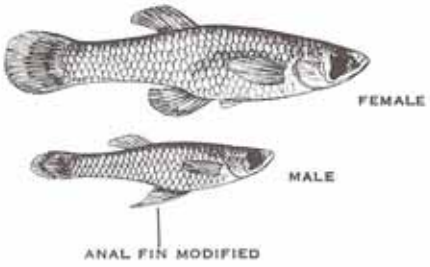
Description: Distinguished from yellow bullheads by the black or gray chin barbels. Differs from brown bullhead by lack of mottled body coloration. Seldom exceeds two pounds in weight. Seems to prefer turbid water, mud bottoms and is tolerant of high temperatures and domestic pollutants. **Oklahoma Distribution:** Statewide. **Life History:** Spawning occurs in late May or early June. Eggs are deposited in nests and parental care is given until shortly after incubation. Young school in tight masses searching for food. At that stage of life cycle they are very vulnerable to predator species such as the largemouth bass. Adult bullheads feed on a wide variety of organisms, both plant and animal. **Value:** Often considered a nuisance due to its persistence in swallowing a baited hook. A very important sport fish in areas of western Oklahoma where conditions are unsuitable for other species. Earthworms and cutbaits are often used for bullheads on hook and line.

YELLOW BULLHEAD

Ictalurus natalis

Description: This bullhead has white chin barbels, a long anal fin with about 26 rays, and sharp serrations on posterior edges of the pectoral spines. Generally less than one pound but can grow to two or three pounds. **Oklahoma Distribution:** Statewide, possibly excepting panhandle counties. Seems to prefer clearer water than does the black, and more closely associated with streams. **Life History:** Spawning activities are similar to those of black bullhead. A scavenger, but also feeds on insects, snails, worms, crustaceans and small fish. **Value:** Because the yellow bullhead is less abundant, it is less important than the black bullhead. However, methods for catching them are the same. Fine tablefare.

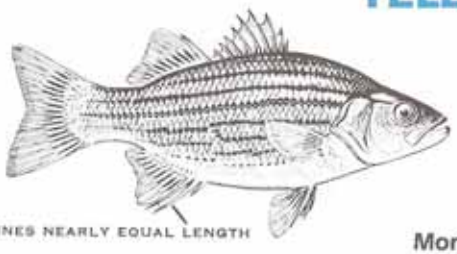
MOSQUITOFISH



Gambusia affinis

Description: Most like topminnows (Fundulus genus), but the anal fin of the male is more anterior and the first ray is a modified intromittent organ for copulation. Females are much longer, usually rotund with developing embryos. **Oklahoma Distribution:** Statewide, in ponds, lakes, streams, drainage ditches and swamps. **Life History:** Only strictly freshwater, livebearer species found in the United States. A surface feeder best known for its predation on mosquito larvae. **Value:** A biological control on mosquitos. Difficult to rid from fish farm culture ponds and of no value as a bait fish.

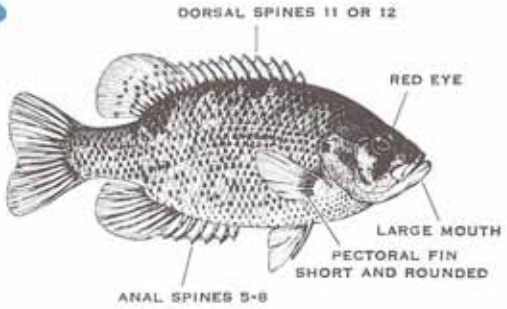
YELLOW BASS



Morone mississippiensis

Description: Resembles the white bass but differs in being smaller, seldom exceeding 12 inches, longitudinal stripes are darker, and body is yellow in color. Has spiny and soft dorsal fins connected by a membrane, second and third anal spines of nearly equal lengths and much longer than first spine. Anal fin with 9-10 rays and upper and lower jaws nearly equal in length. **Oklahoma Distribution:** Primarily in southeastern counties of McCurtain, Choctaw and Pushmataha, but have been found in Wagoner and Muskogee counties. **Life History:** Spawns in spring in both streams and lakes over rocky or gravel areas. Feeds on crustaceans, insects, and fish. **Value:** Due to its small size, yellow bass are not very important as a sportfish, but they are active fighters for their size and can be taken on worms, minnows, flies, spinners, spoons and small plugs. Flesh is white, firm, flaky and considered superior to that of white bass.

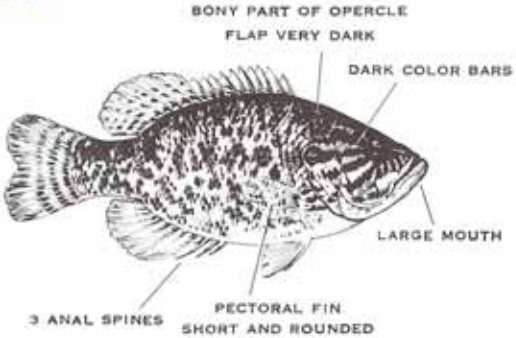
ROCK BASS



Ambloplites rupestris

Description: Resembles warmouth, but anal fin spine count is 5-8. A robust, wide-mouthed sunfish. Olive-brown with dark mottling. Average size is one-half pound. **Oklahoma Distribution:** Clear streams of northeastern Oklahoma. **Life History:** Nests are constructed and eggs deposited when water temperatures reach 60 to 70 degrees F. Rock Bass are found in association with smallmouth bass. **Value:** A good sport fish that can be taken on topwater popping bugs, wet and dry flies and miniature spinners.

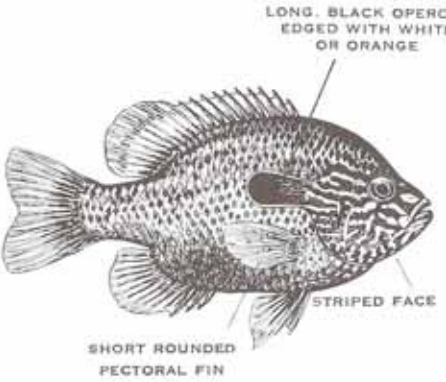
WARMOUTH



Lepomis gulosus

Description: Resembles rock bass but anal fin spine count is three and teeth are present on tongue. Olive to gray with dark color bars radiating from eye. Stocky body, wide mouth. **Oklahoma Distribution:** Originally eastern part of state. Now statewide due to transplanting. **Life History:** The nest is built in clearings amidst aquatic vegetation. **Value:** No important fishery due to limited availability. Miniature plugs, wet and dry flies and natural baits are effective.

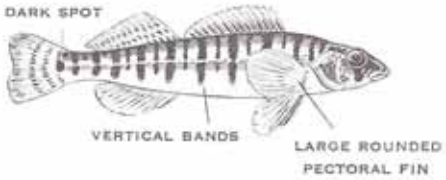
LONGEAR SUNFISH



Lepomis megalotis

Description: Resembles orangespotted sunfish but mouth is smaller. Extremely long and flexible gill flap with scarlet or white border. **Oklahoma Distribution:** Statewide. **Life History:** Seems to do better in the clear waters of eastern Oklahoma. Nest builder. Diet largely insects and crustaceans. **Value:** Forage. Seldom reaches six inches in length.

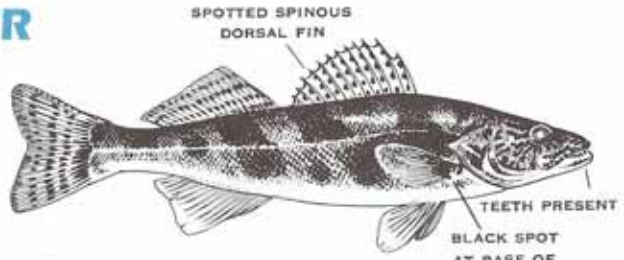
LOGPERCH



Percina caprodes

Description: Logperch belong to the same family (perch) as walleye and sauger. Yellowish-green in color with numerous dark, longitudinal bands along entire length of the body. These bands cross the back and sides but are not connected below. Between prominent bands, one to three less conspicuous bands extend to about the lateral line. A dark spot is located at the base of the caudal fin. Scales along the midline of the belly are enlarged and spiny, but sometimes they shed, leaving a naked strip. **Oklahoma Distribution:** Eastern one-half of state. **Life History:** Unlike most of the darter group that can be found under rocks and in swift waters of clear mountain streams, the logperch is better adapted to lakes. Little is known about the spawning habits in Oklahoma. **Value:** No sport or commercial value.

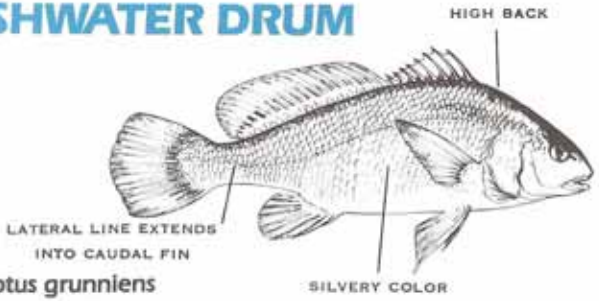
SAUGER



Stizostedion canadense

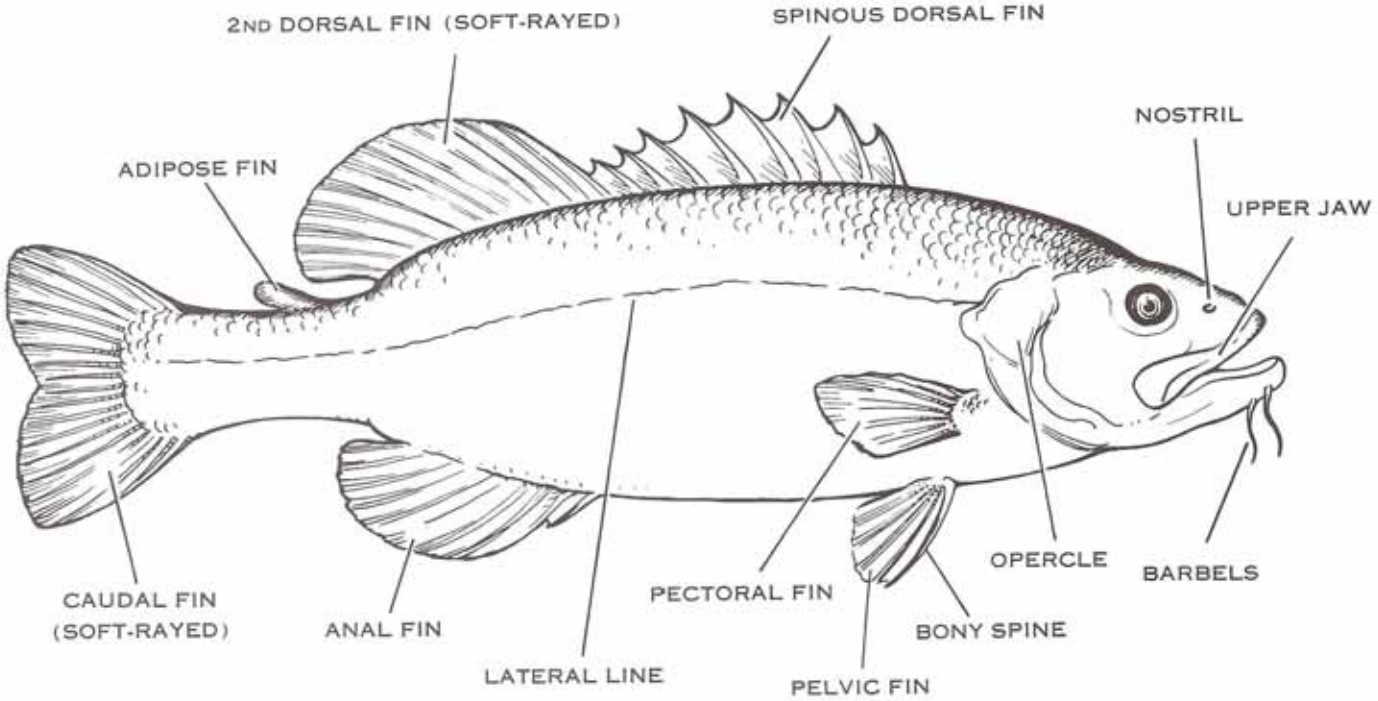
Description: Often confused with walleye but lacks the conspicuous white tip on lower lobe of caudal fin. Black spots occur along the spinous dorsal fin, not found on walleye. Seldom exceeds two pounds. **Oklahoma Distribution:** Poteau, Illinois, Neosho and Red River Systems. **Life History:** Spawning occurs in March and April during upstream migration. Eggs are released, fertilized randomly and left unattended. Incubation requires nine to fourteen days at 60 degrees F. water temperature. Adult sauger feed largely on fish, crayfish and insects. **Value:** Angling is limited and seasonal. Most catches are made in tail waters below large dams during late winter and early spring. Good baits include artificial and live minnows, spinner-minnows and spinner-fly combinations, hair streamers and lead-head flies. A good food fish.

FRESHWATER DRUM



Aplodinotus grunniens

Description: Of special interest is the ability of this species to produce noise. One explanation suggests the large otoliths (ear bones) grind together; others believe air is expelled from one air bladder chamber to another accounting for the strange noise. The latest and most plausible explanation is that of rapid contractions of an abdominal muscle against the thin wall of the air bladder producing the sound. Otoliths from drum have been found in Indian ruins and were used as luck charms as well as ornamentals to ward off sickness. **Oklahoma Distribution:** Statewide. **Life History:** Spawning occurs in May or June over gravel shoals and sandy shores. No parental care given during or after incubation. Young feed on plankton and later aquatic insects and crustaceans, but as adults the diet is largely snails, clams and crustaceans. **Value:** A good food fish. Little commercial value. Often taken on worms or crayfish fished on bottom and occasionally artificial lures.



HYPOTHETICAL FISH

GLOSSARY

APIDOSE FIN—a fleshy fin, without rays, located behind the dorsal fin.

AIR BLADDER—a membranous gas-filled sac in the upper part of the abdomen of fishes.

ANAL FIN—a median unpaired fin located posterior to the anus and in front of the tail.

BARBEL—a fleshy protuberance in the form of a thread, flap, or cone-like structure, sometimes quite long as in cat fishes and carp.

BASE (OF FINS)—the line along which the fin is attached to the body of a fish.

CARNIVOROUS—flesh-eating.

CAUDAL—pertaining to the tail region.

CAUDAL FIN—the posteriormost unpaired fin of fishes located at the end of the caudal peduncle.

CAUDAL PEDUNCLE—The slender portion of the fish body behind the anal fin and bearing the caudal fin.

CTENOID SCALE—a fish scale with tiny spines on its posterior edge.—Sunfishes.

CYCLOID SCALE—a fish scale that is roughly circular, lacks spines but has circular growth lines on its surface.—Trout.

DORSAL FIN—a median unpaired and rayed fin on the back of a fish, sometimes with spines, sometimes with soft rays and sometimes divided into two parts.

GANOID SCALE—a type of fish scale covered with enamel-like substance. Ganoid scales seldom overlap each other, rather are arranged like bricks on a pavement.—gar.

GILL—a structure which functions in the exchange of respiratory gases and is usually located near the head of fishes. Gills may be internal or external.

GILL RAKER—a slender rodlike projection which aids in gaseous exchange in fish gills by increasing surface area.

HETEROCERCAL—a type of fish tail in which the upper lobe is larger than the lower, like the sturgeon.

HOMOCERCAL—a type of fish tail in which the lobes are of approximately the same size, like the largemouth bass.

HYOID—base of tongue.

INSECTIVOROUS—insect-eating.

KEEL—a ridge, an elevated line—as on the belly of the gizzard shad and golden shiner.

LATERAL LINE—a part of the sensory system of fishes which may assist in detection of obstructions, water movement and enemies and also for balance.

MANDIBLE—lower jaw of a fish.

NARIS (Pl. nares)—openings of the nasal cavity or nose.

NUPTIAL TUBERCLE—a hardened lump on the nose of a breeding male fish such as the creek chub, stoneroller and others. Nuptial tubercles may occur anywhere on the body.

OPERCULUM—a covering flap, such as the gill cover of fishes.

PAPILLA—a small fleshy protuberance, such as the knob at the base of the lower jaw in the river carpsucker.

PECTORAL FIN—the most forward or uppermost pair of fins, compares with the arms or forelegs of other vertebrates.

PELVIC FIN—one of a pair of fins located behind or below the pectoral fins of a fish.

PHARYNGEAL—pertaining to the pharynx; a toothed bone in the throat region of some fishes.

SPINE—an unsegmented ray in a fish fin, usually stiff but sometimes flexible, also bony processes on the bones of the operculum.

VIVIPAROUS—producing living young, such as the mosquitofish.

CHECK LIST

CLASS — AGNATHA — JAWLESS FISHES

ORDER — PETROMYZONTIFORMES

LAMPREY FAMILY — PETROMYZONTIDAE

- Chestnut lamprey ..... *Ichthyomyzon castaneus*
- Southern brook lamprey ..... *Ichthyomyzon gagei*

CLASS — OSTEICHTHYES — BONY FISHES

ORDER — ACIPENSERIFORMES

STURGEON FAMILY — ACIPENSERIDAE

- Shovelnose sturgeon ..... *Scaphirhynchus platorynchus*

PADDLEFISH FAMILY — POLYODONTIDAE

- Paddlefish ..... *Polyodon spathula*

ORDER — SEMIONOTIFORMES

GAR FAMILY — LEPISOSTEIDAE

- Spotted gar ..... *Lepisosteus oculatus*
- Longnose gar ..... *Lepisosteus osseus*
- Shortnose gar ..... *Lepisosteus platostomus*
- Alligator gar ..... *Lepisosteus spatula*

ORDER — AMIIFORMES

BOWFIN FAMILY — AMIIDAE

- Bowfin ..... *Amia calva*

ORDER — ANGUILLIFORMES

EEL FAMILY — ANGUILLIDAE

- American eel ..... *Anguilla rostrata*

ORDER — CLUPEIFORMES

HERRING FAMILY — CLUPEIDAE

- Alabama shad ..... *Alosa alabamae*
- Skipjack herring ..... *Alosa chrysochloris*
- Gizzard shad ..... *Dorosoma cepedianum*
- Threadfin shad ..... *Dorosoma petenense*

ORDER — OSTEOGLOSSIFORMES

MOONEYE FAMILY — HIODONTIDAE

- Goldeye ..... *Hiodon alosoides*
- Mooneye ..... *Hiodon tergisus*

ORDER — SALMONIFORMES

SALMON FAMILY — SALMONIDAE

- Rainbow trout ..... *Salmo gairdneri*

PIKE FAMILY — ESOCIDAE

- Grass pickerel ..... *Esox americanus*
- Northern pike ..... *Esox lucius*
- Chain pickerel ..... *Esox niger*

ORDER — CYPRINIFORMES

CHARACIN AND TETRA FAMILY — CHARACIDAE

- Mexican tetra ..... *Astyanax mexicanus*

MINNOW AND CARP FAMILY — CYPRINIDAE

- Stoneroller ..... *Campostoma anomalum*
- Largescale stoneroller ..... *Campostoma oligolepis*
- Goldfish ..... *Carassius auratus*
- Grass carp ..... *Ctenopharyngodon idella*
- Common Carp ..... *Cyprinus carpio*

Cypress minnow	*Hybognathus hayi*
Mississippi silvery minnow	*Hybognathus nuchalis*
Plains minnow	*Hybognathus placitus*
Speckled chub	*Hybopsis aestivalis*
Bigeye chub	*Hybopsis amblops*
Flathead chub	*Hybopsis gracilis*
Silver chub	*Hybopsis storeriana*
Gravel chub	*Hybopsis x-punctata*
Redspot chub	*Nocomis asper*
Golden shiner	*Notemigonus crysoleucas*
Pallid shiner	*Notropis amnis*
Emerald shiner	*Notropis atherinoides*
Blackspot shiner	*Notropis atrocaudalis*
Red River shiner	*Notropis bairdi*
River shiner	*Notropis blennius*
Bigeye shiner	*Notropis boops*
Ghost shiner	*Notropis buchanani*
Bluntface shiner	*Notropis camurus*
Ironcolor shiner	*Notropis chalybaeus*
Common shiner	*Notropis cornutus*
Pugnose minnow	*Notropis emiliae*
Ribbon shiner	*Notropis fumeus*
Arkansas River shiner	*Notropis girardi*
Wedgespot shiner	*Notropis greenei*
Bluehead shiner	*Notropis hubbsi*
Red shiner	*Notropis lutrensis*
Taillight shiner	*Notropis maculatus*
Ozark minnow	*Notropis nubilus*
Kiamichi shiner	*Notropis ortenburgeri*
Peppered shiner	*Notropis perpallidus*
Duskystripe shiner	*Notropis pilsbryi*
Chub shiner	*Notropis potteri*
Rosyface shiner	*Notropis rubellus*
Silverband shiner	*Notropis shumardi*
Ouachita Mountain shiner	*Notropis snelsoni*
Spotfin shiner	*Notropis spilopterus*
Sand shiner	*Notropis stramineus*
Redfin shiner	*Notropis umbratilis*
Blacktail shiner	*Notropis venustus*
Mimic shiner	*Notropis volucellus*
Steelcolor shiner	*Notropis whipplei*
Suckermouth minnow	*Phenacobius mirabilis*
Southern redbelly dace	*Phoxinus erythrogaster*
Bluntnose minnow	*Pimephales notatus*
Fathead minnow	*Pimephales promelas*
Slim minnow	*Pimephales tenellus*
Bullhead minnow	*Pimephales vigilax*
Creek chub	*Semotilus atromaculatus*

SUCKER FAMILY — CATOSTOMIDAE

River carpsucker	*Carpiodes carpio*
Quillback	*Carpiodes cyprinus*
Highfin carpsucker	*Carpiodes velifer*
White sucker	*Catostomus commersoni*
Blue sucker	*Cycleptus elongatus*
Creek chubsucker	*Erimyzon oblongus*
Lake chubsucker	*Erimyzon sucetta*
Northern hog sucker	*Hypentelium nigricans*
Smallmouth buffalo	*Ictiobus bubalus*

CHECK LIST (CONT.)

- Bigmouth buffalo — *Ictiobus cyprinellus*
- Black buffalo — *Ictiobus niger*
- Spotted sucker — *Minytrema melanops*
- River redhorse — *Moxostoma carinatum*
- Black redhorse — *Moxostoma duquesnei*
- Golden redhorse — *Moxostoma erythrurum*
- Shorthead redhorse — *Moxostoma macrolepidotum*

ORDER — SILURIFORMES

CATFISH FAMILY — ICTALURIDAE

- Blue catfish — *Ictalurus furcatus*
- Black bullhead — *Ictalurus melas*
- Yellow bullhead — *Ictalurus natalis*
- Brown bullhead — *Ictalurus nebulosus*
- Channel catfish — *Ictalurus punctatus*
- Mountain madtom — *Noturus eleutherus*
- Slender madtom — *Notorus exilis*
- Stonecat — *Noturus flavus*
- Tadpole madtom — *Noturus gyrinus*
- Brindled madtom — *Noturus miurus*
- Freckled madtom — *Noturus nocturnus*
- Neosho madtom — *Noturus placidus*
- Flathead catfish — *Pylodictis olivaris*

ORDER — PERCOPSIFORMES

CAVEFISH FAMILY — AMBLYOPSIDAE

- Ozark cavefish — *Amblyopsis rosae*

PIRATE PERCH FAMILY — APHREDODERIDAE

- Pirate perch — *Aphredoderus sayanus*

ORDER — ATHERINIFORMES

KILLIFISH FAMILY — CYPRINODONTIDAE

- Red River pupfish — *Cyprinodon rubrofluviatilis*
- Northern studfish — *Fundulus catenatus*
- Golden topminnow — *Fundulus chrysotus*
- Blackstripe topminnow — *Fundulus notatus*
- Starhead topminnow — *Fundulus notti*
- Blackspotted topminnow — *Fundulus olivaceus*
- Plains topminnow — *Fundulus sciadicus*
- Plains killifish — *Fundulus zebrinus*

LIVEBEARER FAMILY — POECILIIDAE

- Mosquitofish — *Gambusia affinis*

SILVERSIDE FAMILY — ATHERINIDAE

- Brook silverside — *Labidesthes sicculus*
- Inland silverside — *Menidia beryllina*

ORDER — PERCIFORMES

TEMPERATE BASS FAMILY — PERCICHTHYIDAE

- White bass — *Morone chrysops*
- Yellow bass — *Morone mississippiensis*
- Striped bass — *Morone saxatilis*

SUNFISH FAMILY — CENTRARCHIDAE

- Rock bass — *Ambloplites rupestris*
- Flier — *Centrarchus macropterus*
- Banded pygmy sunfish — *Elassoma zonatum*
- Redbreast sunfish — *Lepomis auritus*
- Green sunfish — *Lepomis cyanellus*
- Warmouth — *Lepomis gulosus*

Orangespotted sunfish ..... *Lepomis humilis*
Bluegill ..... *Lepomis macrochirus*
Dollar sunfish ..... *Lepomis marginatus*
Longear sunfish ..... *Lepomis megalotis*
Redear sunfish ..... *Lepomis microlophus*
Spotted sunfish ..... *Lepomis punctatus*
Bantam sunfish ..... *Lepomis symmetricus*
Smallmouth bass ..... *Micropterus dolomieui*
Spotted bass ..... *Micropterus punctulatus*
Largemouth bass ..... *Micropterus salmoides*
White crappie ..... *Pomoxis annularis*
Black crappie ..... *Pomoxis nigromaculatus*

PERCH FAMILY — PERCIDAE

Crystal darter ..... *Ammocrypta asprella*
Western sand darter ..... *Ammocrypta clara*
Scaly sand darter ..... *Ammocrypta vivax*
Mud darter ..... *Etheostoma asprigene*
Greenside darter ..... *Etheostoma blennioides*
Bluntnose darter ..... *Etheostoma chlorosomum*
Creole darter ..... *Etheostoma collettei*
Arkansas darter ..... *Etheostoma cragini*
Fantail darter ..... *Etheostoma flabellare*
Swamp darter ..... *Etheostoma fusiforme*
Slough darter ..... *Etheostoma gracile*
Harlequin darter ..... *Etheostoma histrio*
Least darter ..... *Etheostoma microperca*
Johnny darter ..... *Etheostoma nigrum*
Goldstripe darter ..... *Etheostoma parvipinne*
Cypress darter ..... *Etheostoma proeliare*
Stippled darter ..... *Etheostoma punctulatum*
Orangebelly darter ..... *Etheostoma radiosum*
Orangethroat darter ..... *Etheostoma spectabile*
Speckled darter ..... *Etheostoma stigmaeum*
Redfin darter ..... *Etheostoma whipplei*
Banded darter ..... *Etheostoma zonale*
Yellow perch ..... *Perca flavescens*
Logperch ..... *Percina caprodes*
Channel darter ..... *Percina copelandi*
Bigscale logperch ..... *Percina macrolepida*
Blackside darter ..... *Percina maculata*
Longnose darter ..... *Percina nasuta*
Leopard darter ..... *Percina pantherina*
Slenderhead darter ..... *Percina phoxocephala*
Dusky darter ..... *Percina sciera*
River darter ..... *Percina shumardi*
Sauger ..... *Stizostedion canadense*
Walleye ..... *Stizostedion vitreum*

DRUM FAMILY — SCIAENIDAE

Freshwater drum ..... *Aplodinotus grunniens*

CICHLID FAMILY — CICHLIDAE

Blue tilapia ..... *Tilapia aurea*
Redbelly tilapia ..... *Tilapia zilli*

MULLET FAMILY — MUGILIDAE

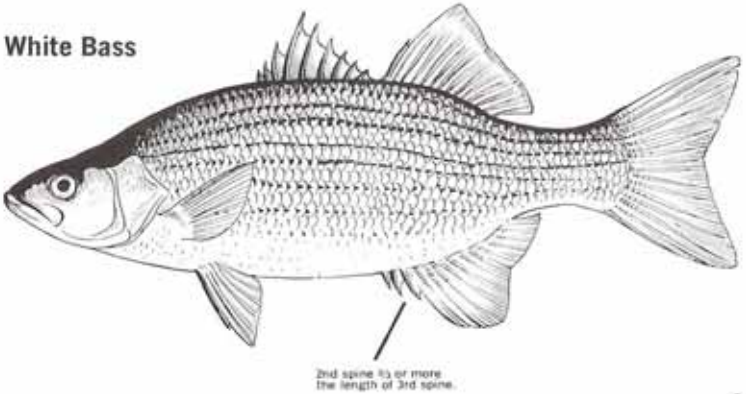
Striped mullet ..... *Mugil cephalus*

SCULPIN FAMILY — COTTIDAE

Banded sculpin ..... *Cottus carolinae*

STRIPED BASS HYBRID IDENTIFICATION

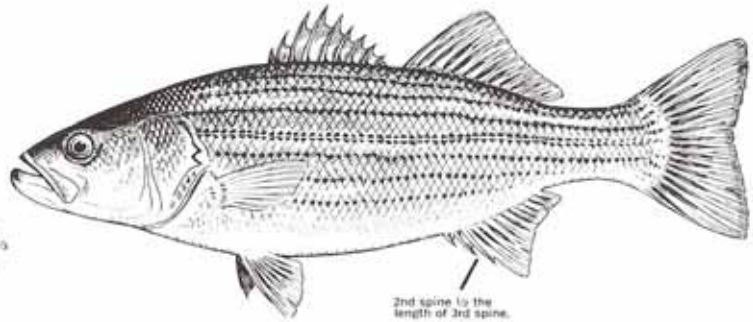
White Bass



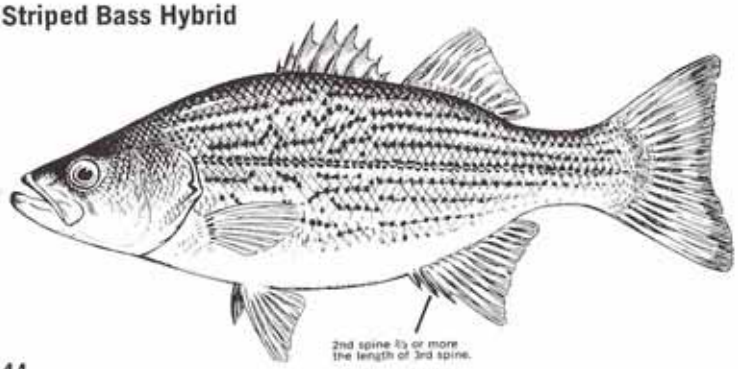
WHITE BASS
Back of tongue has 1 tooth patch.
Body deep, more than ⅓ length.
Stripes faint, only 1 extends to tail.
Seldom exceeds 3 lbs.

Striped Bass

STRIPED BASS
Back of tongue has 2 distinct tooth patches.
Body slender, less than ⅓ length.
Stripes distinct, several extend to tail.
20 lbs. common.



Striped Bass Hybrid



STRIPED BASS HYBRID
Back of tongue has 2 distinct tooth patches.
Body deep, more than ⅓ length.
Stripes distinct, usually broken, several extend to tail.
Seldom exceeds 10 lbs.