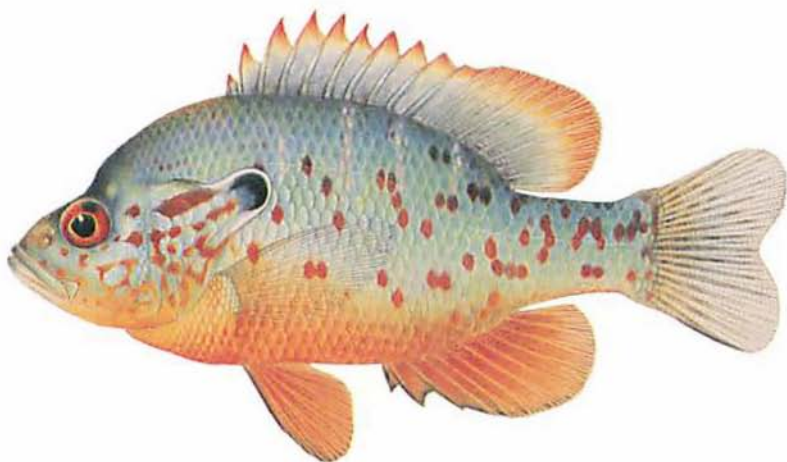


EC 899

GUIDE TO THE COMMON FISHES OF SOUTH DAKOTA



Robert M. Neumann and David W. Willis

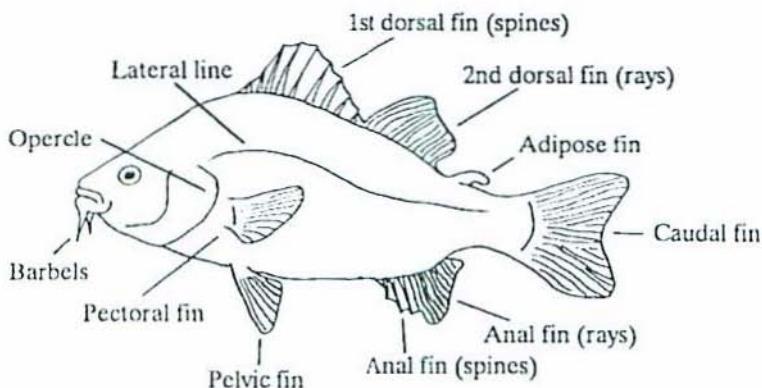
Department of Wildlife and Fisheries Sciences
South Dakota State University
and
South Dakota Department of Game, Fish and Parks
and
South Dakota Cooperative Extension Service

GUIDE TO THE COMMON FISHES OF SOUTH DAKOTA

South Dakota is home to more than 100 fish species. This guide is a reference to the most common 50 species. Included are tips for identification, distribution maps, and brief life histories. Also included is a comprehensive listing of the known fish species in South Dakota.

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External Anatomy of a Fish



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STURGEON (family Acipenseridae)

Pallid sturgeon

Scaphirhynchus albus



Similar Species: Shovelnose sturgeon

Identification: Bases of outer barbels usually **behind** inner barbels, outer barbels twice as long as inner barbels, bony plates **absent** on belly.

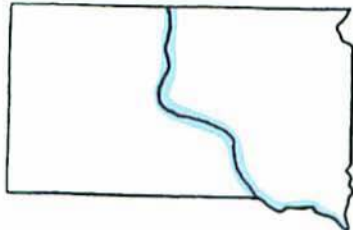
Pallid sturgeon are almost entirely restricted to the main channel of the Missouri River and lower half of the Mississippi River. The pallid sturgeon is an endangered species; therefore, it is illegal to have it in your possession. Throughout its range this sturgeon is most common in Montana and the Dakotas. It is less common than the shovelnose. Like the shovelnose, pallid sturgeon prefer strong currents in sandy and gravel-bottomed rivers. All sturgeons, the pallid included, feed on bottom-dwelling organisms such as snails and insects, but they also eat fish. Pallid sturgeon can weigh as much as 65 pounds.



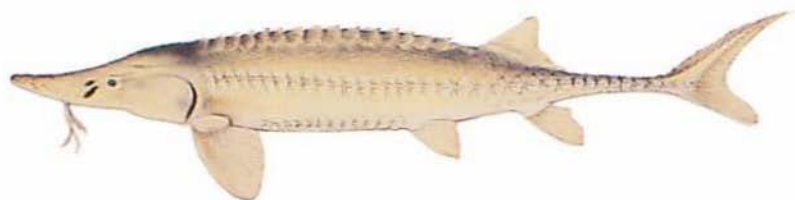
Pallid



Shovelnose



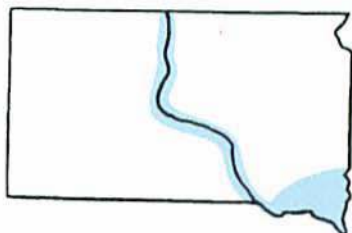
Shovelnose sturgeon
Scaphirhynchus platorynchus



Similar Species: Pallid sturgeon

Identification: Bases of barbels **straight across**, all four are about the same length, bony plates **present** on belly.

The shovelnose is the most abundant sturgeon in the Mississippi and Missouri rivers and larger tributaries. It prefers the fast currents of large rivers with sand or gravel bottoms but can live in muddy rivers. The shovelnose, like other sturgeons, feeds entirely from the bottom on larvae of aquatic insects, the bulk of its diet. It may occasionally eat small fish. Spawning, which can begin at 5 to 7 years of age, occurs over sand and gravel in large channels with fast current. Shovelnose sturgeon are smaller than pallid sturgeon; the average size of adults is about 20 inches and 1 1/2 pounds; a large specimen is about 5 pounds.



PADDLEFISH (family Polyodontidae)

Paddlefish

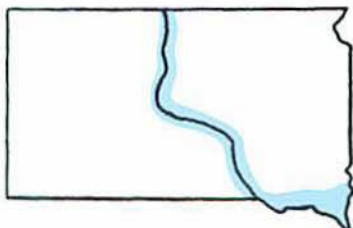
Polyodon spathula



Similar Species: None

Identification: Snout long and paddle-like, shark-like tail, no scales apparent on body.

Paddlefish are truly ancient survivors of the Mississippi Basin. In South Dakota, paddlefish occur in the Missouri River system. Paddlefish numbers have declined since 1900 due to destruction of habitat and overharvest. In some areas, their annual spring spawning migrations are blocked by dams. Paddlefish cruise open water and feed on plankton with their large, gaping mouths. Like sturgeon, their skeleton is cartilage rather than bone. Adult paddlefish may attain lengths up to 60 inches and weights exceeding 100 pounds. Paddlefish are very long-lived and can reach ages of 30 years or more.



GAR (family Lepisosteidae)

Shortnose gar

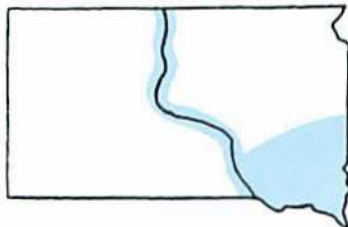
Lepisosteus platostomus



Similar Species: None in South Dakota

Identification: Snout elongated with sharp teeth, olive green above to whitish below, dorsal fin far back on body, diamond-shaped scales.

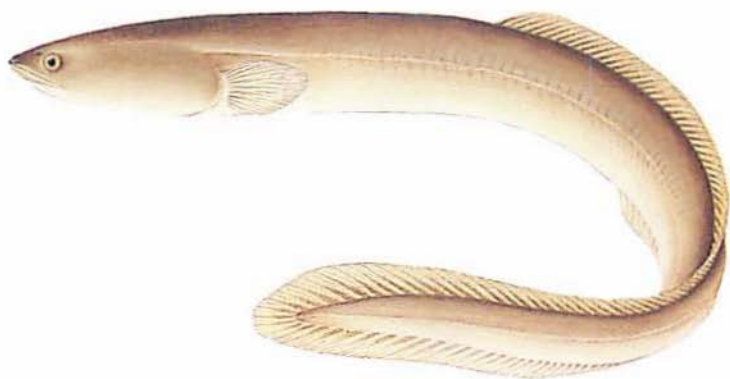
Shortnose gar occur in the Missouri River and its tributaries in eastern South Dakota and are the most common gar in the state. Adult gar primarily eat other fish; however, insect larvae and crayfish also are taken. Shortnose gar are found most often in quiet pools and backwaters. They spawn in shallow water over vegetation when water temperature is around 70 F. The bony mouths of gar make hooking with conventional tackle difficult; thus, shortnose gar provide a considerable challenge to anglers.



EELS (family Anguillidae)

American eel

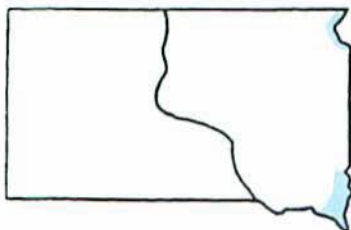
Anguilla rostrata



Similar Species: None

Identification: Smooth body ("slippery as an eel"), dorsal (back) fin continues into tail fin and around bottom of body.

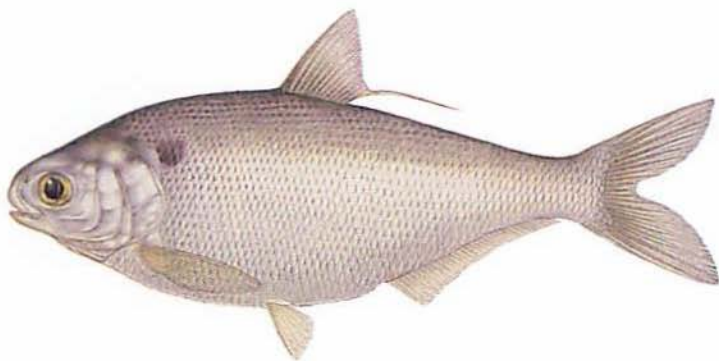
The American eel is a unique fish that spawns in the Atlantic Ocean, but adults live and grow in North American rivers that flow into this ocean. They are seldom collected in South Dakota, and their movement up the Missouri River was stopped by the construction of Gavins Point Dam. Large females rarely exceed 30 to 40 inches and 2 1/2 to 3 1/2 pounds. Males seldom exceed 24 inches. Adult American eels are voracious carnivores. Although they will feed on carrion, eels primarily seek living prey.



HERRING (family Clupeidae)

Gizzard shad

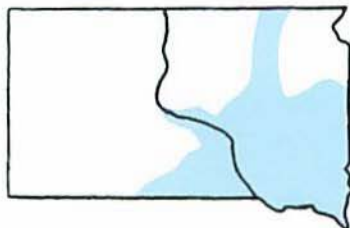
Dorosoma cepedianum



Similar Species: Goldeye, mooneye

Identification: Silvery compressed body, sharp or pointed scales on belly, last ray of dorsal (back) fin is elongated (unlike the goldeye and mooneye which have no dorsal fin projection).

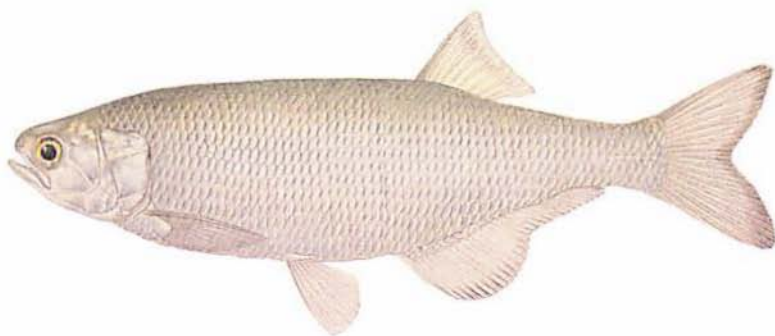
South Dakota is close to the northern limit of distribution for this fish species, which is found only in the Missouri River system up to Lake Oahe and in a few other rivers and lakes. Gizzard shad are important prey fish in many impoundments throughout the U.S. Although adults can grow to 1 or 2 pounds, most die during their first winter in South Dakota because of cold water temperatures. Young gizzard shad typically reach 2 to 4 inches by late summer. They form large schools of several thousand fish and are heavily preyed upon by fishes such as crappies, walleyes, and northern pike. Gizzard shad spawn in the spring, usually over flooded terrestrial vegetation in shallow water. They feed primarily on microscopic plants and animals and also obtain food from decaying organic material on lake bottoms. They are rarely caught by anglers.



MOONEYES (family Hiodontidae)

Goldeye

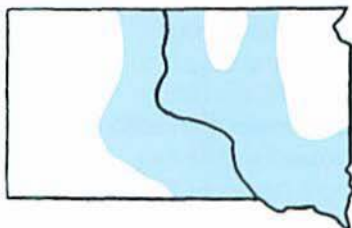
Hiodon alosoides



Similar Species: Mooneye, gizzard shad

Identification: Silvery compressed body, large golden eyes, teeth present, no sharp or pointed scales on belly, no dorsal fin ray projection like the gizzard shad, dorsal fin begins **opposite or behind** anal fin (unlike the mooneyes in which the dorsal fin begins **before** the anal fin).

In South Dakota, the goldeye is most commonly found in the Missouri River and its impoundments. Small goldeyes serve as prey fish for predators such as walleye and northern pike, but the adults are often caught by anglers on small minnows or small artificial lures. They can be quite sporting, but because they are bony they are not prized as table fare. (They are a popular food fish in Canada where they are smoked.) Goldeyes feed on a variety of organisms, from microscopic plankton to insects and fish. This fish rarely exceeds 2 pounds in South Dakota waters.



TROUT (family Salmonidae)

Brown trout

Salmo trutta

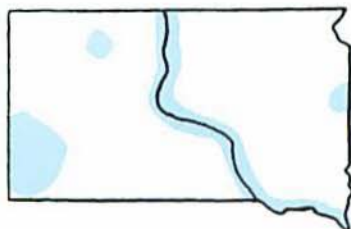


Similar Species: None in South Dakota

Identification: Light body with dark spots, some spots bright red, tail fin not spotted throughout, tail not deeply forked.

Brown trout are native to Europe but have been extensively introduced throughout the U.S. They tend to be more piscivorous (fish-eating) than rainbow or brook trout but feed extensively on insects as well. Brown trout tolerate somewhat warmer water than brook or rainbow trout and can live in waters that occasionally exceed 70 F for short periods of time. Brown trout spawn in the fall and maintain wild populations by natural reproduction in many Black Hills streams and Gary Creek in eastern South Dakota.

Brown trout, along with brook trout, are the primary trout species managed in Black Hills streams. Brown trout can also be found in the tailwaters areas of the Missouri River dams.



Rainbow trout

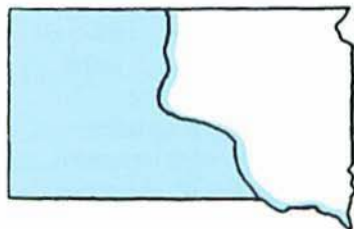
Oncorhynchus mykiss



Similar Species: Cutthroat trout, chinook salmon (in Lake Oahe)

Identification: Light body with dark spots, spots extend onto entire tail, tail not deeply forked. In Lake Oahe, rainbow trout can be distinguished from chinook salmon by the tail, which is silver and deeply forked in the chinook salmon, and by the mouth, which is black in chinook salmon and white in rainbow trout. (Cutthroat trout have orange or red "cutthroat" mark on underside of jaw and are found only in limited areas of the Black Hills.)

Rainbow trout are native to only the Pacific Ocean drainages along the west coast of the U.S. and Canada. They have been introduced into many parts of the U.S. and many other places around the world. In South Dakota, rainbow trout are found in the Missouri River system and have been stocked into many impoundments west of the Missouri River. In the Black Hills, rainbow trout are stocked into lakes and ponds. Rainbow trout spawn in the spring, but only limited natural reproduction occurs in Black Hills streams. Most populations in the state are maintained by stocking. They are commonly cultured as a food fish. The steelhead is actually a Pacific Coast rainbow trout. Steelheads have been stocked into Lake Oahe, along with the chinook salmon.



Brook trout

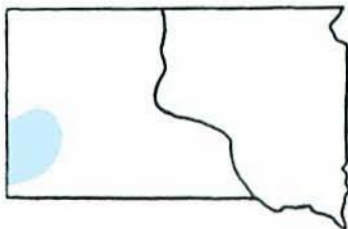
Salvelinus fontinalis



Similar Species: Lake trout, splake

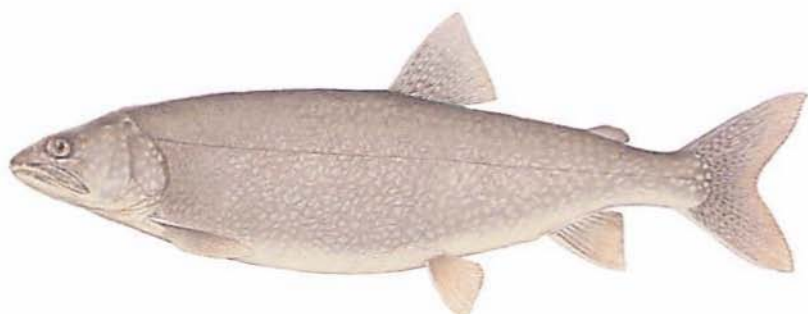
Identification: Dark greenish body with light markings, some spots can be red, back usually with wavy lines (vermiculation), lower fins with white edges, tail fin not deeply forked. (Lake trout has a deeply forked tail.)

Brook trout were native to the eastern U.S. and Canada. They have been introduced throughout the western U.S. and are found in most headwater reaches of Black Hills streams. This pretty little fish is the panfish of the trout family, as it actually matures and reproduces at lengths as small as 4 inches. As a result, brook trout commonly overpopulate and "stunt." Brook trout prefer colder water than rainbow or brown trout and maintain their numbers in the Black Hills streams through natural reproduction. Any brook trout over 10 or 12 inches is considered a trophy fish in Black Hills streams. Brook trout are artificially hybridized with lake trout to create the splake, which is intermediate in size between the two parent species.



Lake trout

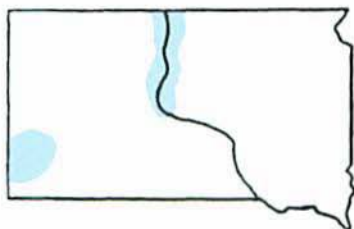
Salvelinus namaycush



Similar Species: Splake, brook trout

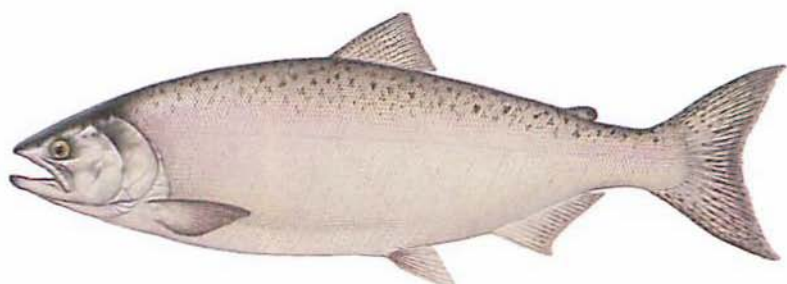
Identification: Dark green body with light markings, deeply forked tail. (Brook trout tail not deeply forked.)

The lake trout is native to northern North America, including the Great Lakes and much of Canada. Along with chinook salmon, this fish was introduced into Lake Oahe to create a cold-water fishery. Some lake trout are also in Pactola Reservoir in the Black Hills, along with the hybrid splake which is also found in Deerfield Reservoir. During summer, lake trout inhabit the deep, cold bottom waters of Lake Oahe. Adult lake trout spawn in the fall and primarily feed on other fishes. They probably eat rainbow smelt in Lake Oahe. Lake trout are slow growing but can reach weights approaching 100 pounds. They rarely exceed 15 pounds in South Dakota.



Chinook salmon

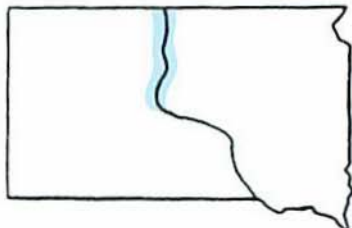
Oncorhynchus tshawytscha



Similar Species: Rainbow trout (in Lake Oahe)

Identification: Light body with dark spots, deeply forked tail, black mouth. (See rainbow trout for further details on distinguishing chinook salmon from rainbow trout.)

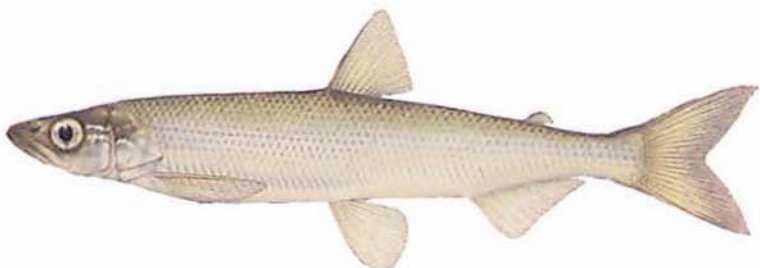
Chinook salmon are native to the Pacific Ocean, but have been introduced into Lake Oahe. They do not naturally reproduce in the reservoir, and their population is maintained by stocking. Salmon are cold-water fishes, and inhabit the cold bottom waters of Lake Oahe during midsummer. Rainbow smelt are an important food item of chinook salmon in Lake Oahe. Chinook salmon spawn in the fall. Although they can exceed 100 pounds in the Pacific Ocean, the largest fish in Lake Oahe are approximately 20 pounds.



SMELT (family Osmeridae)

Rainbow smelt

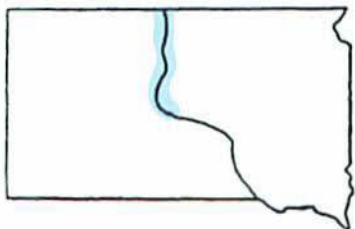
Osmerus mordax



Similar Species: Lake whitefish and lake herring

Identification: Slender silvery body, adipose fin present, large scales. Rainbow smelt are smaller than either of the two similar species found in Lake Oahe.

Rainbow smelt are native to the Arctic Ocean and northern portions of the Atlantic and Pacific oceans. They were introduced as a prey fish in Lake Sakakawea, North Dakota, and found their way downstream into the cool waters of Lake Oahe where they provide a source of prey for large predators such as northern pike, walleye, various trout, and chinook salmon. Rainbow smelt also have been found in Missouri River impoundments in South Dakota downstream from Lake Oahe but are less common in these waters. Rainbow smelt are schooling fish that prefer open water where they feed primarily on microscopic animals (zooplankton). Rainbow smelt commonly reach 6 to 8 inches in length and can live for up to 8 years.



PIKES (family Esocidae)

Northern pike

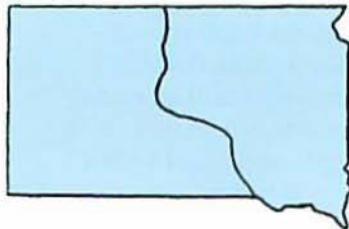
Esox lucius



Similar Species: Tiger muskellunge, muskellunge

Identification: Light spots on dark background, five or fewer pores on lower jaw, cheeks fully scaled. (Muskellunge has a pattern of dark marks on light background, no scales on lower half of cheek, and 6-10 pores on lower jaw.)

Northern pike are a popular sportfish common statewide in South Dakota and are found in a variety of habitats including lakes, rivers, ponds, and impoundments. In rivers, northern pike avoid strong current. The northern pike diet consists primarily of fish, but they have been known to eat insects and other small invertebrates and sometimes small birds and mammals. Spawning occurs during spring over vegetation soon after the ice melts. Northern pike grow rapidly and may reach lengths of 16 inches in the first year of life in South Dakota waters. They are well adapted to South Dakota waters and are able to survive all but the most extreme conditions.



Muskellunge

Esox masquinongy



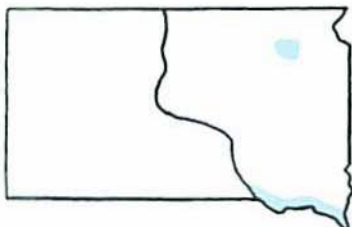
Similar Species: Tiger muskellunge, northern pike

Identification: Six or more pores on lower jaw, upper half of cheeks scaled, dark vertical solid or broken bars on light background.

The muskellunge is related to the northern pike and is known by anglers as the "fish of 10,000 casts."

Muskellunge are primarily found in the midwestern U.S. and southern Canada but have been introduced elsewhere. In South Dakota, muskellunge have been stocked into Lake Amsden in the northeastern part of the state and into the lower portion of the Missouri River. Muskellunge do not reach the same level of population density as northern pike. They are sedentary, lurking predators that feed primarily on other fish. Muskellunge spawn in spring, slightly later than northern pike, and the eggs are scattered over dead vegetation in shallow water.

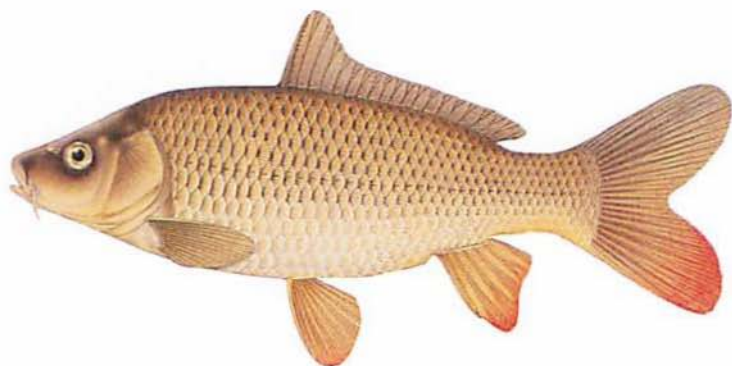
They should not be confused with tiger muskellunge, which are hybrids between muskellunge and northern pike that have been stocked elsewhere in the state.



MINNOWS (family Cyprinidae)

Common carp

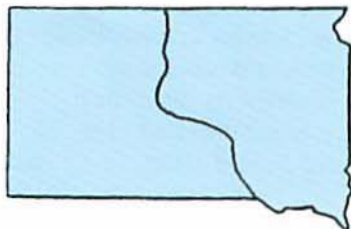
Cyprinus carpio



Similar Species: Goldfish, bigmouth and smallmouth buffalo

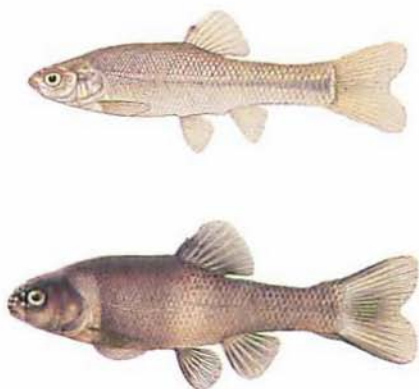
Identification: Barbel on each corner of mouth, heavy serrated spine-like structure at front of dorsal (back) and anal (bottom hind) fin. (Goldfish do not have barbels. The buffalo-fishes do not have barbels or spines.)

Common carp were introduced to the U.S. in the mid-1800s as a food fish and now are cosmopolitan in North America. Carp flourish in a variety of habitats and can tolerate a wide range of environmental conditions. They thrive in lakes or sluggish streams that are rich in organic matter and are less abundant in cold, clearer waters. The common carp is an opportunistic bottom feeder and will eat a variety of insects and green plant material. Carp can provide exciting angling on light tackle as they are excellent fighters. Common carp may reach 40 to 50 pounds.



Fathead minnow

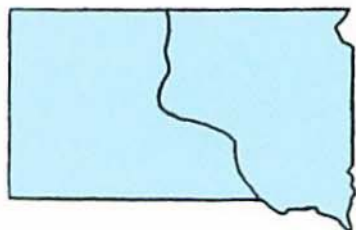
Pimephales promelas



Similar Species: Many other minnows and some suckers

Identification: Blunt rounded snout, barbels absent, lateral line incomplete, scales largest near tail and becoming smaller toward head.

The fathead minnow is the most common minnow of the prairie region and inhabits rivers, lakes, and wetlands. It is an important commercial species sold as a popular bait fish and is very hardy in the minnow bucket. Fathead minnows are often stocked in ponds as food for sport fishes, but they will quickly be eliminated if largemouth bass are abundant. Fathead minnows eat algae and zooplankton and will take aquatic insects. During the spawning period, male fathead minnows become dark, especially around the head. Eggs are laid on the underside of floating or suspended objects such as floating boards, root wads, and aquatic plant leaves. Average size of adult fathead minnows is 1 1/2 to 3 inches.



Emerald shiner

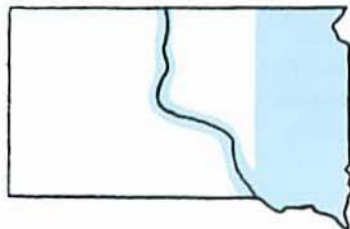
Notropis atherinoides



Similar Species: Many other minnows and some suckers

Identification: Pale and silvery with faint lateral band, body slender.

The emerald shiner is the most abundant minnow in the Missouri and Mississippi rivers. It is common in large streams and Missouri River system reservoirs in South Dakota where it serves as an important prey fish. Large emerald shiners feed on insects and small crustaceans, and smaller ones feed on algae. Spawning occurs at night just below the surface in shallow water over sand or firm mud. In South Dakota, the emerald shiner typically reaches 2 1/2 inches by the end of its first year of life and 3 1/2 inches at the end of its second year.



Common shiner

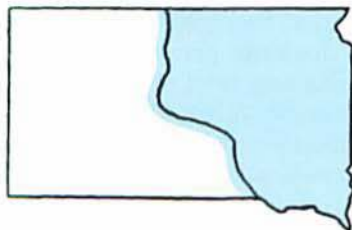
Luxilus cornutus



Similar Species: Many other minnows and some suckers

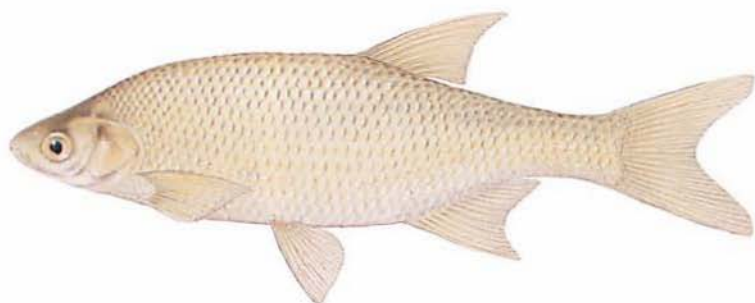
Identification: Silvery with dusky dorsal stripe, no dark lateral band, large eyes, barbels absent, loose diamond-shaped scales.

Common shiners are found in most of the Great Lakes drainage and lower Missouri and upper Mississippi river basins. They are common in small to medium-sized streams with clear, cool water with moderate to swift current and gravel to rubble bottom. In South Dakota they may occur in warmer, more turbid waters. Common shiners feed primarily on aquatic and terrestrial insects, small crustaceans, and plant material. Often the male will build a spawning pit in the gravel in which the female lays eggs. Many males may occupy a nest, which often results in frequent fights. Common shiners can reach lengths of 8 inches, with males larger than females.



Golden shiner

Notemigonus crysoleucas

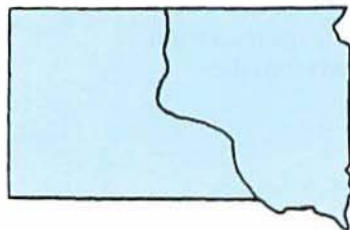


Similar Species: European rudd

Identification: No barbels, lateral line droops along body and is not straight, outer margin of anal (bottom hind) fin concave. (European rudd have bright red fins while golden shiners lack such fin color.)

Golden shiners are widely distributed in the central and eastern U.S. They prefer clear, vegetated habitat in wetlands, ponds, lakes, impoundments, and slow-moving streams. In South Dakota, golden shiners are common in ponds and lakes where they serve as food for larger predators. Culture of golden shiners is common because they are a popular bait fish and are often stocked into ponds. The European rudd is a European minnow that resembles golden shiners and is also cultured for bait. If largemouth bass are present, golden shiners are likely to persist only if the pond contains abundant aquatic vegetation. Golden shiners feed on algae and higher plants, as well as insects and snails.

Unlike the common shiner, the golden shiner does not prepare a spawning nest or guard its eggs. Adult golden shiners average 3 to 5 inches, although they can reach 10 to 12 inches.



Creek chub

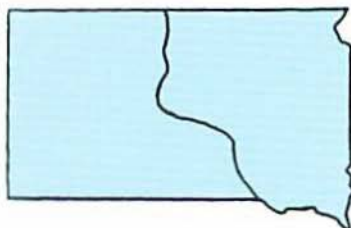
Semotilus atromaculatus



Similar Species: Smaller creek chubs may resemble many minnows and some suckers; however, adult creek chubs are much larger than most of these fish except for some suckers.

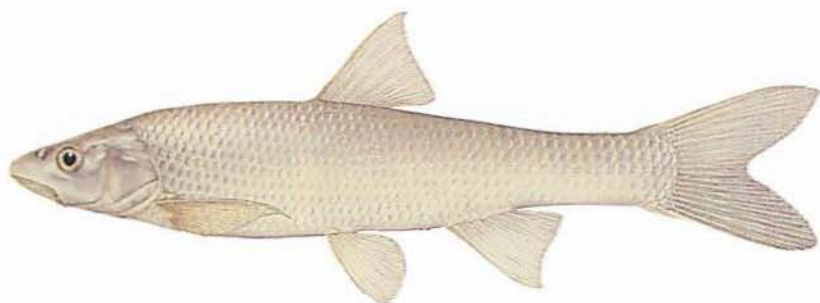
Identification: Dark blotch at front of dorsal (back) fin base, small dark blotch near tail, large mouth with upper jaw reaching beyond eye.

Creek chubs are widely distributed throughout eastern and central North America and are found statewide in South Dakota. They inhabit small prairie creeks and occasionally clear lakes. During dry weather, creek chubs can survive in isolated pools. Creek chubs spawn over gravel and require flowing water for reproduction. Males are sometimes called horned dace because tubercles (bumps) form on their heads during the breeding season. Creek chubs are often caught by hook and line using live bait or dry flies. They are used as bait for catfishes. Creek chubs can grow to 12 inches, but most are 5 to 8 inches long.



Flathead chub

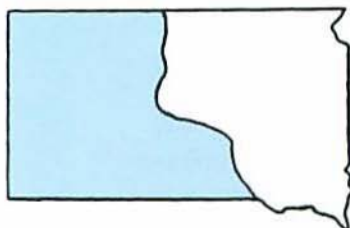
Platygobio gracilis



Similar Species: Many other minnows and some suckers

Identification: Broad wedge-shaped head with flattened snout, barbels at each corner of mouth.

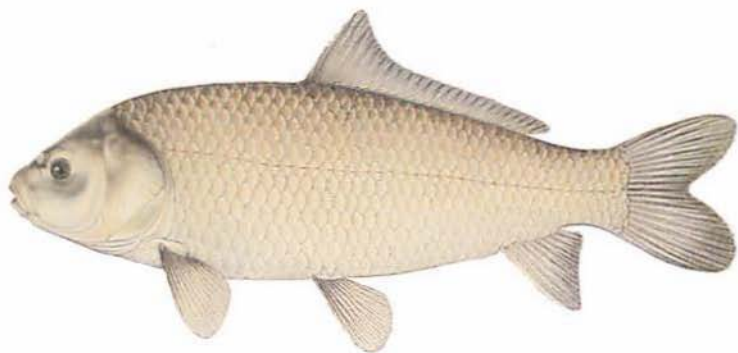
The flathead chub is the most common chub in western South Dakota rivers that flow into the Missouri River. It is a slender, silvery, active minnow, moving about more or less constantly in search of food. Flathead chubs feed almost exclusively on terrestrial insects that fall into the water but will eat other small invertebrates. Details of spawning habits are not well known. Adults commonly range from 3 1/2 to 7 inches long and may live 3 to 4 years. Two other minnow species that resemble flathead chubs are sicklefin and sturgeon chubs. Both are federally endangered species found in the Missouri River drainage.



SUCKERS (Family Castostomidae)

Bigmouth buffalo

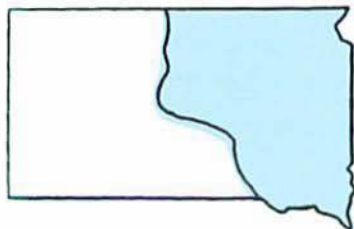
Ictiobus cyprinellus



Similar Species: Smallmouth buffalo, common carp

Identification: Large mouth with anterior location, no barbels or heavy spines like those of the common carp. (Smallmouth buffalo has more conical head and more horizontal mouth.)

The bigmouth buffalo is the largest and most important commercial species among the suckers and is found throughout most of the Mississippi River drainage and its larger tributaries. In South Dakota, bigmouth buffalo are found in the Missouri River complex and its tributaries, as well as in many of the natural lakes in the eastern part of the state. They commonly aggregate in schools in midwater or near the bottom. Young feed primarily on invertebrates. The adults are planktivores, straining large numbers of zooplankton from the water. Individuals over 30 pounds are not uncommon, and the maximum size reported is about 80 pounds.



Smallmouth buffalo

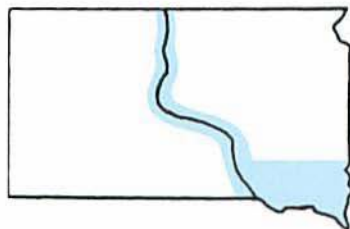
Ictiobus bubalus



Similar Species: Bigmouth buffalo, common carp

Identification: Small mouth positioned near the underside of the head, no barbels or heavy spines like those of the common carp.

The smallmouth buffalo is found throughout most of the Mississippi River drainage. In South Dakota, it lives in the Missouri, James, and Big Sioux rivers. This fish seems to prefer clearer water than the bigmouth buffalo. The smallmouth buffalo is primarily a bottom feeder, eating invertebrates and detritus. Adult smallmouth buffalo commonly reach 10 to 20 pounds and occasionally attain 40 to 50 pounds.



River carpsucker

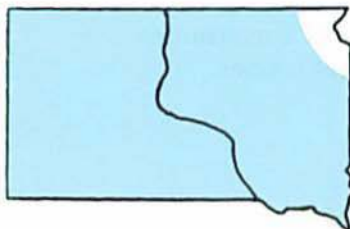
Carpoides carpio



Similar Species: Quillback

Identification: Mouth positioned on underside of head, when mouth is closed lower jaw has prominent nipple-like projection, upper jaw extends **behind** front of eye. (Quillback **lacks** nipple at middle of lower lip, has longer snout, and its upper jaw does not extend behind front of eye.)

The river carpsucker is found in rivers and reservoirs of the Great Plains from northern Mexico to Montana and Minnesota. In South Dakota, river carpsuckers are found throughout the Missouri River drainage, living in large schools primarily in quiet, silt-bottomed pools and slow, sandy runs of rivers. This species feeds on tiny aquatic worms, small crustaceans, and algae from lake and stream bottoms. River carpsuckers commonly reach 2 to 5 pounds and generally do not exceed 10 pounds.



Shorthead redhorse

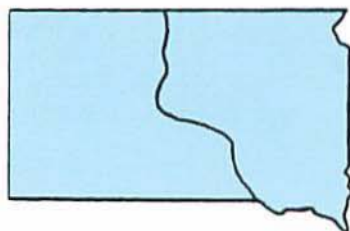
Moxostoma macrolepidotum



Similar Species: Many other redhorses and some other suckers

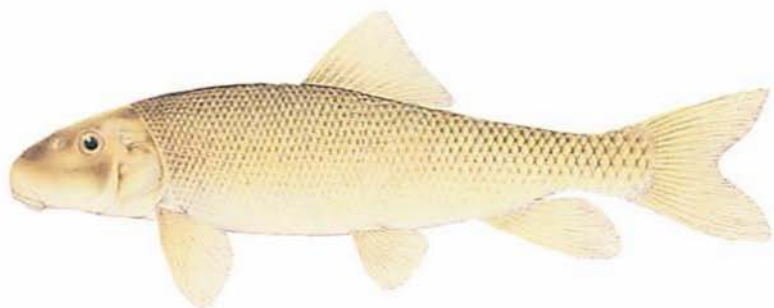
Identification: Fins have definite red color, rear margins of lower lip nearly straight.

The shorthead redhorse is the most widely distributed species of redhorse, found from Alberta to the St. Lawrence River and south to Oklahoma and South Carolina. In South Dakota, the shorthead redhorse occurs in rivers and streams throughout the state. Although it inhabits a variety of stream types, it is most abundant in moderately large rivers having a predominance of gravelly or rocky bottoms. Shorthead redhorse are bottom feeders, eating primarily aquatic insects. Shorthead redhorse migrate upstream to gravelly riffles in the spring to spawn. Adults usually average 8 to 16 inches and reach a maximum of 24 inches.



White sucker

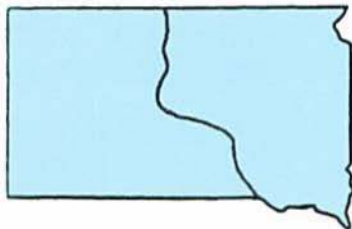
Catostomus commersoni



Similar Species: Mountain sucker and longnose sucker

Identification: Scales largest near tail, becoming smaller toward head, bumpy lips, short dorsal fin, resembles both longnose and mountain suckers but is more common than either.

The white sucker is widespread in rivers and lakes in South Dakota. White suckers are omnivorous, feeding on plants, algae, crustaceans, and larval insects. White suckers are early spring spawners, congregating near riffles after upstream spawning runs. They spawn over gravel, burying the eggs in the substrate. White suckers are relatively long-lived, with life spans of 15 years or more. Although they can reach about 5 pounds, they are more well-known as the common "chub minnow," widely used for bait when fishing for northern pike in South Dakota.



Mountain sucker

Catostomus platyrhynchus

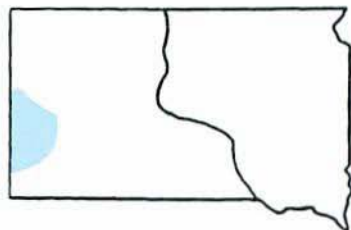


Similar Species: White sucker and longnose sucker

Identification: Lips are bumpy, lower and upper lip separated by a notch. Breeding male has bright red stripe along side, distinguishing it from other suckers.

As its name implies, the mountain sucker is found in mountainous regions of western North America, from California and Colorado to British Columbia and Saskatchewan. In South Dakota, it is only found in the clear, cold streams and a few lakes of the Black Hills. The species is most at home in small streams with aquatic vegetation and undercut banks. The primary food of this fish is algae that it scrapes from rocks. Mountain suckers spawn in late spring to early summer in streams.

These are small fish, usually not over 1 pound.



CATFISH (family Ictaluridae)

Black bullhead

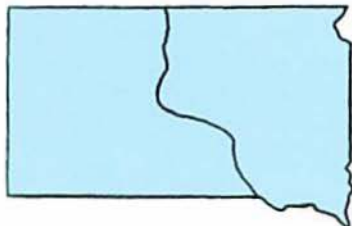
Ameiurus melas



Similar Species: Brown bullhead and yellow bullhead

Identification: Dusky or black chin barbels (whiskers) (yellow bullhead has pale chin barbels). Brown and black bullheads are difficult to tell apart; however, brown bullheads have more sharply serrated spines than black bullheads.

Black bullheads are the most common bullhead species in South Dakota and are found throughout the state. They feed primarily on insects and fish (live or dead), but also graze on plant material. They are abundant in most natural lakes and in some man-made lakes and ponds. In rivers, black bullheads are common in backwaters and sloughs and rare in flowing water. Black bullheads are nest builders and spawn in May or June when water temperature is around 70 F. They are a popular game fish and can often reach 2 pounds or more, but they overpopulate and stunt in certain waters.



Yellow bullhead

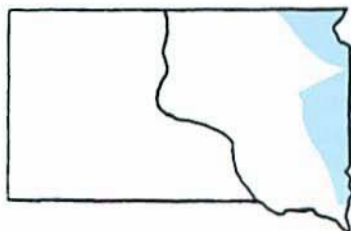
Ameiurus natalis



Similar Species: Black bullhead and brown bullhead

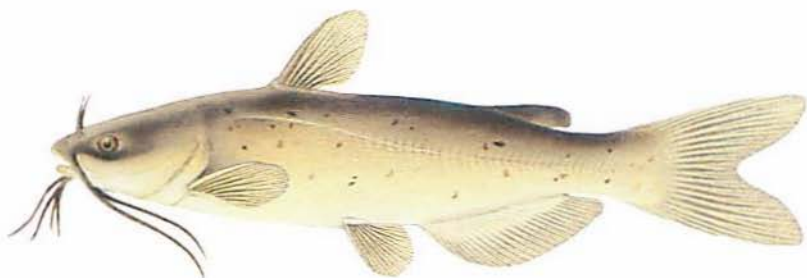
Identification: Similar to black and brown bullheads, but barbels (whiskers) under chin are uniformly white or cream colored.

The yellow bullhead is less common than the black bullhead and is more or less confined to the eastern half of South Dakota. Yellow bullheads appear to be somewhat more selective in their feeding than black bullheads, but share most of the same food and spawning habits. Yellow bullheads are most commonly found in ponds, pools, backwaters, and sluggish currents, but prefer clearer water than black bullheads. Yellow bullheads spawn in May or June when water temperature is near 70 F. Yellow bullheads are also popular game fish, reaching weights of 2 pounds or more.



Channel catfish

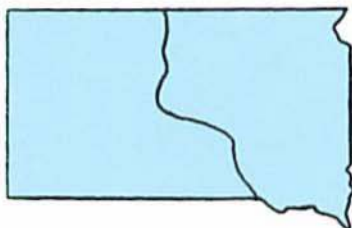
Ictalurus punctatus



Similar Species: Blue catfish

Identification: Slender for a catfish, deeply forked tail fin, rounded anal fin, body marked with pigmented spots, spots obscure in large adults. (Blue catfish **lacks** dark spots on body and has a straight-edged anal fin.)

Channel catfish were native to the Missouri River drainage in South Dakota. Stocking programs have further distributed this fish to reservoirs and natural lakes in the state. They are omnivorous and eat a variety of plant and animal species. Channel catfish prefer depressions, undercut banks, and submerged logs for spawning when water temperatures are around 75 F. Adults often concentrate in larger deep pools in rivers around submerged logs. Channel catfish are a popular game fish, sometimes live more than 10 years, and can exceed 30 pounds.



Flathead catfish

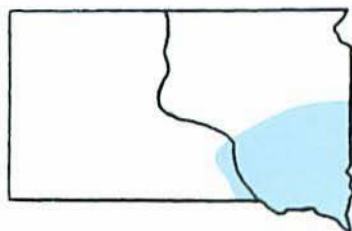
Pylodictis olivaris



Similar Species: None

Identification: Dark mottling on sides, head broad and flat, tail square and unforked.

Flathead catfish are limited to large rivers in the southeastern part of South Dakota. Adults are almost entirely piscivorous, eating mostly live fish. Adults spend the day in deep water or under cover and move to shallows and riffles to feed at night. Flathead catfish build nests in secluded areas and spawn somewhat later than channel catfish. This catfish is an important commercial species in southern areas of the U.S. and a popular sport fish. Flathead catfish can reach 100 pounds, but 10- to 20-pound fish are considered big by South Dakota anglers.



Stonecat

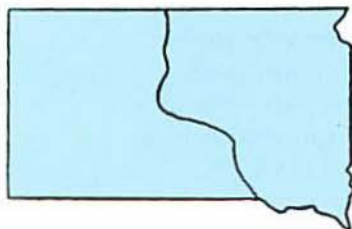
Noturus flavus



Similar Species: None common in South Dakota

Identification: Small slender catfish, adipose fin connected to tail forming squarish fin at back, lower lip and chin without dark pigment, light blotch on back just before dorsal fin.

The stonecat is distributed across much of the northern Mississippi River basin, including the Missouri River basin in South Dakota. The stonecat inhabits rivers and streams and prefers riffle areas with rocky bottoms. Stonecats have been found in the Missouri River in strong current over sand substrate. They are active at night, feeding on immature stages of various riffle-dwelling insects. Eggs are deposited in a compact cluster beneath flat stones and are protected by one of the parents. In the Vermillion River, South Dakota, stonecats have been known to live up to 7 years, attaining lengths of about 8 inches.



CODFISHES (family Gadidae)

Burbot

Lota lota



Similar Species: None

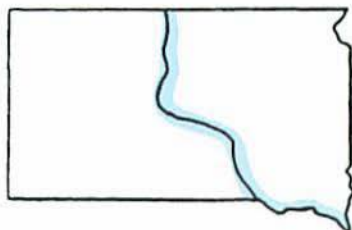
Identification: Single barbel located in middle of lower jaw, rounded tail fin.

In South Dakota, the burbot is limited to the Missouri River drainage. It is the only inland freshwater member of the cod family. It prefers the deeper, cooler water of lakes and large rivers, normally hiding by day and emerging at night to feed. Young burbot feed primarily on insect larvae, and adults subsist on crayfish and fish. The burbot spawns in the winter. Spawning occurs at night, typically under the cover of ice in shallow

sandy bays or on gravel shoals.

Eggs are broadcast over the substrate, and no nest is built.

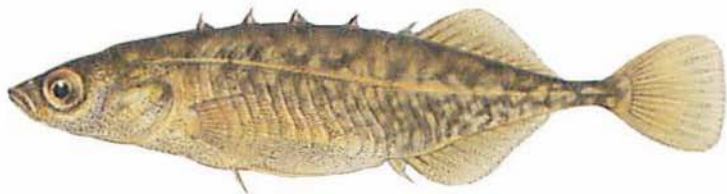
The burbot commonly grows to 5 pounds or more. In spite of its appearance, its flesh is white, flaky, and tasty.



STICKLEBACKS (family Gasterosteidae)

Brook stickleback

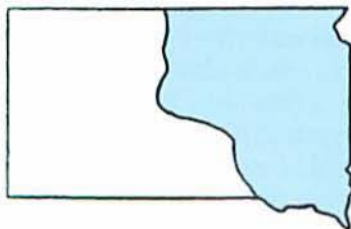
Culaea inconstans



Similar Species: None in South Dakota

Identification: Five small, isolated spines on back.

Brook sticklebacks are found in cold, clear to slightly turbid streams, spring-fed ponds, and the shallow edges of lakes in eastern South Dakota. In spring, the male brook stickleback builds a globular nest of dead grass, algae, and other plant material, which he binds together with a "waterproof glue" that he secretes from his kidneys. The male coaxes a female into the nest, where she deposits eggs and abandons the nest. The male fertilizes the eggs and then stays nearby to defend his territory, typically positioning himself in front of the nest opening and aerating the eggs by fanning his fins. The male remains vigilant after the eggs hatch and retrieves any larvae that stray from the nest. Within several days, the young leave the nest faster than the male can retrieve them and the male then abandons the nest. Sticklebacks are small fish, averaging about 2 to 3 inches as adults.



TEMPERATE

BASSES (family Percichthyidae)

White bass

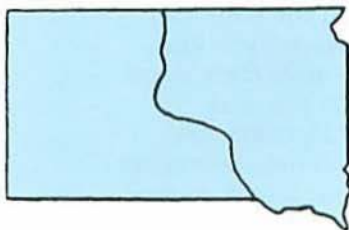
Morone chrysops



Similar Species: None in South Dakota

Identification: Stripes unbroken above lateral line, faint and often broken in irregular pattern below lateral line, single patch of teeth at base of tongue.

The white bass is found throughout the Mississippi River drainage and has been widely stocked elsewhere. In South Dakota, white bass are primarily found in the Missouri River, its tributaries, and some eastern lakes, primarily in large lakes connected to major river systems and in big rivers with moderate current. White bass prefer clear water but will tolerate murky conditions. They are primarily fish-eaters, but have been known to eat aquatic insect larvae and crustaceans. Spawning is usually in rivers, but also on the shoal areas of lakes. White bass spawn in the spring, when water temperatures reach about 60 F. Any white bass that exceeds 3 pounds should be considered a quality fish in South Dakota.



SUNFISHES (family Centrarchidae)

Largemouth bass

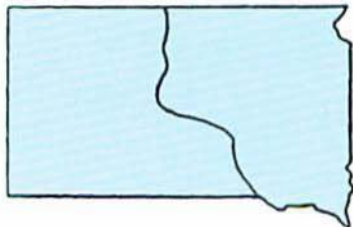
Micropterus salmoides



Similar Species: Smallmouth bass

Identification: Jaw extends well past the eye, dark lateral band. (Smallmouth bass are brownish and their jaws do not extend past the eye.)

The largemouth bass is native to eastern South Dakota but has been stocked throughout the state. Largemouth bass thrive in natural lakes and reservoirs, especially those with an abundance of aquatic vegetation and flooded timber. In South Dakota, they do best in waters that are somewhat protected from wind, relatively clear (18 inches or greater transparency for most of the year), and have submerged aquatic vegetation. Largemouth bass will eat whatever is available, including fish, crayfish, and insects. They spawn in the spring, when water temperature reaches about 65 F. The male sweeps out a nest in sand or gravel. After spawning, he guards the eggs and fry. Largemouth bass may live 16 years in the north and commonly reach 3 to 5 pounds as adults.



Smallmouth bass

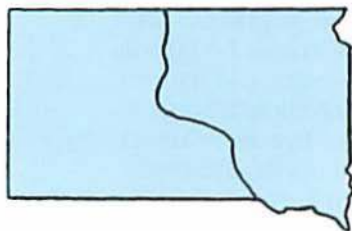
Micropterus dolomieu



Similar Species: Largemouth bass

Identification: Jaw extends to about the middle of eye, three dark bars radiate from eye.

The smallmouth bass was probably native to extreme north-eastern South Dakota; because of stocking, it is now found throughout the state. Smallmouth bass prefer clear, clean water and are seldom found in murky water. They live in all types of natural lakes and impoundments, as well as rivers and streams with moderate current. Smallmouth bass will eat whatever is available, but show a definite preference for crayfish and a variety of small fish. Smallmouth bass spawn in the spring when the water temperature reaches 60 F. Their spawning behavior is similar to that of largemouth bass.



Rock bass

Ambloplites rupestris

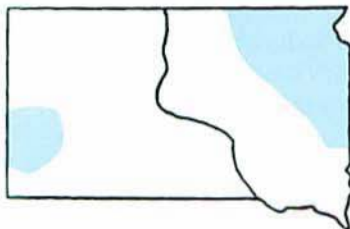


Similar Species: None in South Dakota

Identification: Red eye, six spines in anal fin, brassy color with dark spots forming rows on sides.

Rock bass are widely distributed across the central and northern U.S. and southern Canada. In South Dakota, rock bass are found in the northeastern part of the state and in Sheridan Reservoir and small lakes in the Black Hills. Rock bass inhabit clear-water lakes and streams and spend most of their time around rocks and boulders. A rock bass can camouflage itself by changing color and patterns to match its surroundings. This is why it often has characteristic dark blotches when caught from rocky habitat. In fact, the Greek meaning of the word *rupestris* is "living among the rocks." Rock bass feed on immature insects, but larger ones may eat small minnows. Rock bass are easily caught by angling and will take a bait at any time of the day.

Average adult sizes range from 6 to 10 inches, but individuals have been known to grow to 17 inches and about 3 pounds in Missouri.



Bluegill

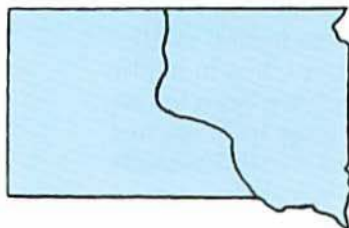
Lepomis macrochirus



Similar Species: Green sunfish, orangespotted sunfish, pumpkinseed

Identification: Gill cover lobe is entirely black, rear base of dorsal fin has a dark blotch, sometimes with dark vertical bars on sides.

The bluegill is found in every state in the continental U.S. In South Dakota, it has been stocked into lakes and impoundments statewide. Bluegills prefer slow-moving or standing water with aquatic vegetation or flooded timber. Bluegill diet consists mainly of larval and adult insects, plankton, snails, and algae. Spawning begins in the spring when water temperatures reach about 68 F and may continue into the summer. Individual fish may spawn more than once during the year. The male builds a nest on a sand or gravel bottom, often near other bluegill nests, and later guards the eggs and fry. Bluegill growth varies considerably in different bodies of water. This species often overpopulates when predator density is low.



Pumpkinseed

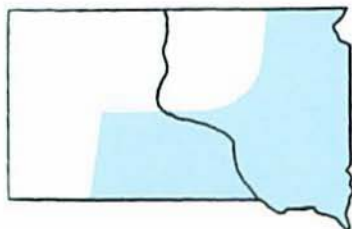
Lepomis gibbosus



Similar Species: Orangespotted sunfish

Identification: Gill lobe has orange or red spot at tip, cheeks with wavy bluish streaks. (Orangespotted sunfish **lacks** red spot on gill lobe and has a **wide** white edge around gill lobe.)

The pumpkinseed is found from Washington east to Maine and south to Alabama and Nebraska. It has been stocked in various places in South Dakota but is uncommon. Pumpkinseeds are typically found in shallow lakes, sheltered bays of larger lakes, and quiet areas of slow-moving streams. Adult and larval insects make up most of the pumpkinseed diet, although snails and fish fry are also eaten. Pumpkinseeds seldom exceed 1 pound.



Green sunfish

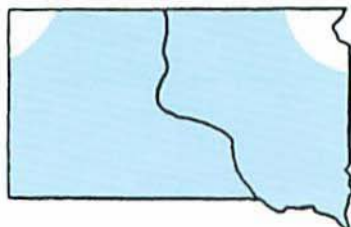
Lepomis cyanellus



Similar Species: Other sunfishes have smaller mouths

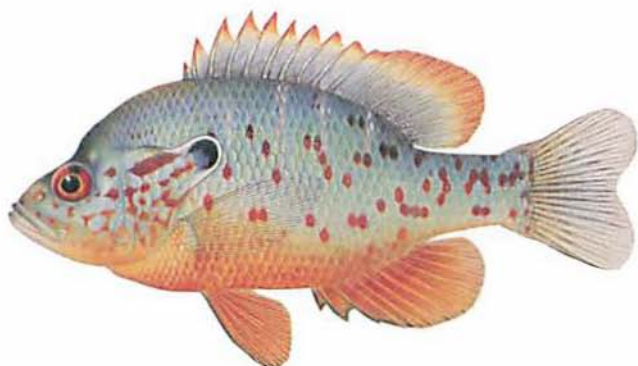
Identification: Gill-cover lobe dark with light margin, body color drab green, mouth extending to middle of eye.

In South Dakota, the green sunfish is found statewide, except for the Little Missouri and Minnesota River drainages. It is found in heavy cover such as large rocks, brush piles, or thick aquatic vegetation when predators are common. Green sunfish tolerate murky water, low oxygen levels, and silty bottoms and live in slow-moving streams, ponds, and lakes. Insects, crayfish, and small fish make up the bulk of their diet. Green sunfish spawn in the spring when water temperatures reach about 70 F in the same manner as other sunfish. They rarely exceed 1/2 pound in South Dakota waters.



Orangespotted sunfish

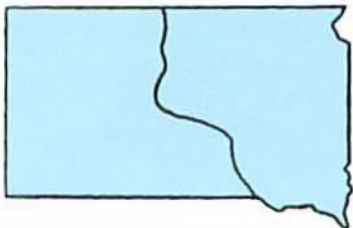
Lepomis humilis



Similar Species: Pumpkinseed

Identification: Mouth extending to front margin of eye, small colorful sunfish, rarely reaching size sought by anglers.

The orangespotted sunfish occurs from eastern North Dakota and southern Minnesota south through eastern Texas and Louisiana. In South Dakota, the orangespotted sunfish is found primarily east of the Missouri River, although it does occur in some areas in the west. Although they are occasionally found in ponds and reservoirs, orangespotted sunfish are most common in the sandy or silty pools of creeks and small rivers. The orangespotted sunfish feeds principally on young crayfish and immature aquatic insects. This small fish rarely exceeds 3 to 4 inches in length.



Black crappie

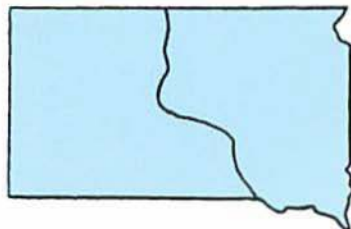
Pomoxis nigromaculatus



Similar Species: White crappie

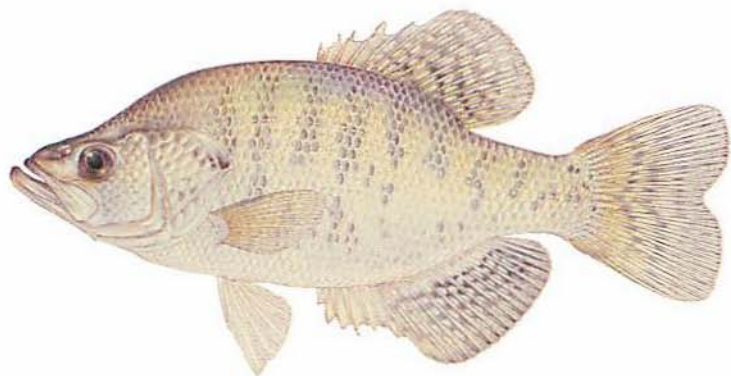
Identification: Usually seven to eight hard spines in dorsal (back) fin, mottled coloring on side, breeding male black under chin and breast.

Black crappies may not have been native to South Dakota, but they have been introduced into natural lakes and impoundments throughout the state. Like the white crappie, the black crappie feeds on zooplankton, insects, and fish. The black crappie is more likely to be found in clearer waters than the white crappie. Black crappies and white crappies are some of the most popular panfish in South Dakota waters. Crappies can have slow growth and "stunt" in small impoundments that do not contain sufficient predators. Average adult crappies in South Dakota range from 8 to 12 inches with some reaching lengths of 15 inches and weights of 2 1/2 pounds.



White crappie

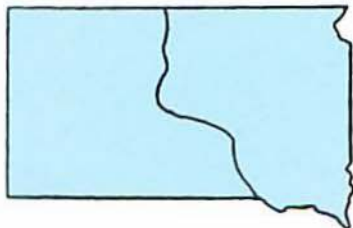
Pomoxis annularis



Similar Species: Black crappie

Identification: Dorsal (back) fin with 5 or 6 hard spines, dark vertical bars on sides, breeding male also gets quite dark and is often confused with black crappie at that time.

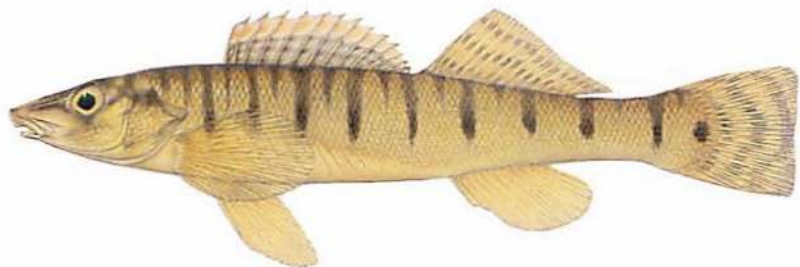
The white crappie is native to extreme northeastern South Dakota, and has been stocked throughout the state. It is more likely to be found in more turbid (muddy) water than the black crappie. Suspended plankton are an important part of white crappie diet, especially when crappies are small. Small fish and aquatic insects are also eaten. Both crappie species spawn in nests when water temperatures reach about 60 F.



PERCHES (family Percidae)

Logperch

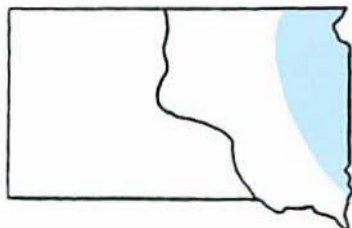
Percina caprodes



Similar Species: Many other darters, but few reach the size of adult logperches

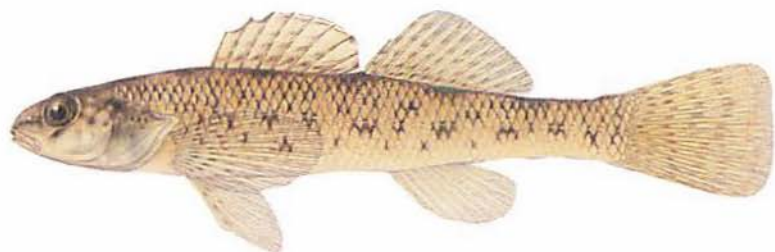
Identification: Small fish, conical snout, sides marked with numerous crossbars.

The logperch is found in the lower Mississippi River drainage and throughout the Ohio River drainage. In South Dakota, it lives primarily in the Big Sioux River drainage. Habitat preferences range from small creeks to rivers, lakes, and reservoirs. Overall, the species prefers clean riffles over sand and gravel, avoiding silted areas. Logperch overturn small rocks in search for food, which consists of small invertebrates. Adults can reach 6 to 8 inches.



Johnny darter

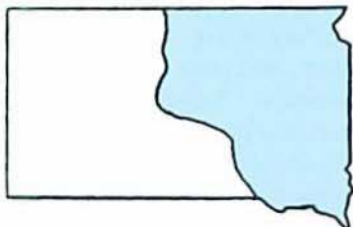
Etheostoma nigrum



Similar Species: Many other darters

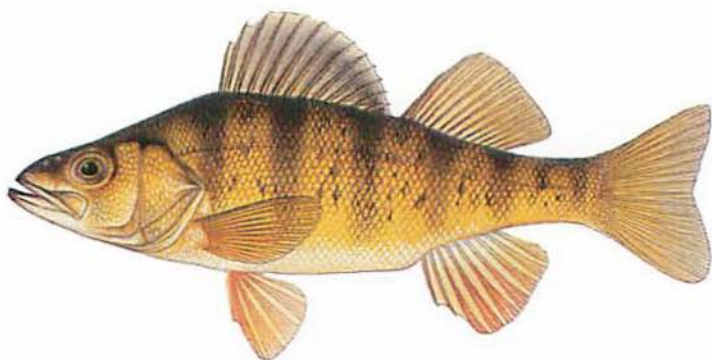
Identification: Small, slender fish, light colored with dark "W"-shaped marks along sides.

The johnny darter is found from Manitoba to Quebec and south to Arkansas. In South Dakota, it is found primarily in the eastern third of the state in small creeks and rivers. It can tolerate more turbidity than most other darters. The johnny darter does not have a swim bladder, and it must rely only on swimming power, current, and wave action for mobility. It lives on the bottom and feeds on small invertebrates and rarely grows larger than 3 inches.



Yellow perch

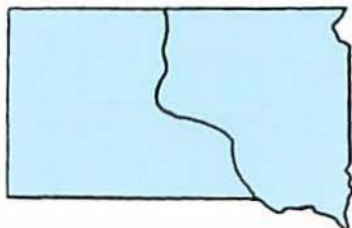
Perca flavescens



Similar Species: None in South Dakota

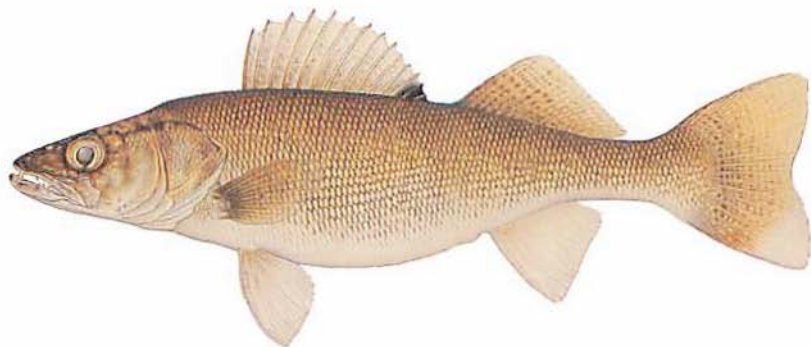
Identification: Fairly deep, compressed body, green-brown saddles extend down yellow side, yellow to red paired fins, no teeth.

Yellow perch are widely distributed in South Dakota. Adult yellow perch consume small fishes, aquatic insects, snails, and small crayfish, feeding throughout the day in deep water but often moving into shallows during the evening. Spawning takes place when water temperatures are between 45 and 55 F. Their spawning habits are unique because they deposit long, tubular masses of eggs over submerged vegetation or brush. Reproduction and subsequent population levels are extremely inconsistent in many of the state's larger wind-swept waters because of high turbidity, wave action, and lack of vegetation. Yellow perch are popular with anglers and can exceed 2 pounds.



Walleye

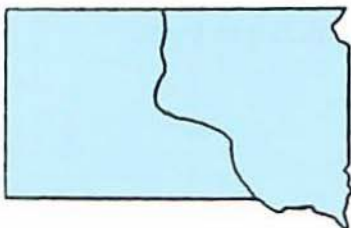
Stizostedion vitreum



Similar Species: Sauger (and saugeye)

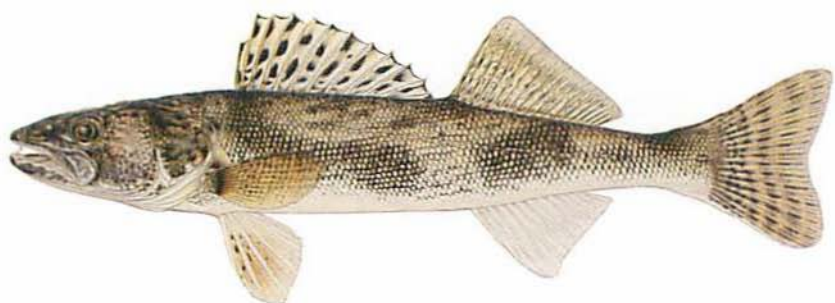
Identification: Large white, glossy eyes and sharp teeth, no distinct mottling, caudal (tail) fin has white tip on lower lobe, dark spot at base of dorsal fin.

Walleyes are the state fish of South Dakota and are found throughout the state, inhabiting the open water of lakes and reservoirs and pools in streams. They eat primarily fish, but also other vertebrates and invertebrates. Spawning occurs when water temperature reaches about 45 F. The eggs are distributed over rock and gravel. A large number of walleyes are annually propagated by the South Dakota Department of Game, Fish and Parks to maintain populations where natural reproduction is lacking. The walleye is the largest member of the perch family and can weigh up to 15 pounds in South Dakota. Its size, sporting qualities, and delicious flesh make it a highly prized sport species.



Sauger

Stizostedion canadense

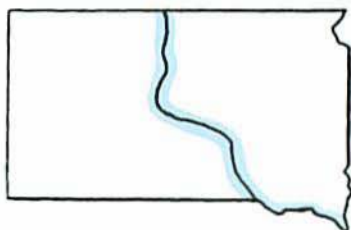


Similar Species: Walleye (and saugeye)

Identification: Saddle-like markings on body, black dots on the dorsal (back) fin, large glossy eyes, and sharp teeth.

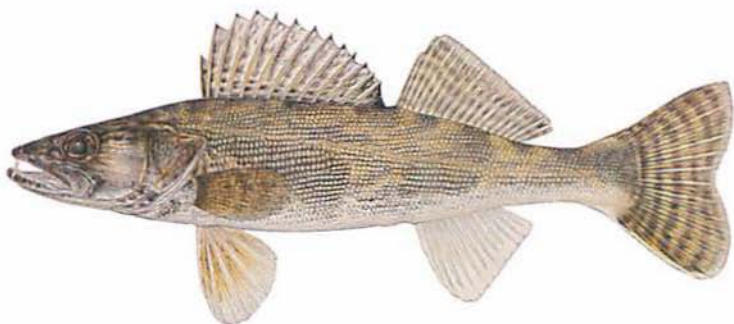
In South Dakota, saugers are found primarily in the Missouri River system. Adult saugers feed primarily on fish, crayfish, and other crustaceans and insects. The habitat of sauger is much like that of walleye, except that saugers are more tolerant of high turbidity (muddy water) and strong current. Saugers spawn when water temperature is between 41 and 45 F. Adults enter backwaters or tributaries and search for gravel or rock substrate where they can deposit their eggs. Saugers are an important sportfish on the Missouri River. The flesh tastes like walleye and thus is highly valued.

Saugers grow more slowly than walleyes; most fish taken by anglers are less than 18 inches in length.



Saugeye

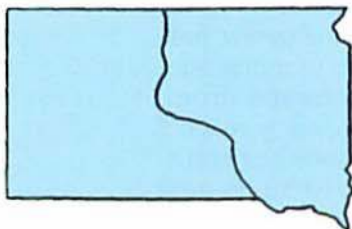
walleye x sauger



Similar Species: Walleye and sauger

Identification: Body similar to walleye, dorsal (back) fin sometimes spotted; body often with saddle markings as with sauger, caudal fin has white tip on lower lobe as does walleye.

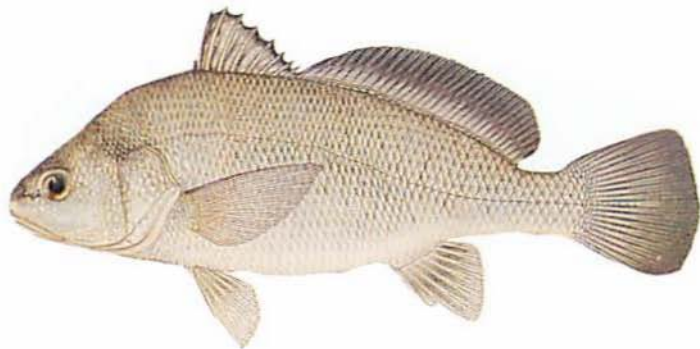
A saugeye is a hybrid between walleye and sauger. These hybrids can be purposefully produced by biologists or can be the result of natural hybridization. Saugeyes appear better adapted than walleyes to turbid (muddy) impoundments that have high rates of water exchange. Like the parent species, saugeyes eat primarily fish but also feed on a variety of other vertebrates and invertebrates. Their flesh is similar to that of walleye and they are popular with anglers. Saugeye have the potential to grow to walleye size, and individuals exceeding 9 pounds have been found in South Dakota waters.



DRUMS (family Sciaenidae)

Freshwater drum

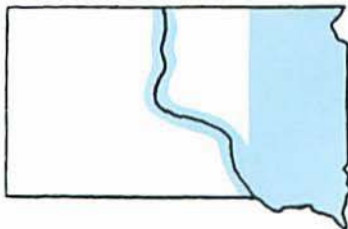
Aplodinotus grunniens



Similar Species: None

Identification: High arched back, long dorsal (back) fin, rounded tail.

The freshwater drum is the only widespread species of this family in the fresh waters of the U.S. and is found from south-central Canada and the Great Lakes south to Mexico. In South Dakota, the freshwater drum occurs primarily in the Missouri River and its tributaries. The freshwater drum lives in rivers, natural lakes, and reservoirs where it feeds along the bottom on immature insects, crayfish, and minnows. The drum is known for its "drumming" or "grunting" noises, which it produces with a special set of muscles that are vibrated against the swim bladder. Their otoliths (ear "bones") are unusually large and can be over a half inch in diameter. Freshwater drum commonly reach 5 pounds but can exceed 15 pounds.



FISH SPECIES FOUND IN SOUTH DAKOTA

Lampreys (Petromyzontidae)

Silver lamprey *Ichthyomyzon unicuspis*

Sturgeon (Acipenseridae)

Pallid sturgeon *Scaphirhynchus albus*
Shovelnose sturgeon *Scaphirhynchus platyrhynchus*

Paddlefish (Polyodontidae)

Paddlefish *Polyodon spathula*

Gar (Lepisosteidae)

Longnose gar *Lepisosteus osseus*
Shortnose gar *Lepisosteus platostomus*

Bowfin (Amiidae)

Bowfin *Amia calva*

Mooneye (Hiodontidae)

Goldeye *Hiodon alosoides*
Mooneye *Hiodon tergisus*

Eel (Anguillidae)

American eel *Anguilla rostrata*

Herring (Clupeidae)

Skipjack herring *Alosa chrysochloris*
Gizzard shad *Dorosoma cepedianum*

Minnnows (Cyprinidae)

Central stoneroller *Campostoma anomalum*
Goldfish *Carassius auratus*
Lake chub *Couesius plumbeus*
Grass carp *Ctenopharyngodon idella*
Red shiner *Cyprinella lutrensis*
Common carp *Cyprinus carpio*
Brassy minnow *Hybognathus hankinsoni*
Mississippi silvery minnow *Hybognathus nuchalis*
Plains minnow *Hybognathus placitus*
Common shiner *Luxilus cornutus*
Sturgeon chub *Macrhybopsis gelida*
Sicklefin chub *Macrhybopsis meeki*
Silver chub *Macrhybopsis storeriana*

Pearl dace
Hornyhead chub
Golden shiner
River shiner
Emerald shiner
Bigmouth shiner
Blackchin shiner
Blacknose shiner
Spottail shiner
Rosyface shiner
Silverband shiner
Sand shiner
Topeka shiner
Suckermouth minnow
Northern redbelly dace
Finescale dace
Bluntnose minnow
Fathead minnow
Flathead chub
Blacknose dace
Longnose dace
Creek chub
European rudd

Suckers (Catostomidae)

River carpsucker
Quillback
Longnose sucker
White sucker
Mountain sucker
Blue sucker
Northern hogsucker
Smallmouth buffalo
Bigmouth buffalo
Black buffalo
Golden redhorse
Shorthead redhorse

Catfish (Ictaluridae)

Black bullhead
Yellow bullhead
Brown bullhead
Blue catfish
Channel catfish
Slender madtom
Stonecat

Margariscus margarita
Nocomis biguttatus
Notemigonus crysoleucas
Notropis blennioides
Notropis atherinoides
Notropis dorsalis
Notropis heterodon
Notropis heterolepis
Notropis hudsonius
Notropis rubellus
Notropis shumardi
Notropis stramineus
Notropis topeka
Phenacobius mirabilis
Phoxinus eos
Phoxinus neogaeus
Pimephales notatus
Pimephales promelas
Platygobio gracilis
Rhinichthys atratulus
Rhinichthys cataractae
Semotilus atromaculatus
Scardinius erythrophthalmus

Carpionodes carpio
Carpionodes cyprinoides
Catostomus catostomus
Catostomus commersoni
Catostomus platyrhynchus
Cycleptus elongatus
Hypentelium nigricans
Ictiobus bubalus
Ictiobus cyprinellus
Ictiobus niger
Moxostoma erythrum
Moxostoma macrolepidotum

Ameiurus melas
Ameiurus natalis
Ameiurus nebulosus
Ictalurus furcatus
Ictalurus punctatus
Noturus exilis
Noturus flavus

Tadpole madtom
Flathead catfish

Noturus gyrinus
Pylodictis olivaris

Pike (Esocidae)

Northern pike
Muskellunge

Esox lucius
Esox masquinongy

Mudminnow (Umbridae)

Central mudminnow

Umbra limi

Smelt (Osmeridae)

Rainbow smelt

Osmerus mordax

Trout (Salmonidae)

Lake herring
Lake whitefish
Cutthroat trout
Coho salmon
Rainbow trout
Sockeye salmon
Chinook salmon
Brown trout
Brook trout
Lake trout

Coregonus artedi
Coregonus clupeaformis
Oncorhynchus clarki
Oncorhynchus kisutch
Oncorhynchus mykiss
Oncorhynchus nerka
Oncorhynchus tshawytscha
Salmo trutta
Salvelinus fontinalis
Salvelinus namaycush

Trout-perch (Percopsidae)

Trout-perch

Percopsis omiscomaycus

Cod (Gadidae)

Burbot

Lota lota

Killifish (Cyprinodontidae)

Banded killifish
Plains topminnow
Plains killifish

Fundulus diaphanus
Fundulus sciadicus
Fundulus zebrinus

Stickleback (Gasterosteidae)

Brook stickleback

Culaea inconstans

Temperate bass (Percichthyidae)

White bass

Morone chrysops

Sunfish (Centrarchidae)

Rock bass
Green sunfish
Pumpkinseed

Ambloplites rupestris
Lepomis cyanellus
Lepomis gibbosus

Orangespotted sunfish
Bluegill
Smallmouth bass
Largemouth bass
White crappie
Black crappie

Perch (Percidae)

Iowa darter
Johnny darter
Yellow perch
Logperch
Blackside darter
Slenderhead darter
Sauger
Walleye

Drum (Sciaenidae)

Freshwater drum

Lepomis humilis
Lepomis macrochirus
Micropterus dolomieu
Micropterus salmoides
Pomoxis annularis
Pomoxis nigromaculatus

Etheostoma exile
Etheostoma nigrum
Perca flavescens
Percina caprodes
Percina maculata
Percina phoxocephala
Stizostedion canadense
Stizostedion vitreum

Aplodinotus grunniens

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Federal Aid Project

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