Fish of Montana

Montana Field Guide

Note
These PDF versions of the Montana Field Guide are intended to assist in offline identification and field work. They are not intended to replace the live Field Guide, as that version contains more information and is updated daily.

This PDF was generated 9/10/2012

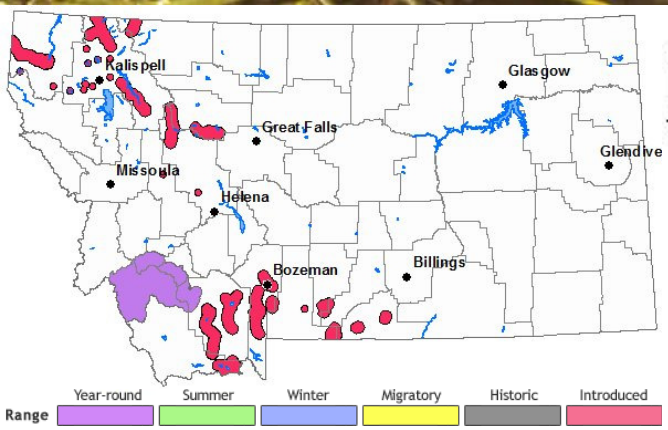
For the most up to date information of Montana species, please visit ~~http://FieldGuide.mt.gov~~

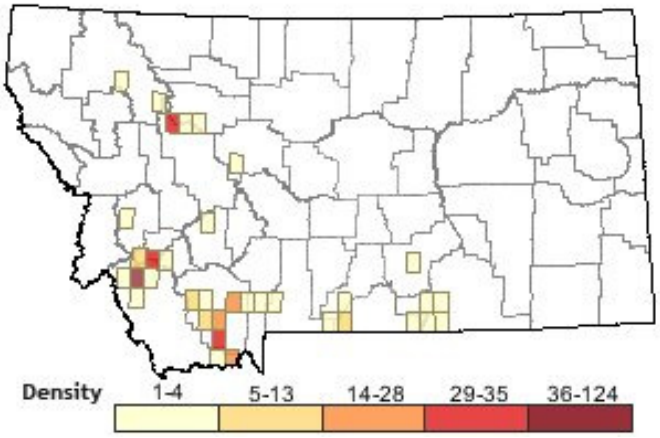
Arctic Grayling - *Thymallus arcticus*

~~**Species of Concern**~~

Global Rank: G5
State Rank: S1

~~**Agency Status**~~
USFWS: C
USFS: SENSITIVE
BLM: SENSITIVE





Number of Observations: 547

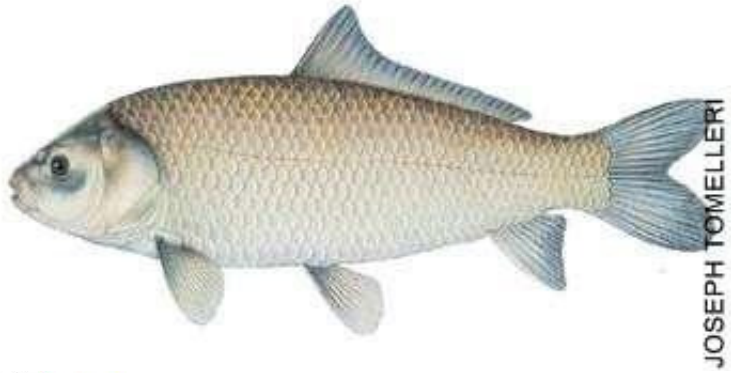
General Description

The Arctic grayling is a species native to northern North America. The only populations native to the lower 48 states were in Michigan and Montana, and the Michigan population is now extinct. Consequently, the fluvial or river-dwelling population in the upper Big Hole River are the last remnants of this native Fish of Special Concern. Originally, the fluvial Arctic grayling was widespread throughout the upper Missouri river drainage as far downstream as Great Falls. Lewis and Clark made note of these "new kind of white or silvery trout" in 1805. The lake-dwelling form is fairly common in 30 or more lakes across the western half of the state. These lake fish are genetically, but not visibly, different from our native fluvial grayling. Grayling are gullible to the angler's lures and also seem to be easily out-competed by other salmonid species. This probably explains much of their demise from their native range. They are spring spawners and broadcast their eggs over a gravel bottom in moving streams. Grayling can overpopulate, producing severely stunted populations in some mountain lakes. Grayling are truly a unique Montana species. The iridescent hues of a spawning grayling's dorsal fin are brilliant. Exceptional individuals can weigh up to 3 pounds and reach 20 inches in length. They are generalists, eating a variety of aquatic invertebrates (FWP).

Habitat

Today in Montana Arctic grayling are found primarily small, cold, clear lakes with tributaries suitable for spawning. They do not coexist well with other fishes except cutthroat trout and others with which they evolved.

Bigmouth Buffalo - *Ictiobus cyprinellus*



Global Rank: G5
State Rank: S4

~~Agency Status~~
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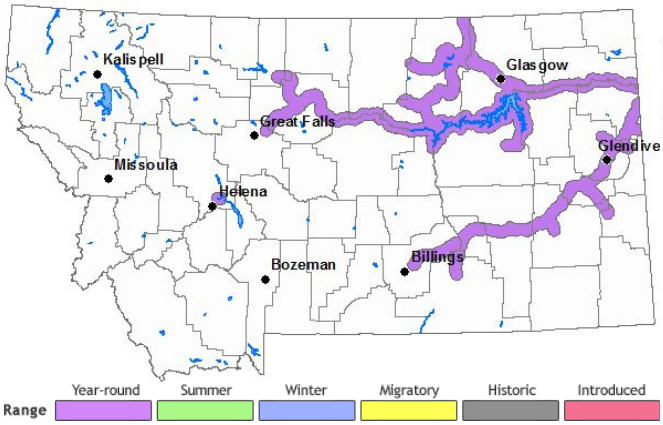
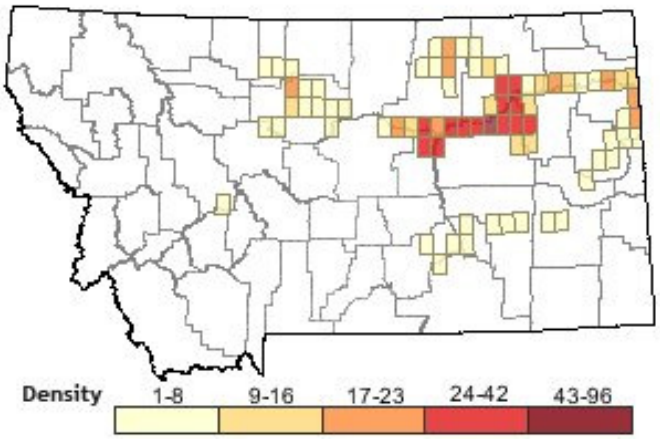
USFS:
BLM:





Number of Observations: 1553

General Description

The Bigmouth Buffalo has a more terminal mouth, (that is, opening at the front of the head), which allows it to feed on plankton as well as bottom organisms and detritus. These barrel-shaped fish are rarely taken on hook and line. Bigmouth Buffalo can produce hundreds of thousands of eggs and live over 20 years. (FWP)

Habitat

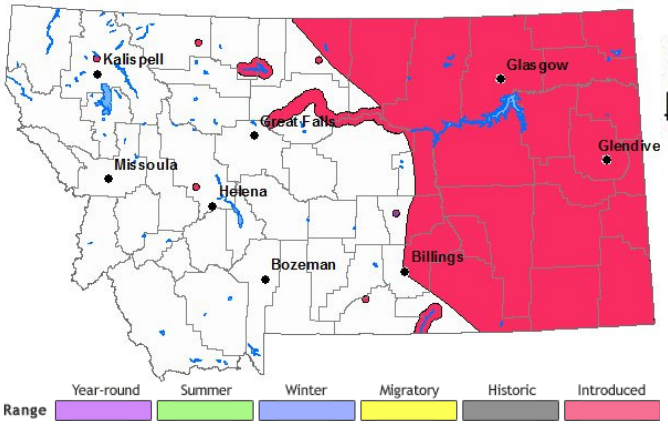
Large rivers and reservoirs. Spawn in larger streams with backwater areas.

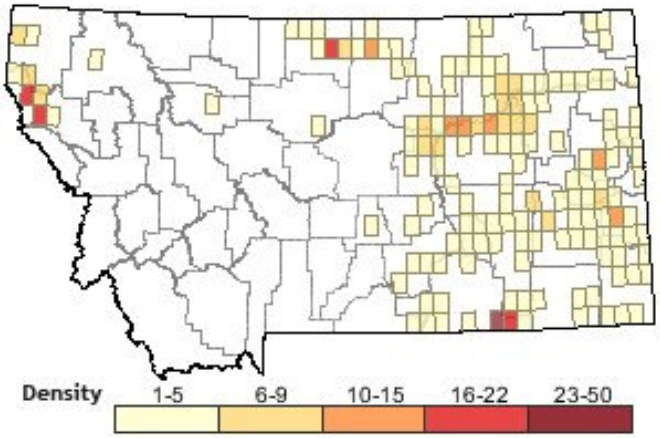
Black Bullhead - *Ameiurus melas*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 771

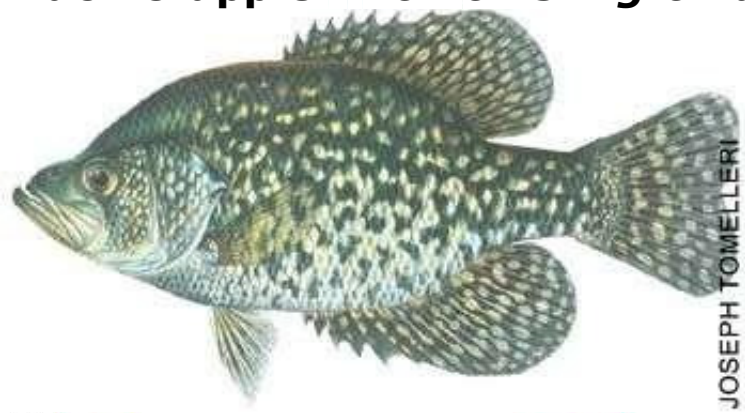
General Description

The black bullhead is the most common bullhead in Montana. It is an introduced species with scattered populations statewide but primarily concentrated in small ponds and backwater sloughs of eastern Montana. Black bullheads are extremely tolerant of high water temperature and turbidity and low dissolved oxygen, thus making them a good fish for certain ponds. Their feeding and spawning habits are similar to channel catfish. Newly-hatched bullhead fry swim in a large mass which looks like a moving black ball, attended by the parents, often providing a unique curiosity to a first-time observer. They seldom exceed 1 pound in weight and thus are rarely a desirable game fish in Montana waters.

Habitat

Turbid, mud bottomed lakes and ponds; also pools and backwaters of streams. Tolerates high water temperatures and low levels of dissolved oxygen.

Black Crappie - *Pomoxis nigromaculatus*



~~Exotic Species (not native to Montana)~~

Global Rank: G5
State Rank: SNA

~~Agency Status~~
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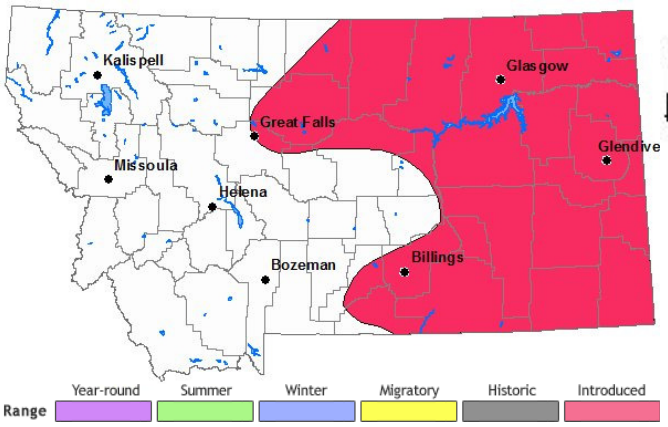
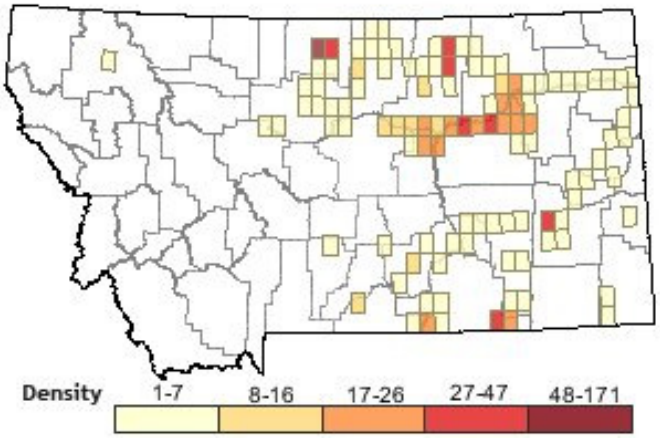
USFS:
BLM:





Number of Observations: 1772

General Description

The black crappie is more widespread across eastern Montana than the white crappie with some scattered populations into central and western Montana. As the name implies, it is darker colored than the white crappie, and has seven or eight dorsal spines instead of the five or six spines found on the white. Crappies are spring-spawning nest-builders like all the other sunfish. Crappies are fun to catch, good to eat, and can weigh up to 3 pounds although 1/2 pound fish are the rule. They are schooling fish and notorious for their love of stumps, debris piles, or other cover.Crappies are spring-spawning nest-builders like all the other sunfish. Crappies are fun to catch, good to eat, and can weigh up to 3 pounds although 1/2 pound fish are the rule. They are schooling fish and notorious for their love of stumps, debris piles, or other cover.

Habitat

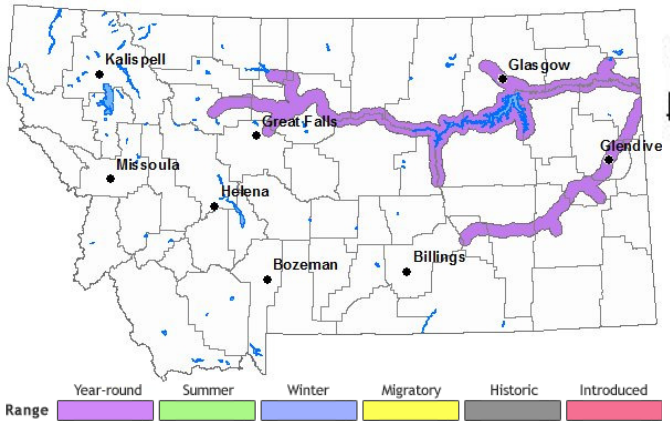
Favors lakes, reservoirs, and relatively large clear streams with sandy to mucky bottoms and aquatic vegetation. Prefers slow portions of streams.

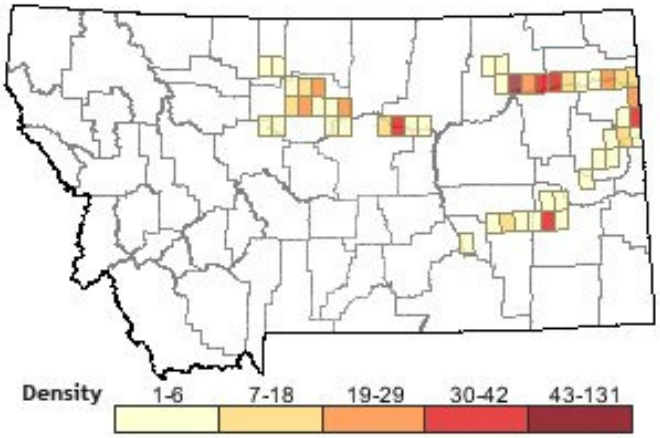
Blue Sucker - *Cycleptus elongatus*

~~**Species of Concern**~~

Global Rank: G3G4
State Rank: S2S3

~~**Agency Status**~~
USFWS:
USFS:
BLM: SENSITIVE





Number of Observations: 949

General Description

Eastern Montana is the home of the blue sucker. This species appears to inhabit only the larger streams, primarily the Missouri and Yellowstone rivers. It is easily recognized by its elongate shape, long dorsal fin, and slate-blue coloration. The largest weight for this species in Montana is slightly over 10 pounds. It was once taken commercially from the Mississippi River but is now too rare.

Montana populations appear to be stable and fairly abundant with a healthy size structure. Although the blue sucker populations appear to be healthy and stable, special recognition is warranted because this species may be susceptible to population declines due to its unique biological characteristics (longevity, low recruitment, migratory nature and reliance on high flows in tributary streams for spawning). Montana has some of the finest habitat for blue suckers found in their range and losses of Montana populations would be significant to the overall gene pool (AFS website 2003).

Habitat

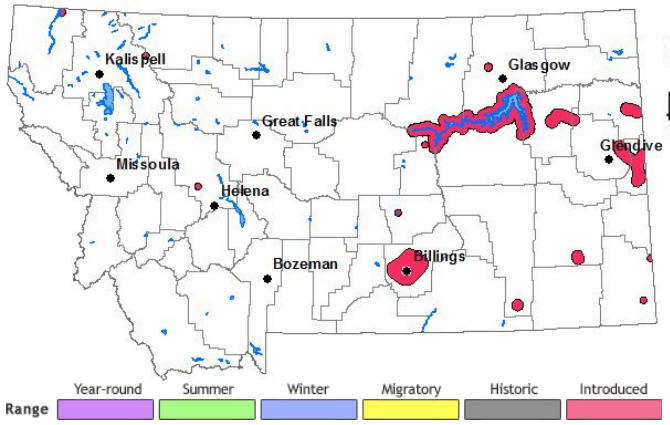
Blue suckers prefer waters with low turbidity and swift current (Brown 1971).

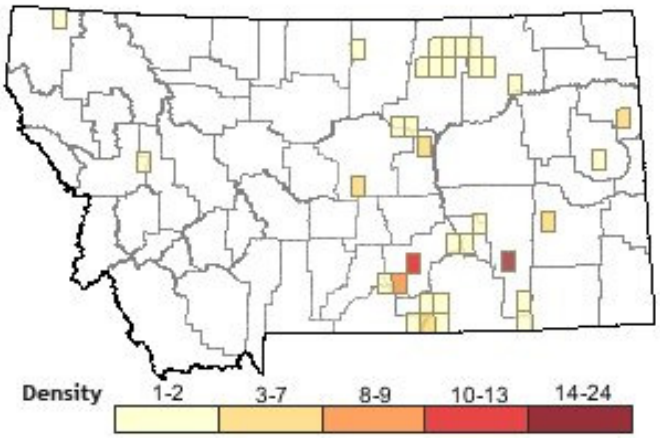
Bluegill - *Lepomis macrochirus*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 125

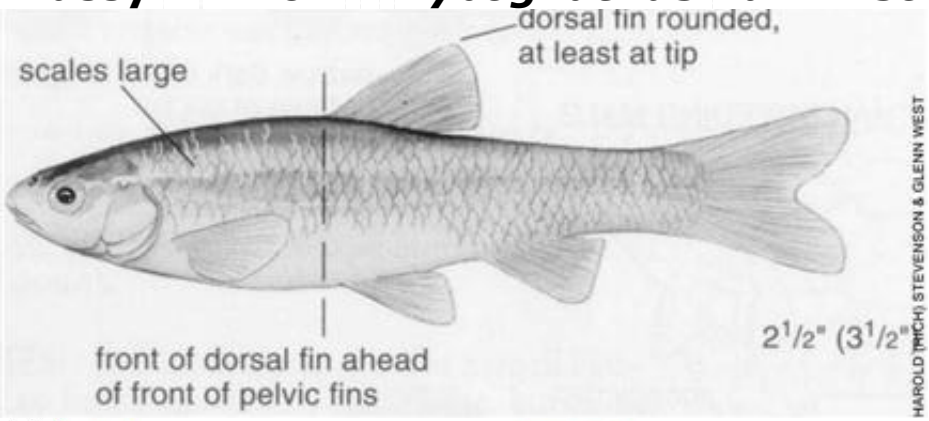
General Description

Like all of the sunfish, the bluegill is native to central and eastern North America, not Montana. However, it is now found across most of eastern Montana. And, like the others sunfish species, the bluegill is a shoreline spring spawner. Males begin the nest-building by fanning the bottom with their fins to clear a shallow, bowl-like depression. Spawning is very temperature-dependent, but when the time is right a willing female lays her eggs in the nest. The male guards the nest tenaciously until the fry hatch out, and any type of intruder will be viciously attacked during the nesting season. All of the smaller sunfishes have been known to hybridize with other species and bluegills are no exception. Bluegill are the largest of the sunfishes other than bass and thus widely acclaimed as a sport fish in the Midwest. In Montana, they have grown to nearly 3 pounds, but they generally do not attain a size to make them a desirable sport fish. Consequently, fisheries managers who used to routinely stock bluegill in combination with bass, seldom do so in Montana today.

Habitat

Preferred habitat is comparitively warm lakes and ponds with abundant vegetation; also, in the quiet pools of streams.

Brassy Minnow - *Hybognathus hankinsoni*



~~**Potential Species of Concern**~~

Global Rank: G5
State Rank: S4

~~**Agency Status**~~
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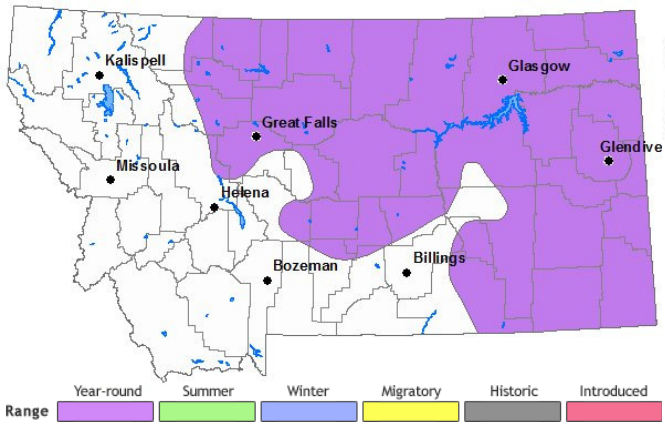
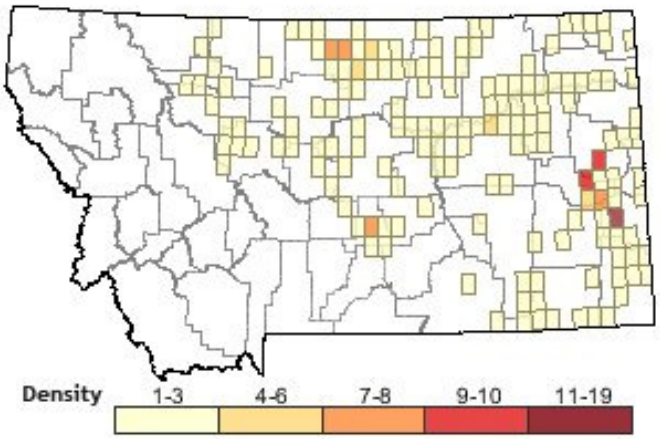
USFS:
BLM:





Number of Observations: 401

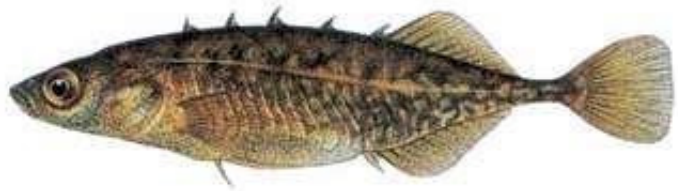
General Description

As its name implies, live specimens of the brassy minnow have a greenish-brassy color. This native species lives in warm-cool water prairie streams east of the Continental Divide in Montana. It is more frequently collected in smaller and clearer perennial streams than the western silvery or plains minnow. Close associates found with this species include the brook stickleback, lake chub and northern redbelly dace. Its herbivorous food habits are probably similar to western silvery and plains minnows. Brassy minnows are somewhat smaller than its sister species, only reaching a length of about 4 inches.

Habitat

The brassy minnow favors the upper reaches of creeks characterized by no current, silt or mud bottoms, and aquatic vegetation in southeast Montana. They prefer clear, slow streams but have been collected in larger rivers with higher turbidities, and occasionally in lakes.

Brook Stickleback - *Culaea inconstans*



~~**Potential Species of Concern**~~

Global Rank: G5
State Rank: S4

~~**Agency Status**~~
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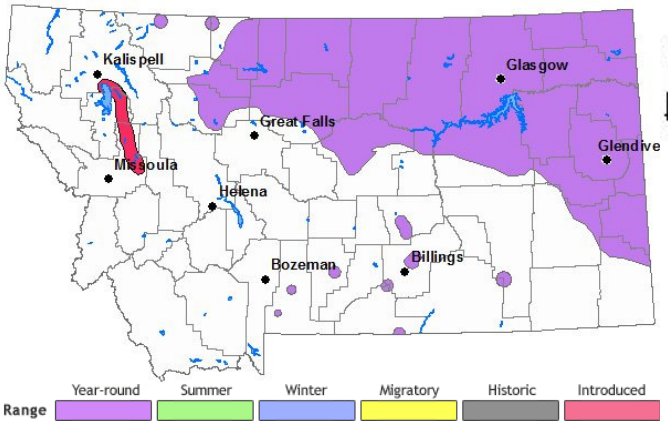
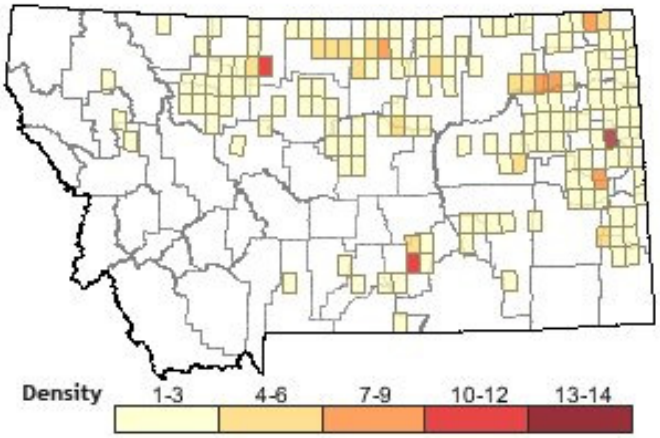
USFS:
BLM:





Number of Observations: 436

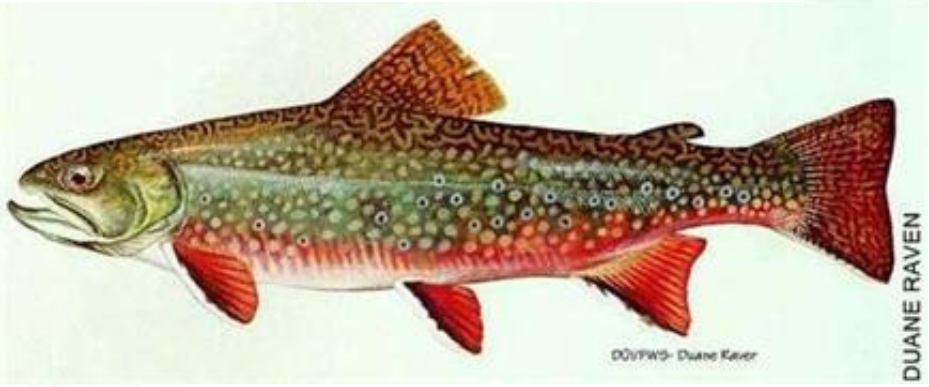
General Description

The brook stickleback is unique among Montana's fishes in its appearance. This species is native east of the Continental Divide in northeastern Montana. Sticklebacks live in slow streams and lakes with submerged plants. They are spring spawners that build a nest from pieces of vegetation they glue together with a special kidney secretion. Sticklebacks feed on small crustaceans and insects and can reach a length of about 3 inches. They provide some food for other predatory fishes.

Habitat

Brook sticklebacks are associated with dense vegetation in slow, clear streams and shallow lakes.

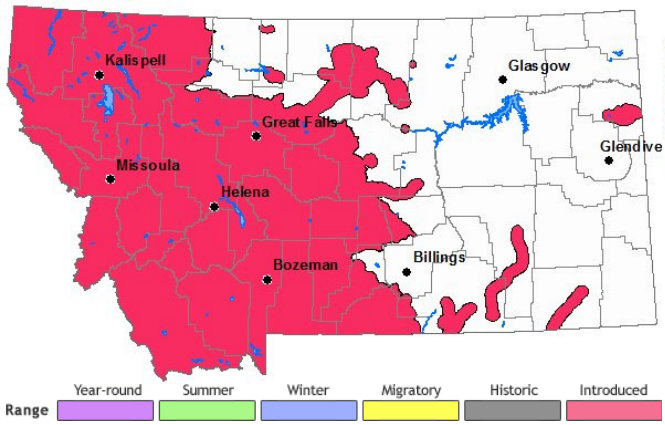
Brook Trout - *Salvelinus fontinalis*

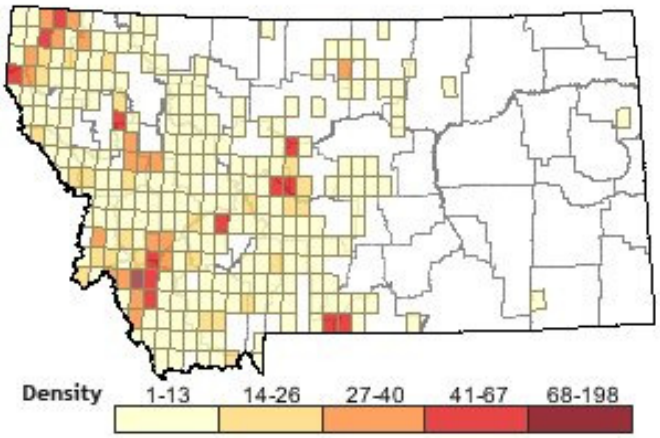


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 4884

General Description

The "brookie" or brook trout was introduced to Montana from eastern North America in 1889. It too, was extensively propagated and stocked in the early half of this century, although seldom so today. Brook trout favor small, cold, headwaters streams and ponds, particularly those that are spring-fed. Brook trout are common throughout most of the western two-thirds of the state in all major drainages. Many an angler learned to fish for brookies as a kid. Spawning occurs in typical trout-like fashion with eggs deposited in a gravel redd during the fall. Brook trout are frequently able to spawn successfully in ponds which have upwelling springs. Brook trout will eat nearly any living organism, and larger fish can be voracious predators on other fish and even their own young. Brook trout are a handsome game fish in their own right, but indiscriminate stocking in mountain lakes has resulted in irreversibly stunted populations in many cases. Trophy brook trout up to 9 pounds have been taken in Montana waters.

Habitat

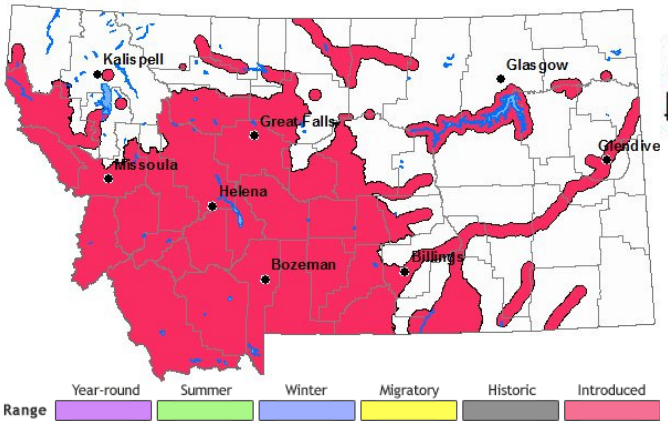
Prefers small spring fed streams and ponds with sand or gravel bottom and vegetation. Clear, cool water (Brown 1971, Holton 1981). Spawns over gravel in either streams or lakes with percolation;spring areas in lakes. Often overpopulates, resulting in fish too small to attract anglers.

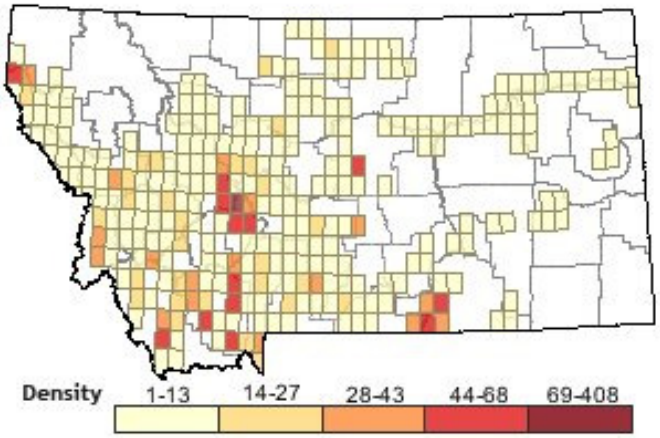
Brown Trout - *Salmo trutta*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 5387

General Description

The brown trout belongs to a different genus than our native trout species. They evolved in Europe and western Asia and were introduced to North America in 1883 and to Montana in 1889 in the Madison River. Today brown trout are found throughout most of Montana except the northwest and parts of the east. Generally, they prefer lower gradient, larger streams than cutthroat and rainbow, and they also do well in many reservoirs. Brown trout were widely stocked in the first half of this century, but today most come from natural reproduction. Brown trout are great competitors and generally are more tolerant of dewatering and other environmental disturbances than our other trout species. The state record is 29 pounds, and large fish are not at all uncommon, although 12-20 inches is the usual size range of adults. Brown trout spawn in gravel redds like our native trout but their spawning season is in the fall. This gives them a distinct advantage in some habitats since their spawning and incubation period lies outside the irrigation season. Brown trout are more predaceous than rainbow or cutthroat. Large fish often feed at night on other fish as well as crayfish and other invertebrates.

Habitat

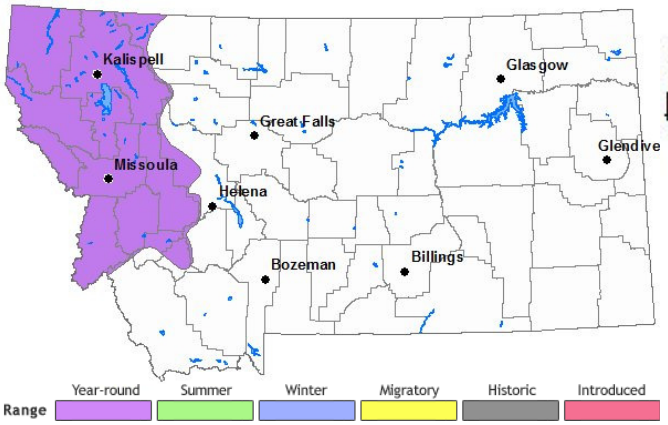
Valley portions of larger rivers where gradients are low and Summer temperatures range from 60-70 degrees F. Also reservoirs and lakes at similar elevation with suitable spawning trib. (Brown 1971, Holton 1981).

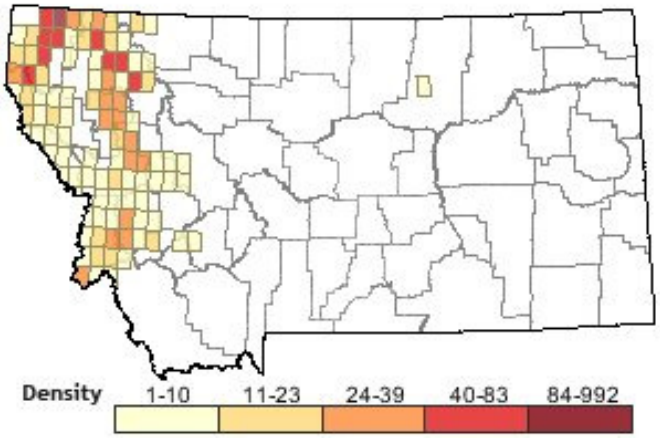
Bull Trout - *Salvelinus confluentus*

~~**Species of Concern**~~

Global Rank: G4
State Rank: S2

~~**Agency Status**~~
USFWS: LT
USFS: THREATENED
BLM: SPECIAL STATUS





Number of Observations: 4798

General Description

The native bull trout has been determined to be a separate species from the coastal Dolly Varden. Bull trout are found in the Clark Fork and Flathead drainages of western Montana, and their slowly declining trend has led to their designation as a threatened species. Bull trout are a sensitive species that do not tolerate high sediment levels in their spawning streams. Sediment can suffocate the developing embryos before they hatch. In Flathead Lake, where they achieve trophy sizes of up to 25 pounds, the bull trout life cycle has been studied extensively. Adult bull trout ascend the North and Middle forks of the Flathead River to spawn in small tributary streams; in some cases traveling well over 100 miles in a few months. They spawn in the fall and the adults return to the lake. Young fish may spend up to three years in the tributaries before returning to mature in Flathead Lake. In other river systems, bull trout may be a resident stream fish.

Often, native bull trout have been displaced through competitive interaction with introduced brook trout. Bull trout and brook trout will interbreed, resulting in sterile hybrids, which leads to a further decrease in bull trout populations. The bull trout may be considered the grizzly bear of the fish world in relationship to its need for unaltered habitat. Young bull trout feed primarily on aquatic invertebrates but adults eat mostly other fish (FWP). Resident adults are 15 to 30 centimeters in length whereas migratory adults commonly exceed 60 centimeters (Rieman and McIntyre 1993).

Habitat

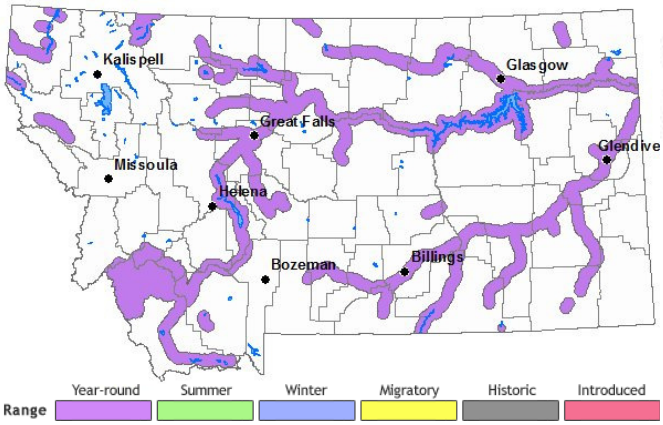
Sub-adult and adult fluvial bull trout reside in larger streams and rivers and spawn in smaller tributary streams, whereas adfluvial bull trout reside in lakes and spawn in tributaries (AFS website 2003). They spawn in headwater streams with clear gravel or rubble bottom (Brown 1971, Holton 1981).

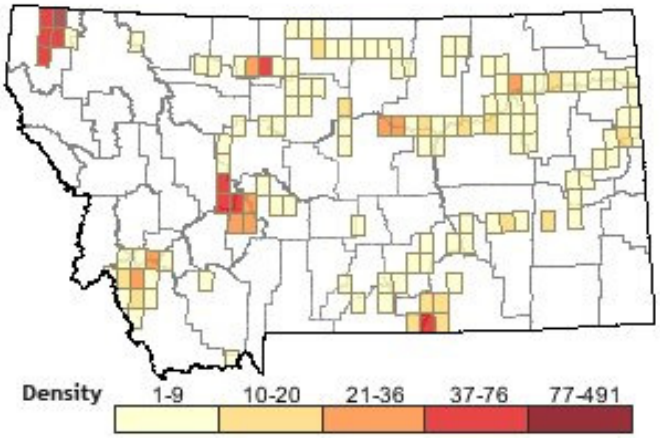
Burbot - *Lota lota*

~~**Potential Species of Concern**~~

Global Rank: G5
State Rank: S4

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 3537

General Description

The burbot is easily recognized by its single chin barbel. It is native to most of Canada and the northern United States and is found in all three major river drainages in Montana. Burbot, also known as ling, are usually found in larger streams and cold, deep lakes and reservoirs. They are peculiar in that they spawn during winter, under the ice. They are also largely nocturnal and have an enthusiastic following among fishermen. Burbot are voracious predators and opportunistic feeders. Like other codfish, burbot have livers which contain oils high in vitamins A and D. Despite their unconventional appearance, fishermen rate burbot tops for table fare.

Habitat

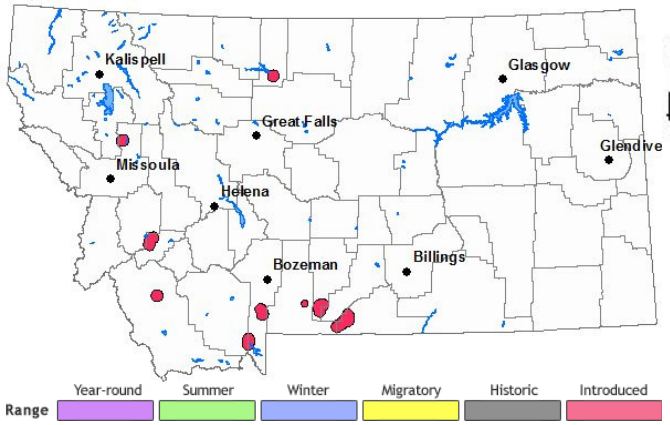
Burbot habitat includes large rivers and cold, deep lakes and reservoirs. They spawn in shallow water, usually in rocky areas.

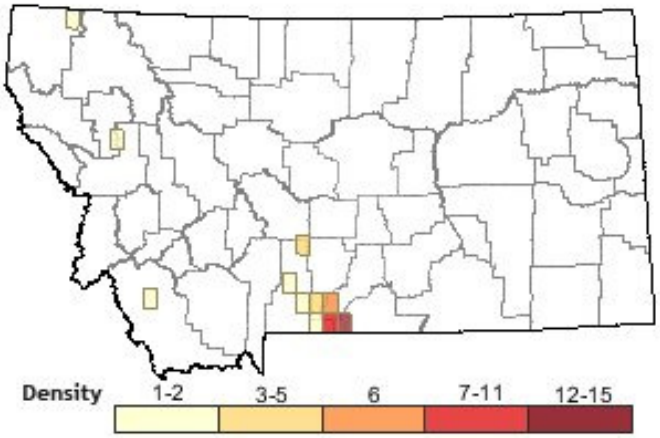
California Golden Trout - *Oncorhynchus mykiss aguabonita*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5T1
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 52

General Description

The golden trout is a California species that was introduced in Montana in 1907. There are currently about 20 golden trout populations in the high mountain lakes of western and southcentral Montana. They provide a unique opportunity to catch a beautiful fish in a pristine environment. Golden trout up to 4 pounds have been caught in Montana but typical size is usually 6-12 inches. Golden trout are spring spawners and can usually be found in inlet or outlet streams to high mountain lakes around the Fourth of July. Like other mountain lake trout species, they are opportunistic feeders, surviving off a variety of aquatic and terrestrial invertebrates.

Habitat

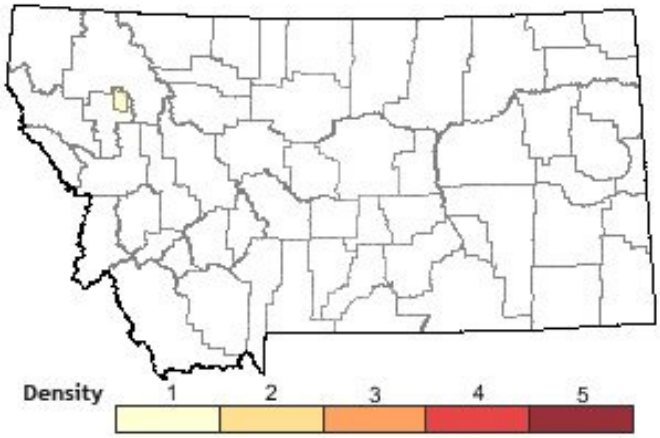
Found only in mountain lakes in Montana; also successful in clear, cool lakes at lower elevations . Spawns in redds over clean gravel of fist size and smaller. Spawns mostly in outlets, but also in inlets and occasionally along lake shoals.

Central mudminnow - *Umbra limi*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:



Number of Observations: 1

General Description

Mudminnows are small, robust fishes with soft-rayed fins. The dorsal fin is set well back toward the tail, and the tail fin is rounded. The Central Mudminnow is the only Montana species and has a black bar at the base of the tail fin. Unauthorized introductions into Montana.

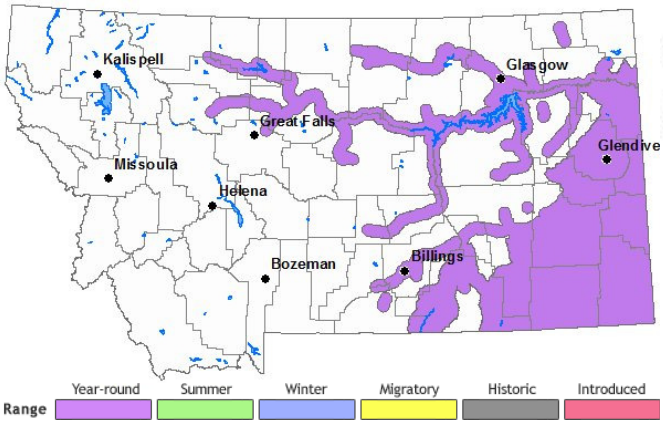
Habitat

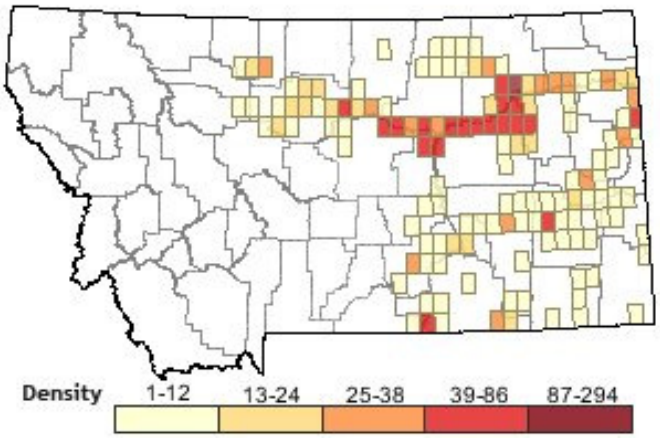
Small ponds, slow moving streams and marshes. Usually associated with vegetation, organic debris and mud.

Channel Catfish - *Ictalurus punctatus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 4504

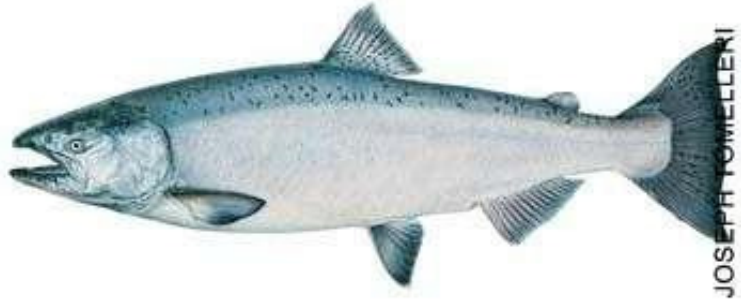
General Description

The largest and most important catfish to sport fishermen in Montana is the native channel catfish of the Yellowstone and Missouri River drainages. These fish prefer warm, muddy rivers and lakes where they forage on just about any animal and some plants, living or dead. They are excellent eaters and millions of pounds of channel catfish are raised commercially in southern states for that purpose. Like all catfish, channel cats spawn in the spring or early summer. The female lays her jelly-like mass of eggs in a nesting site in a dark, protected cavity such as a muskrat burrow, under a stump, etc. and the male guards the nest until the eggs hatch. Biologists have captured channel catfish over 30 pounds in Montana but 2 to 4 pound fish are more common and better eating. The deeply-forked tail separates the channel catfish from the bullheads.

Habitat

Prefers large rivers and lowland lakes. Thrives at water temperatures above 70 degrees. Tolerates turbid water.

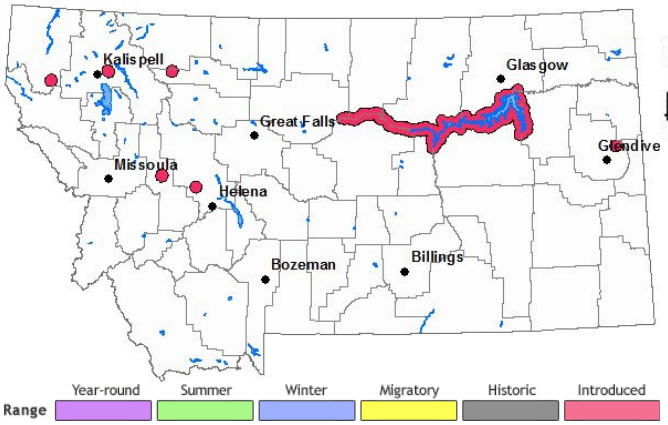
Chinook Salmon - *Oncorhynchus tshawytscha*

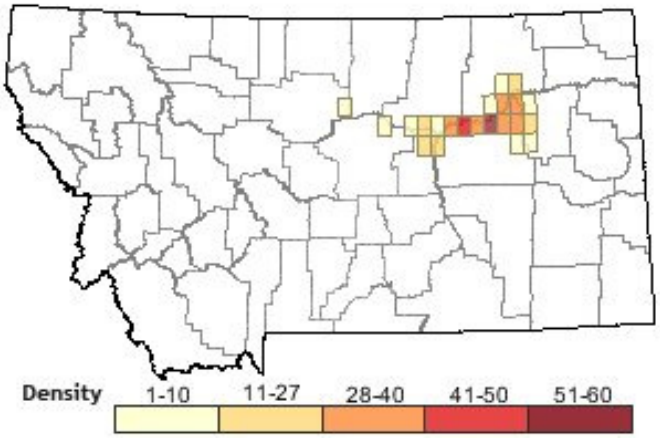


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 601

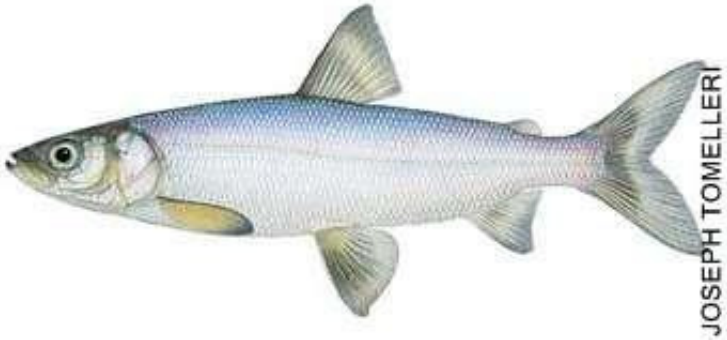
General Description

One of two Pacific salmon species in Montana, the chinook salmon, was introduced into Fort Peck Reservoir during the 1980s in an effort to produce a trophy fishery. Like all Pacific salmon species, the chinook dies after spawning. It is doubtful that these fish will reproduce in Fort Peck, but due to their intense homing instinct they will return to where they were stocked when they are ready to spawn. They may then be captured and artificially propagated in the hatchery. While still experimental, chinooks of over 25 pounds have already been captured in Montana. Chinook, also known as "king salmon", are intense fish predators as adults.

Habitat

A pelagic deep water species. Freshwater populations may spawn in rivers flowing into lake or on gravel shoals in the lake. The young may stay in the stream for a year or two before migrating downstream to the lake. There are no reproducing populations in Montana.

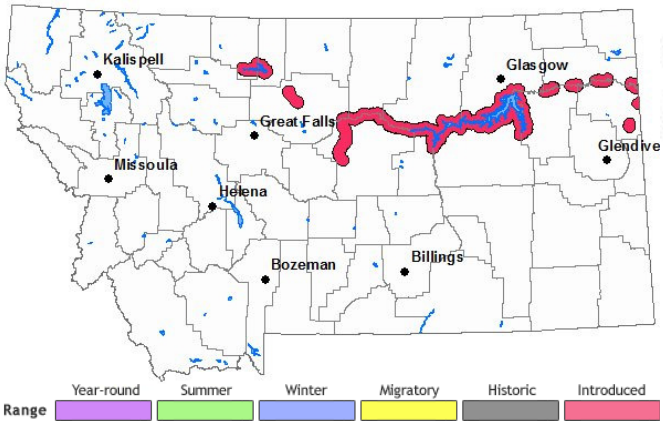
Cisco - *Coregonus artedi*

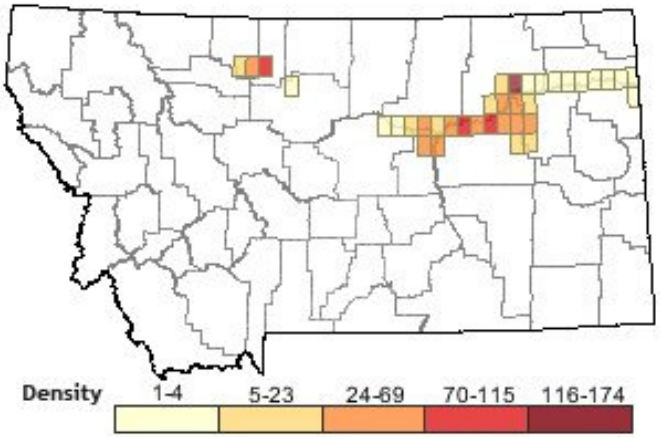


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 1788

General Description

Cisco is Montana's newest fish species. They were introduced by the Montana Department of Fish, Wildlife and Parks into Fort Peck Reservoir in 1984, from Saskatchewan, to act as a forage fish for walleye and lake trout. They have produced a rapidly expanding self-reproducing population. Studies are ongoing to determine the value of cisco as a forage fish. Cisco, also known as lake herring, are widespread across eastern and central Canada. They spawn in the fall in shallow water. Cisco are an open water or pelagic species, forming large schools at medium depths where they feed mostly on plankton.

Habitat

Habitat includes deep lakes and large rivers. Pelagic species are usually found in open, deep water. They spawn over shoreline substrate.

Clark Fork Sculpin - *Cottus sp. 10*

Global Rank: GNR
State Rank: SNR

~~**Agency Status**~~
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

The St. Regis sculpin is a new sculpin species in Montana within the old Cottus confusus group. This determination is based on recent genetic work by the USFS and FWP. This sculpin is a very distinct species by genetic distance, but more closely resembles the slimy sculpin. It seems restricted to the St. Regis River of far western MT which lends further evidence that the Northern Rocky Mountain Refugium area of this MT/ID border region contains the most endemic species of any other area in the state. Like all sculpins, this species is a benthic invertivore meaning it eats primarily aquatic insects. They occasionally eat small fish or trout eggs but this is not a large part of their diet.

Habitat

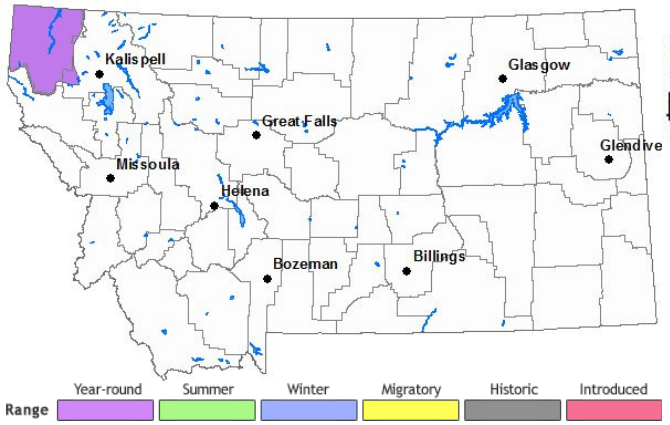
They prefer riffle and run areas of fast to moderately-flowing streams that are clear and have cobble to gravelly benthic substrates.

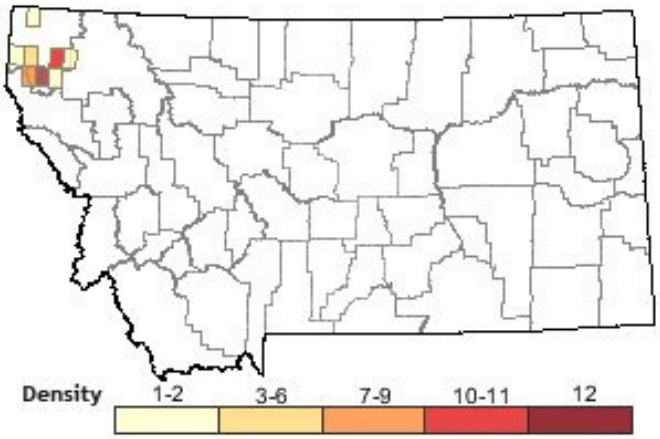
Columbia River Redband Trout - *Oncorhynchus mykiss gairdneri*

~~**Species of Concern**~~

Global Rank: G5T4
State Rank: S1

~~**Agency Status**~~
USFWS:
USFS: SENSITIVE
BLM:





Number of Observations: 45

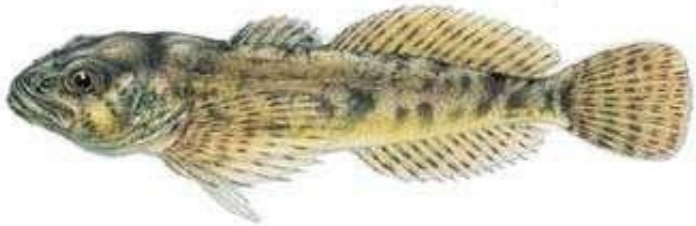
General Description

Interior redband trout are a native trout of western North America. There is considerable variation in the life history in this group of trout. Resident stream populations are found throughout the Columbia River basin. A lake variation known as kamloops are found in some larger lakes in the Columbia and Frasier River (British Columbia) basins. A third variation is the steelhead that migrated from the ocean as far as the upper Snake River, Idaho (almost 1000 miles) (Behnke 1992).

Habitat

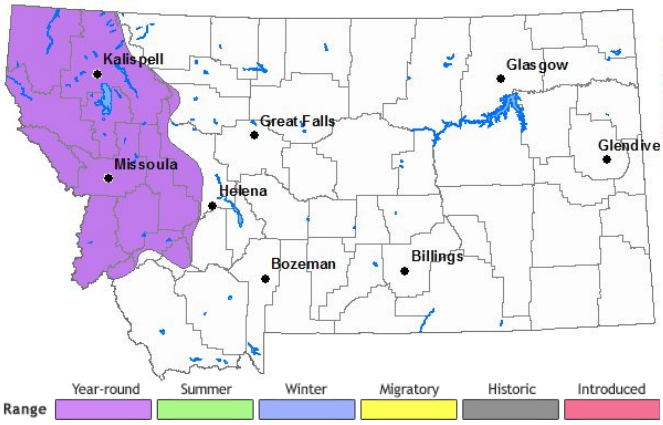
Redband trout prefer cool, clean, relatively low gradient streams but, in some circumstances, are able to withstand wider temperature variations than their cousins the westslope cutthroat trout.

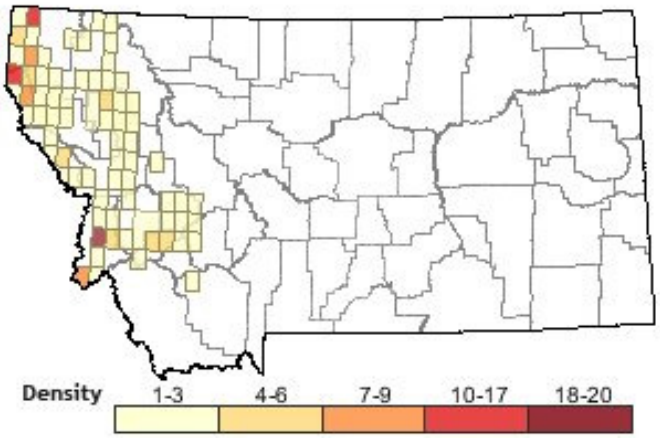
Columbia Slimy Sculpin - *Cottus cognatus*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 267

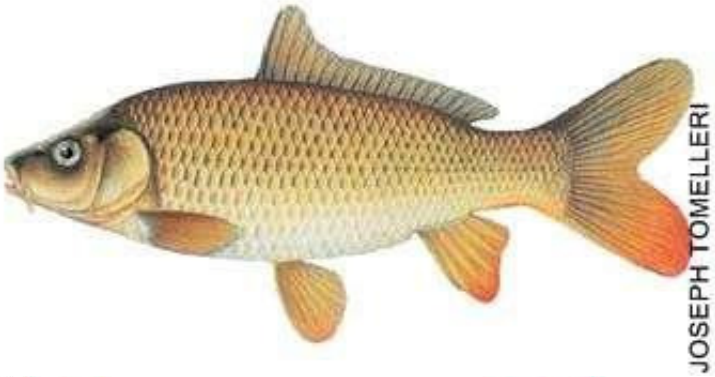
General Description

The slimy sculpin is native west of the Continental Divide, and a recent study (Neely et al. 2010) showed through DNA work that the Columbia Basin slimy sculpin is more closely related to a Russian sculpin in Siberia--not the slimy sculpin of the eastern U.S., as some previously thought. Like the rocky mountian sculpin, it prefers clear, cold, rocky streams but will also be found along cobbly shorelines of lakes. Like all sculpins, this species is a benthic invertivore meaning it eats primarily aquatic insects. They occasionally eat small fish or trout eggs but this is not a large part of their diet. All freshwater sculpins are spring spawners. The males select spawning sites on the undersides of rocks. The female is courted, enters the nest, and deposits a mass of adhesive eggs upside down on the ceiling of the nest. The male then guards the nest and newly-hatched young sculpins with vigilance.

Habitat

Its usual habitat is in the rocky riffles of cold, clear streams, but it is sometimes found along the rubble beaches of lakes, especially near the mouths of inlet streams (Brown 1971).

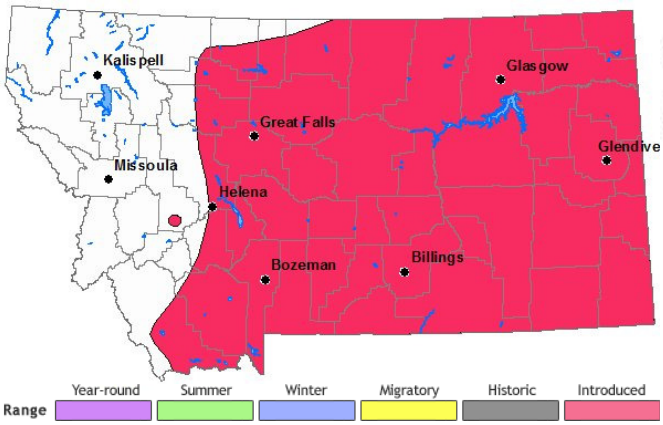
Common Carp - *Cyprinus carpio*

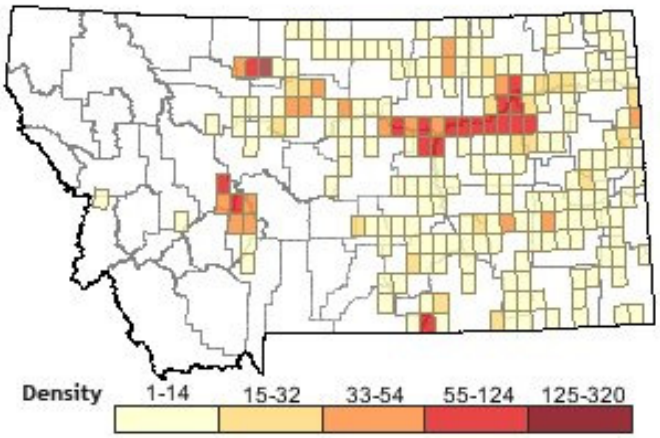


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 7110

General Description

Common carp are easily recognized by the two barbels or "whiskers" on each side of the mouth and the sawn-toothed hardened ray in the front of the dorsal and anal fins. The introduction of carp into North America from Asia is considered to be one of the greatest mistakes in the history of American fisheries management by biologists who have documented the widespread loss of native fish and habitat to this aggressive intruder. Carp are a popular food fish in Eurasia, so they were introduced into North America to serve the same function. However, they are not desirable to North American consumers because they are bony, often have an unpalatable taste and because there are more attractive alternatives. There is some commercial fishing for carp, and they can be processed so that the problems with the fine bones between their muscles are eliminated. Carp are also despised because they compete with more desirable sport fishes, muddy the water by their bottom feeding, and reduce the available food for waterfowl by eating submerged plants. Carp have been the target of large eradication projects in several states that have generally only temporarily reduced populations. They are extremely hardy omnivores, which means that they eat almost anything. Carp can attain a weight of 40 pounds in productive waters. In Montana, carp are present only in our eastern drainage. They attain their greatest numbers in lakes and reservoirs. (FWP) From Scott and Crossman (1973), Jester (1974), and Pflieger (1975): adult length 12-25 in (30.5-63.5 cm) or more; large individuals may reach 20-60 lbs (9.1-27.2 kg); two barbels on each side of upper jaw, posterior pair more conspicuous; relatively small, toothless mouth, with the upper jaw slightly protruding; throat teeth 1,1,3-3,1,1, with teeth in main row broad and molar-like; lateral line complete, with 35 to 38 scales; one long dorsal fin with 17-21 soft rays, and a stout saw-toothed spine in front of dorsal and anal fins; pectoral fins with 14-17 rays; pelvic fins thoracic, originating beneath origin of dorsal fin, 8 or 9 rays; 1 anal fin with 5 branched rays; scales cycloid, large, thick; 35-36 vertebrae; 21-27 gill rakers on first gill arch; color variable: back and sides olivaceous, gold, greenish-olive, reddish-brown, or blackish-red, silver or yellowish-white below; fins dusky, often with red on tail fin and yellow or orange on lower fins; peritoneum gray, often more or less speckled.

Habitat

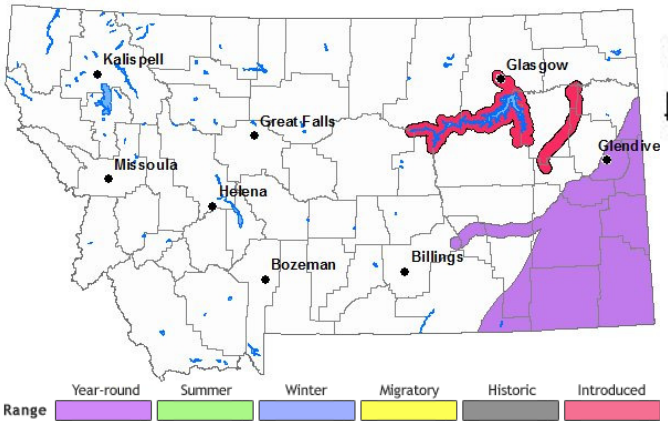
Primarily lakes and reservoirs, where it seeks moderately warm water and shallows. Also rivers, where it prefers pools and backwaters. Congregates in areas of organic enrichment, such as sewage outfalls. Tolerates turbid water and low dissolved oxygen; avoids cold and swift, rocky streams. (Holton 2003) Spawns in shallow weedy areas (Brown 1971).

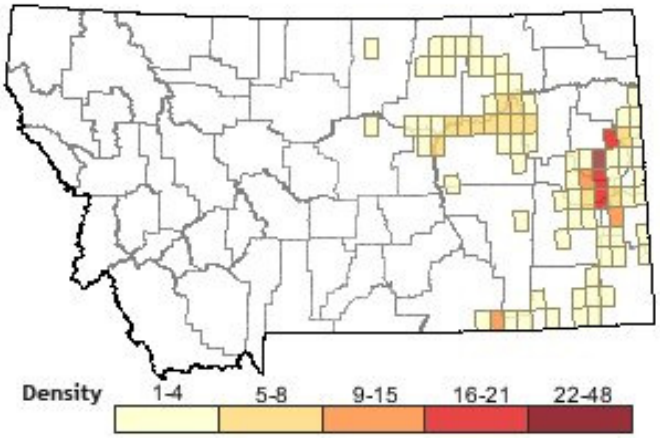
Creek Chub - *Semotilus atromaculatus*

~~**Potential Species of Concern**~~

Global Rank: G5
State Rank: S4

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 459

General Description

The creek chub is native to prairie streams in the extreme eastern part of Montana and is most common in the smaller Perennial Prairie Stream Ecological System. It differs from most minnows in that, similar to trout, the males dig a nest for the spawn and cover the fertilized eggs with stones to protect them. Creek chubs are also more piscivorous than most minnows, readily eating other small fish. In several areas of the U.S., creek chub are used as bait fish. They can attain a length of about 6 inches in Montana and 12 inches elsewhere.

Habitat

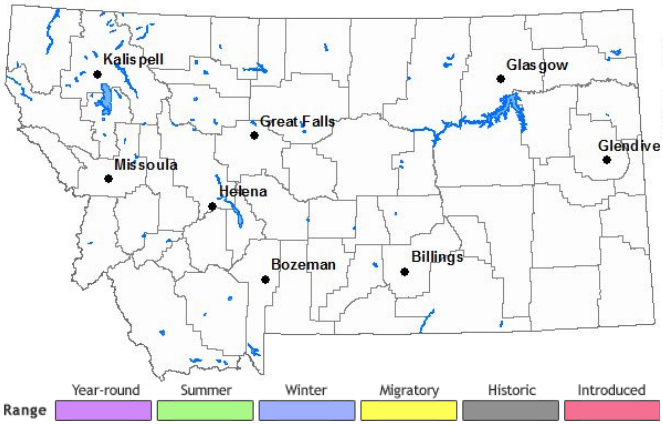
Creek chubs show a high preference for creek habitat. They are less frequent along the margins of rivers, lakes, and impoundments.

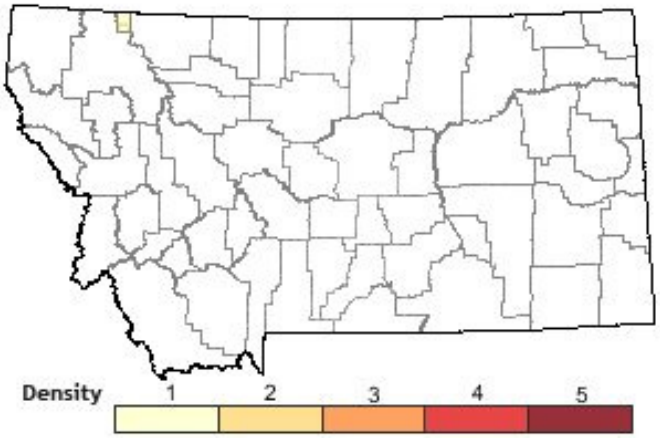
Deepwater Sculpin - *Myoxocephalus thompsonii*

~~Species of Concern~~

Global Rank: G5
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 1

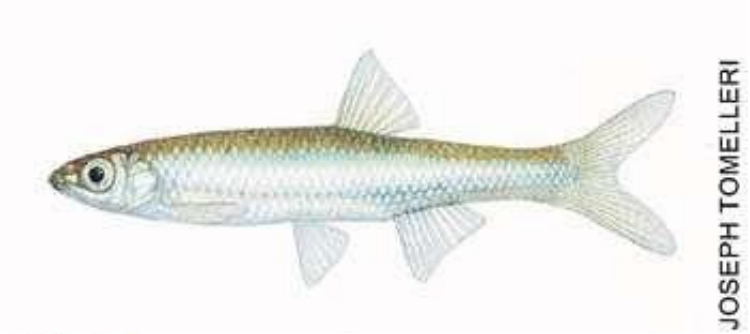
General Description

The Deepwater Sculpin is one of the most poorly known native freshwater fishes in North America (Parker 1988). It reaches 23 cm (9.0 in.) in length, but is usually smaller; the first two collected in Upper Waterton Lake (McAllister and Ward 1972) were 2.7 and 4.8 cm (1.1 and 1.9 in.) standard length. There is a large gap between the two dorsal fins, and a series of bony plates along the lateral line. The head is extremely wide and flat, and the mouth extends to below the eye. Large diskline scales are present on the back and sides above the lateral line. Large males have a very large 2nd-dorsal and pectoral fins. The lateral line is complete (in western populations). There are four preopercular spines, the upper two large and directed upward, the lower two directed downward. Overall appearance includes dark brown to green mottling, often with 4-7 green saddles, on a gray-brown back and sides, with a whitish belly (Page and Burr 1991).

Habitat

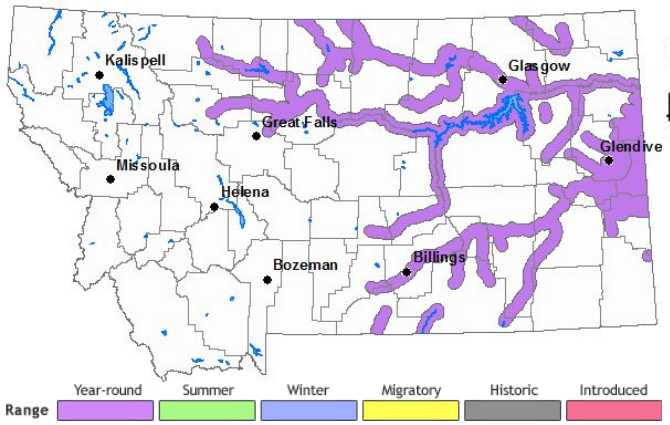
The Deepwater Sculpin appears to remain near the bottom in deep oligotrophic glacial lakes, but habitat descriptions are limited because of the difficulty of capture or detection; the record depth is about 366 m (1200 ft) in both Great Bear Lake and Lake Superior (Scott and Crossman 1973). All lakes occupied in a 2004 survey had relatively low nutrient concentrations and low biological production rates, maximum water depths exceeding 35 m (115 ft) and benthic water temperatures below 8 C during summer. (Sheldon et al. 2008).

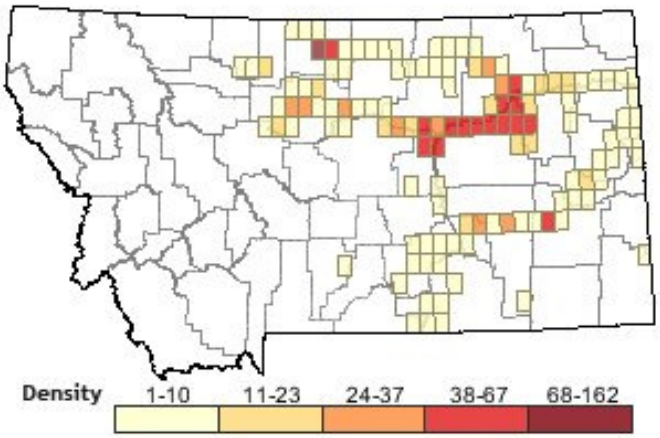
Emerald Shiner - *Notropis atherinoides*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 2962

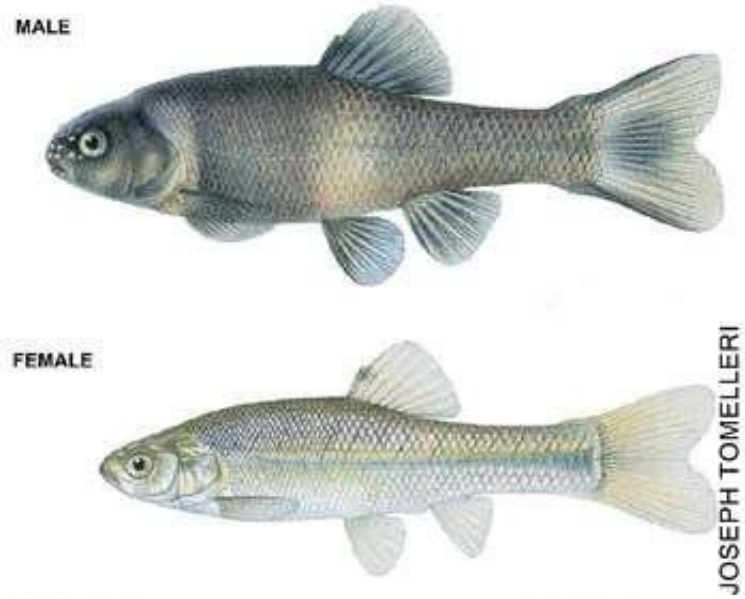
General Description

The emerald shiner belongs to a genus that contains about 100 species of minnows commonly called shiners. Emerald shiners are schooling fish native to the Missouri-Yellowstone River basin. They seem to prefer the larger prairie rivers and the open central waters of impoundments. Fish with this type of habitat preference are called pelagic. In some areas of the U.S., this fish has been widely introduced for forage; that is, as food for the larger predatory game fish. Although they are of lesser importance as prey in Montana, emerald shiners do have some value as a commercial bait fish in eastern Montana. They grow to about 4 inches in length.

Habitat

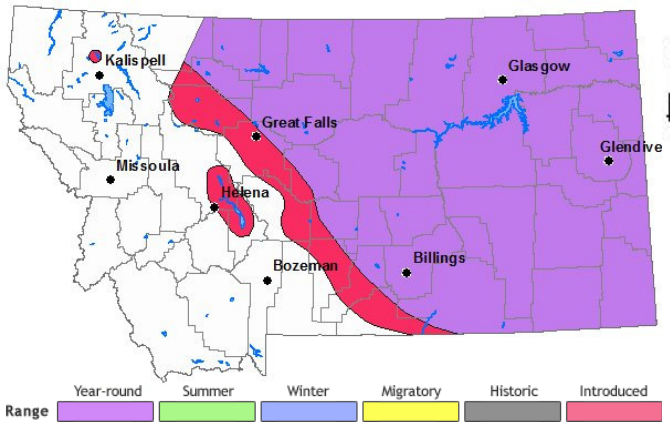
Preferred habitat is larger streams and their impoundments. It is pelagic and avoids areas with aquatic vegetation. Prefers main channel border as specific habitat type.

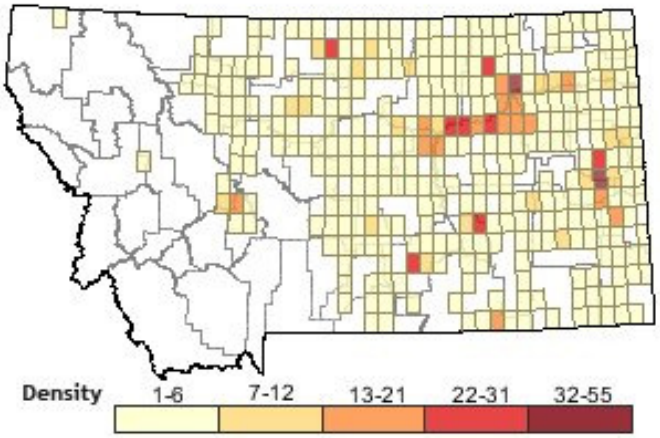
Fathead Minnow - *Pimephales promelas*



Global Rank: G5
State Rank: S4S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 2072

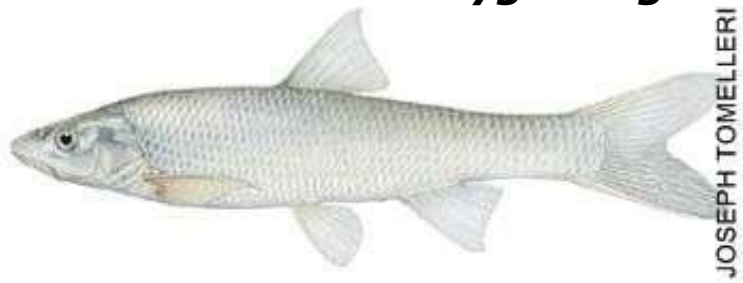
General Description

The fathead minnow is another native inhabitant in both ponds and streams of the prairie ecoregions of Montana. They are an indicator species of the core prairie fish assemblege found in the Intermittent and Perennial Prairie Stream Aquatic Ecological Systems. This fish also has a limited distribution west of the Divide in Montana, but it is not native to that drainage. This species has been reared throughout the U.S. for use as a forage and bait fish. The reproductive behavior of the fathead minnow is unlike that of most of the minnows which broadcast their eggs and give them no parental care. Fatheads deposit adhesive eggs on the undersides of rocks and logs, and males guard the eggs during their incubation period. The breeding males form small, bony bumps called tubercles on their snouts. These serve no apparent purpose but may be a sign of beauty or prestige in the fish world. The largest fatheads are about 4 inches long. Fatheads can tolerate very low oxygen levels and a wide variety of temperatures. They utilize a wide variety of foods.

Habitat

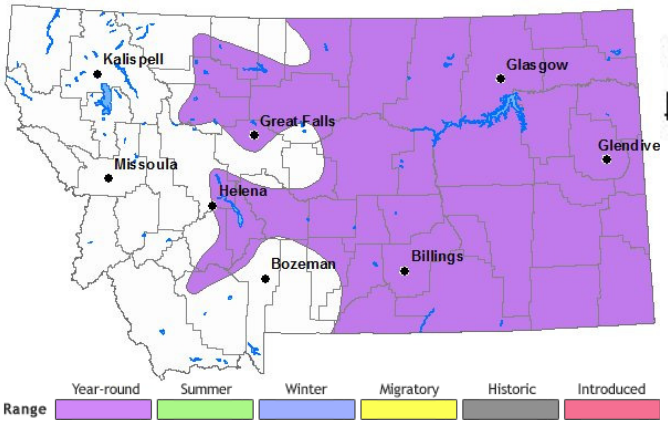
Habitat is highly variable but found mostly in small turbid creeks and shallow ponds of flatlands. Very tolerant of extreme conditions found in a prairie environment (turbid water, high temperature, and low dissolved oxygen).

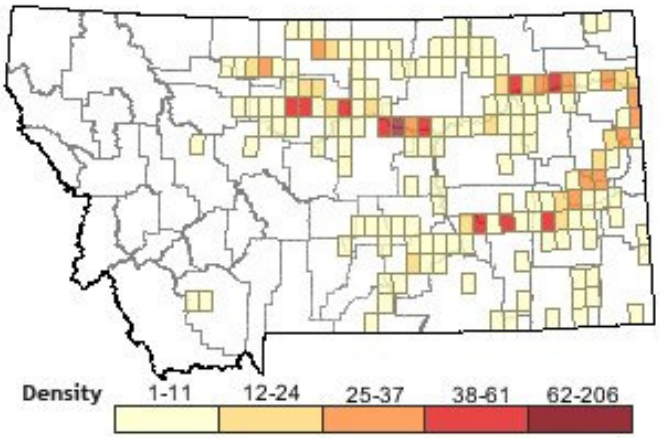
Flathead Chub - *Platygobio gracilis*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 2919

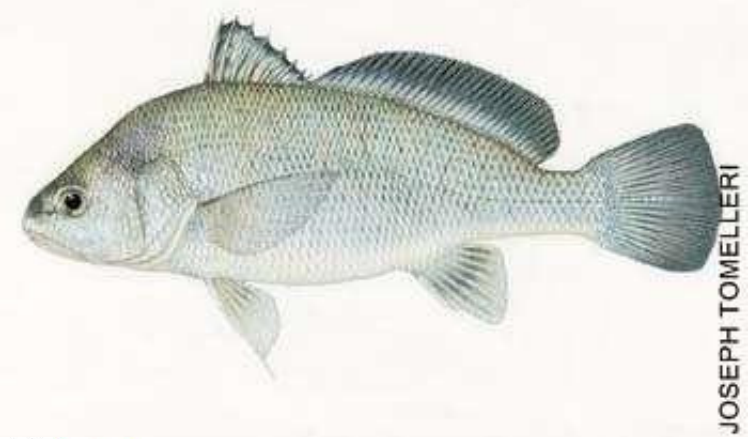
General Description

The flathead chub has one of the greatest north-south distributions of any of the minnows. It extends from New Mexico to the northern Yukon Territory in Canada. Here in Montana it is found in the plains and foothill streams of our Missouri-Yellowstone River complex and is an indicator species of the Medium Warmwater River Fish Assemblage. Its most conspicuous features are a barbel or "whisker" at each corner of its mouth, flattened head and streamlined appearance. The sleek body shape and pointed fins are believed to be adaptations for living in fast water. Flathead chubs grow to about 12 inches in length and are sometimes used as bait. They are often caught by anglers.

Habitat

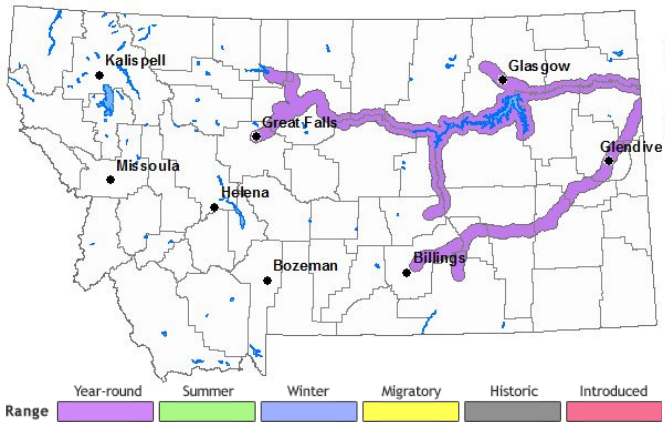
Plains rivers and streams with some to moderate turbidity. Many reaches of prairie streams and rivers have the characteristic riffle/run/pool habitat and gravels preferred by flathead chubs. Studies on middle Missouri River showed it was relatively more abundant in the lower gradient downstream sections.

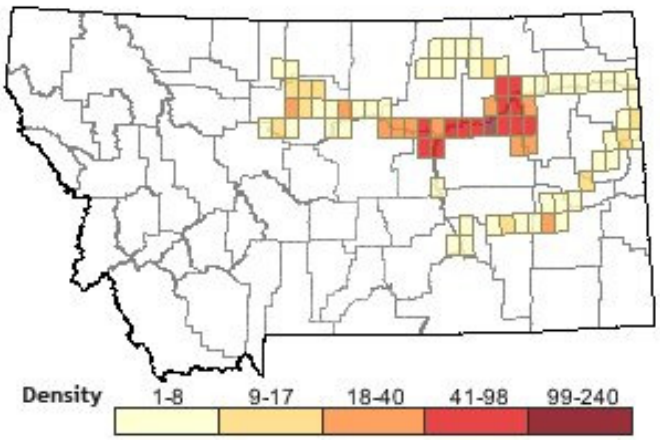
Freshwater Drum - *Aplodinotus grunniens*



Global Rank: G5
State Rank: S4

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 3184

General Description

Only one member of the drum family is found in Montana--the freshwater drum. This species is native to larger streams and reservoirs in the plains region of our eastern drainages. Drum are so named because they can produce sound by "drumming" muscles against their gas bladders. Drum are spring broadcast spawners, but unlike other Montana fish their eggs are buoyant. Drum are not a sport fish in Montana and are taken commercially elsewhere. Drum eat fish, insects, clams and snails.

Habitat

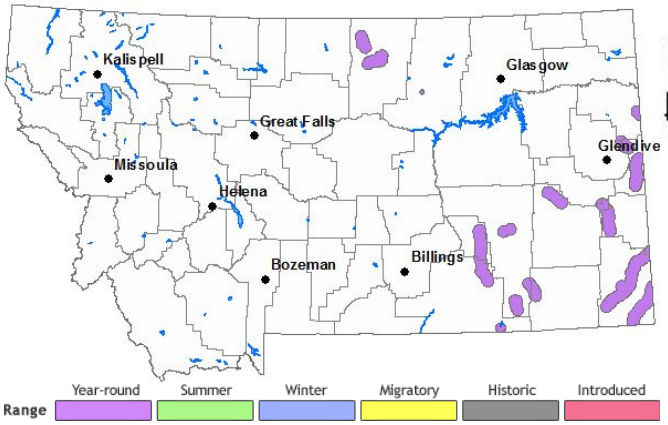
Deep pools of large streams, lakes, and reservoirs. Prefers clean bottoms and moderate turbidity. Spawning has been observed to take place in lakes some distance from shore.

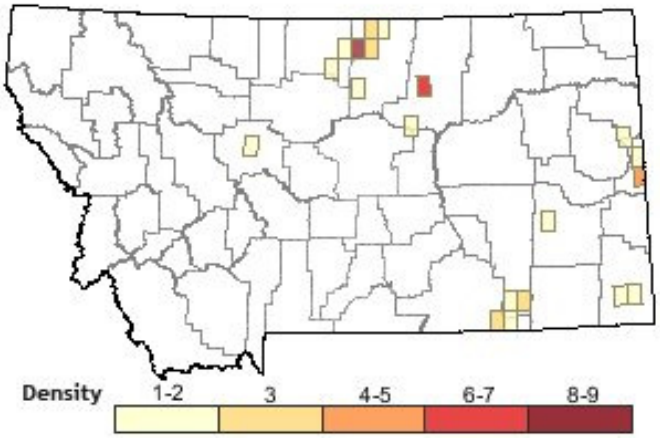
Golden Shiner - *Notemigonus crysoleucas*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: S5

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 51

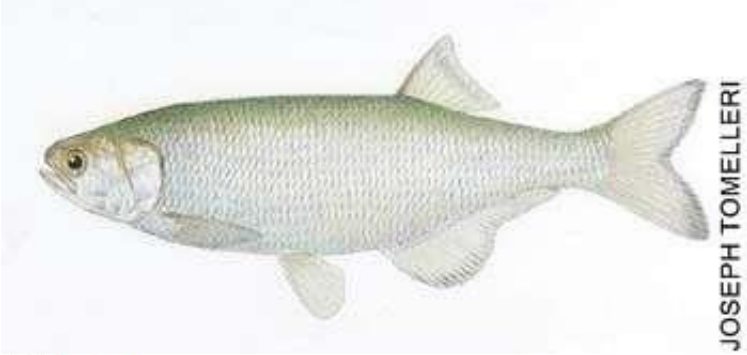
General Description

The golden shiner is an introduced species that has been stocked into ponds and has escaped into slow running streams and rivers east of the Continental Divide in Montana. It was probably introduced into our state as a forage fish or as the result of bait fishing. Pond culture of the golden shiner for bait is a moderately large industry in the south-central U.S. They can grow to lengths of about 8 inches. Golden shiners prefer habitat with abundant aquatic vegetation and eat plant as well as animal matter. They are easily caught on bait or artificial flies.

Habitat

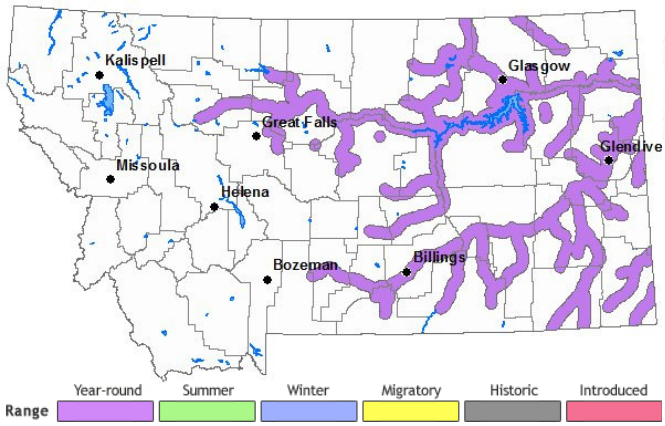
Weedy ponds and lakes, slow moving streams.

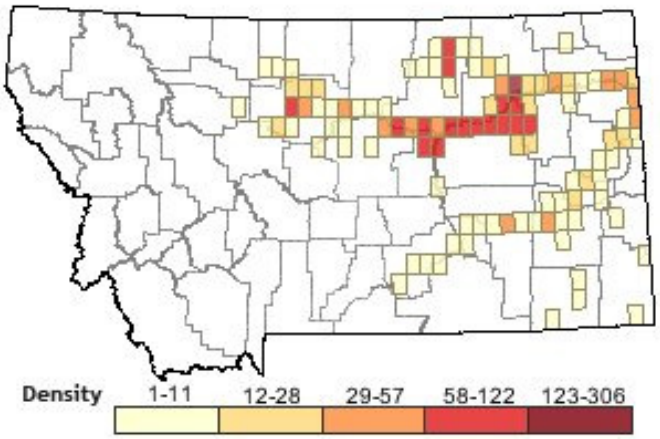
Goldeye - *Hiodon alosoides*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 5154

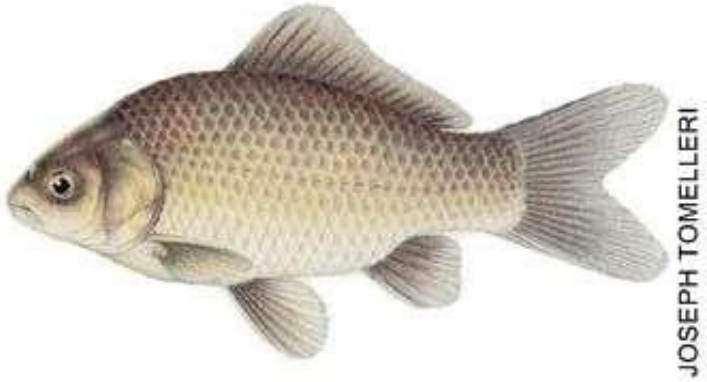
General Description

Members of the Mooneye family are moderately sized fishes with deep, flat-sided bodies covered by large silvery scales. They resemble herrings. They have large, reflective eyes with rods only, no cones. This makes them uniquely adapted to see under low light conditions but they cannot detect colors.

Habitat

This is a species of the Large Valley and Large Prairie Rivers ecological systems, occasionally getting up into Medium prairie rivers and reservoirs that have direct connnections; adapted to turbid water. Prefers calm waters for spawning and incubation.

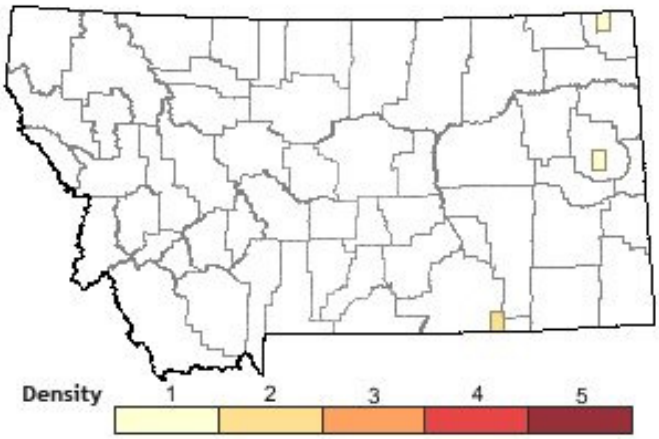
Goldfish - *Carassius auratus*



~~**Exotic Species** (not native to Montana)~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:



Number of Observations: 4

General Description

Goldfish have been introduced and have become established in several locations east of the Continental Divide in Montana. The goldfish is an Asian species that has been bred for bright colors and large, showy fins for the aquarium trade. However, the wild goldfish in Montana are greenish-brown in color and lack the enlarged fins. They hybridize with common carp in some locations outside Montana. Wild goldfish can reach a weight of several pounds. Goldfish can become so numerous in the wild that they crowd out more desirable species. It is illegal to release them in any lake, pond, or stream in the state.

Habitat

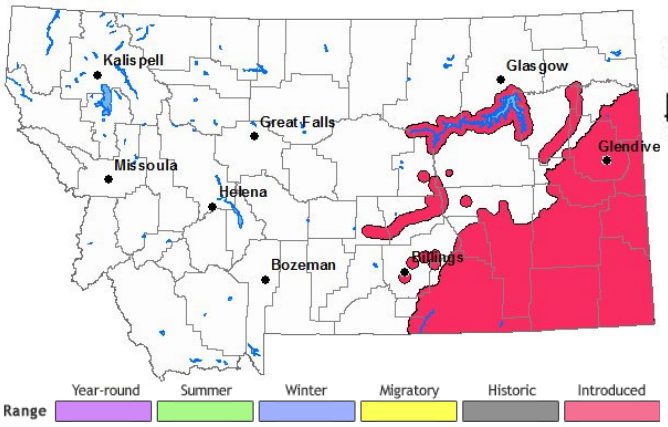
Prefers Ponds and streams, low turbidities, abundance of vegetation, and little or no current. Known to survive in water 40-80 degrees F.

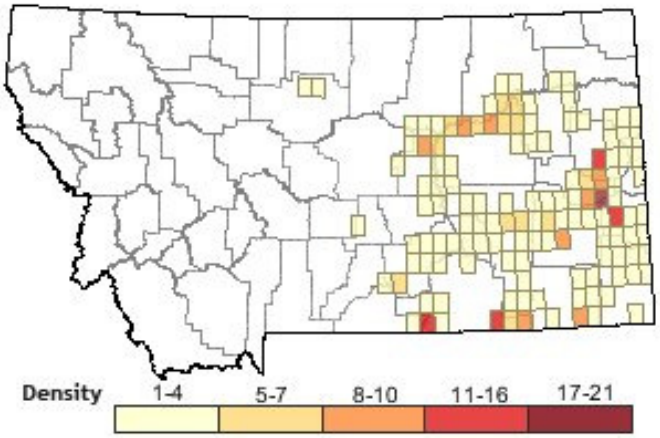
Green Sunfish - *Lepomis cyanellus*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 547

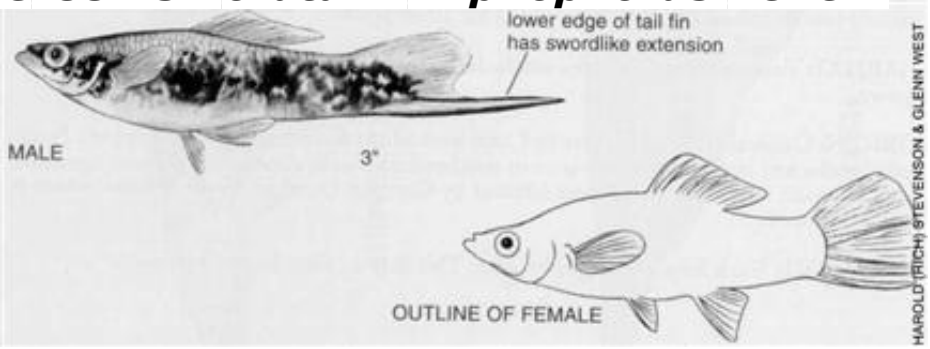
General Description

The green sunfish is another marginal introduction found scattered in the lower Yellowstone and Little Missouri river drainages of southeastern Montana. They are hardy little fish, tolerating a wide range of temperature, turbidity, and oxygen levels in slow-moving streams, ponds, or lakes. Green sunfish in Montana seldom exceed 5 inches in length although they are readily caught on a variety of baits. The food of this species, as with the other sunfishes, is primarily insects, crustaceans, and small fishes.

Habitat

Slow-moving streams at lower elevations and shallows of lakes. Tolerates turbid water, high temperatures and low dissolved oxygen.

Green Swordtail - *Xiphophorus helleri*



~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:

Number of Observations: 0

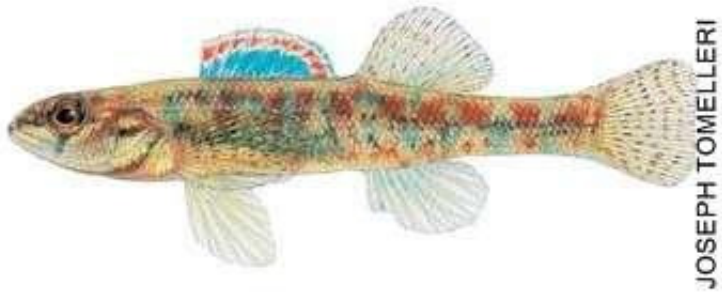
General Description

This tropical aquarium fish is an illegally released pet fish. The native range is southeastern United States, Mexico, and Central America.

Habitat

Can exist in Montana only in warm springs, ponds, and resultent streams in water temperatures of 68-80 degrees F.

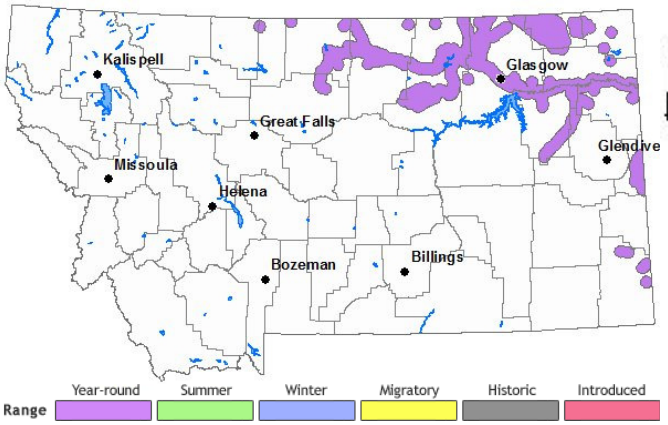
Iowa Darter - *Etheostoma exile*

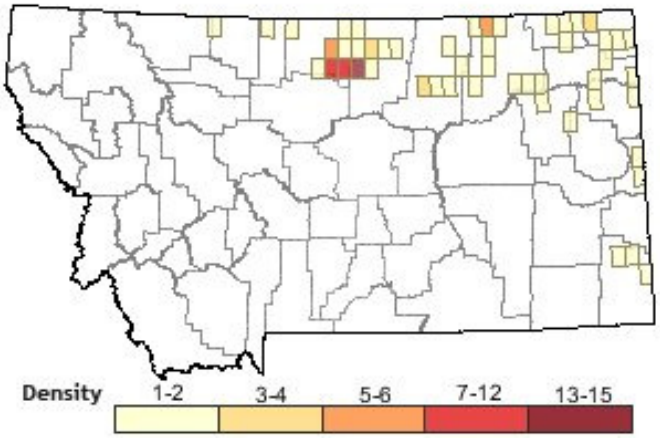


~~Species of Concern~~

Global Rank: G5
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 126

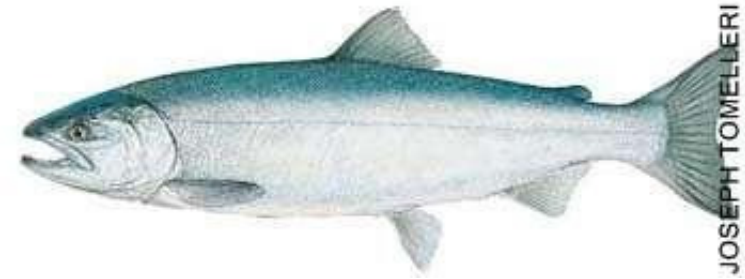
General Description

There are about 100 species of small perches called darters. In Montana we have only one representative, the Iowa Darter. It is a native fish found in small streams and reservoirs in the plains region of our eastern drainage. During the spawning season, this species becomes one of Montana's most highly colored fish. Its maximum size is a little less than 3 inches (Brown 1971, Holton and Johnson 1996).

Habitat

Iowa darters prefer clear slow-flowing streams with solid bottoms, although they have a wide range of tolerance for changes in water flow rates. They are also found in lakes and reservoirs, such as Nelson Reservoir east of Malta (Brown 1971). In Little Beaver Creek (Carter County), Iowa Darters were present during April to August in upstream and midstream pools and riffles that were characterized by cooler, clearer, lower water-velocity habitats, but were absent from downstream segments that were sampled, which had more riffles, reduced stream flows, and elevated late-summer water temperatures (to 30 C or more) (Barfoot and White 1999). Tempertures were 12-15 C in breeding pools of streams in Colorado during late April to early June, and the fish were found in masses of organic debris and slime on the pool bottoms; during the remainder of the year they were found under pebbles and in riffles in higher velocity water (Jaffa 1917). Breeding habitat in Michigan typically included the slow current of streams that contained some vegetation and submerged fibrous root banks. In lakes, Iowa Darters bred near shores over areas of fibrous root and organic debris. Sandy bottoms were often present in breeding habitats, males were never seen in muddy areas. After breeding, Iowa Darters moved to deeper waters of stream pools or lakes; in winter they could be found in thick organic debris and plants, to depths of 1.2 m (4 ft) (Jaffa 1917, Winn 1958a, 1958b).

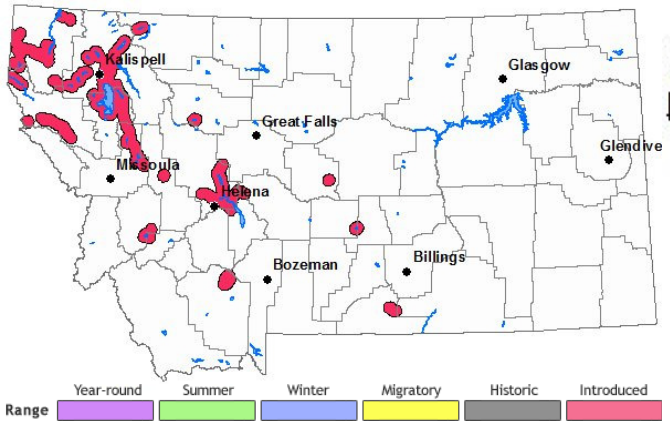
Kokanee Salmon - *Oncorhynchus nerka*

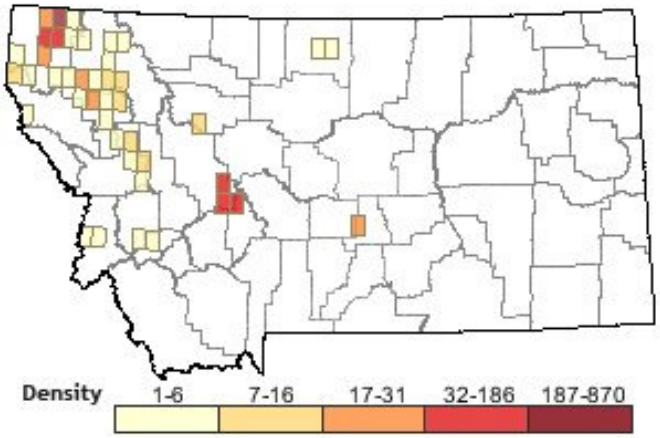


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 3185

General Description

The kokanee is the landlocked version of the sockeye salmon. Kokanee were first introduced into Montana in Flathead Lake in 1914 and are currently fairly widespread in the western half of the state on both sides of the Divide. Kokanee can achieve sizes of 3 to 5 pounds but 1-pounders are most common. The size of kokanee in Montana waters is a function of two factors, their own population density and the abundance of their available food supply. Kokanee are strictly plankton feeders and they can rapidly overpopulate, resulting in large numbers of stunted fish. Kokanee spawn naturally in many Montana waters. They either run upstream from their lake habitat or spawn along the lake shorelines in the fall. Most kokanee reach sexual maturity in their fourth year of life and they then undergo a dramatic transformation prior to spawning. The silvery specimen seen here becomes a smooth-skinned, red-colored spawning fish with large hooked jaws and teeth on the males. All the adults die after spawning, making for a tremendous food source for bald eagles, grizzly bears, and other animals. Kokanee are very sensitive to water temperature and school in lakes at a certain depth. Once located, they are readily caught and provide excellent sport as well as table fare.

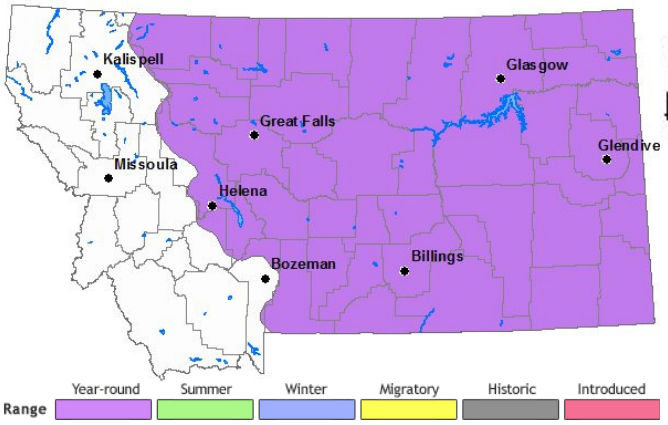
Habitat

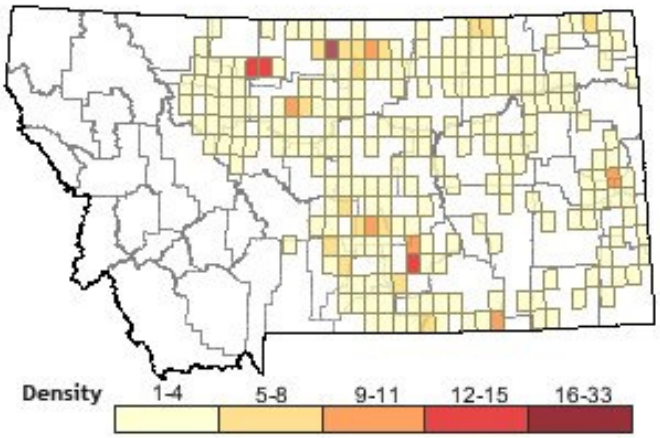
Habitat consists of cold, clear lakes and reservoirs and Kokanee Salmon are found at all depths. They spawn over loose rubble, gravel, and sand in lower portions of tributary streams or along lake shores (Holton 1981, Brown 1971).

Lake Chub - *Couesius plumbeus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 765

General Description

The lake chub is a native minnow found in Montana's eastern and northern drainages. They are an indicator species of the core prairie fish assemblege found in the Perennial Prairie Stream Aquatic Ecological System. Lake chubs are usually 6 inches or less in length (can be confused with creek chubs in the southern part of their MT range), and are reported to be an important forage fish in some locations. Lake chubs generally prefer small, slow streams and have been illegally introduced in several mountain lakes.

Habitat

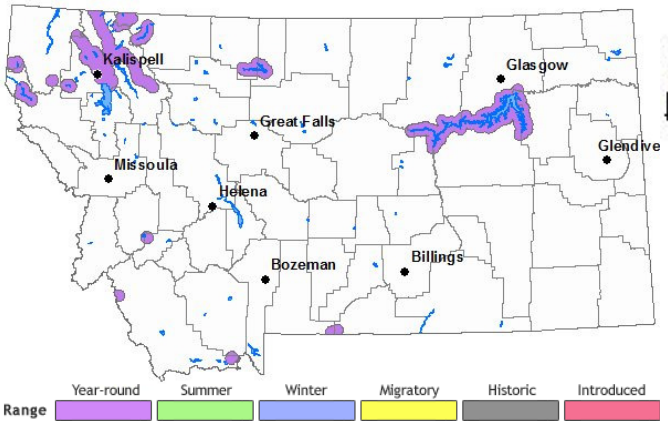
Favors creek type habitat, mostly at lower elevations, and is rarely found in the larger streams. Also in some mountain lakes.

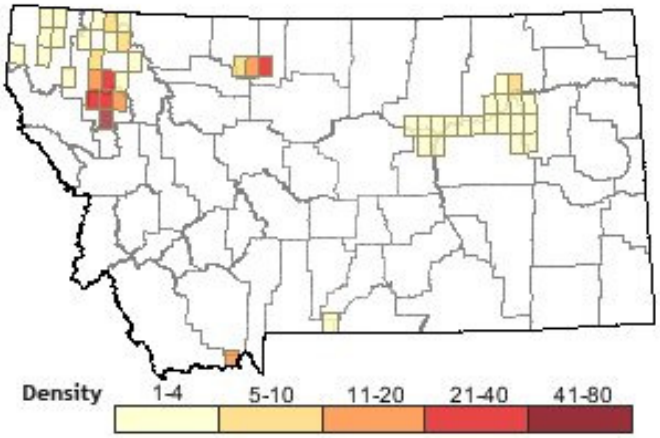
Lake Trout - *Salvelinus namaycush*

~~**Species of Concern**~~

Global Rank: G5
State Rank: S2

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 572

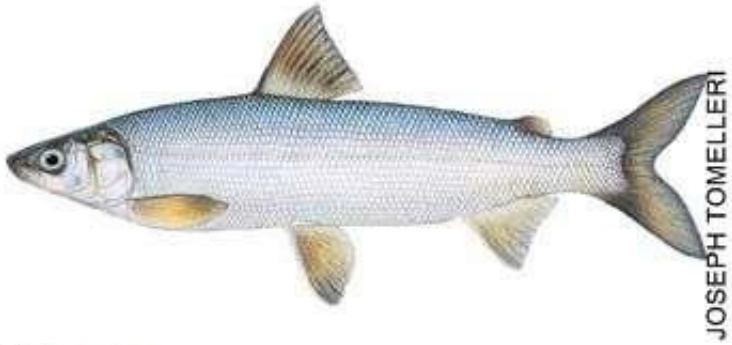
General Description

The lake trout is a char of the same genus as bull trout and brook trout. Lake trout are native in the St. Mary and Missouri River drainages and have been introduced to a few other scattered mountain lakes, Flathead Lake, and Fort Peck Reservoir. Lake trout are a major game fish in much of Canada and were at one time a staple of the Great Lakes fishery. In Montana, the lake trout of Flathead Lake have achieved trophy status, growing to 42 pounds. Lake trout inhabit very deep, cold lakes, living in water up to 200 feet deep. They spawn in the fall on the rocky substrate of the shoreline. They scatter or broadcast their spawn, a rarity in the trout group. Small lake trout feed on plankton and aquatic invertebrates but fish over 2 to 3 pounds eat a fish diet. Lake trout are a highly-prized food fish in Canada and are catching on as a game fish in Montana with the advent of downriggers, electronic fish finders, and other specialized techniques.

Habitat

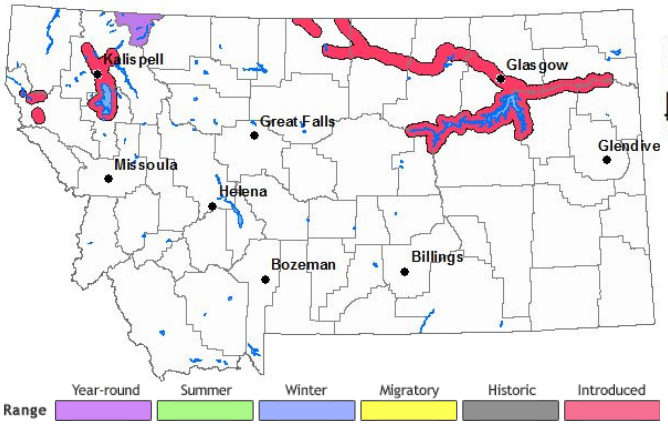
Deep, cold lakes and reservoirs. (FWP) Deep cold water lakes and reservoir with some rocky bottom and on abundance of forage fish. Spawns over rocky shoal areas in lakes in depths from 10 to 120 feet.

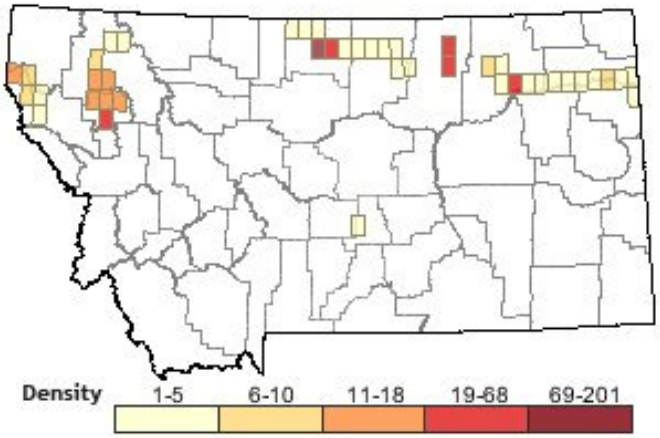
Lake Whitefish - *Coregonus clupeaformis*



Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 1071

General Description

The lake whitefish is the largest of our four whitefish species. They commonly weigh 2 to 4 pounds, and the state record is 10 pounds. The lake whitefish has a deep, flat-sided body and is found mainly in the depths of clear, cold lakes across northwest and north-central Montana. All Montana whitefish are fall spawners. Adult lake whitefish move into the shore zone to broadcast their spawn randomly over a rocky bottom. Lake whitefish are schooling cold-water fishes and feed at depths often over 200 feet on plankton and other invertebrates. The lake whitefish is the most valuable commercial freshwater fish in Canada, but in Montana it is just beginning to catch on as a game fish in the Flathead Lake area.

Habitat

Primarily deep, coldwater lakes where it is found mostly at depths of 50 to 90 feet. Spawns over shallow shoals near shore over rocky or sandy bottom; rarely ascends tributary streams. Has thrived in Fresno Reservoir, a shallow, warm, often turbid reservoir.

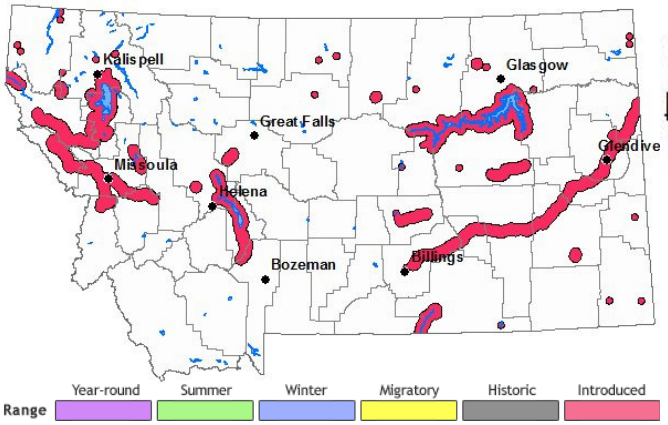
Largemouth Bass - *Micropterus salmoides*

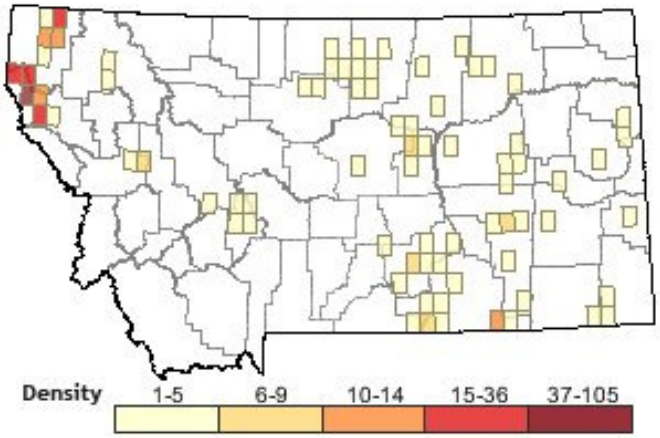
JOSEPH TOMELLERI

~~Exotic Species (not native to Montana)~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 650

General Description

The largemouth bass is the largest and most widely acclaimed gamefish in the sunfish family. Largemouth are true warmwater fish, thriving in temperatures up to 90 F in their native southeastern U.S. The largemouth bass may be the most widely introduced species in North America and are now found virtually all across the continent as well as east and west of the Divide in Montana. Another spring spawning nest-builder, the largemouth bass prefers habitat that is very warm, such as weedy ponds or sloughs. They are seldom found in rivers or in waters deeper than 20 feet. An aggressive and opportunistic surface-feeder, largemouth bass are primarily fish-eaters. They also will eat nearly any other water-borne animal on occasion. The Montana record largemouth bass is a little over 8 pounds, but the world record is 22 pounds. Largemouth bass do well in many marginal trout ponds but are subject to winterkill and often need to be restocked.

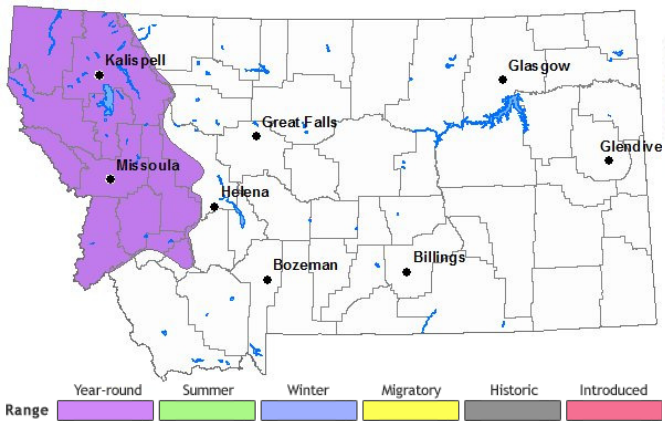
Habitat

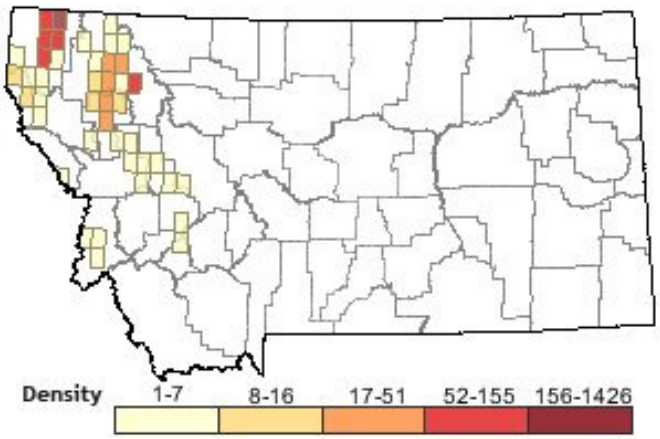
Clear mud-bottomed lakes and stream backwaters. Seeks areas with comparatively warm summer water temperatures and ample aquatic vegetation.

Largescale Sucker - *Catostomus macrocheilus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 4184

General Description

The largescale sucker is native to Montanas western drainage. Like the previously mentioned suckers, it is present in both rivers and lakes. In Montana, the maximum size in this species is usually less than 5 pounds. The food habits of largescale suckers are similar to those of other suckers.

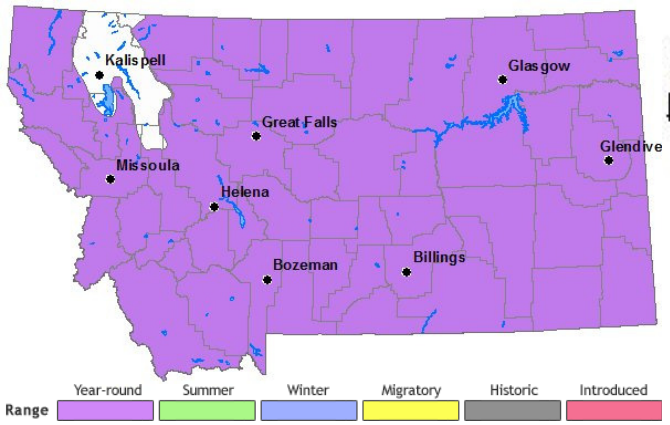
Habitat

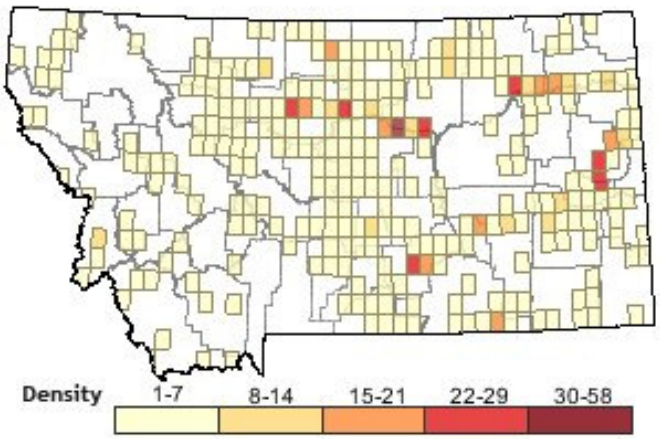
Found in both streams and lakes. Spawns in gravel riffles with strong current or along lake margins (Brown 1971, Huston et al. 1984, Weisel 1957).

Longnose Dace - *Rhinichthys cataractae*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 1656

General Description

The longnose dace has the most widespread distribution of all fish in Montana. It is found throughout all three of our major drainages. It is very adaptable, inhabiting almost every conceivable habitat: muddy and warm, clear and cold, streams and lakes. The largest longnose dace are about 6 inches long. They are well-adapted for living on the bottom of fast-flowing streams among the stones. Longnose dace eat mostly immature aquatic insects. They are probably one of the most important forage minnows for Montana's larger predatory game fish.

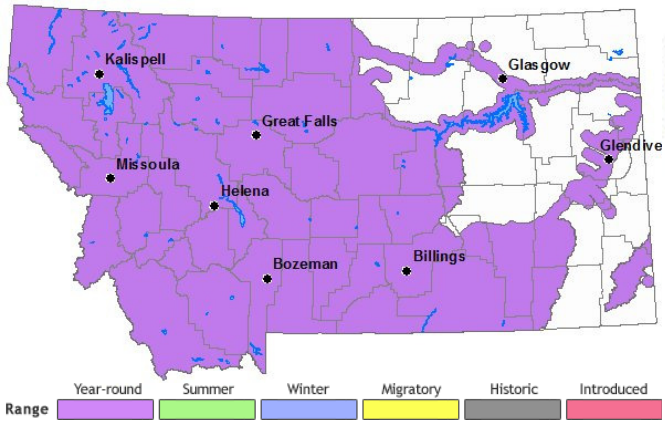
Habitat

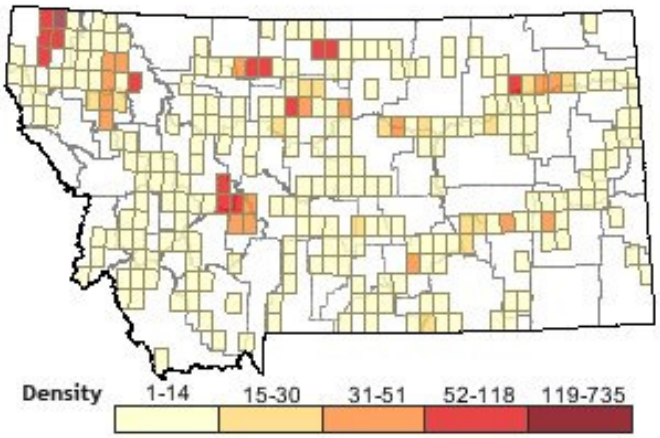
Habitat variable. Found in lakes, streams, springs (Brown 1971). Preferred habitat is riffles with a rocky substrate (Morris et al. 1981, Elser et al. 1980).

Longnose Sucker - *Catostomus catostomus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 7134

General Description

The sucker with the greatest statewide distribution is the longnose sucker. It is found in all three of our major drainages and from mountainous streams to plains reservoir habitats. In Montana the largest weigh about 5 pounds. Longnose suckers are most abundant in clear, cold streams. In the springtime, spawning migrations into small tributaries are common and males develop bright red colors on their bodies. Longnose suckers are one of the most frequently caught fish by Montana anglers.

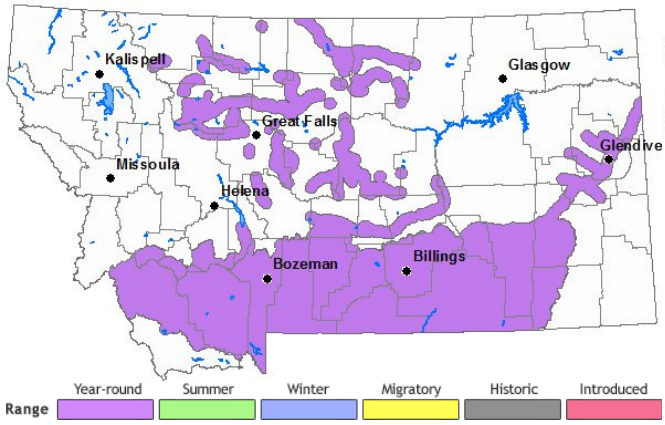
Habitat

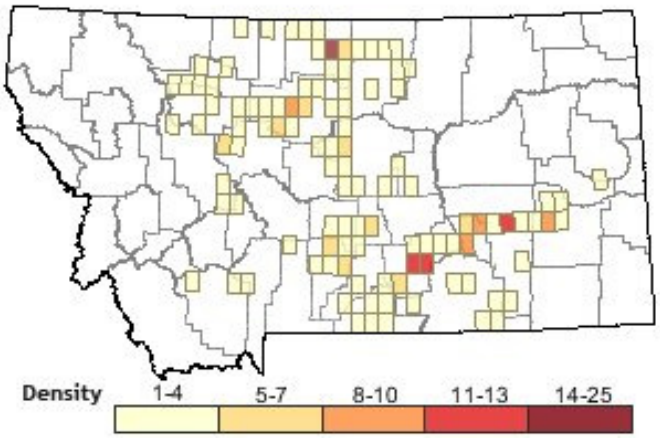
Cold, clear streams and lakes; sometimes moderately warm waters and turbid waters. (FWP) Spawns over loose gravel beds in riffle areas.

Mountain Sucker - *Catostomus platyrhynchus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 401

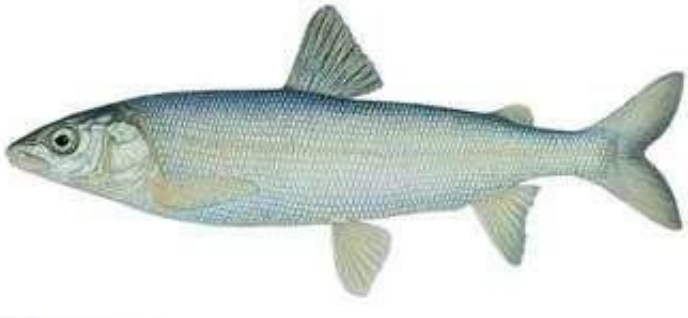
General Description

The mountain sucker has a more limited habitat than other Montana suckers. It is virtually limited to running waters east of the Divide. It also is the smallest sucker in Montana with its largest specimens having a length of about 9 inches.

Habitat

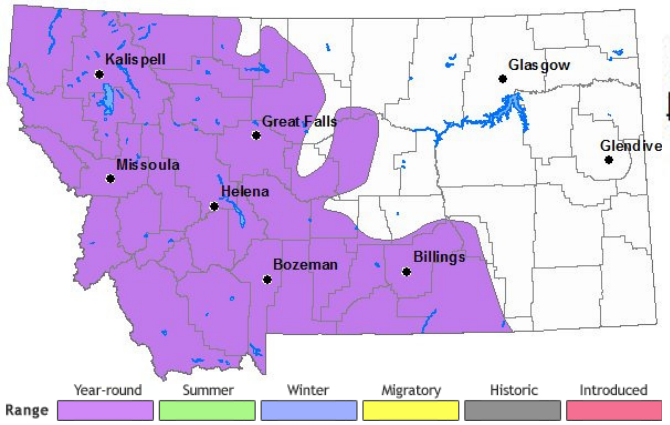
Cold, clear streams with rubble, gravel or sand bottoms; sometimes turbid streams but seldom lakes. Found principally in riffle habitat in middle Missouri River study.

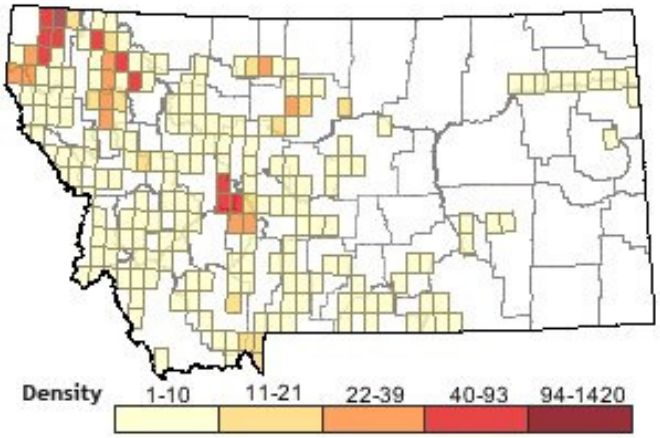
Mountain Whitefish - *Prosopium williamsoni*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 6169

General Description

The mountain whitefish is familiar to most Montanans. This widespread native fish is primarily a stream-dwelling species, but populations are also found in reservoirs and lakes. The mountain whitefish is found in abundance in most clear, cold rivers in the western drainages and eastern mountain front of Montana. The typical mountain whitefish is a cylindrical 10-16 inch fish, but they can reach a weight of 5 pounds. Trout fishermen frequently catch several whitefish for every trout taken. They are considered a nuisance by some anglers, but are sought after by others. Whitefish provide forage for larger trout. They have evolved with our native trout and have been shown to provide little competition with trout. Their pointed snout and small round mouth makes them efficient at vacuuming invertebrates from the substrate while trout tend to feed more on drifting insects. Mountain whitefish often congregate in large schools on their fall-spawning runs to broadcast their adhesive eggs over gravel bars in tributary streams. Mountain whitefish are one of our most important native gamefish because of their abundance and willingness to take a bait or artificial fly.

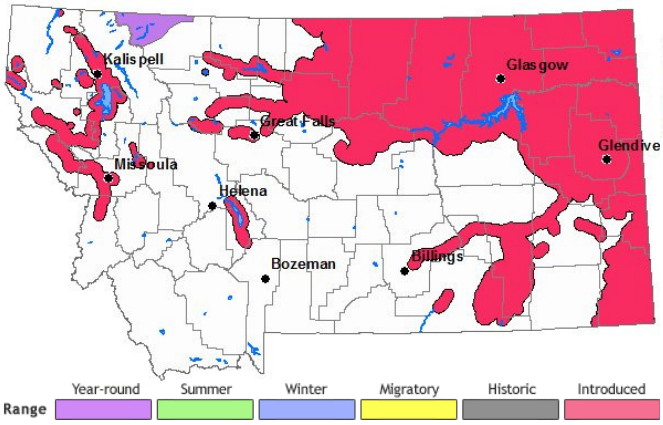
Habitat

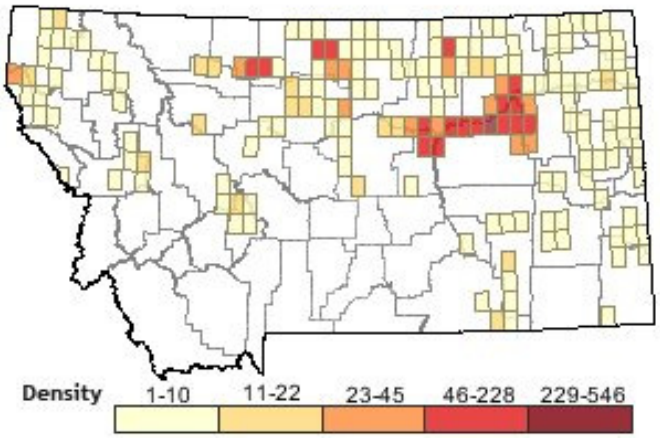
Prefers medium to large cold mountain streams. Also found in lakes and reservoirs. Normally a stream spawner in riffles over gravel or small rubble but has been seen spawning along lake shorelines.

Northern Pike - *Esox lucius*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 8964

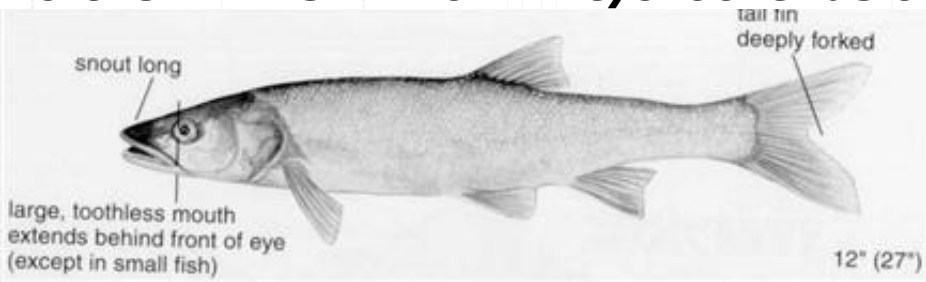
General Description

The northern pike is Montana's lone representative of the pike family. It is native to Montana only in the Saskatchewan River drainage on the east side of Glacier Park. However, widespread introduction, both legal and illegal, now makes the northern pike a common gamefish statewide except for southwest Montana. Northern pike thrive in standing or slow-moving waters of lakes, reservoirs, and streams, especially where dense vegetation grows. Because of their voracious fish-eating habits they can literally eliminate their food supply in only a few years, leaving a population of terminally-stunted "hammerhandles." It is for this reason that widespread illegal pike introductions in western Montana have become a fishery manager's nightmare. And in the prairie streams of eastern MT, pike have caused widespread elimination of multiple native prairie minnow species (that did not evolve with predatory fish) in permanent and intermittent drainages. Northern pike spawn in early spring just after ice-off. They broadcast their eggs over flooded shoreline vegetation. The eggs adhere to the vegetation until the young are ready to swim on their own. Northern pike can grow to nearly 40 pounds in Montana and provide a truly outstanding sport and food fish in the appropriate waters.

Habitat

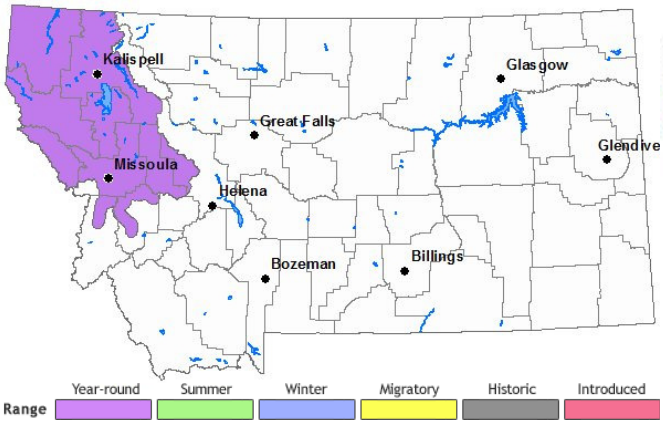
Bays of lakes and reservoirs; pools and backwaters of streams. Seeks areas with dense vegetation. (Holton 2003)

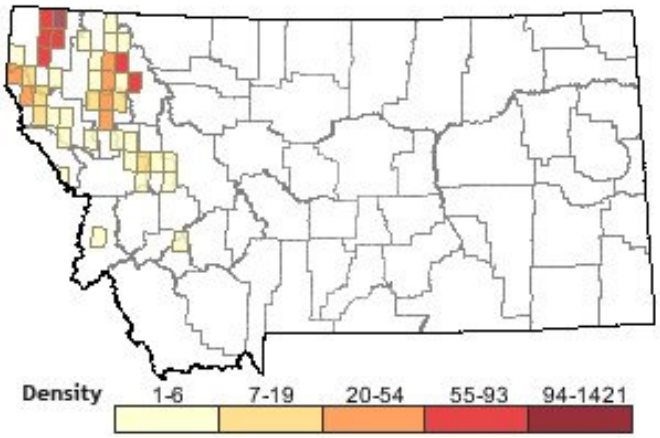
Northern Pikeminnow - *Ptychocheilus oregonensis*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 4344

General Description

The predaceous Northern Pikeminnow is native to Montana west of the Continental Divide. It is somewhat pike-like in appearance with its large mouth and elongated body. Northern Pikeminnow prefer lakes and slow-moving waters. They are considered to be highly undesirable in some situations because they feed on young sport fish. They are effective predators despite their lack of teeth. Northern Pikeminnow are among the largest native North American minnows. Weights of over 7 pounds have been reported in Montana, with weights of nearly 30 pounds reported from Canada. Northern Pikeminnow are readily caught on bait, fly, or lure and put up a good fight but are poor table fare. (FWP) Generally 21-30 cm SL(length); may reach length of 63 cm and mass of 13 kg.

Habitat

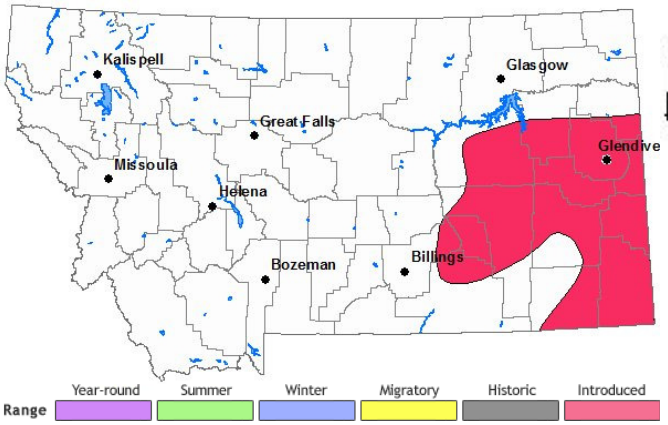
Prefers lakes and slow - flowing streams of moderate size. Young usually school in shallow water near lake shores and in quiet backwaters of streams (Weisel 1957, Brown 1971).

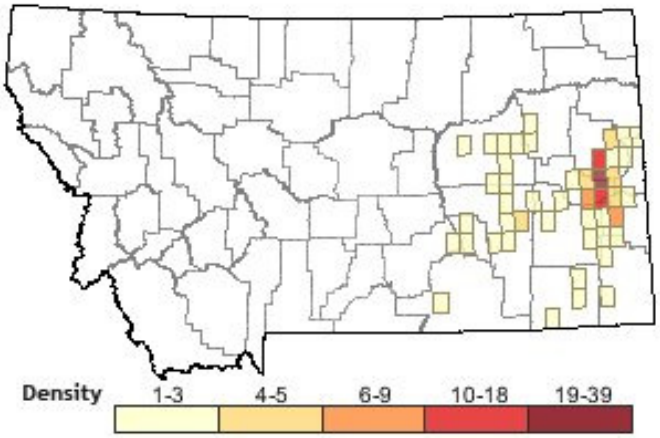
Northern Plains Killifish - *Fundulus kansae*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 199

General Description

The plains killifish has probably been introduced into Montana's eastern drainage. This fish has an unusual appearance for a Montana fish because it bears vertical stripes. It typically inhabits small, low-gradient streams and spawns in the spring by broadcasting its eggs. The plains killifish eats primarily insects and other invertebrates that are taken largely from the surface of the water by its mouth, which is located near the top of its head. Hence, the common name of topminnow. The largest size of this killifish is about 6 inches.

Habitat

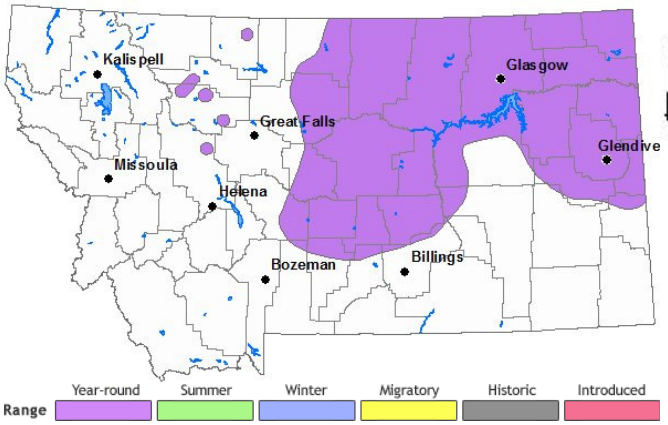
Found in small clear water creeks where substrate is mostly of a silt-clay type. Alkalinity and salinity may be a factor in stream selection.

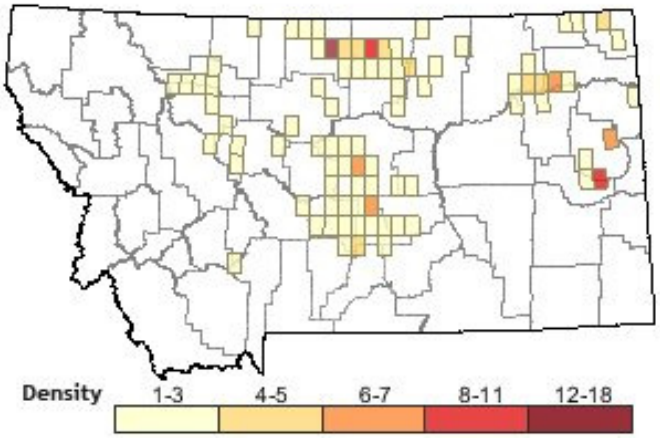
Northern Redbelly Dace - *Chrosomus eos*

~~Species of Concern~~

Global Rank: G5
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 246

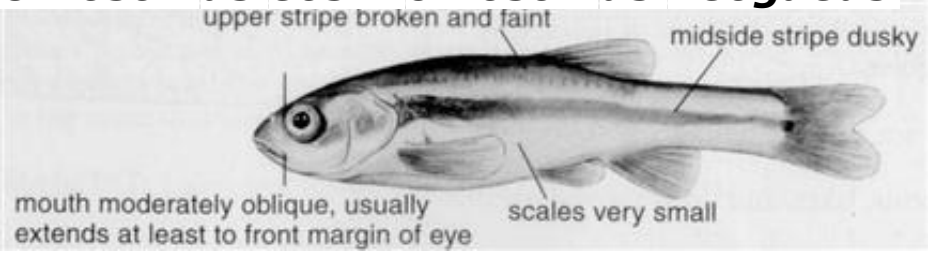
General Description

The Northern Redbelly Dace is another of Montana's small minnows. During the spawning season, this species becomes quite colorful with red flanks. Its maximum size is about 3 inches. In some locations in the northern U.S. and Canada, the Northern Redbelly Dace hybridizes with its close relative, the Finescale Dace. The resultant hybrids are very unusual in that they are all females and produce offspring that are likewise all female. Eggs from the hybrids are "fertilized" by the sperm of Northern Redbelly Dace. It appears that this "fertilization" is necessary for egg development to begin, but curiously none of the genetic traits of the male are incorporated into the fertilized embryo. This type of reproduction is known as gynogenesis and is found in only a few fish and amphibians. Here in Montana we have the Northern Redbelly Dace and the hybrids, but no Finescale Dace. Because of its genetic uniqueness, the Northern Redbelly Dace x Finescale Dace hybrid is a Fish of Special Concern in Montana.

Habitat

Not well-studied in Montana. Northern Redbelly Dace are found in clear, cool, slow-flowing creeks, ponds and lakes with aquatic vegetation, including filamentous algae, and sandy or gravelly bottoms interspersed with silt (Brown 1971). In Stink Creek of northern South Dakota (Morey and Berry 2004), dace were found in a single unconstrained and low-gradient prairie channel with little surface flow at the time (early June). Pools were 26 to 84 cm (1.0 to 3.3 inches) deep in a wetted area about 1.3 m (4.3 ft) wide. Water temperature was 16.6 C, filamentous algae and rooted macrophytes were abundant. In western South Dakota, the range of this species appears to be limited to perrenial streams with slow, clear water and abundant macrophytes and algae (Morey and Berry 2004). In Colorado (Bestgen 1989), the presence of cool springs or cool tributary flow was a consistent feature of Northern Redbelly Dace habitats in prairie streams and marshes. Strong thermal stratification existed in some heavily vegetated ponds. In water < 0.3 m (0.9 ft) deep, surface temperature was 27 C when bottom temperature was 18 C; water < 22 C was present in all occupied habitats. Individuals were usually found in water 0.25 to 1.3 m (0.8 to 4.3 ft) deep and congregated near the shores of ponds >3.0 m (9.8 ft) deep. Substrate in all habitats ranged from black anoxic silt to sand.

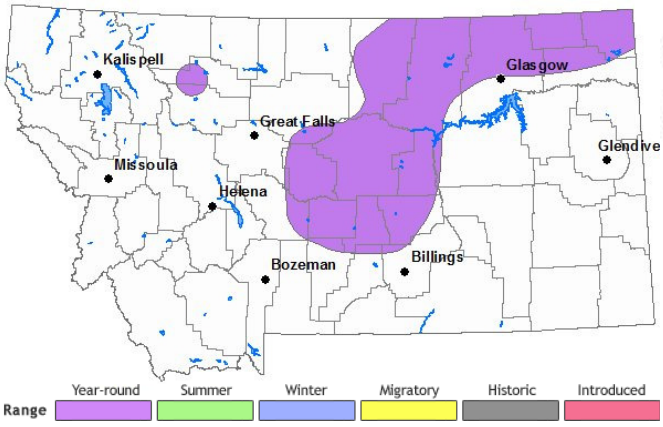
Northern Redbelly X Finescale Dace - *Chrosomus eos x chrosomus neogaeus*

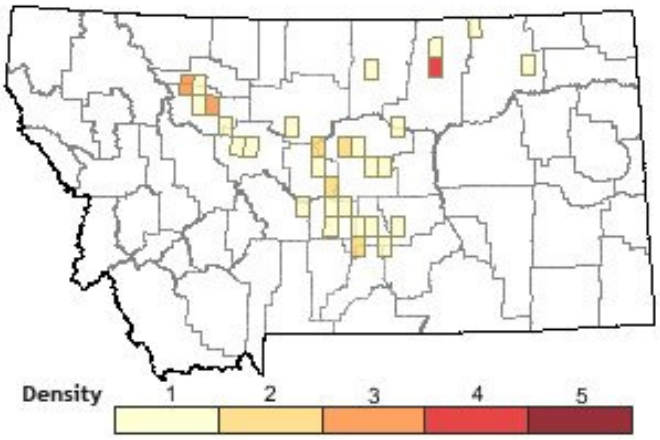


~~**Species of Concern**~~

Global Rank: GNA
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM: SENSITIVE





Number of Observations: 41

General Description

The northern redbelly x finescale dace hybrid (*Phoxinus eos* x *P. neogaeus*) is a Montana Fish Species of Special Concern, Class C (Hunter 1997). It was placed on the species of concern list due to its rarity and unusual form of genetic reproduction (Holton and Johnson 1996). Montana appears to be the only state that designates special status for this hybrid fish (AFS website 2003).

The hybrid is usually larger than the northern redbelly dace and has a larger mouth. The finescale dace has never been recorded for this state. The hybrid persists due to a unique strategy. Typically, hybrid females breed with redbelly dace males, but the male's genetic material is not incorporated during egg development and is not passed on to the next generation. The offspring are all female and clones of the mother (that is, they are genetically identical to the mother). Unisexuality is not common among vertebrates but has been found in amphibians and reptiles as well as in fishes.

Habitat

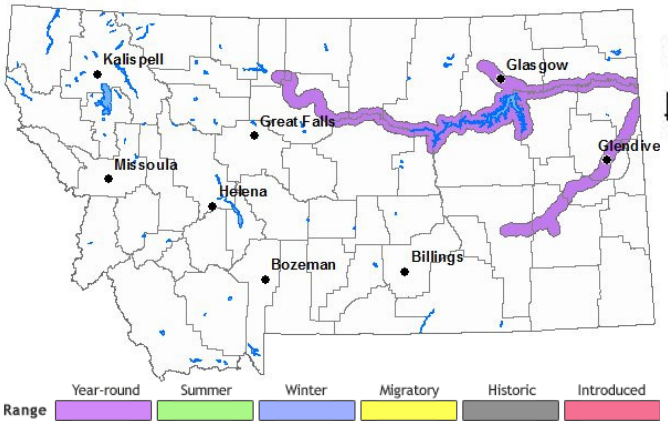
Northern redbelly dace prefer quiet waters from beaver ponds, bogs and clear streams (Scott and Crossman 1973, Holton and Johnson 1996). The finescale dace likes similar habitat but is also found in larger lakes (AFS website 2003).

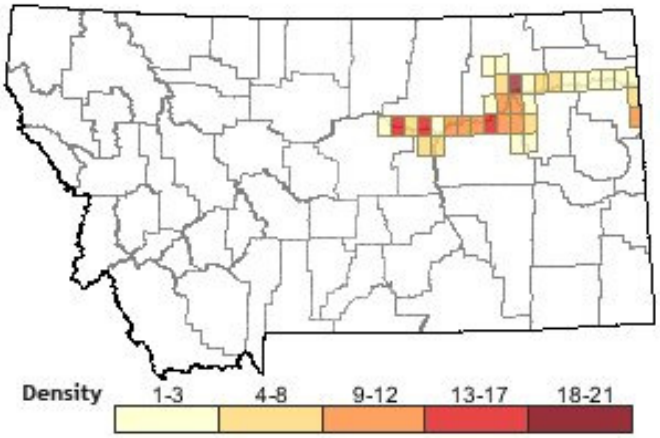
Paddlefish - *Polyodon spathula*

~~Species of Concern~~

Global Rank: G4
State Rank: S1S2

~~**Agency Status**~~
USFWS:
USFS:
BLM: SENSITIVE





Number of Observations: 297

General Description

The paddlefish is an ancient, mostly cartilaginous fish with a smooth skin. It is a close relative of sturgeons. Although it is sometimes called a spoonbill or spoonbill cat, it is not closely related to catfish. Most species of paddlefish are now extinct, and fossil paddlefish from 60 million years ago have been found in the Missouri River basin near Fort Peck Reservoir, Montana (AFS website 2003).

Montana is home to one of the few remaining self-sustaining populations of paddlefish, and harbors the largest individual fish as well. Specimens have been taken weighing up to 150 pounds.

Habitat

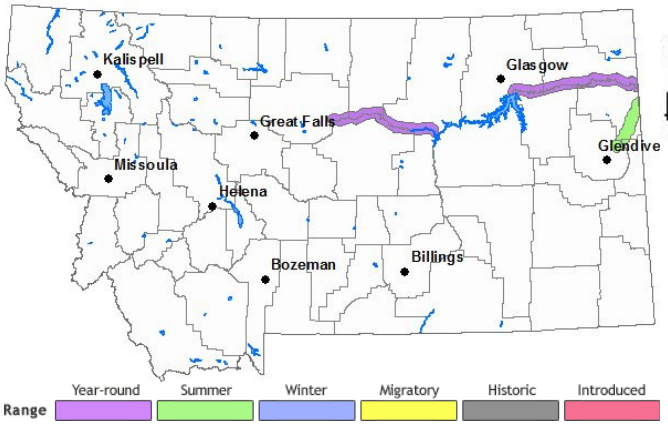
Habitat includes slow or quiet waters of large rivers or impoundments. They spawn on the gravel bars of large rivers during spring high water. Paddlefish tolerate, or perhaps seek, turbid water (Holton 2003).

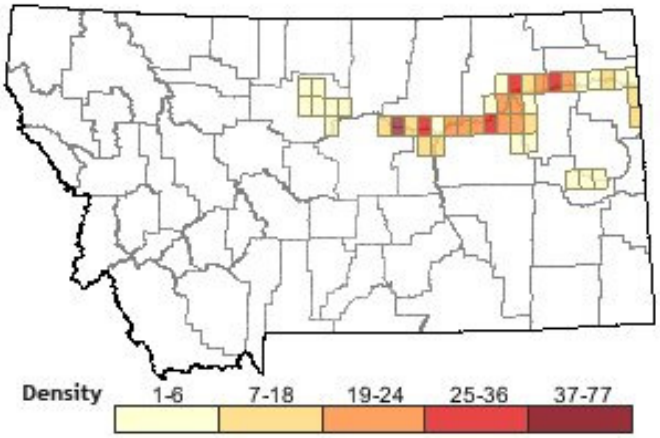
Pallid Sturgeon - *Scaphirhynchus albus*

~~**Species of Concern**~~

Global Rank: G2
State Rank: S1

~~**Agency Status**~~
USFWS: LE
USFS: ENDANGERED
BLM: SPECIAL STATUS





Number of Observations: 783

General Description

The pallid sturgeon is the larger of the two species of sturgeon found east of the Continental Divide. It grows to about 60 pounds. Because it is rare and we know so little about it, the pallid sturgeon is a Montana Fish of Special Concern and is also on the Federal Endangered Species List. This fish is the subject of an ongoing research project (FWP).

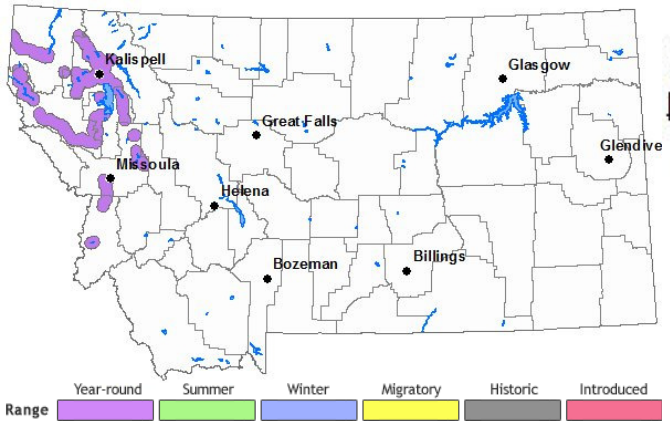
Habitat

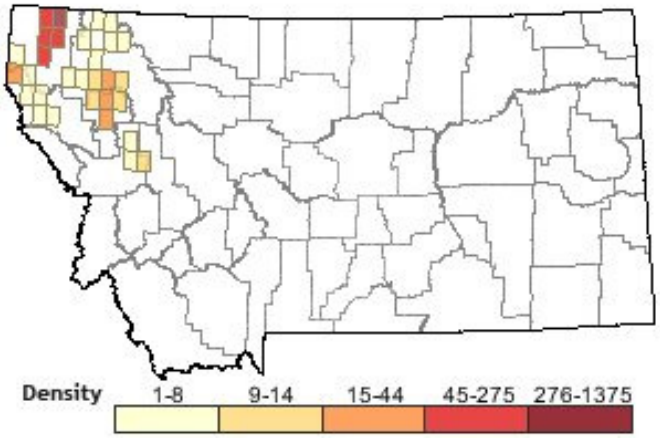
Pallid sturgeon use large, turbid rivers over sand and gravel bottoms, usually in strong current; also impoundments of these rivers (FWP). In Montana, pallid sturgeon use large turbid streams including the Missouri and Yellowstone rivers (Brown 1971, Flath 1981). They use all channel types, primarily straight reaches with islands (Bramblett 1996). They primarily use areas with substrates containing sand (especially bottom sand dune formations) and fines (93% of observations) (Bramblett 1996). Stream bottom velocities ranged between 0.0 and 1.37 meters per second, with an average of 0.65 meter per second (Bramblett 1996). Depths used were 0.6 to 14.5 meters and averaged 3.30 meters, and they appeared to move deeper during the day (Bramblett 1996). Channel widths from 110 to 1100 meters are used and average 324 meters (Bramblett 1996). Water temperatures used ranged from 2.8 to 20 degrees C. (Tews 1994, Bramblett 1996). Water turbidity ranged from 12 to 6400 NTU (Turbidity Units) (Tews 1994).

Peamouth - *Mylocheilus caurinus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 3717

General Description

The peamouth is a native minnow that is found in lakes and the slow waters of rivers west of the Continental Divide in Montana. Its common name probably refers to its small mouth. Specimens can get quite large, up to 14 inches. Unfortunately, at this size they are not likely to be preyed upon and so do not contribute to the food base of predatory sport fishes. Peamouth are unusual in that they can tolerate diluted sea water. This feature has allowed them to colonize some inshore islands off the coast of western North America. Peamouth are schooling fish that feed on aquatic insects and bottom organisms. They can be caught readily on small baits.

Habitat

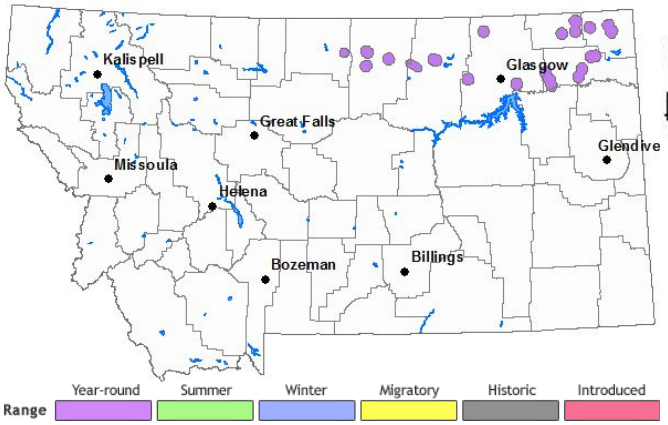
Shallow weedy zones of lakes or rivers.

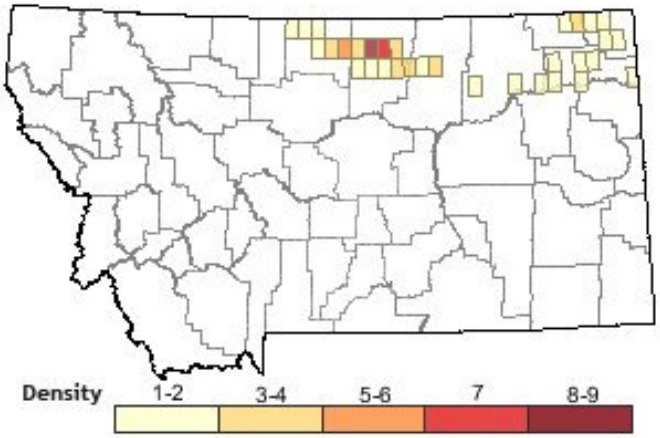
Pearl Dace - *Margariscus margarita*

~~Species of Concern~~

Global Rank: G5
State Rank: S2

~~**Agency Status**~~
USFWS:
USFS:
BLM: SENSITIVE





Number of Observations: 84

General Description

The pearl dace is a native of both the eastern and northern drainages within the Glaciated Plains ecoregion of Montana, and is an indicator species of the Coolwater Northern Redbelly Dace Assemblage. Pearl dace are not abundant at the relatively few sites in cool, small streams and ponds they are known to inhabit, so they are designated a Montana Fish of Special Concern. Unlike most of the minnows, males establish and defend territories during the spawning season. Their diet includes a wide variety of plants and animals. Pearl dace grow to a maximum length of about 6 inches.

Habitat

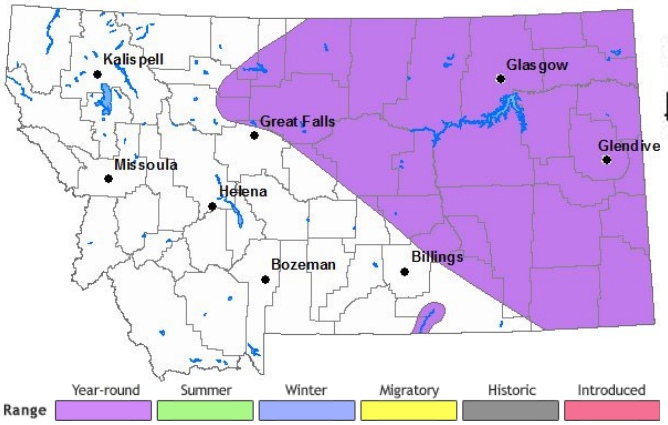
Pearl dace prefer small cool streams, either clear or turbid (Brown 1971). They spawn in clear water at depths of 1 to 2 feet over a gravel or sand bottom (Brown 1971).

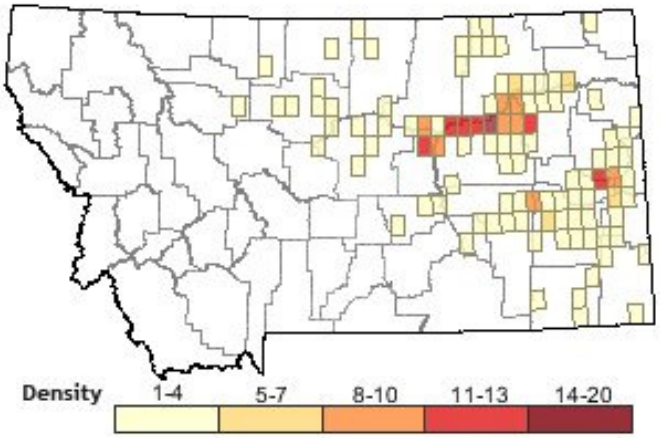
Plains Minnow - *Hybognathus placitus*

~~**Potential Species of Concern**~~

Global Rank: G4
State Rank: S4

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 431

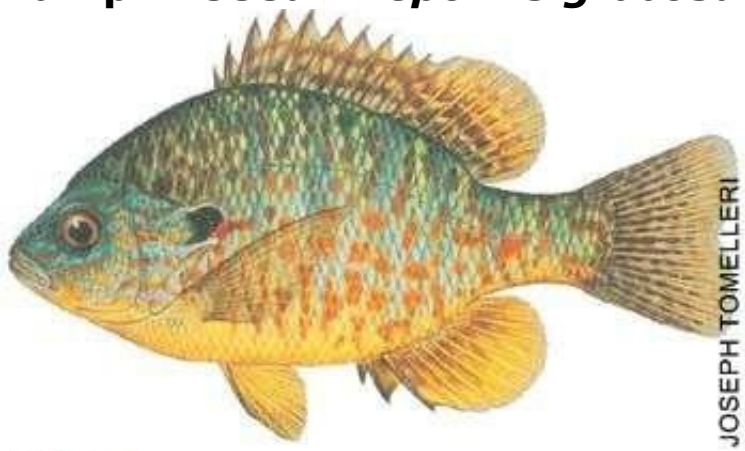
General Description

The plains minnow is similar to the western silvery minnow in many features. It is native, silvery in color, found in the same major drainages and even at the same sites as the western silvery minnow, eats similar foods and attains about the same size. The plains minnow is so similar to the western silvery minnow that the two can only be told apart after making a dissection and examining a certain bone in the head.

Habitat

Habitat for the plains minnow is probably similar to that for the western silvery minnow. Seventy percent of specimens in a southeast Montana study were taken in the mouths of streams, showing their preference for larger streams.

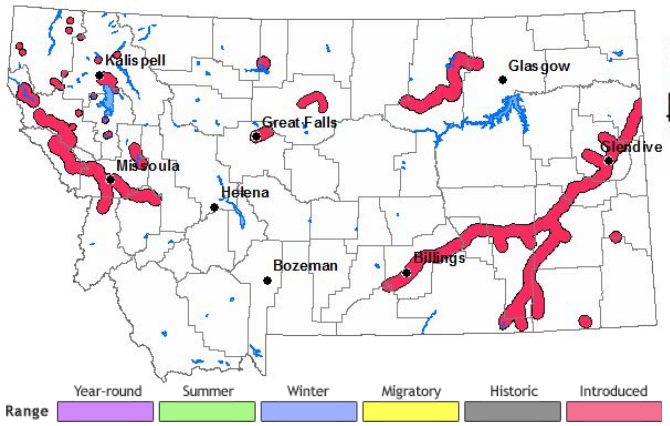
Pumpkinseed - *Lepomis gibbosus*

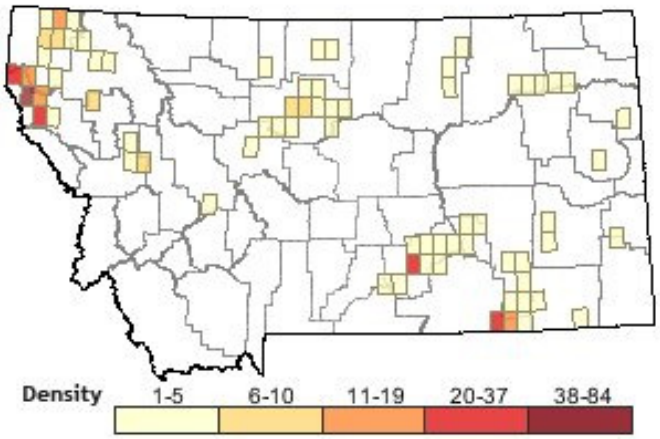


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 651

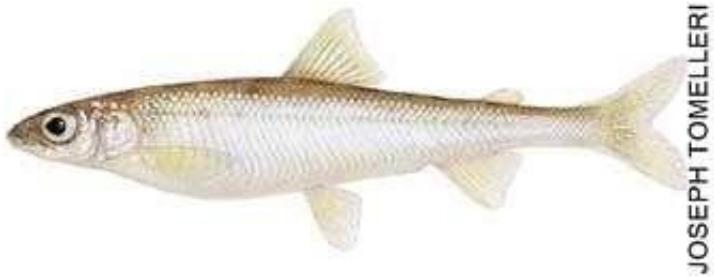
General Description

The pumpkinseed is Montana's most widespread small sunfish, but like the others it has been introduced. Pumpkinseeds were first found here in 1910 in sloughs near Kalispell and now are found nearly statewide except for southwestern Montana. Pumpkinseeds are beautiful little fish, and in their preferred habitat of clear ponds with abundant aquatic vegetation they can grow up to 1 pound and provide some fun fishing. However, most populations are stunted. The pumpkinseed is another example of a fish which has become widespread through illegal introduction.

Habitat

Ponds, small lakes, some large lakes, and slow streams. Prefers quite, clear water with an abundance of aquatic vegetation submerged brush.

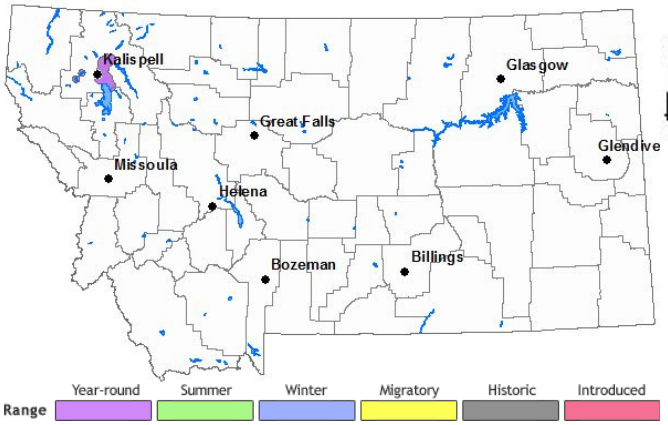
Pygmy Whitefish - *Prosopium coulteri*

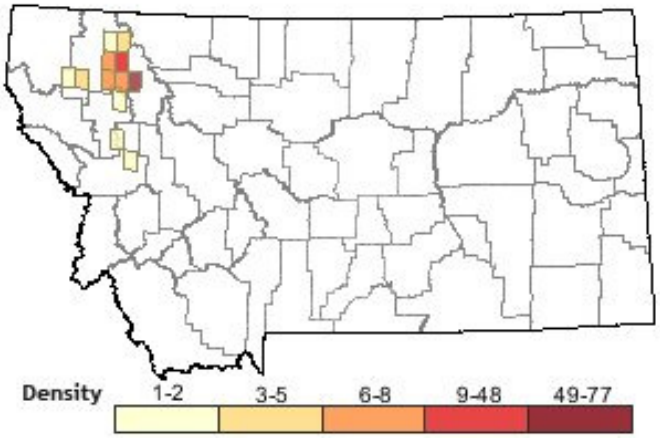


~~Species of Concern~~

Global Rank: G5
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 193

General Description

Pygmy Whitefish are a native salmonid in northwestern Montana. They seldom exceed 15.2 to 20.3 cm (6 to 8 in.) in length. Their overall appearance is silvery or white, except for an olive-brown back. The snout overhangs the mouth, the jaw lacks visible teeth, there is a single flap between the nostrils on each side, the eye is large (about the same diameter as the snout length), the transparent membrane surrounding the eye has a distinct notch below the rear edge of the pupil. The body is round in cross-section, the scales relatively large, with 54 to 79 along the lateral line, 31 to 40 around the body, and 16 to 20 around the caudal peduncle (Brown 1971, Page and Burr 1991, Holton and Johnson 1996).

Habitat

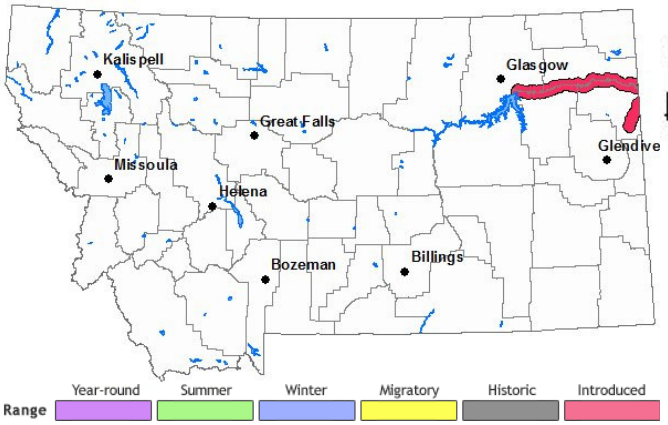
Occupies deep cold-water lakes and their associated tributaries. Classified as adfluvial, hypolimnetic, and lacustrine for the Flathead Lake system (Ellis et al. 2011, supporting materials). Spawning occurs in tributary streams; all stream locations where the species has been found are associated with lakes. In Montana, Pygmy Whitefish have been collected in lakes or their tributary streams including McDonald Lake in Glacier National Park, Bull Lake, Flathead Lake, Ashley Lake, Little Bitterroot Lake, Seeley Lake, and Swan Lake (Brown 1971, Weisel 1954, Weisel at al. 1973). The amount of detritus and sand in Montana stomach samples during May to December is evidence that this species feeds at or near the bottom.

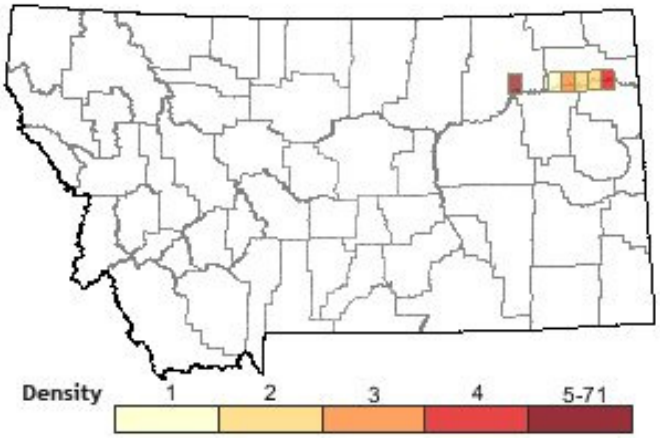
Rainbow Smelt - *Osmerus mordax*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 83

General Description

Montana has one member of the smelt family, courtesy of North Dakota. The rainbow smelt was introduced into Garrison Reservoir in 1971 as a forage fish for sport fishes. In 1979 it was first collected in eastern Montana below Fort Peck Dam. Its adipose fin and strong canine teeth make this species easy to identify. Rainbow smelt are spring broadcast spawners. They live in lake waters most of the time but run into streams to spawn. This species supports a commercial fishery in the Great Lakes, and a sport fishery in the tributaries when they make their spawning runs. Rainbow smelt eat insects, crustaceans and, as adults, fish. It is this latter feature that makes them undesirable as a forage fish. Their maximum size is about 10 inches in length. They are only occasional Montana residents.

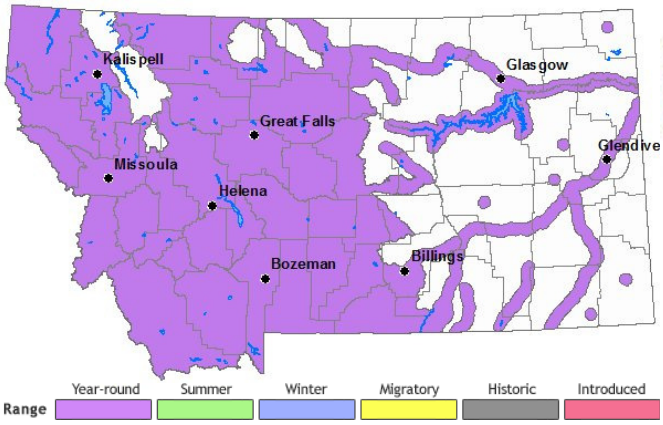
Habitat

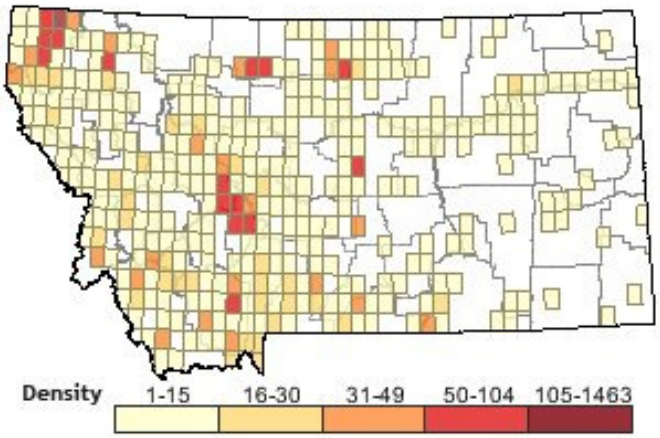
Found in coolwater lakes and associated tributary streams. Usually spawn in streams but also over shallow gravel deltas near shore.

Rainbow Trout - *Oncorhynchus mykiss*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 11077

General Description

The rainbow trout is Montana's number one game fish. Rainbow trout were introduced from numerous hatchery stocks into virtually every suitable habitat in the state, beginning in 1889. Scientists believe that only the rainbow trout of the upper Kootenai River drainage are native to this state. This small group of natives are a Fish of Special Concern. Rainbow trout introductions have caused a severe reduction in the range of the native cutthroat trout through hybridization and competition. Rainbow trout fare well under a wide range of habitat conditions from ponds to reservoirs, lakes, and streams. Various strains of rainbow trout, like breeds of cattle, are used for different purposes. The state has stocked hundreds of millions of rainbow in state waters in the last 100 years. However, today the policies have evolved and rainbow trout are stocked primarily in lakes and reservoirs but no longer in streams. The state record for rainbow trout is over 33 pounds, and fish of up to 10 pounds are common in some of our most productive waters. Rainbow are efficient at feeding on plankton, aquatic and terrestrial insects, and occasionally some smaller fishes. They spawn in early spring in running water, usually April or May, and maintain themselves quite nicely if the habitat is not degraded.

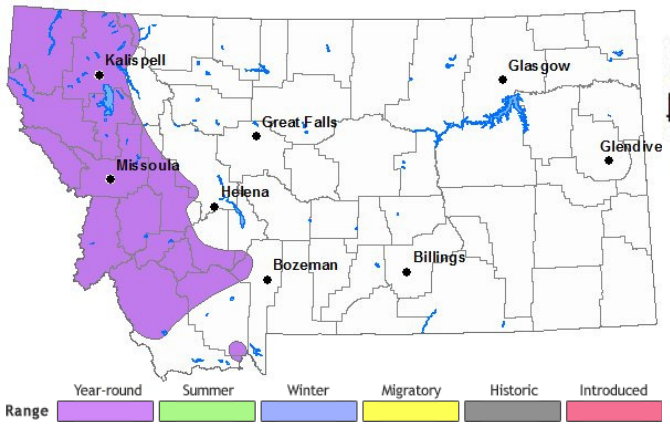
Habitat

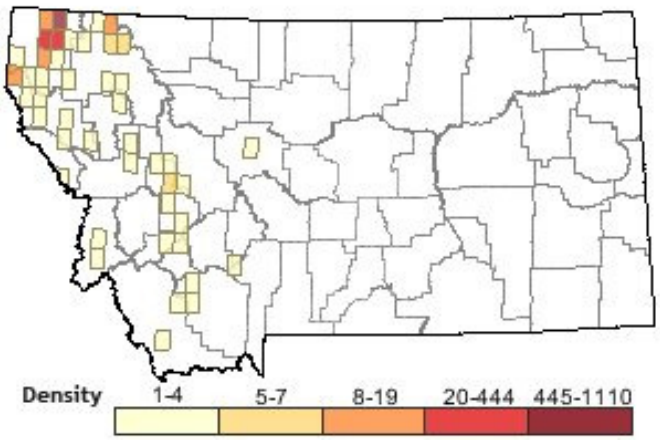
Cool clean streams, lakes, res., farm ponds. Able to withstand wider range of temperatures than most trout. Spawns in streams over gravel beds (Brown 1971, Holton 1981).

Redside Shiner - *Richardsonius balteatus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 2806

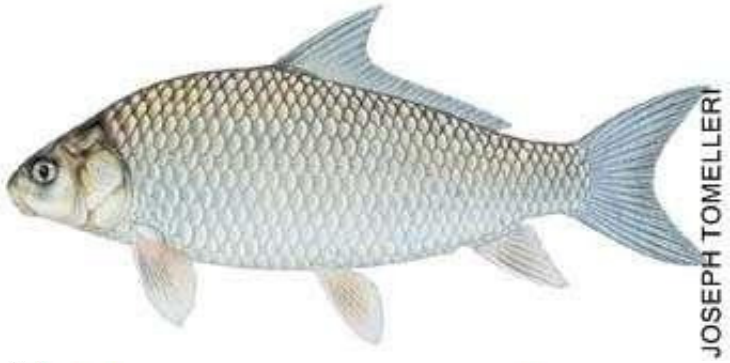
General Description

The redside shiner is native to Montana west of the Divide and has been introduced into our eastern drainage, probably by bait fishermen. It likely was given its common name because red develops on its sides during the breeding season. The preferred habitat of this fish is cold, clear ponds, lakes and the slow water of streams. It can often be found in schools. The largest redside shiners are about 7 inches long. Populations of these fish can reach nuisance proportions in the lakes of western Montana.

Habitat

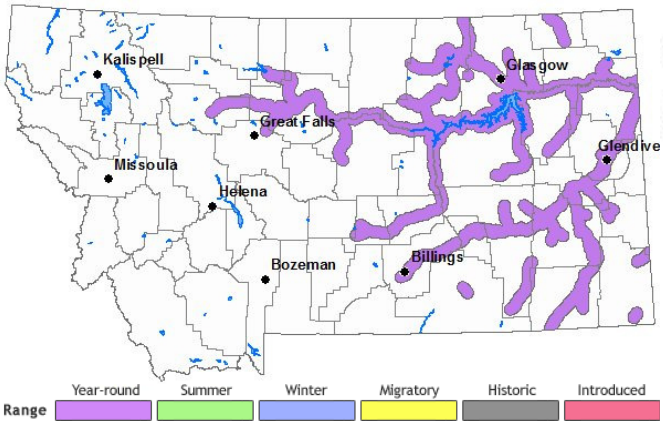
Lakes, ponds, and larger rivers where current is weak or lacking (Brown 1971).

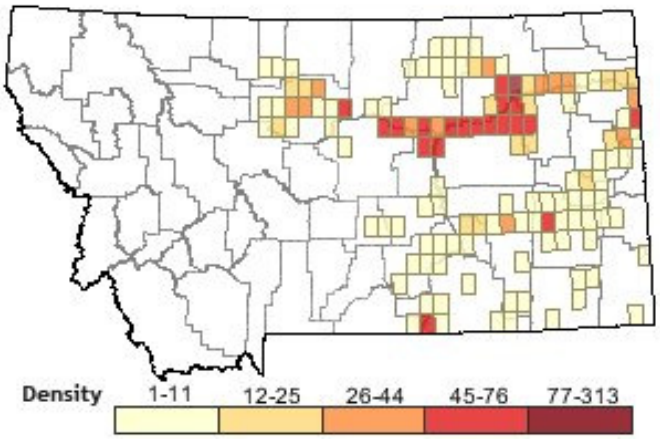
River Carpsucker - *Carpiodes carpio*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 4420

General Description

The river carpsucker has a widespread distribution in warm-water prairie streams, rivers and reservoirs. Only a few individuals reach the largest weight of about 10 pounds. All suckers have long intestines, which is an adaptation for processing detritus and plant material in addition to the insects, snails and clams they pick up from stream and lake bottoms. The chief value of suckers is as forage and bait for sport fishes. Most fishermen believe that suckers compete with trout, but most species of fish that have evolved together as these have developed mechanisms to minimize competition. River carpsuckers are occasionally caught on hook and line.

Habitat

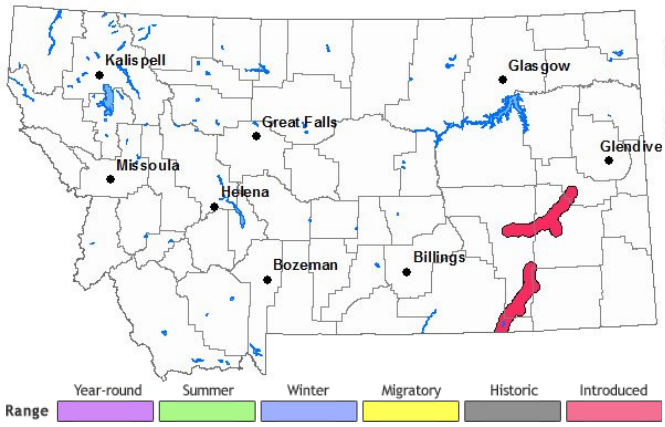
Reservoirs and the pools and backwaters of rivers. Spawn in larger streams with backwater areas.

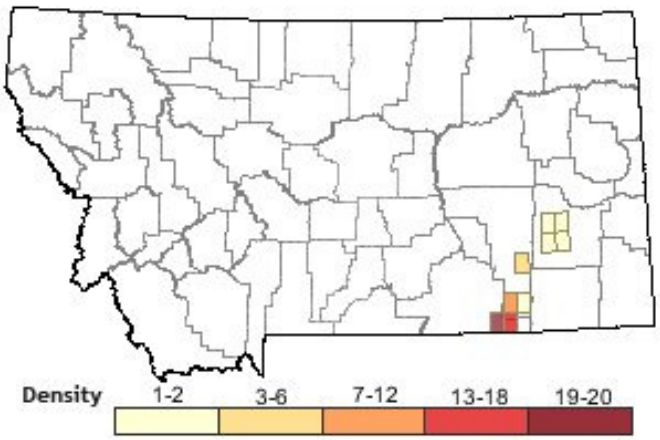
Rock Bass - *Ambloplites rupestris*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 67

General Description

The rock bass is a stout little sunfish with a red eye. They were introduced in Wyoming and found their way downstream in the Tongue River drainage of southeastern Montana, which is presently their only known locale. Montana is apparently too cold for these 6-8 inch sunfish to thrive, and they are of little importance in this state although they are popular panfish elsewhere. All of the sunfishes are important forage fish for northern pike, walleye, and bass.

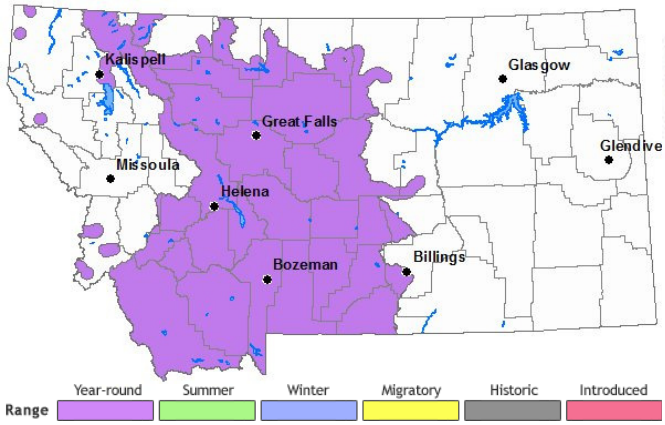
Habitat

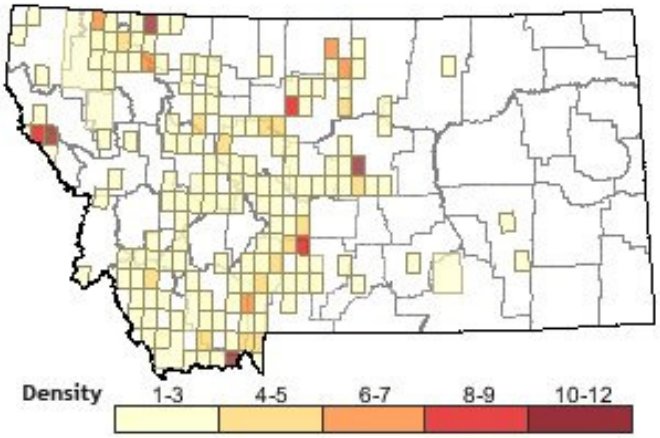
Pools of rocky-bottomed streams; rocky shallow areas of lakes. Seeks moderately warm water. In Montana, found only in Tongue River Drainage.

Rocky Mountain Sculpin - *Cottus bondi*

Global Rank: GNR
State Rank: SNR

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 477

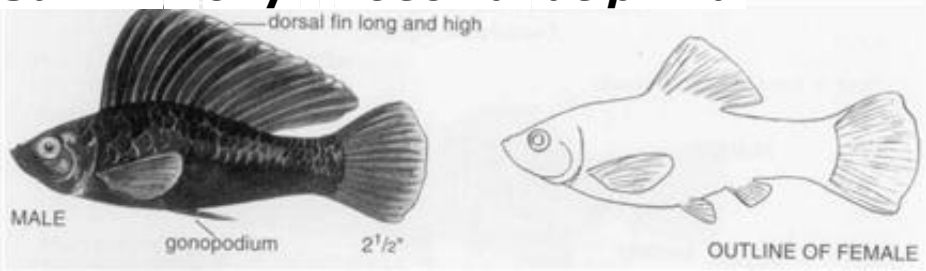
General Description

The Rocky Mountian sculpin is a species that was previously known as the mottled sculpin (Cottus bairdi) in Montana, but recent genetic work has proven that the mottled sculpin doesn't exist this far east and the "mottled" sculpin in MT is more closely related to the sculpins of Russia than to the eastern US. Cottus bondi has been described from British Columbia with similar relatives in Alberta and likely Idaho. This species is highly camoflaged with it's surroundings as it blends in with the rocks (see picture). The Rocky Mountian sculpin is a native fish, widespread in Montana in mountain streams east and west of the Continental Divide. Like all sculpins, this species is a benthic invertivore meaning it eats primarily aquatic insects. They occasionally eat small fish or trout eggs but this is not a large part of their diet.

Habitat

They prefer riffle and run areas of fast to moderately-flowing streams that are clear and have cobble to gravelly benthic substrates.

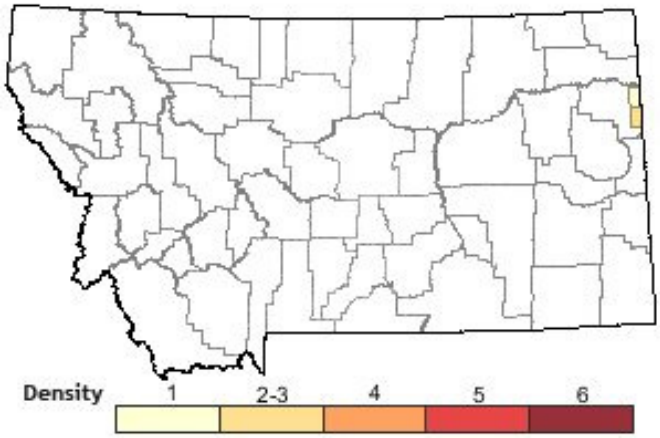
Sailfin Molly - *Poecilia latipinna*



~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:



Number of Observations: 4

General Description

This tropical aquarium fish is an illegally released pet fish. The native range is southeastern United States, Mexico, and Central America.

Habitat

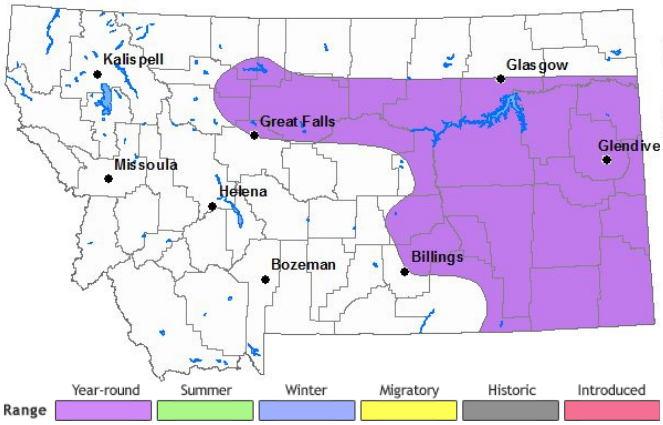
The only natural habitats suitable for tropical fishes in Montana are warm springs and ponds or small streams resulting from such springs.

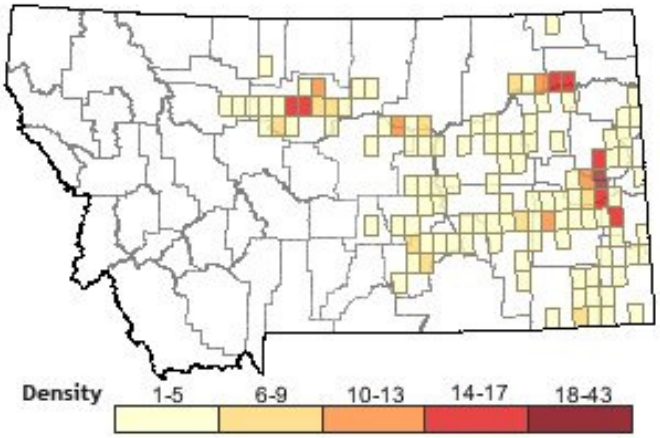
Sand Shiner - *Notropis stramineus*

JOSEPH TOMELLERI

Global Rank: G5
State Rank: S4

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 644

General Description

The smallest of the shiners in Montana is the sand shiner. This species is native to the plains area of eastern Montana, where it lives in schools, primarily in clear streams with sandy bottoms. It attains a length of about 3 inches and so is too small to be used much as a bait minnow. The sand shiner is one of our least known minnow species.

Habitat

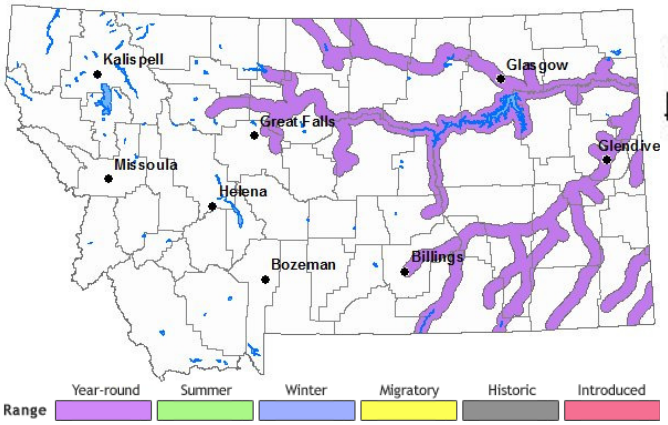
Streams both large and small, with clear water, rapid current, and sand or gravel bottom; also sandy shallows of lakes. Southeast Montana study showed widest distributions at mouth sections of study streams.

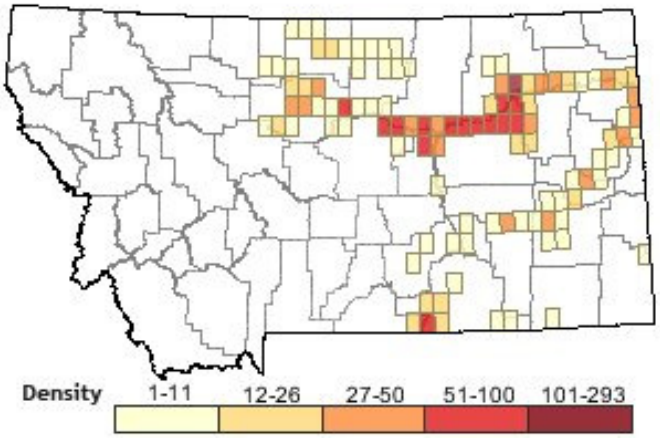
Sauger - *Sander canadensis*

~~Species of Concern~~

Global Rank: G5
State Rank: S2

~~**Agency Status**~~
USFWS:
USFS:
BLM: SENSITIVE





Number of Observations: 4771

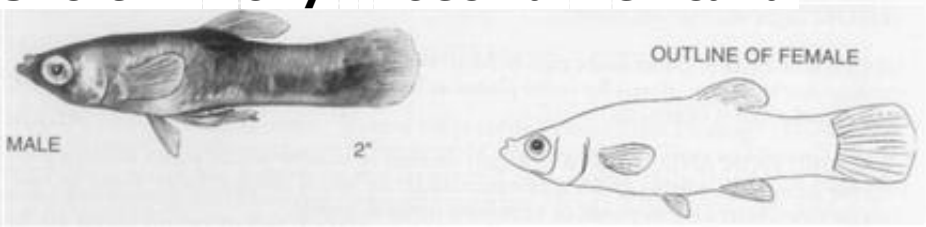
General Description

The sauger is native to Montana east of the Continental Divide. It inhabits both large rivers and reservoirs, but is mainly a river fish. In the spring, sauger broadcast their spawn over riffles in rivers. Sauger are a highly prized sport fish and in some areas outside Montana are also commercially fished. Their major food items are insects and small fish.

Habitat

Sauger inhabit the larger turbid rivers and the muddy shallows of lakes and reservoirs. They spawn in gravelly or rocky areas in shallow water and seem to prefer turbid water.

Shortfin Molly - *Poecilia mexicana*



~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

This tropical aquarium fish is an illegally released pet fish. The native range is southeastern United States, Mexico, and Central America.

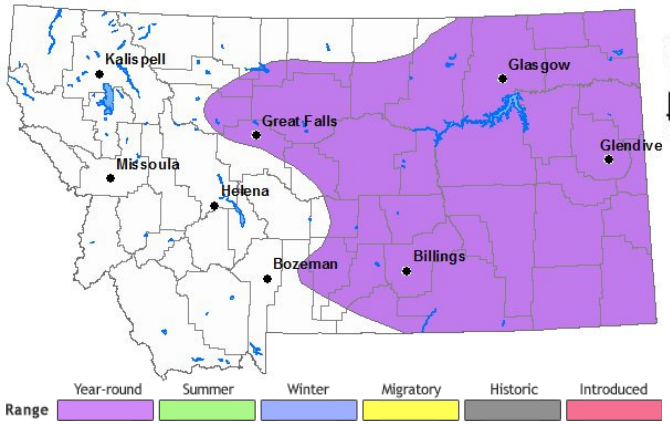
Habitat

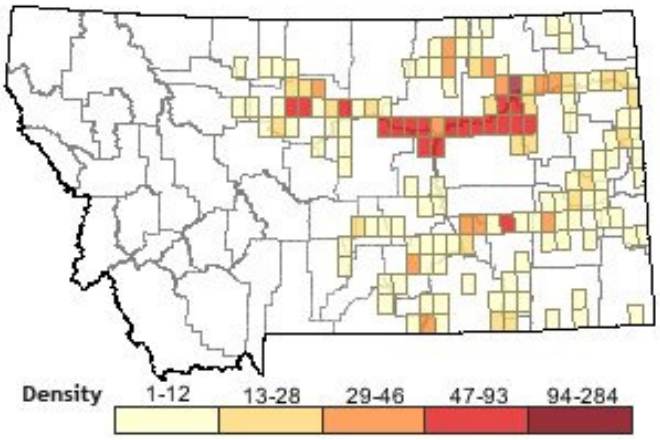
Can exist in Montana only in warm springs of ponds and streams resulting from these.

Shorthead Redhorse - *Moxostoma macrolepidotum*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 5264

General Description

The shorthead redhorse is native to Montana and typically found in the shallow, swift waters of larger rivers in our eastern drainage. Its maximum size in Montana is about 5 pounds. Their natural silver-green coloration is offset by bright red fins. Shorthead redhorse are frequently caught on baited hooks.

Habitat

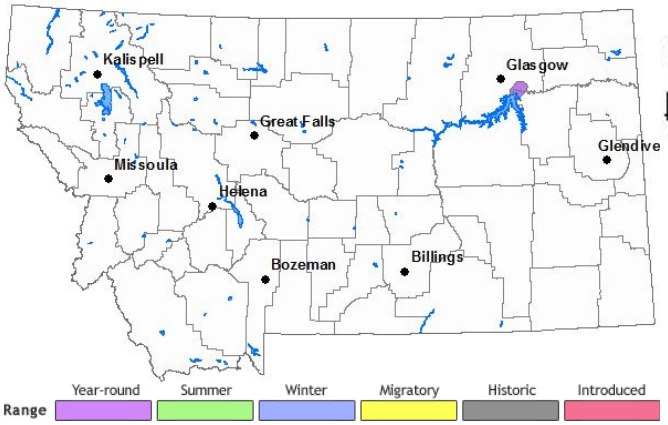
Moderately large rivers with sand, gravel or rocky bottom, intermediate temperatures, and swift current.

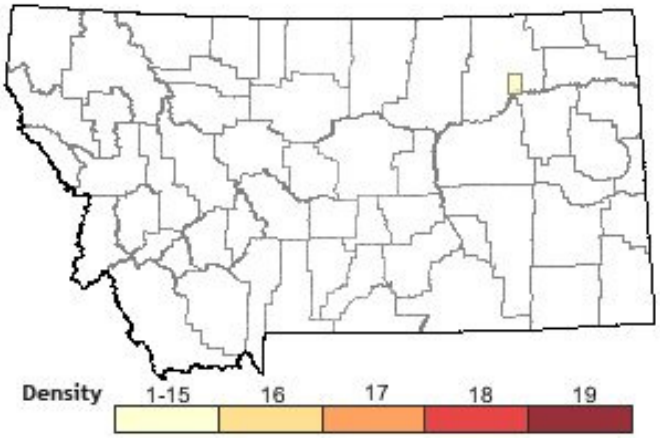
Shortnose Gar - *Lepisosteus platostomus*

~~Species of Concern~~

Global Rank: G5
State Rank: S1

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 15

General Description

The gar family has only one representative in Montana, the shortnose gar. This fish is native to Montana and is found at only one location--the dredge ponds below Fort Peck Reservoir. Because of its restricted distribution and limited population size, it has been named a Montana state Fish of Special Concern. Gars are predaceous. They are spring, broadcast spawners. They have several unusual features including rectangular scales found only in primitive fishes, and a gas bladder that can function like a lung. All fish have gas bladders, which they use to regulate their buoyancy, but the gas bladder of a gar can extract the oxygen from air that is swallowed. Consequently, gars can survive in waters that have very little oxygen where most other fish would perish. Gar eggs are poisonous to humans.

Habitat

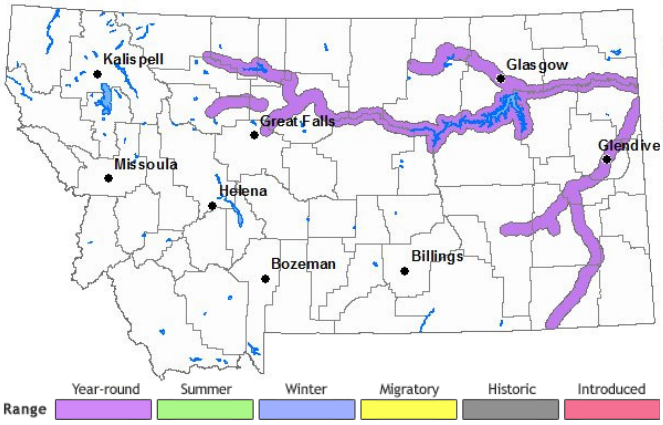
Shortnose gar are typically found in large rivers, quiet pools, backwaters, and oxbow lakes. It has a higher tolerance to turbid water than the other four gar species found in North America (AFS website 2003).

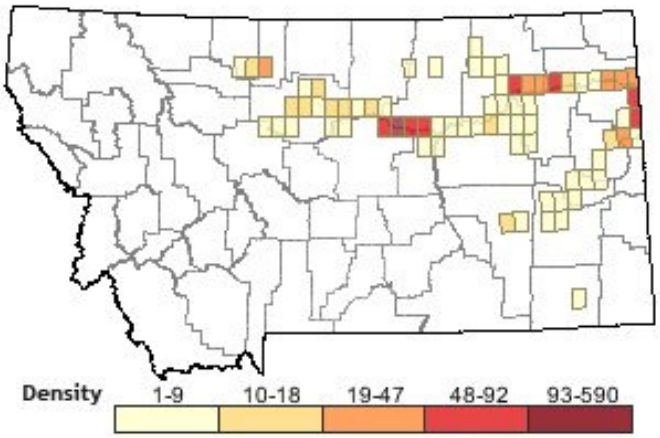
They are found in dredge cuts below Fort Peck Dam (Holton 2003).

Shovelnose Sturgeon - *Scaphirhynchus platorynchus*

Global Rank: G4
State Rank: S4

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 2906

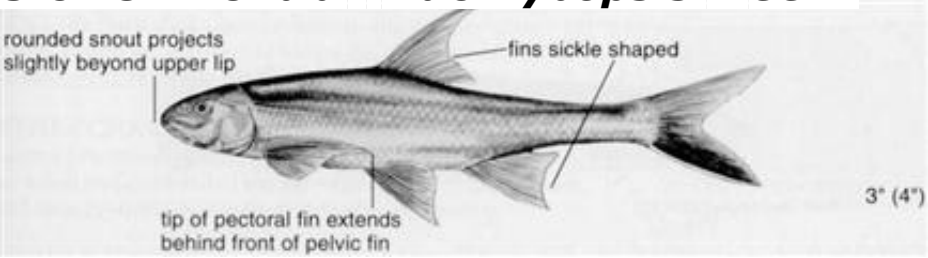
General Description

The smallest and most common sturgeon in Montana is the shovelnose sturgeon. It reaches a maximum weight of about 15 pounds. These fish can readily be taken on bait fished on the bottom and are pursued by relatively few anglers in the Missouri River downstream from Great Falls.

Habitat

Large rivers over sand or gravel, often in strong current; also impoundments of these rivers. Tolerates turbid water. (FWP) In Montana, shovelnose sturgeon appear to utilize primarily large rivers (Bramblett 1996), but also use reservoirs to some extent. They are found in all channel types, primarily in straight reaches with islands (Bramblett 1996). They are found at depths ranging from 0.9 to 10.1 m and averaged 2.29 m (Bramblett 1996). Channel widths used are from 25 to 800 m, and averaged 208 m (Bramblett 1996). Bottom velocities range from 0.00-1.51 m/s, and average 0.78 m/s in riverine habitat (Bramblett 1996). They tolerate high turbidity. Spawning substrate is silt-free gravel bars; preferred substrate use year-long is primarily gravel and cobble (69%), while fines and sand (27%) are avoided (Bramblett 1996). However, small sturgeon (<5kg) may use areas over larger substrates (Erickson 1992).

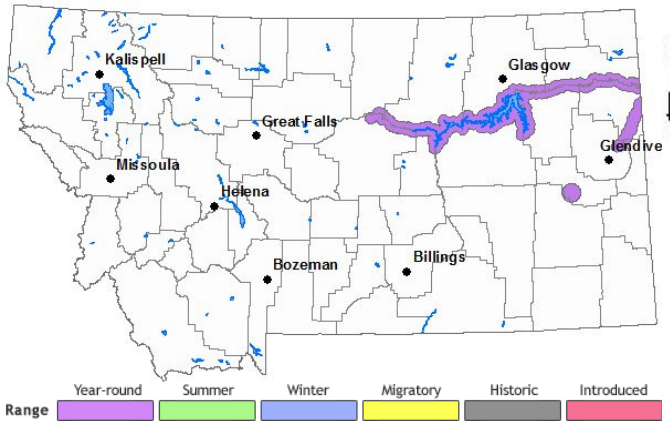
Sicklefin Chub - *Macrhybopsis meeki*

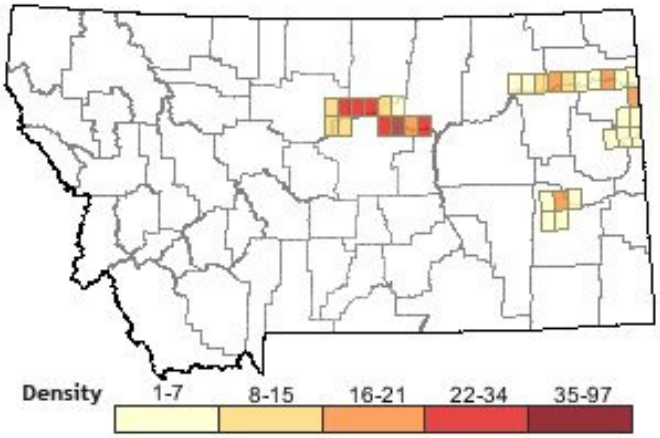


~~Species of Concern~~

Global Rank: G3
State Rank: S1

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 645

General Description

The sicklefin chub is apparently one of the rarest fishes in Montana. It is a native form first collected in 1979 and to date has only been found at three sites. Because it is rare, it is a Montana Fish of Special Concern. Its general habitat and distribution is much like that of the sturgeon chub. The sicklefin chub is found in large, turbid streams in the plains region of Montana. This species is very similar in appearance to the sturgeon chub except that its pectoral fins are strikingly long. The life history features and maximum size of the sicklefin chub are similar to those of the sturgeon chub.

Habitat

Sicklefin chub are strictly confined to the main channels of large, turbid rivers where they live in a strong current over a bottom of sand or fine gravel (Pflieger 1975).

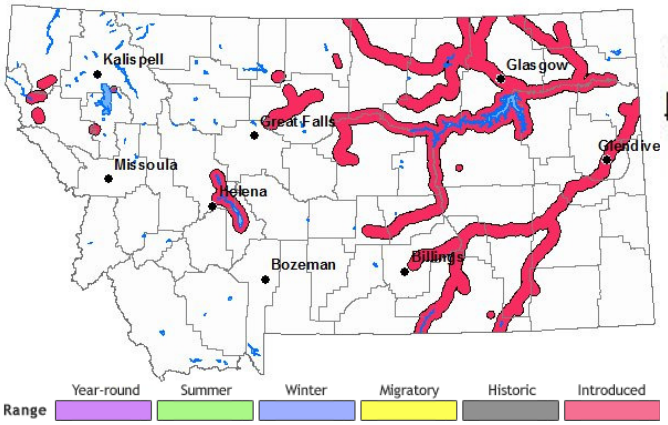
Unlike the sturgeon chub, all of the Montana captures have been from only the Missouri and Yellowstone rivers, indicating a strong preference for large turbid rivers (AFS website 2003).

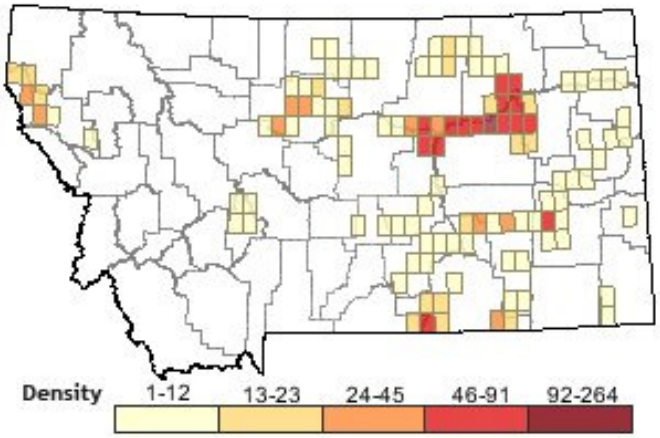
Smallmouth Bass - *Micropterus dolomieu*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 4115

General Description

The smallmouth bass has been called "pound for pound the best fighting game fish alive." Smallmouth are native to eastern central North America but were widely propagated in hatcheries and planted as early as the mid-1800s. They were first transplanted to Horseshoe Lake near Bigfork in 1914 and are still being introduced in selected locations by the Department of Fish, Wildlife and Parks. Smallmouth bass are primarily a stream fish but are also doing well in reservoirs like Fort Peck and Tongue River where specimens over 5 pounds have been taken. Smallmouth are spring, nest-building spawners. Due to erratic spring weather, nesting failure in Montana is not unusual. Smallmouth bass eat insects, frogs, crayfish, and fish.

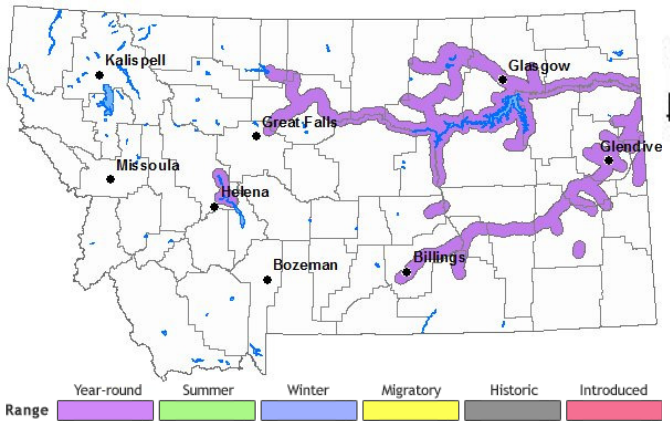
Habitat

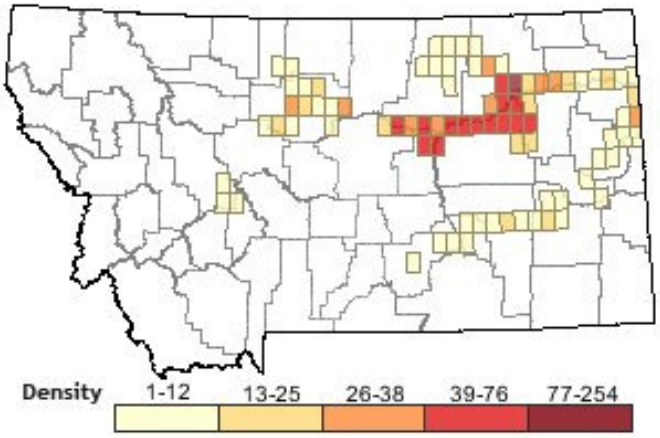
Prefers clear cool water and rocky substrates in both rivers and lakes. In streams, it prefers riffle areas with clean bottoms. In lakes, it prefers rocky shorelines, reefs, out- croppings, gravel bars, etc.

Smallmouth Buffalo - *Ictiobus bubalus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 3409

General Description

Montana's two buffalo fishes are both found east of the Divide. They are both large, heavy, deep-bodied fishes with long dorsal fins. They prefer reservoirs and larger rivers. In past years there has been a small commercial fishery for them in Fort Peck Reservoir. The smallmouth buffalo is the smaller of the two. They are generally bottom feeders and are reportedly good to eat, but bony.

Habitat

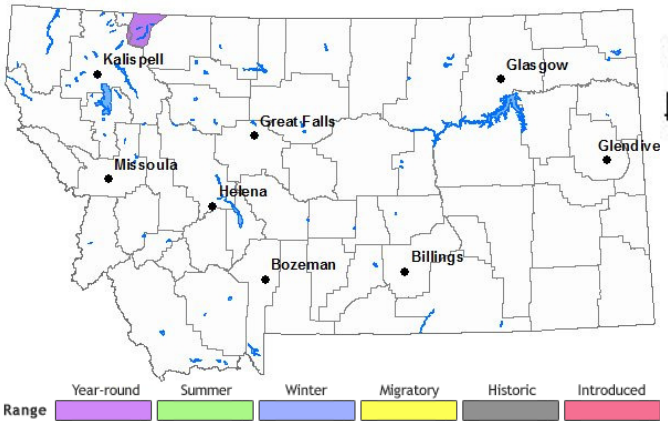
Found in rivers and impoundments in both shallow and deep water over firm bottoms. Spawn in larger streams with backwater areas.

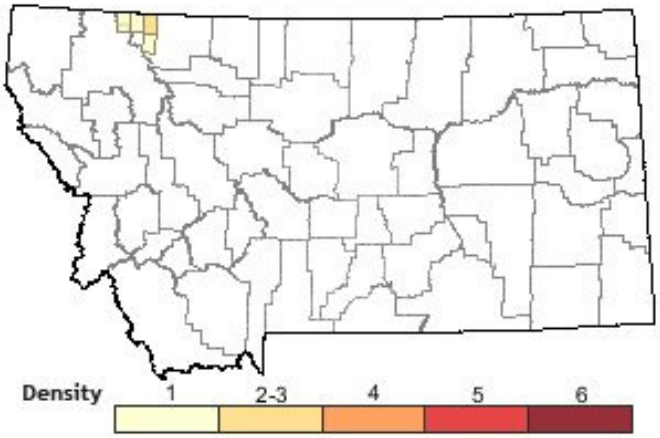
Spoonhead Sculpin - *Cottus ricei*

~~**Species of Concern**~~

Global Rank: G5
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 6

General Description

The spoonhead sculpin is another native Montana Fish of Special Concern due to its limited Montana distribution. Spoonheads are found only in the St. Mary and Waterton river drainages of Glacier National Park, which ultimately drain into Hudson Bay. They inhabit deep lakes as well as streams and provide forage for lake trout, burbot, and other species.

Habitat

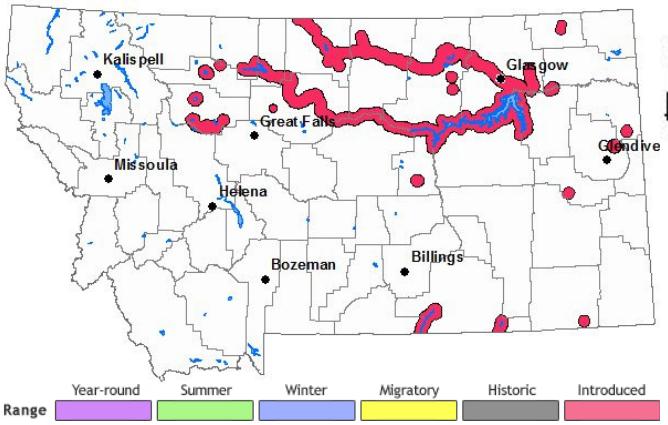
Habitat includes small, swift streams to larger rivers, and the shallows and deep water of lakes. They have been taken at depths of over 100 feet.

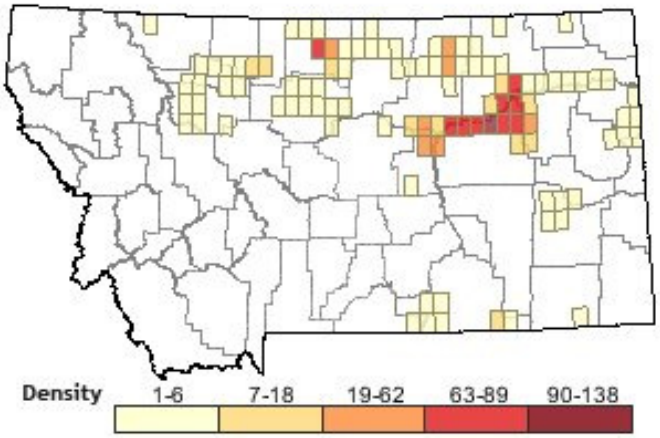
Spottail Shiner - *Notropis hudsonius*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 2173

General Description

The spottail shiner is a relatively new member to Montana's fish fauna. It was introduced into Ft. Peck from the midwest in 1982 to serve as forage for sauger, walleye and northern pike because it is a shoreline inhabitant and thus lives in the same habitat as those predators. As the name suggests, they have a prominent black spot at the base of the tail. Spottails have become well established and have increased their range within the reservoir. Maximum length is about 5 inches.

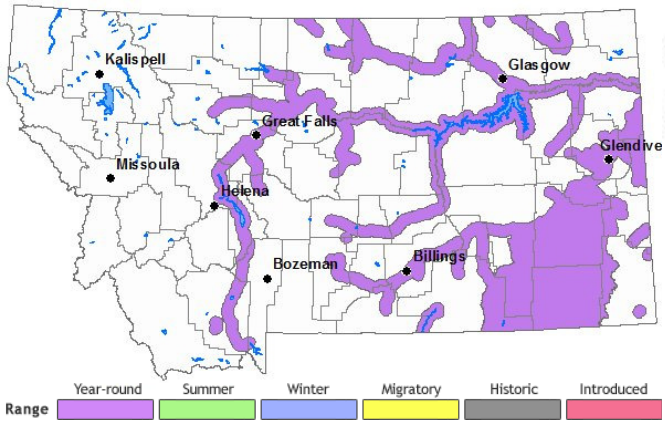
Habitat

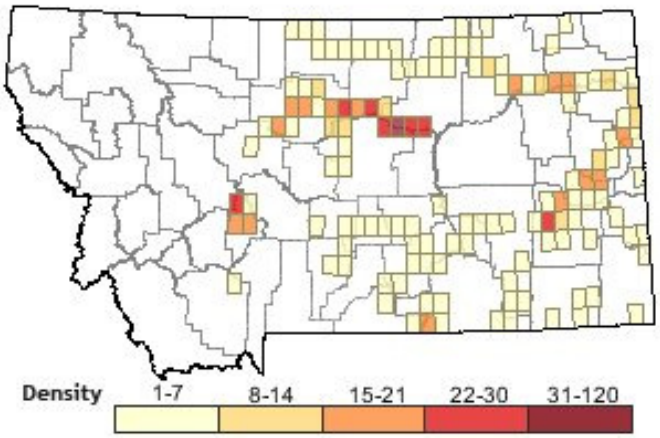
Large lakes an rivers. Usually spawn over sandy shoals of lakes and, to a lesser degree, in lower reaches of tributary streams. A shoreline species. Avoids strong currents.

Stonecat - *Noturus flavus*

Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 1490

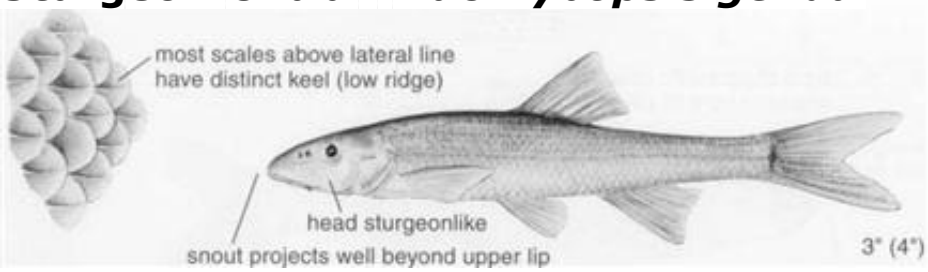
General Description

The stonecat is our other native catfish species. It is widespread throughout all of eastern Montana, preferring to live in cracks and crevices of rocks and logs in streams or on wave-swept shorelines of lakes. Like other catfish, it is an early-summer nest-building spawner. Stonecats seldom exceed 8-10 inches in length and thus do not provide a sport fishery. They are, however, renowned for inflicting a nasty sting on those who handle them and are unfortunate enough to be poked by the spines on their pectoral or dorsal fins.

Habitat

Swift-water areas of streams among rocks or under logs; also lakes over sand and gravel bottom where there is wave action. Found mainly in flowing water over rocky substrates in lower Yellowstone River drainage study. Also found in riffle habitat in middle Missouri River study.

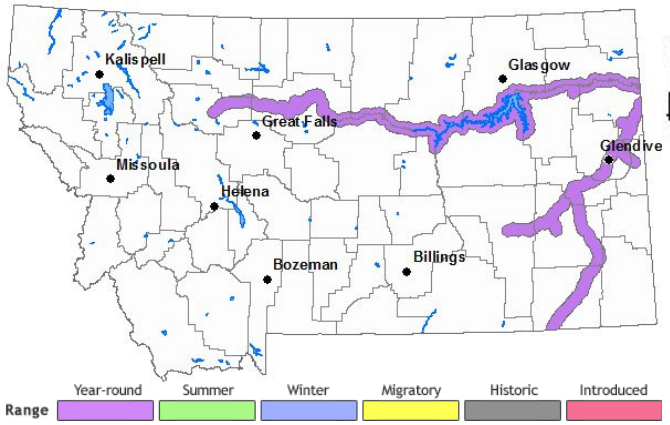
Sturgeon Chub - *Macrhybopsis gelida*

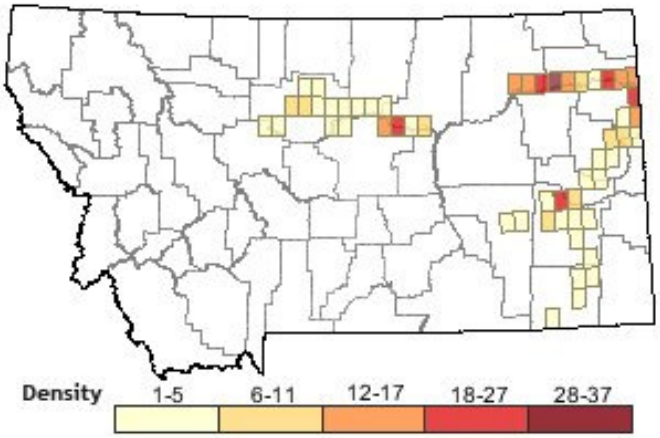


~~Species of Concern~~

Global Rank: G3
State Rank: S2S3

~~**Agency Status**~~
USFWS:
USFS:
BLM: SENSITIVE





Number of Observations: 561

General Description

The sturgeon chub is one of several native minnows found in the eastern MT prairie river drainages (Missouri, lower Yellowstone and Powder Rivers) and is an indicator species of the Large Mainstem Warmwater River Fish Assemblage that includes other big river species--the sicklefin chub, shovelnose sturgeon, freshwater drum and blue sucker. This fish is so named because its mouth is ventral and its snout is long and overhangs the mouth, somewhat like the snout of the sturgeon. Sturgeon chubs have been rarely collected in the past and were placed as a candidate on the Endangered Species list in 1994, but were removed from consideration in 2001 with more collection efforts. They are a Fish Species of Special Concern in Montana (and 9 other states) due to extensive loss of habitat in the Missouri and Bighorn River systems. They are typically found in the rapid, gravelly turbid waters in larger, plains rivers. They are benthic invertivores using their ventral mouth to feed on bottom-dwelling insects; a short intestine also indicates they do not consume plant materials to a large degree. Sturgeon chubs attain a maximum length of about 4 inches and spawn over gravels in June to July.

Habitat

Sturgeon chub are found in turbid water with moderate to strong current over bottoms ranging from rocks and gravel to coarse sand (Brown 1971, Holton 1980).

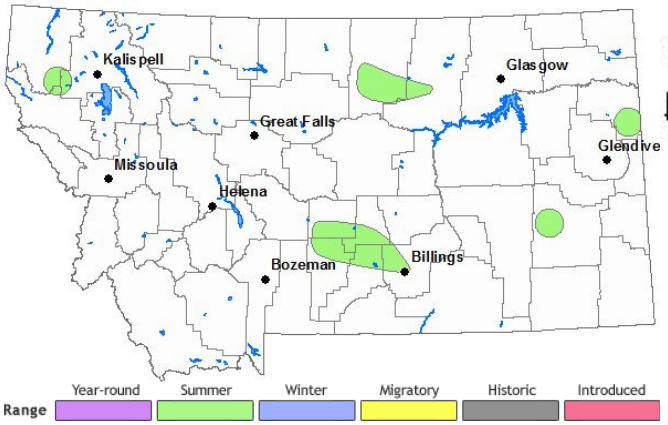
In the Powder River, sturgeon chub were taken most frequently at sites with depths less than 51 centimeters and depth velocities of less than 90 centimeters per second at 0.6 depth (Stewart 1981, Werdon 1992, Gould unpublished data) (AFS website 2003).

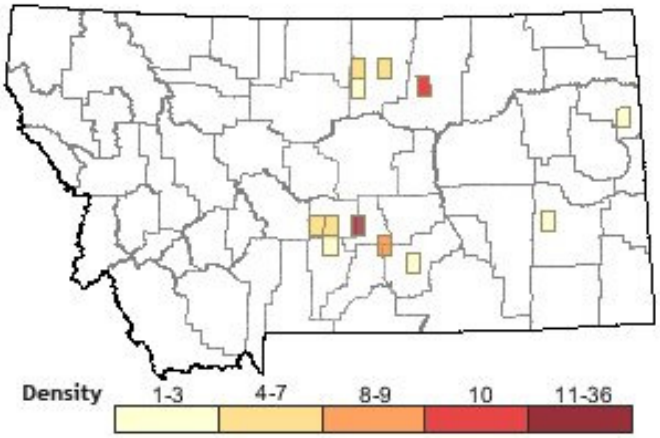
Tiger Muskellunge - *Esox masquinongy x lucius*

~~**Exotic Species (not native to Montana)**~~

Global Rank: GNA
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 96

General Description

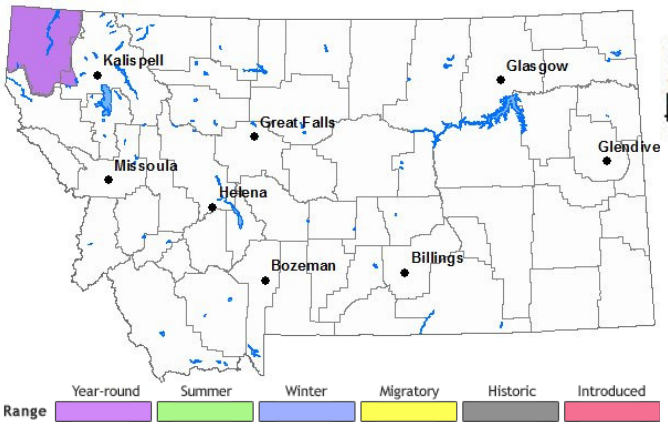
The tiger muskellunge is a sterile hybrid of the Northern Pike and Muskellunge.

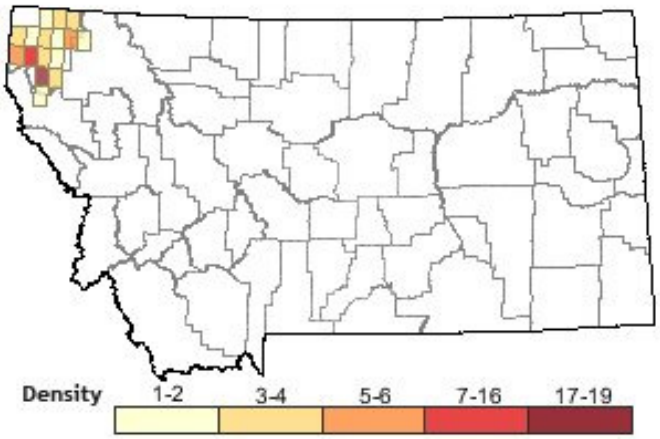
Torrent Sculpin - *Cottus rhotheus*

~~Species of Concern~~

Global Rank: G5
State Rank: S3

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 92

General Description

The torrent sculpin is found only in the fast headwater streams of the Kootenai River drainage of northwest Montana. As with all sculpins, it presents a somewhat grotesque appearance with its large head, huge pectoral fins, and bulging eyes. Sculpins have a very flattened hydrodynamic shape, which serves them well as they dart along the bottom between the cracks and crevices of rocks.

Habitat

These fish are typically found in the riffles of cold, clear streams, but are also taken in lakes. They hide near stones on the bottom.

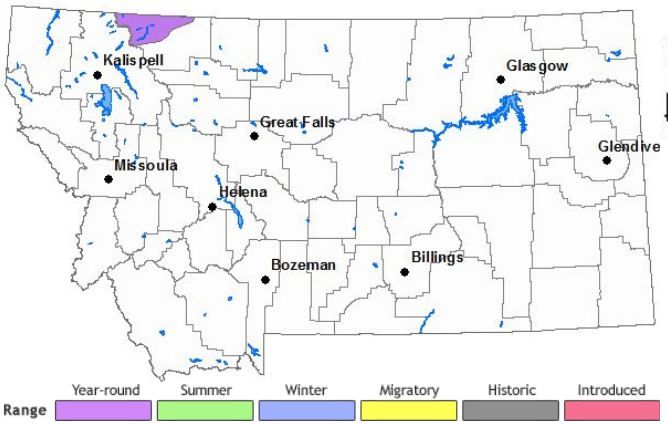
Trout-perch - *Percopsis omiscomaycus*

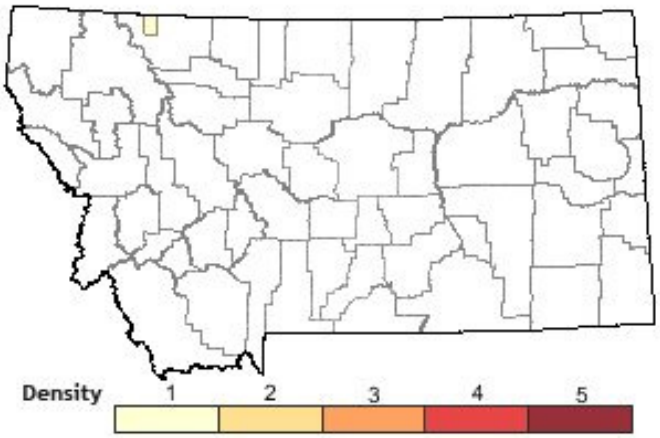
JOSEPH TOMELLERI

~~Species of Concern~~

Global Rank: G5
State Rank: S2

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 1

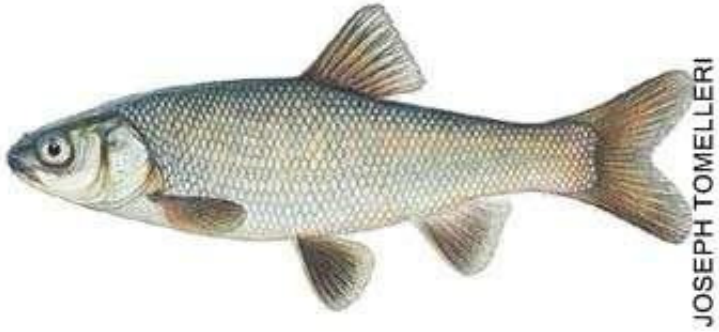
General Description

Trout-perches have characteristics of both the trout and perch families. They have an adipose fin like the trouts and yet have spines in some fins and superficially resemble members of the perch family. Trout-perch are native to our northern drainages in Montana and, because of their limited distribution, have been designated a Montana Fish of Special Concern. The trout-perch is a spring broadcast spawner that usually spawns on the shores of lakes. Trout-perch are largely nocturnal, feeding on insects and crustaceans. It is an important forage fish in some North American lakes but of minor consequence in Montana. The largest specimens are about 6 inches.

Habitat

Their preferred habitat is along the shoals of lakes or in deeper pools of streams where the bottom is clean sand, gravel, or rubble. They spawn over sand or gravel in 3-4 feet of water. In the Lower Saint Mary Lake, they are associated with large rocky cover, and are not captured over sandy or silty substrates. During daylight periods, they appear to use rocks as hiding cover, while at night, they are out of, but in close proximity to, rocky cover. In the Saint Mary Canal, trout-perch have been captured in winter after the canal head gate is closed. In the canal, trout-perch are found in residual pools, associated with large, rocky cover or concrete riprap (R. Wagner, U.S. Fish and Wildlife Service, personal communication, October 2000) (AFS website 2003).

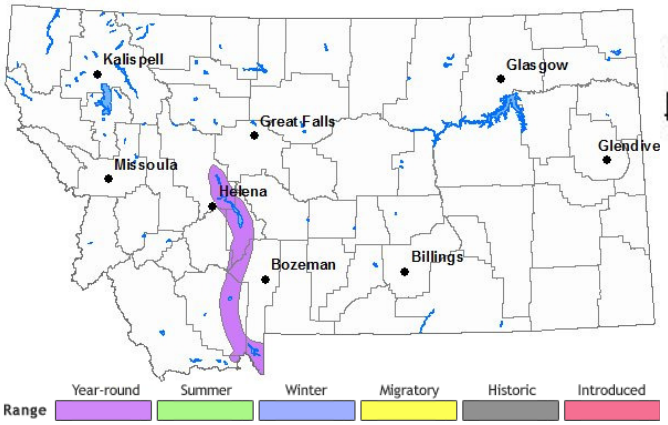
Utah Chub - *Gila atraria*

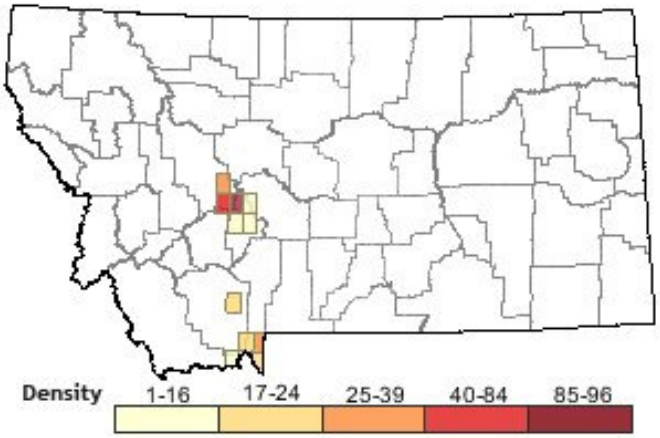


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 406

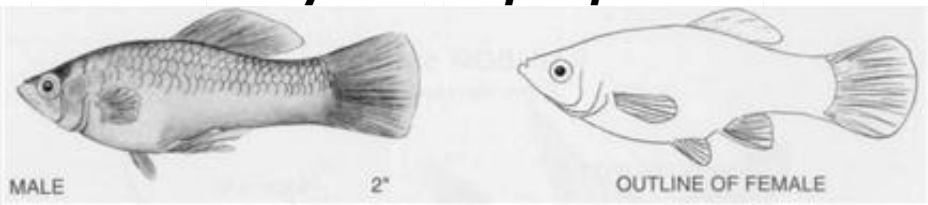
General Description

Utah chub were introduced into Montana in the 1930's, probably by bait fishermen. They were released into Hebgen Lake, a headwater reservoir on the Missouri River system, and have since extended their range about 200 miles downstream. In time, they could even move into North Dakota. Utah chubs are omnivorous and can grow to a size of up to 2 pounds. They are considered to be a very undesirable fish. In some reservoirs, they have become very abundant and may compete for food with trout. These chubs can become too large to be preyed upon by trout and are annoying because they readily take fishermen's bait.

Habitat

Very generalized habitat requirements. Found in both stream and lakes with abundant aquatic vegetation. Prefers slow-moving or still water as in sloughs backwaters, and reservoirs. Spawns in littoral waters.

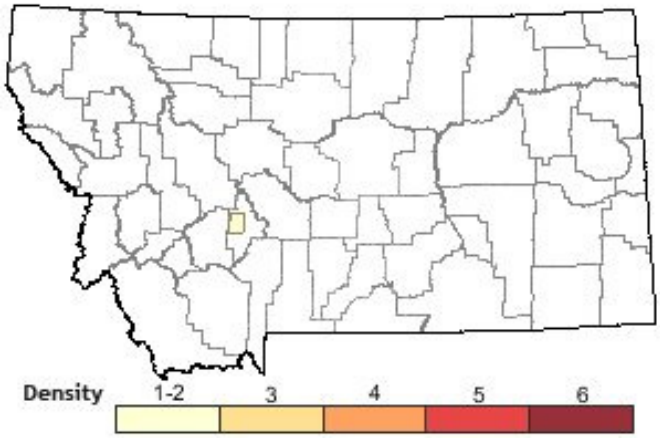
Variable Platyfish - *Xiphophorus variatus*



~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:



Number of Observations: 2

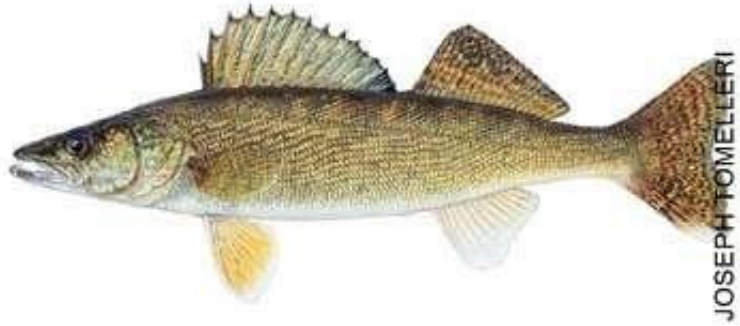
General Description

This tropical aquarium fish is an illegally released pet fish. The native range is southeastern United States, Mexico, and Central America. Hybrids are common where this species occurs with the Green Swordtail. Male hybrids have a short sword.

Habitat

Suitable natural habitats in Montana are warm springs, ponds, and streams from warm springs. Minimum temperatures 68 degrees F. (Brown 1971).

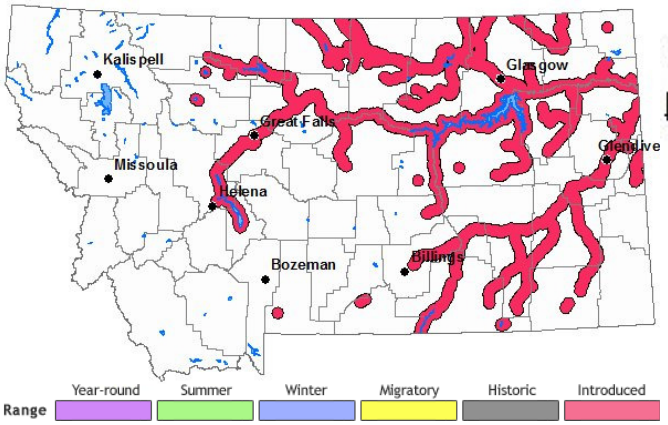
Walleye - *Sander vitreus*

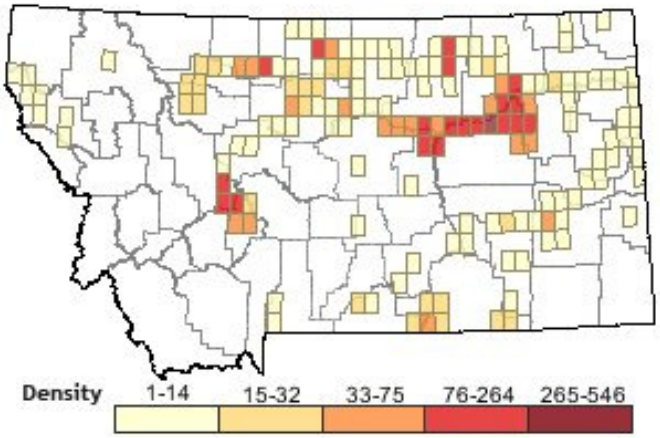


~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 11302

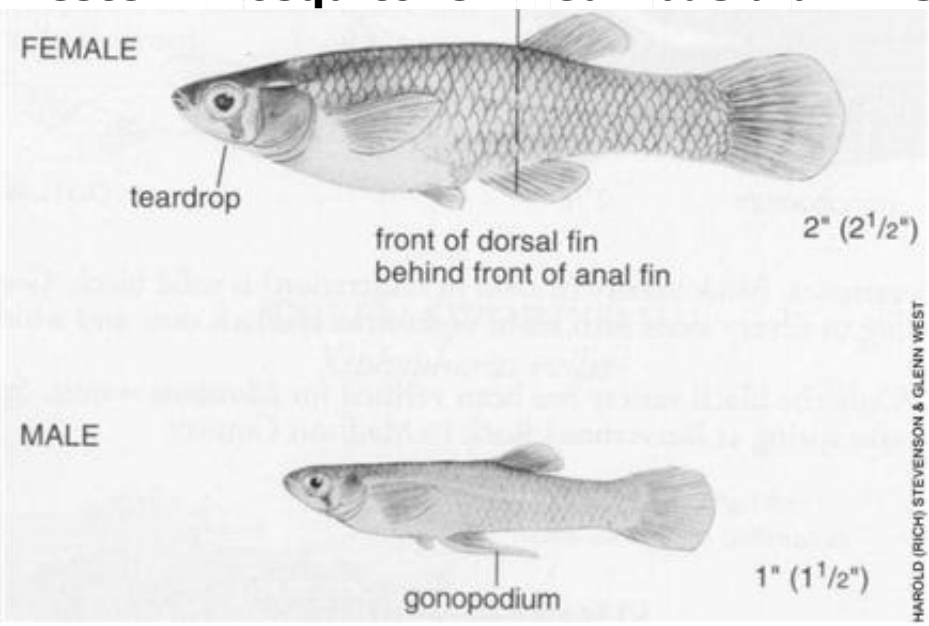
General Description

There are conflicting ideas among experts as to whether the walleye is native to Montana or not. Regardless, it is one of the most important sport fishes in Montana's eastern drainage and elsewhere in the U.S. and in Canada, where the walleye is a much sought-after commercial fish as well. Its flesh is of the highest quality. In recent years some sportsmen's groups in Montana have aggressively pursued the increased planting of walleye and promoted walleye fishing tournaments. Sometimes walleye hybridize with sauger, producing sterile saugeye. Adult walleye largely eat fish and for the most part are lake and reservoir dwellers. Walleye are so named because of their large, reflective eyes which are very light-sensitive. They are very active at night.

Habitat

Primarily found in larger lakes and reservoirs, to a lesser extent in rivers. Spawns over gravelly riffles and rocky areas in shallow water.

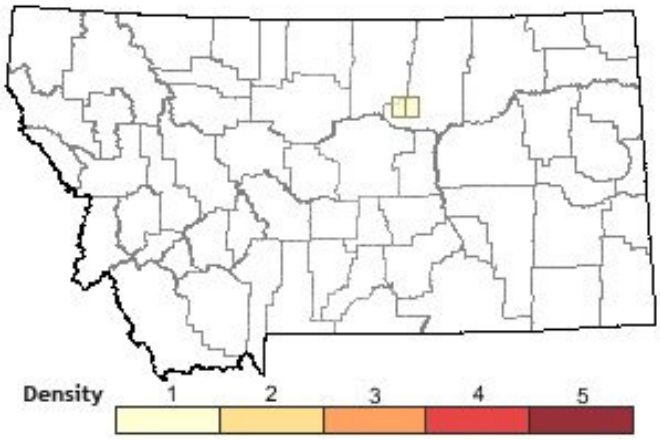
Western Mosquitofish - *Gambusia affinis*



~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:



Number of Observations: 2

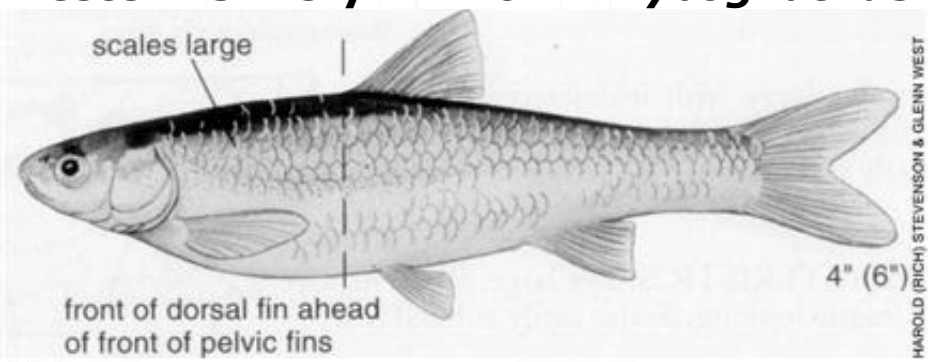
General Description

The only livebearer species widely distributed, the mosquitofish, is established in a thermal spring east of the Divide and can be found in other non-thermal waters in the eastern drainages during the summer. The wider summer distribution is the result of the State Board of Health planting them in mosquito-infested areas. Mosquitofish are planted because they eat crustaceans and insects on or near the water's surface, including a high number of mosquito larvae when available. Mosquitofish thus serve as a biological control for mosquitoes. Mosquitofish do not overwinter in Montana in non-thermal waters. This species shows marked sexual differences with females becoming larger than males. Females can reach about 3 inches in length.

Habitat

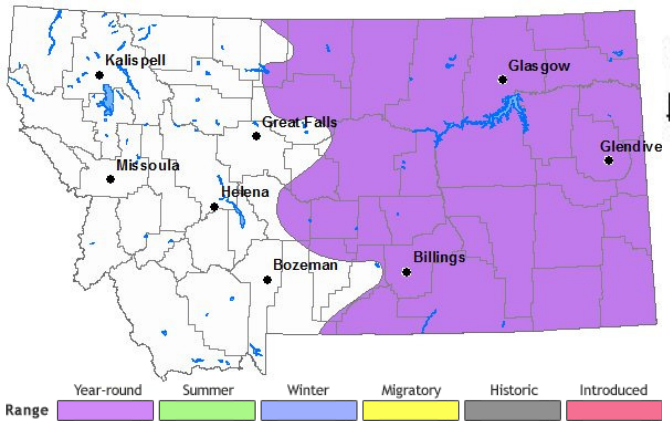
Year round survival in Montana is restricted to waters with thermal influences (Elser et al. 1980).

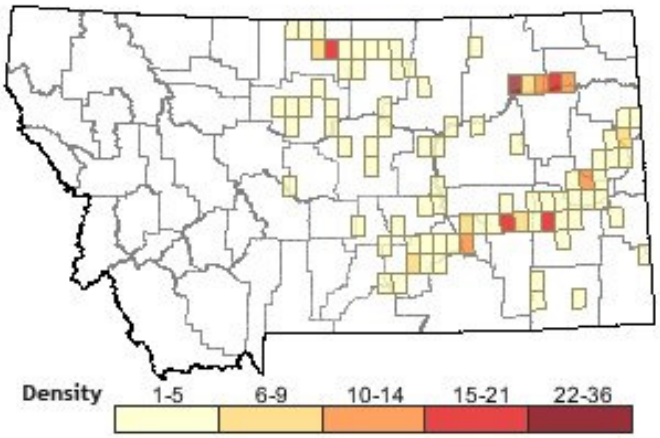
Western Silvery Minnow - *Hybognathus argyritis*



Global Rank: G4
State Rank: S4

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 433

General Description

The western silvery minnow has been recognized as a separate species only since 1971. It is very difficult to field separate from the plains minnow which it is frequently collected with. This native fish is found in perennial streams and rivers in the prairie ecoregions of eastern MT, and is an indicator species of the Medium Warmwater River Fish Assemblage. Western silvery minnows have long intestines, indicating they are adapted for eating plants and detritus as well as other food items. Specimens grow to a size of about 7 inches in length.

Habitat

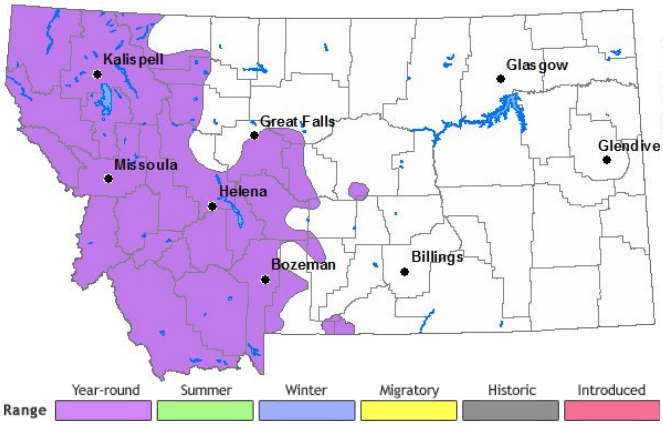
Seems to prefer large streams and is less common in creeks and impoundments. Bottom of silt or sand. Showed a preference for pools and backwaters in middle Missouri River study.

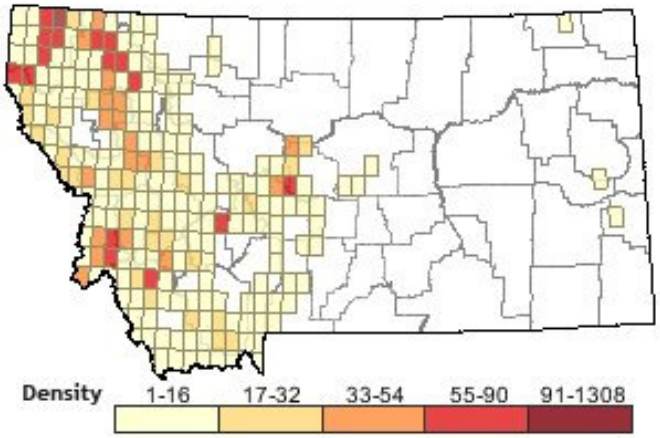
Westslope Cutthroat Trout - *Oncorhynchus clarkii lewisi*

~~**Species of Concern**~~

Global Rank: G4T3
State Rank: S2

~~**Agency Status**~~
USFWS:
USFS: SENSITIVE
BLM: SENSITIVE





Number of Observations: 9218

General Description

The Westslope cutthroat trout is one of two subspecies of native cutthroat found in the state. Together, they have been designated Montana's state fish. Cutthroat trout are so named for the red slashes near the lower jaws. The westslope cutthroat's historical range was all of Montana west of the Continental Divide as well as the upper Missouri River drainage. This fish has been seriously reduced in its range by two primary factors: hybridization with rainbow and/or Yellowstone cutthroat, and habitat loss and degradation. Since the westslope is recognized as a very important part of our native fish fauna it has been designated a Montana Fish of Special Concern in Montana. Pure westslope cutthroat have been identified by genetic analysis and form the broodstock maintained by the Montana Department of Fish, Wildlife and Parks at its Anaconda hatchery. The average size of these fish is 6 to 16 inches, depending on habitat, but they rarely exceed 18 inches in length.

Westslope cutthroat are common in both headwaters lake and stream environments. They feed primarily on aquatic insect life and zooplankton. Cutthroat spawn in the spring in running water, burying their eggs in a nest called a redd. The eggs hatch in a few weeks to a couple of months. The newborn fry frequently migrate back to lakes to rear after 1 to 2 years in their native stream (FWP). Westslope cutthroat is a trout with small, nonrounded spots, with few spots on the anterior body below the lateral line. Coloration varies, but generally is silver with yellowish hints, though bright yellow, orange, and especially red colors can be expressed to a much greater extent than on coastal or Yellowstone cutthroat (Behnke 1992). Hybridization between westslope and Yellowstone cutthroat trout can produce a spectrum of spotting and coloration ranging between the typical patterns of each subspecies. Some populations that have been affected by hybridization show little or no phenotypic signs of hybridization (Behnke 1992). Hybridization with rainbow trout can be detected by the appearance of spots on the top of the head and on the anterior body below the lateral line, as well as by reduced scale counts, increased caecal counts, and loss of basibranchial teeth (Behnke 1992).

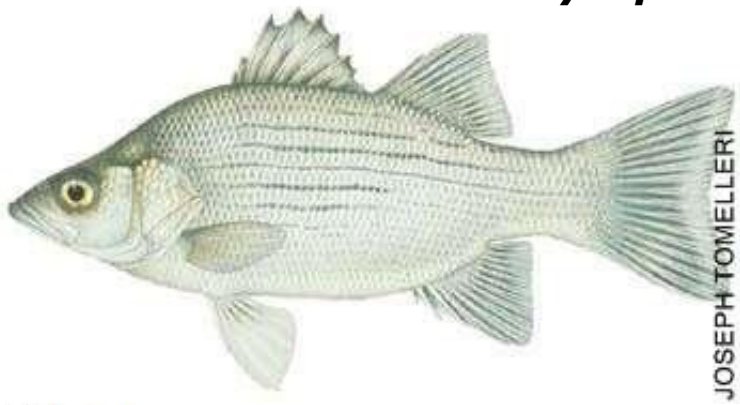
Habitat

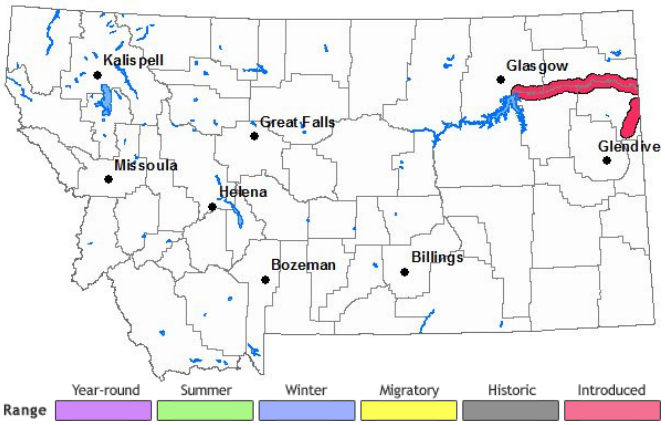
Spawning and rearing streams tend to be cold and nutrient poor. Westslope cutthroat trout seek out gravel substrate in riffles and pool crests for spawning habitat. Cutthroat trout have long been regarded as sensitive to fine sediment (generally defined as 6.3 milimeters or less). Although studies have documented negative survival as fine sediment increases (Weaver and Fraley 1991), it is difficult to predict their response in the wild (McIntyre and Rieman 1995). This is due to the complexity of stream environments and the ability of fish to adapt somewhat to changes in microhabitat (Everest et al. 1987) (AFS website 2003).

Westslope cutthroat trout also require cold water, although it has proven elusive to define exact temperature requirements or tolerances. Likewise, cutthroat trout tend to thrive in streams with more pool habitat and cover

than uniform, simple habitat (Shepard, Pratt and Graham 1984). Juvenile cutthroat trout overwinter in the interstitial spaces of large stream substrate. Adult cutthroat trout need deep, slow moving pools that do not fill with anchor ice in order to survive the winter (Brown and Mackay 1995) (AFS website 2003).

White Bass - *Morone chrysops*





~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

The white bass is an introduced, recent, and infrequent resident of Montana found only in the Missouri River below Fort Peck Dam and the very lower end of the Yellowstone River. These fish are upstream migrants from Lake Sakakawea in North Dakota where they were stocked. They are characterized by a spiny dorsal fin and horizontal stripes. They are spring, broadcast spawners, seldom exceed 1 pound in weight, and of little consequence in Montana fishery management. In other states they are important game fish.

Habitat

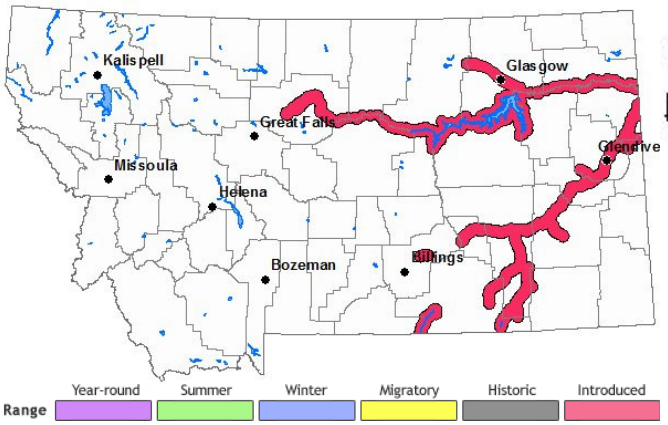
Open surface waters of lakes, reservoir,and pools in streams. Avoid turbid water and is most often found over firm sandy or rocky bottom. Spawns over gravelly or rocky bottom on lake shoals or tributary streams.

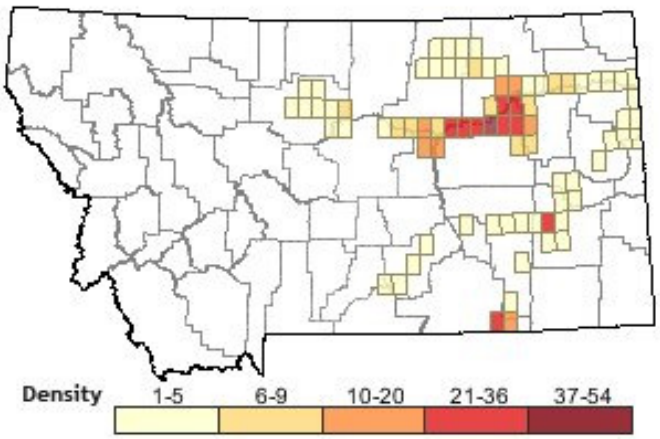
White Crappie - *Pomoxis annularis*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 831

General Description

The white crappie and its close relative, the black crappie, are very similar in appearance and habit. These flat-bodied sunfishes are native to east-central North America but were introduced to Montana in the early 1900s. The white crappie is found in the eastern one-third of the state in streams, reservoirs, and ranch ponds. They are opportunistic feeders, utilizing plankton when young but switching primarily to fish as they mature. The white crappie is supposed to tolerate muddier waters than the black crappie and for that reason has been planted in some eastern Montana waters.

Habitat

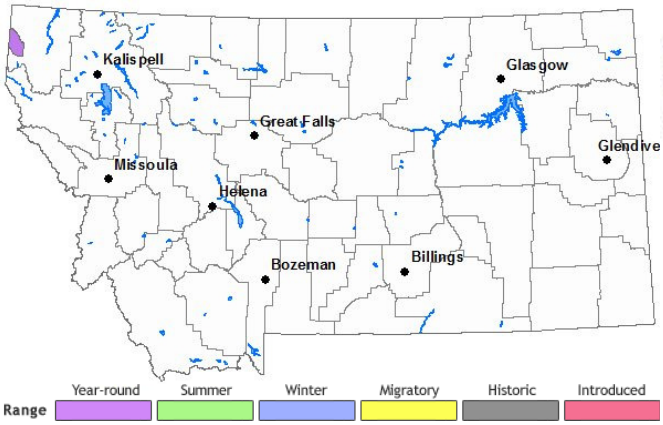
Ponds, lakes and reservoirs and slow portions of streams. Seeks weedy areas, logs, and other protective cover. Seems more tolerant of turbid water than Black Crappie.

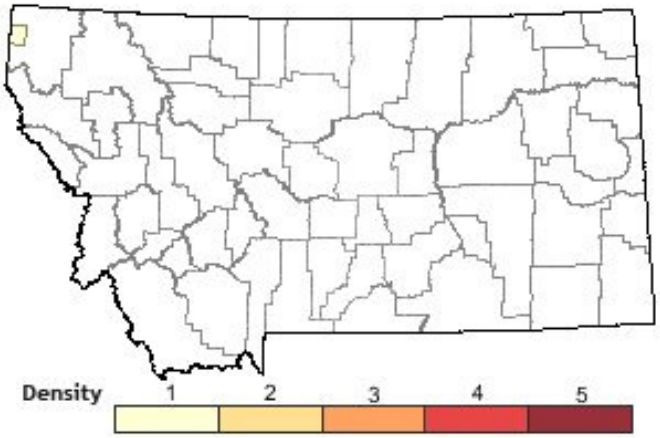
White Sturgeon - *Acipenser transmontanus*

~~Species of Concern~~

Global Rank: G4
State Rank: S1

~~**Agency Status**~~
USFWS: LE
USFS: ENDANGERED
BLM: SPECIAL STATUS





Number of Observations: 1

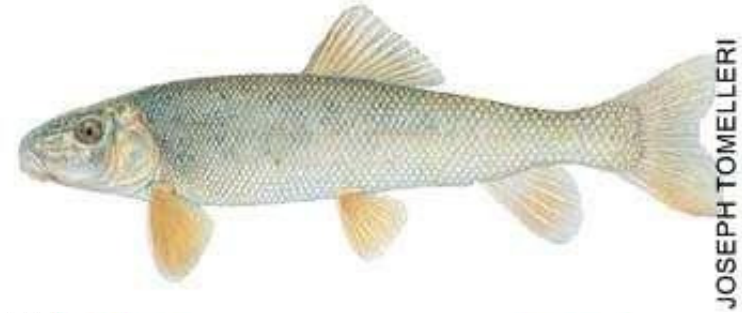
General Description

The Kootenai River population of white sturgeon (*Acipenser transmontanus*) was listed as endangered under the Endangered Species Act (59 FR 45989, September 6, 1994), due to a lack of juvenile recruitment to the population since the mid-1960s. Almost no recruitment has occurred since Libby Dam began regulating the Kootenai River in 1972 (Duke et al. 1999, USFWS 1999). In the final rule, the Service stated "there is no recent evidence of successful spawning and survival past the egg stage" and "regulations and experimental flow programs have not been effective in arresting the decline of the species". A small number of recruits from a cohort spawned in 1974 indicated fairly successful natural reproduction, associated with high, protracted springtime river flows. Between 1992 and 2000, the wild population was augmented with 4,879 juvenile white sturgeon (age 1 and 2) from the Kootenai Tribal Conservation Aquaculture Facility located in Bonners Ferry, Idaho, to address concerns of increasing demographic and genetic risk to a non-recruiting population (Ireland 2000) (AFS website, 2003).

Habitat

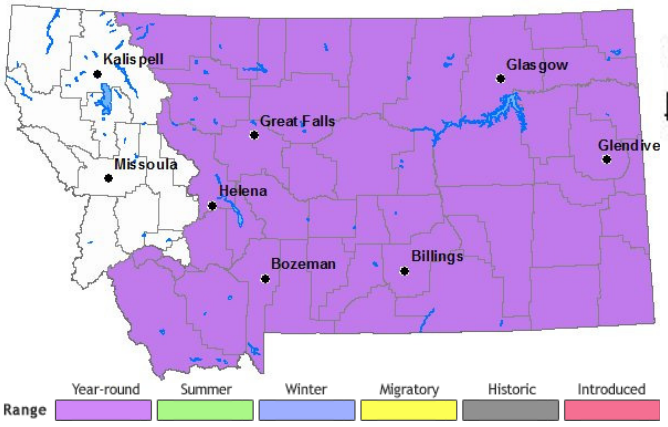
Large cold rivers.

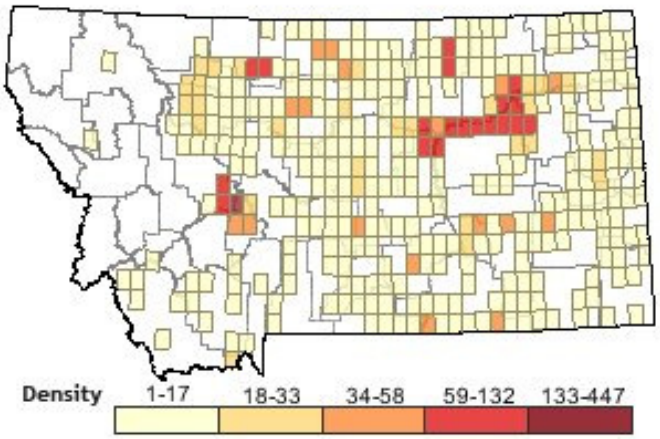
White Sucker - *Catostomus commersoni*



Global Rank: G5
State Rank: S5

~~Agency Status~~
USFWS:
USFS:
BLM:





Number of Observations: 8575

General Description

The white sucker is quite adaptable. It has been collected from virtually all types of water in Montana: muddy, clear, warm, cold, running and standing. As the position of the mouth suggests, it feeds on the bottom and eats an omnivorous diet of detritus and insects. The white sucker is distributed throughout Montana's eastern drainage and is present in our northern watershed as well. They are most abundant in the many reservoirs of eastern Montana. In Montana the largest specimens have been about 5 pounds. Large females can produce over 100,000 eggs and suckers can produce large populations in short periods of time. Any type of attempted population control by man is usually a losing proposition. (FWP) See Snyder and Muth (1990) for a guide to the identification of larvae and early juveniles.

Habitat

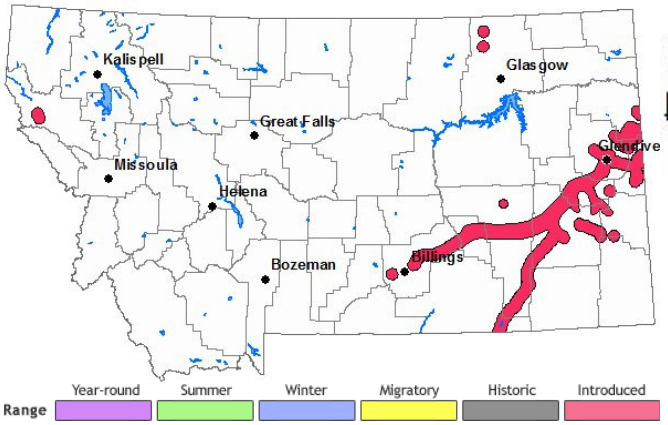
Extremely varied. Present in both lakes and streams under a wide variety of considerations, but avoids rapid current. Reaches maximum abundance in man-made impoundments. Spawns over gravel or rocky shoals.

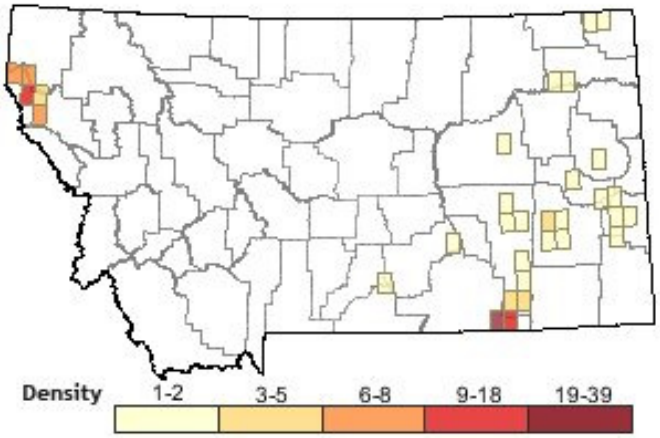
Yellow Bullhead - *Ameiurus natalis*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 164

General Description

The Yellow bullhead is similar to the black bullhead in nearly all respects, except it has white or creamy chin barbels. It has been introduced from the Midwest into a few scattered locales, mostly in southeast Montana, but is of little consequence to the fishery fauna of this state.

Habitat

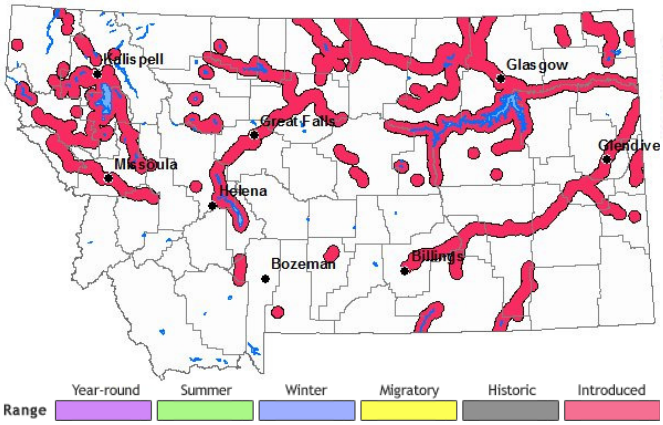
Weedy, shallow, clear-water areas of lakes and slow-moving streams.

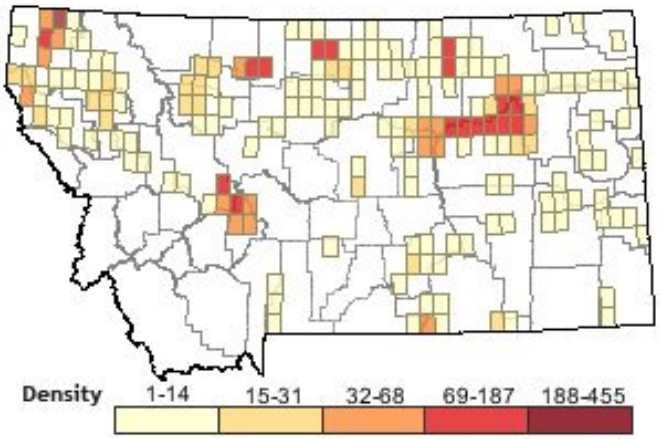
Yellow Perch - *Perca flavescens*

~~**Exotic Species (not native to Montana)**~~

Global Rank: G5
State Rank: SNA

~~**Agency Status**~~
USFWS:
USFS:
BLM:





Number of Observations: 8915

General Description

The yellow perch is a very familiar species to most fishermen. This fish was introduced into Montana and is found in abundance in many lakes and reservoirs located east and west of the Divide. Perch support one of the largest fisheries in Montana and are considered one of the best eating fish in the state. Because of their tendency to travel in schools, perch often can be caught in large numbers, which makes up for their relatively small size and difficulty in cleaning. Young yellow perch are important prey for several sport fish. Perch drape strings of gelatinous material with eggs embedded inside over substrate or vegetation. Perch foods are invertebrates and small fish.

Habitat

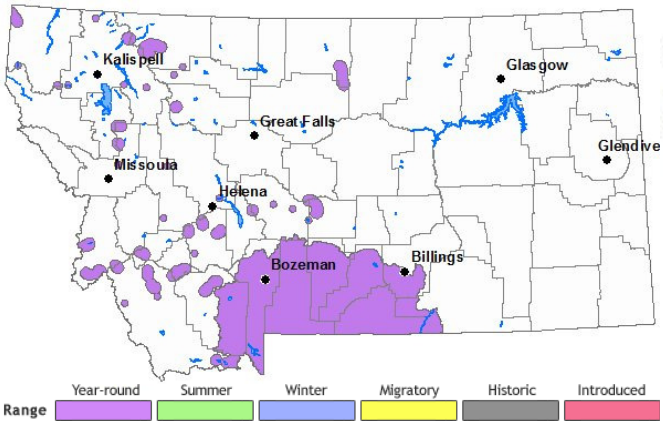
Prefers warm to cool clear lakes with vegetation and to a lesser extent, slow, weedy streams, but is adaptable. Usually spawns over aquatic vegetation but silt-free sand and gravel bars may be used.

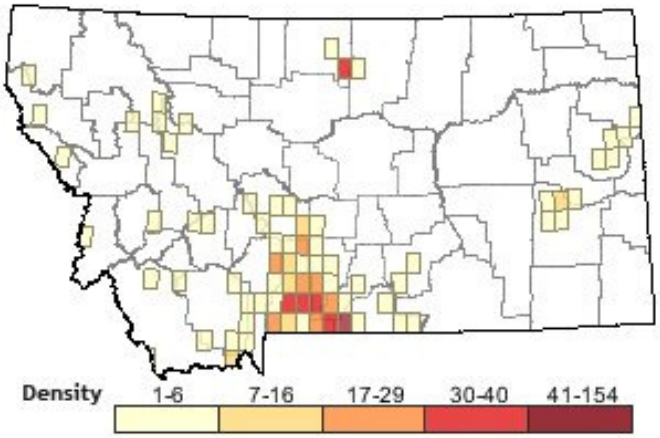
Yellowstone Cutthroat Trout - *Oncorhynchus clarkii bouvieri*

~~**Species of Concern**~~

Global Rank: G4T2
State Rank: S2

~~**Agency Status**~~
USFWS:
USFS: SENSITIVE
BLM: SENSITIVE





Number of Observations: 1000

General Description

The Yellowstone cutthroat trout is one of two cutthroat trout subspecies in Montana. They have a golden coloration and larger spots more widely distributed on their sides than the westslope cutthroat trout. The Yellowstone cutthroat, as the name implies, is native to the Yellowstone River drainage of southwest and south-central Montana. Originally their range was as far downstream as the Tongue River, but today pure, unhybridized populations are limited to some headwaters streams and Yellowstone National Park. Yellowstone cutthroat are a Montana Fish of Special Concern. Much of their spawning habitat in tributaries of the upper Yellowstone River has been lost to irrigation withdrawals which dewater the streams before spawning and egg-incubation are completed in July and August. The Big Timber hatchery of the Montana Department of Fish, Wildlife, and Parks maintains a pure Yellowstone cutthroat broodstock. Yellowstone cutthroat are used extensively for mountain lake stocking on the east slope of the Rocky Mountains and in the Absaroka-Beartooth Wilderness where they can grow to sizes up to 15 pounds. In general, Yellowstone cutthroat are larger than westslope cutthroat and more prone to eat fish as part of their diet.

Habitat

Yellowstone cutthroat trout inhabit relatively clear, cold streams, rivers, and lakes. Optimal temperatures have been reported to be from 4 to 15 degrees C., with occupied waters ranging from 0 to 27 degrees C. (Gresswell 1995) (AFS website 2003).