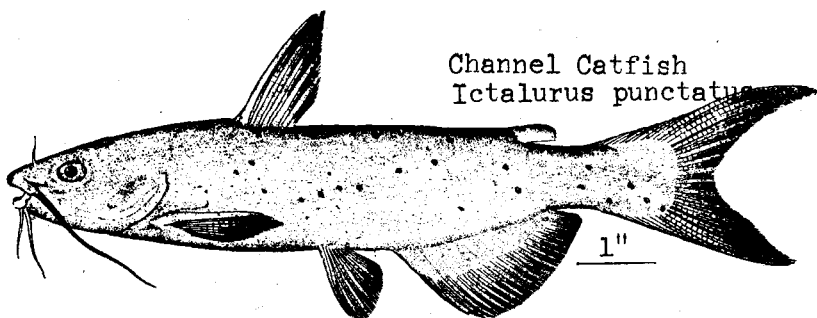


Catfish and Bullheads

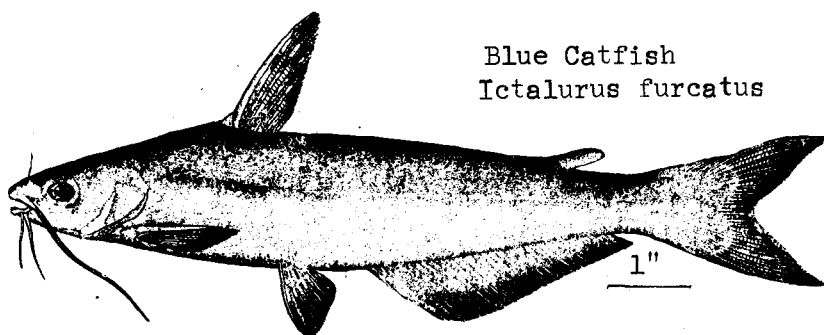
The family Ictaluridae contains many interesting and unusual catfish that are very well suited to aquarium conditions. They have occupied space in my tanks for many years and the only reason I can think of for their lack of popularity by aquarium fans is the unfortunate fact that the family comes exclusively from North America. They adapt easily to aquarium conditions and are efficient peaceful scavengers and their interesting spawning habits and unusual traits should win them many permanent admirers. Among the members of the family there are many species that have albino or semi-albino types and there are also several blind cave species.

Catfish and bullheads are very tolerant of water conditions, and once they are acclimated to their aquarium, you will find them practically impossible to kill through neglect. They can stand wide variations in temperature, and it is even reported that the larger catfish are frozen alive, shipped in ice-blocks, and unthawed at destination without harm! (Although this may be coloring the report a little.) Concerning upper temperature range, many of my catfish are kept with tropicals at 80 degrees F., and apparently quite comfortably.

It wouldn't surprise me at all if many of these natives could outlive tropicals at the higher temperatures because of their unique accessory breathing organ. This consists of nothing more than a modified swim bladder which is connected to the throat. The bladder is lined with veins, like a lung, and it acts as an accessory when the water is low in oxygen by allowing the fish to gulp a breath of surface-air into the swim bladder. Thus bullheads have been known to survive in ponds that dry up in the summer. Digging in the mud, and occasionally taking a gulp of air through a hole in the mud, much like a lungfish, they can survive for weeks as long as the mud doesn't dry up. Their abilities to withstand high temperature ranges allows them to survive in lakes that get too muddy and hot for any other fish. In waters that freeze during the winter, another of the bullhead's peculiarities occurs. When the water gets too low in oxygen content, they gather in huge numbers and commence to swim in a circle, finally wearing a hole in the ice which may be a foot thick!



Channel Catfish
Ictalurus punctatus



Blue Catfish
Ictalurus furcatus

Bull heads have an uncanny ability to recognize food when it touches their body. Their taste buds are located all over their skin as well as on their barbels, and they also seem to have a sense of smell. Their eyesight is poor, if not non-existent, for they can swim within an inch of a pellet without noticing it, unless it touches their barbels or their body. Even if it hits near their tail, they'll instantly turn around and grab the pellet. If the pellet is not touched, they'll seldom swim more than a foot past it before turning around and trying again, somehow knowing that they have overshot the target. And when I start feeding they may be motionless on the bottom some four feet away but within one minute from the time I drop the first pellet they'll be swimming around or near the feeding spot with their mouths wide open!

Feeding bullheads and catfish is quite easy, as they will eat practically anything from live minnow, through pellets, to decaying plants and animals. They are extremely efficient scavengers, and although they are somewhat nocturnal, they rarely hide during the day. They swim around about as much as Corydoras species do. They can survive on very little food, on the other hand they are capable of eating almost as much as you can throw in the tank. By feeding sparingly, I've had bullheads grow only 1/2" in three years. Others, by feeding generously and often, doubled their body-length. Growth at the rate of 1 1/2" per month is not unusual if food is plentiful. Bullheads have one drawback: they will swallow any fish less than half their own body-length as long as they are hungry, which is almost always! They may not be able to catch these smaller, faster fish during daylight hours, but they will catch them at night while the smaller fish are sleeping. I've noticed this by checking the tanks in the morning to find the smaller fish missing, and the bullhead looking like he'll split at the seams! Due to this carnivorous habit, you'll do well to check their respective sizes constantly and remove one or the other when the bullhead's size gets out of proportion with those of his tank-mates. If this seems like too much trouble to you, you may want to keep madtoms, which look quite a bit like bullheads but seldom grow over 5 inches in the wild.

Tadpole madtoms and young bullheads can be told apart by comparing their adipose fins. On bullheads it is a little flap, whereas on madtoms it resembles a ridge going all the way to the caudal fin. Also, on my madtoms the color seems lighter, nearly light purple, but I don't know if this is typical of all the species or not. Madtoms are more nocturnal than bullheads, and possibly their hiding has something to do with their smaller size. If you should get stung by a madtom, however, it is many times more painful than getting stung by a bullhead. This "super-sting" protects the madtom quite well, and in spite of its relative small size, fish that are big enough to swallow a madtom whole give it a wide berth.

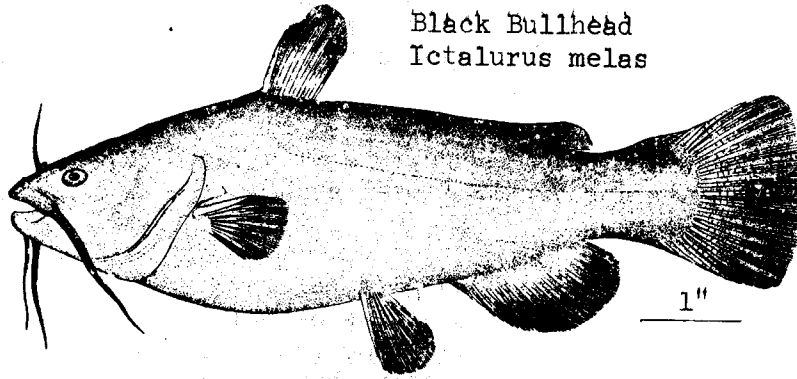
There hasn't been much written about spawning catfish in aquariums yet but many of the species have been spawned. There is a lot of information on spawning habits in the wild. If you are interested in any certain fish it would be best to study all the literature on that particular species.

Most of the species make nests, either in the bottom mud, weeds, or in caves such as tin cans or old kegs. There the eggs are guarded by one parent until they hatch and for a short time after hatching at which time the young form a dense school which resembles a dark cloud in the water.

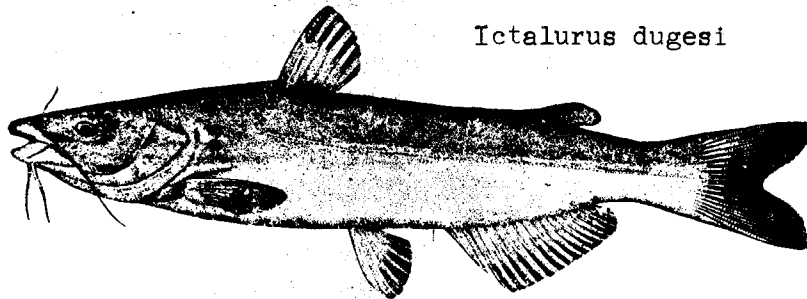
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I think the purpose of this closely knit school is to resemble a large fish or animal, thus keeping larger predators from attacking because of fear. (I know this works pretty well, for I watched a school of bullheads in an aquarium with a gar. The gar never did attack the school, but waited until a straggler left the school before grabbing it without going near the school itself!) The young may continue their schooling until 2-3 inches long, fighting their battle of psychological warfare with the larger predators!

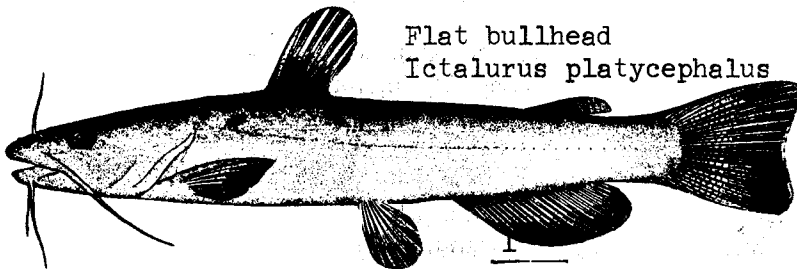
Black Bullhead
Ictalurus melas



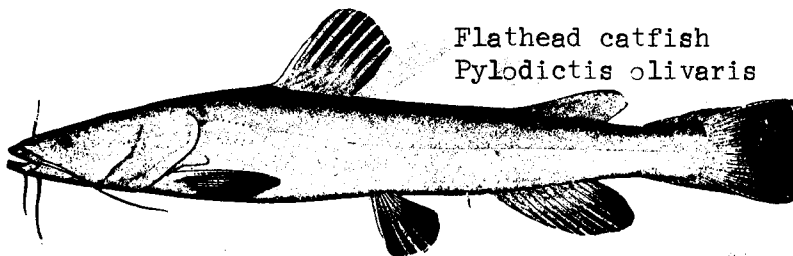
Ictalurus dugesi



Flat bullhead
Ictalurus platycephalus



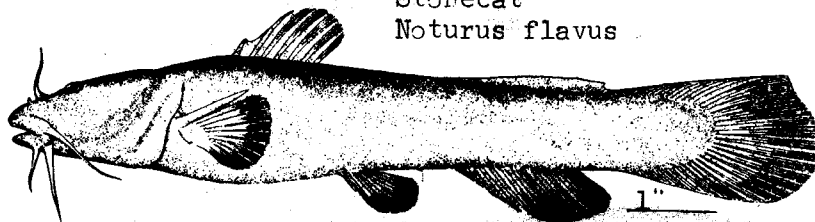
Flathead catfish
Pylodictis olivaris



If you are interested in raising catfish or bullheads, there are several important things to remember:

1. Quarantine all native fish for at least 2 months before adding them to your tanks in order to prevent spreading any disease or parasite.
2. If you should catch a large number of natives, don't make the mistake of taking them all home. It is easier to acclimate a smaller number of fish. And if you do bring in disease, it certainly gives you a better chance of curing it than if you would have an over-crowded quarantine tank. If you should have caught some rare or exceptional fish, it is best to leave the more common species until next time, unless you have a plentitude of acclimating tanks.
3. During the acclimating period it is a good idea to use some sort of medication such as malachite green or methylene blue, as well as an antibiotic. Heavy aeration helps, as does a good filter such as the Diatom in order to keep water cleaner than usual.
4. Native fish are susceptible to sudden temperature variations as much as tropicals are. If the fish come from waters of below 50 degrees F., maintain the fish at a temperature of well below room temperature for one week. It doesn't have to be a 50 degrees exactly, but do keep it cool by adding ice cubes two or three times a day. After a week of this you can raise the temperature gradually, at the same time getting them used to water other than their own by adding some of the water you normally use in your tanks. In the summer, when lake and river waters are warmer, you don't have to worry as much about temperature differences, but if the weather is too hot you may have trouble moving the fish because of the low oxygen-content of the water. Native fish are generally in poorer condition in the summer, and the best time to collect them is in spring. Then the transfer to warmer waters may even result in stimulating spawning activities, as I have found with some minnows and sunfish.
5. Catfish and other natives are not harder on plants than other fish, as long as they are used to their surroundings. The only time I have seen natives damage plants is when they came fresh out of a lake or river, and were dumped into a small tank within a few hours. These fish would then dash around madly and stir up the tank, damage limited only by their respective sizes. In such cases it would take several days for them to calm down.
6. Catfish and bullheads have no scales, and so are more susceptible to fungus if handled roughly. Particularly if transferred to soft and acid waters, although acid water doesn't bother them otherwise.

Stonecat
Noturus flavus

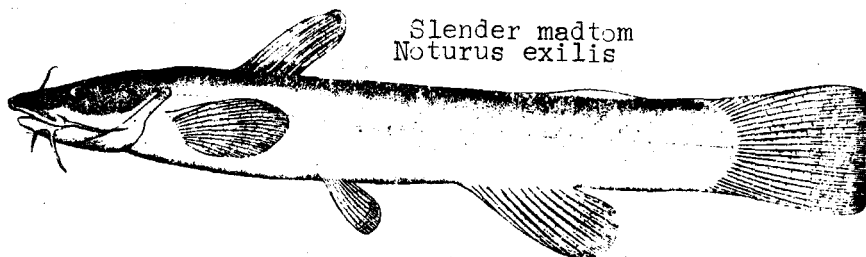


CATFISH AND BULLHEADS
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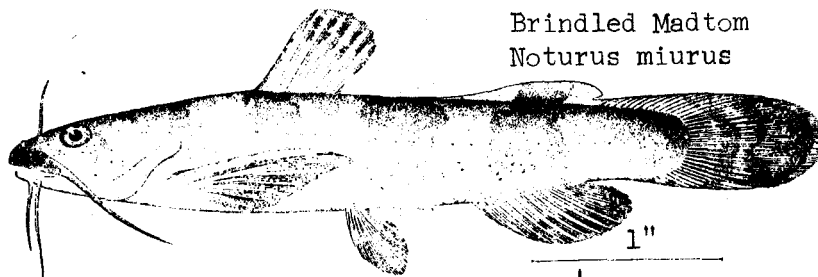
Bullheads and catfish are warmth loving fish, and are usually found in warm lakes and rivers in Minnesota. They are not common in waters that have a high percentage of predators, for they are too easily caught. The best place to look for them are muddy rivers or lakes, where predators do not abound because of silt or other adverse conditions. I haven't found madtoms common anywhere, but find an occasional specimen in shallow (4-6 inches deep) backwaters of rivers, as well as in some weedy lakes with muddy bottoms. An excellent place to find bullheads is below a dam or small culvert, where water is continually running into a larger stream. Under these culverts, you can quite often collect as many as several hundred small bullheads and other native fish. Another good place to get them is under tree roots which reach into a stream. The easiest way to catch them here, is to reach in with your hand and feel around until you manage to catch them bare-handed. This may sound a bit unusual, but you can catch several dozen fish an hour this way - if you don't mind getting stung occasionally!

If you find a pond that is too weedy or muddy to catch catfish and bullheads by seining, you may trap them quite easily by using baited minnow traps. A source for native fish that should not be overlooked is either a state hatchery or fishery, or your local minnow dealer. Either one of these can probably let you have a few species. If not, ask your minnow dealer who he gets his minnows from, because the fellow who actually traps minnows for sale, would almost certainly be able to get you some, or he could tell you where to get them and how to catch them.

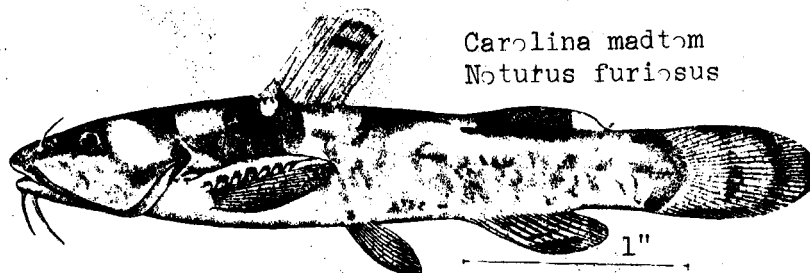
In summary, native catfish and bullheads are peaceful, reasonably active, efficient scavengers, very adaptable to conditions, inexpensive and unusual. Go ahead, give them a try!



Slender madtom
Noturus exilis



Brindled Madtom
Noturus miurus



Carolina madtom
Noturus furiosus

CATFISH AND BULLHEADS

Continued from page 17

LIST OF SPECIES IN NORTH AMERICAN CATFISH FAMILY

All scientific names in parentheses are former names or names used only by some authorities but not the recognized name of the American Fisheries Society in 1970.

All names preceded by an * are new species or species not recognized in the American Fisheries Society book of 1960, but shown in 1970. New species listed in Taylor (1969) and in Yeager (1968).

FAMILY ICTALURIDAE (AMETURIDAE)

Genus Ictalurus

- White catfish *Ictalurus catus* up to 2 feet Atlantic coastal streams from New Jersey to Texas Widely planted elsewhere
- Blue catfish *Ictalurus furcatus* up to 100 pounds in large rivers in central U.S. into Mexico Not common anywhere
- Ictalurus balsanus* (*Istlarius balsanus*) Puente de Ixtla, Guerrero, Mexico
- Headwater catfish *Ictalurus lupus*; to 20 lbs. N.E. Mexico and Texas.
- Yaqui catfish *Ictalurus pricei*; to 20 lbs. northern Mexico, southern Arizona
- Channel catfish *Ictalurus punctatus* (*I. lacustris*) ; 20 to 50 lbs; central continent, Hudson Bay to Gulf of Mexico.
- Ictalurus meridionalis* Rio Usumacinta, Guatemala
(Some authorities place the bullheads in the genus *Ameiurus*)
- Ictalurus dugesi* (*Haustor dugesi*) Rio Turbio, Guanajuato, Mexico
- Black bullhead *Ictalurus melas*; to 18 inches; central and southern U.S.A. very common.
- Yellow bullhead *Ictalurus natalis* (*A. erebennus*); to 18"; central and eastern U.S.A. and Canada, very common.
- Brown bullhead *Ictalurus nebulosus* (*A. vulgaris*) a blind form of this species formerly called (*Gronias nigrolabuis*) exists in Pennsylvania caves.
- Flat bullhead *Ictalurus platycephalus*; to 15"; Atlantic coast streams Virginia to Georgia.
- *Snail bullhead *Ictalurus brunneus* No. Carolina to Florida
- *Spotted bullhead *Ictalurus serracanthus* No. Florida to South Georgia

Genus Satan

Wide mouth blindcat *Satan eurystomus* in Artesian wells near San Antonio, Texas

Genus Pylodictis

Flathead catfish *Pylodictis olivaris* (*Leptops olivaris*) up to 100 pounds
found in large rivers in central U.S. and Mexico also Lake Erie

Genus Trogloglanis

Toothless blindcat *Trogloglanis pattersoni* in Artesian wells near San Antonio,
Texas

Genus Prietella

Prietella phreatophila Underground blind catfish from Rio Grande area in Mexico

Genus Noturus

Subgenus Schilbeodes

Tadpole madtom *Noturus gyrinus* (*Schilbeodes mollis*) to 5 inches Central and
Eastern U.S. and Canada and introduced into Columbia River System.

*Ouachita madtom *Noturus lachneri* to 3 inches Saline River System, Arkansas.

Slender madtom *Noturus exilis* to 6 inches Central U.S. Minn. to Oklahoma-Tennessee

Speckled madtom *Noturus leptacanthus* to 3 inches South Carolina to Mississippi
River, South to Gulf of Mexico

Freckled madtom *Noturus nocturnus* to 4 inches Mississippi River System from
Northern Missouri and Illinois South.

Margined madtom *Noturus insignis* to 5 inches Coastal Streams N.Y. to Georgia

Black madtom *Noturus funebris* to 4 inches Gulf Coast streams east of
Mississippi River to Western Florida.

Orange-fin madtom *Noturus gilberti* to 3 inches Roanoke River, Virginia

*Brown madtom *Noturus phaeus* to 5 inches Louisiana, Mississippi, W. Tennessee

Genus Noturus

Subgenus Noturus

Stonecat *Noturus flavus* to 10 inches Central U.S. from New York to Montana
south to Oklahoma and Tennessee

Genus *Noturus*
Subgenus *Rabida*

- Least madtom *Noturus hildebrandi* to 2 inches Mississippi and Western Tennessee
- *Smoky madtom *Noturus baileyi* to 2 inches Abrams Creek, Great Smoky Mts. Park, Tenn,
- *Ozark madtom *Noturus albater* to 3 1/2" Southern Missouri and No. Arkansas
- *Elegant madtom *Noturus elegans* to 3 inches Central Kentucky and Tennessee
- *Scioto madtom *Noturus trautmani* to 2 inches Big Darby Creek, Scioto River, Ohio
- Mountain madtom *Noturus eleutherus* to 3 inches in an area from Indiana to East Pennsylvania to Tennessee west to Mississippi River also Arkansas
- *Neosho madtom *Noturus placidus* to 3 inches Eastern Oklahoma and Kansas
- *Northern madtom *Noturus stigmosus* to 4 inches Tennessee North to Southern Michigan
- *Frecklebelly madtom *Noturus munitus* to 4 inches Alabama, Mississippi and Louisiana
- Carolina madtom *Noturus furiosus* to 4 inches Central North Carolina
- Brindled madtom *Noturus miurus* to 4 inches inside an area from New York to Louisiana to Eastern Kansas to Michigan through Ontario to New York
- *Yellowfin madtom *Noturus flavipinnis* to 4 inches Upper Tennessee River Basin
- *Checkered madtom *Noturus flavater* to 5 inches Southern Missouri and Arkansas

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