

INTRODUCTION TO NORTH AMERICA'S NATIVES

By Dick Stober

I can only hope to scratch the surface on the topic of Freshwater Aquarium Fishes of North America; however, I shall introduce you to some of my favorites which may perhaps make you suspect that you are missing something. Most of these fishes are rarely seen in shops or private collections and I'm confident that some of the more attractive species can be found within a few miles of your own home. Stop and think for a moment. Our North American continent is certainly not unique in general topography nor climate. We have an abundance of water: still, flowing, deep, shallow, fresh and brine. Water with varying degrees of hardness and a wide range of pH ranging from the semi-tropical climates to the Arctic circle. Needless to say, these waters contain a large variety of fish with many suitable for maintaining in the home aquarium.

The American Fisheries Society in their 1970 edition of "A List of Common and Scientific Names of Fishes from the United States and Canada" has enumerated 2,131 species which includes both salt and freshwater varieties with an equal distribution between the two groups. It has only been recently that this figure has grown to over two thousand. In 1948 there were only 570 entries and 1960 there were 1,852. Even today more are waiting to get on the list. Obviously naming all the known freshwater fish of North America would take considerable time and space, so consequently, to give you a rough idea, I'll list the families and the more prominent genres in each. Note that the following list is by common names only.

LAMPREYS
lamprey

ANCHOVIES
anchovy

MINNOWS/CARPS
dace stoneroller
chub minnow
carp spinedace
shiner squawfish

STURGEONS
sturgeon

MOONEYES
goldeye
mooneye

SUCKERS
carpsucker jumprock
chubsucker sucker
hog sucker redhorse

PADDLEFISHES
paddlefish

TROUTS
cisco salmon
herring grayling
whitefish

CATFISHES
bullhead stonecat
catfish blindcat
madtom

GARS
gar

SMELTS
smelt

EELS
eel

BOWFINS
bowfin

TARPONS
tarpon

PIKES
pickerel
pike
muskellunge

MUDMINNOWS
mudminnow

HERRINGS
herring
shad
sardine

PERCHES
darter
logperch

CAVEFISH
swampfish
cavefish

LIVEBEARERS
gambusia
molly
topminnow

SNAPPERS
snapper

PIRATE PERCHES
pirate perch

SILVERSIDES
silverside

MOJARRAS
mojarra

TROUT-PERCHES
trout-perches
sand roller

STICKLEBACKS
stickleback

PORGIES
sheepshead
pinfish

CODFISHES
burbot

PIPEFISH
pipefish

DRUMS
drum croaker

NEEDLEFISHES
needlefish

SNOOKS
snook

CICHLIDS
cichlid

KILLIFISHES
killifish pupfish
minnow topminnow

TEMPERATE BASSES
perch bass

SLEEPERS
sleeper

SUNFISHES
sunfish bass
perch crappie

MULLETS
mullet

FLOUNDERS (right &
flounder left)

GOBIES
goby

SCULPINS
sculpin

SOLE
sole

Contrary to the popular belief of many hobbyists, the trend for proper identification of our fish is not by the latinized scientific name, but by the common name. The Committee on Names of Fishes has been working for the past twenty years on stabilizing names which as you know, change so frequently. They state: "This committee aims at the development of a body of common names that reflect broad current usage, the creation of a richer, more meaningful and colorful vernacular, nomenclature, and the promotion of mechanisms that will add to the stability and the universality of names applied to American fishes".

Now I'd like to give you the "Low Down" on some of your fascinating neighbors.

The LAMPREYS are a nasty family of sorts whose characteristics you are probably well aware of. Some years ago, they nearly wiped out the lake trout population by attaching to these fish as a parasite and eventually destroying them. In spite of these bad habits, they are quite interesting to study. As a matter of fact, I'm sure that it was through observation of their habits that conservation people were able to bring the lamprey under

control. In the southeastern portion of the United States the brook lamprey, a smaller harmless variety, is fairly common and can be caught both in their larval and adult forms. The larvae may be caught in decaying vegetation in the still areas of a stream.

BOWFIN is the single species of their family and at the same time the sole survivor of a group of fish which flourished and covered a wide territory during the Mezozoic period. Sometimes referred to as the grinnel or as the "Cajuns" from the Louisiana delta country call it, the "shopick".

We have one known species of TETRA which has crossed the Rio Grande (a true wetback) and is presently found in Texas and Oklahoma. The *Astyanax mexicanus* grows to a length of about two inches, is silver with black markings and has tinges of red in the fins reminding one of a miniature Buenos Aires TETRA.

ANCHOVIES may not be the most attractive fish for the home aquarium, but they sure do taste good on pizza.

The MINNOW & CARP family is quite large and is comprised primarily of shiners, dace and chub. *Notropis hypselopterus*, *Notropis signipinnis*, and *Notropis lutrensis* are typical of the family. These *Notropis* and other closely related species are ideal community tank fish. They are peaceful, energetic, spawn readily in captivity and usually take all types of food including the dry flake food. As you can see, their colors are no less striking than most other aquarium fish imported from some distant far off land. These beauties speak for themselves.

Our most common LIVEBEARER, *Gambusia affinis*, a fin nipper if there ever was one, hardly noted for its beauty; but it has been exported all over the world because of a voracious appetite for mosquito larvae. Even in the case of the *Gambusia* there is a black spotted variety which does have a certain attractiveness.

Mollienisia latipinna, the green sailfin molly is the fish from which the black molly was developed back in the 1930's. As you know, the black molly has been shipped all over the world. Extensive development has taken place in locations such as Hong Kong where exotic strains such as the lyretail have been produced, but remember it all started back on the Gulf Coast about forty years ago. In the meantime the green sailfin molly is still a very attractive fish.

Another livebearer, the *Heterandria formosa* sometimes referred to as the least killifish has the distinction of being the smallest livebearer. Males grow to the maximum of 1 inch with a large female reaching approximately two inches. The standard strain of *formosa* is olive-colored with black markings and a noticeable red splash on the dorsal. A golden variety called the Xanthic strain has also been developed which at present is quite rare.

The Madtom is one of the most interesting of all the North American CATFISH, a rather small fish which can reach a length of about 6 or 7 inches maximum with sizes from 3 to 4 inches more common. The distinguishing feature of the Madtom is that the adipose fin extends and connects to the caudal fin. As most, these catfish make efficient scavengers and are quite active.

North American KILLIFISH consist primarily of Cyprinodons and a considerable number of Fundulus. Cyprinodon nevadensis diabolis or Devil's Hole fish is one of the rarest, most unique species of fish in the world. It is only found in one hot spring, The Devil's Hole in Nevada near the desert springs. This particular variety of pupfish, the smallest by the way, is now protected by the Department of the Interior and can not be collected. The spring in which it thrives has an average mean temperature of 94 degrees F and sustains 115 degrees in the summer. In an aquarium it must be kept warm. The male is steel blue with dark fins and has the inclinations of a harem keeper. He gathers as many females as he can, fights off the other males and after spawning beats up the females. How about that!

Jordanella floridae is one of the most popular of the group of American killifish. A new albino strain has been seen on the market which is most attractive.

Another North American killie is the Fundulus cingulatus which is one of the few killies which makes a good community tank addition. The male has warm red coloration which varies in intensity depending on where it was caught. No matter how intense the parent might be in color, it has been my experience that the first few generations do not show as well. However, with selective breeding I have been able to develop a strain more colorful than the wild one.

Leptolucania ommata, pygmy or lemon killi is one of the smallest killifish reaching a maximum size of 1-1/2". This fish is a peaceful tank mate and because of its diminutive size should be kept with only small fish as the pygmy sunfish and the J.H. formosa. These little fellas all usually inhabit the same ponds and swamps of Western Florida.

In the coastal waters you will find an abundance of brackish water killifish including such interesting ones as: Fundulus confluentis, Adenia xenica, Fundulus heteroclitus, Cyprinodon varigatus and many more.

Did you know that the Brook SILVERSIDE spawns in much the same fashion as the medaka? Adhesive eggs cling to a sticky filament attached to the vent of the female until they are brushed against some plant and are transferred. The silverside is one of the most delicate fish. Just catching them in a net is usually fatal and rarely do they survive handling of any kind. Catching fry in a glass container and raising them without ever netting them proves to be the best way for me. Can you imagine the difficulty of trying to get a fish of this type back from some far off land?

Apeltes quadracus a four-spined STICKLEBACK is a brackish water fish which travels up fresh water rivers and creeks of the Atlantic seaboard to spawn. They appear in large numbers in these streams in the early spring, about March. If netted at this point they are more than likely to spawn in an aquarium. The water temperature should be from 65 degrees F to 70 degrees F. Eastern tropical fish dealers have stocked them in season at reasonable prices. The male builds a vertical nest in plant thickets. During the breeding season, the four-spined stickle back male has brilliant red ventral fins. Also at breeding the male exudes from special glands a sticky cobweb which he uses to glue his nest together. The nest is usually open at the top and has a hole in the side insuring circulation of water as he blows into it during the several days of the hatching period. He will usually not eat the young. Parents, however, do not usually survive long after spawning is completed.

There are many brackish water varieties of PIPEFISH which are found all along the coast of North America. Pipefish require live food such as newly hatched brine shrimp, dwarf white worms or baby tubifex. Certainly a curiosity!

The SUNFISH family is perhaps the most popular family of American fish on the foreign market. This family includes species of *Lepomis*, *Elassoma*, and *Enneacanthus*. I've seen Longeared sunfish on several occasions for sale in tropical fish shops in Europe for as much as twenty-five dollars a pair.

Predominant in the PERCH group are the darters. There are presently 109 varieties identified as inhabitants of North America. Usually found in fast moving streams, in the aquarium they require strong aeration. The darters are known as the fish that dance because some species of this family perform a dance while spawning, clasping each other with their ventral fins they dance towards the surface. There are a large number of highly colorful darters including the rainbow and orange throated.

Something for almost everyone, we even have our very own cichlid which is found quite commonly in Texas. *Cichlasoma cyano-guttatum*, the Texas cichlid or Rio Grande perch is found quite often in aquarium shops, but if you really wish to see them at their best you should visit Brakenridge Park in San Antonio, Texas.

The *Dormitator maculatus* or fat SLEEPER as it is called, is indeed a very interesting fish to watch. Their eyes are unusual, you can see right into them, much like the pink eyes of an albino except that their coloration changes from a blue to orange. They usually do not jump out of their containers no matter how open it may be or how tempting.

The Hogchoker, *Trinectes maculatus*, the freshwater member of the SOLE family most often mistaken for a fresh water flounder is very hardy and quite unique. In addition to their odd shape, these fish have the ability to adapt themselves to sudden and severe changes of salinity. The Hogchoker can be shifted from

fresh to salt and back to fresh water without any noticeable affects what-so-ever.

At one time or another most of you have tried keeping native fish in your aquarium with probably rotten results. Before blaming the fish, ask yourself a few questions:

1. Have I studied available information on the fish which I am interested in keeping?
2. Have all quarantine precautions been taken?
3. Am I providing the proper environment, food and tankmates?

Our native fish require no more, but definitely no less attention than most so-called tropicals. One should remember that a fish on display in a tropical fish shop has been subjected to violent upheavals of its environment and that it has taken the attrition of many to bring each one to market. This same thing occurs with our native fish, but to a lesser extent. When collecting we should keep the following guidelines in mind:

1. Holding water collected from area should be as clean as possible.
2. Do not overcrowd.
3. Separate fish by size and temperament.
4. Large fish such as *Lepomis* should be separated and transported individually.
5. Do not handle excessively.
6. Insulate whenever possible.
7. Use prophylactic against fungus.
8. Check pH and be aware of mineral content.
9. Keep plants and driftwood out of fish container.
10. Use good common sense.

Not all of us have the opportunity to travel to far away exotic places in search for thrilling adventure, but who knows what experiences might be in store for you right here in your own back yard!