

Collecting Fishes in an Urban Environment by Jim Pitts

The Louisville metropolitan area has a population of roughly 300,000. A large number of industrial plants are located here including such big names as General Electric, Ford, DuPont, Union Carbide, and Phillip Morris. We dump an enormous amount of industrial and residential wastes into our local waterways. Yes, we have treatment plants, but they are not sufficient to check the damage we inflict on our local streams. Despite this glum picture, many interesting species of fish may be found only a short distance from the heart of the city. It is the intent of this article to point out that native fish collectors need not have their hobby totally stifled even though they are situated in an urban environment that is not conducive to the existence of our more delicate species. Most of the species I will note exhibit high tolerance for siltation and even chemical pollutants.

THE RIVER

The Ohio River forms the northern and western borders of the city of Louisville. This mighty stream flows past us at up to half a million cubic feet per second. The water is pooled along most of the river's 981-mile course by a series of dams. The McAlpine dam, here at Louisville, stands above the Falls of the Ohio. This historical site is where Rafinesque described a great many of the 113 fishes of his *Ichthyologia Ohioensis* in 1819. The Falls are visible only during low water periods, and consist of a plane of ancient limestone that is deeply pocked with potholes. The fossil record recorded in this bed is said to be among the richest of the period and several unsuccessful attempts have been made to give the Falls national park status.

Today, perhaps 130 species of fish may still be found along the course of the river, though many of these are quite rare. Seining is possible below the dam at times of low water. Here I have collected the following species:

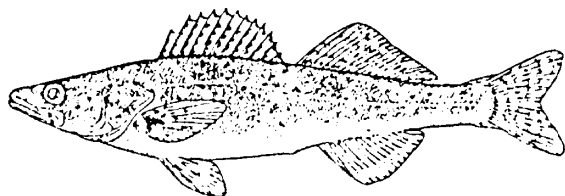
<i>Dorosoma cepedianum</i>	Gizzard shad
<i>Notropis atherinoides</i>	Emerald shiner
<i>Anguilla rostrata</i>	American eel
<i>Ictalurus punctatus</i>	Channel catfish
<i>Fundulus notatus</i>	Blackstriped topminnow
<i>Lepomis macrochirus</i>	Bluegill
<i>Aplodinotus grunniens</i>	Freshwater drum

Use of hook and line in the river is likely to yield many other species including:

<i>Lepisosteus osseus</i>	Longnose gar
<i>Cyprinus carpio</i>	Carp
<i>Pylodictus olivaris</i>	Flathead catfish
<i>Ictalurus melas</i>	Black bullhead
<i>Pomoxis annularis</i>	White crappie
<i>Stizostedion canadense</i>	Sauger
<i>Stizostedion vitreum</i>	Walleye

Of course, this is only a partial list, but serves to point out the general type of ichthyofauna one might find in eastern rivers, even near large metropolitan ports.

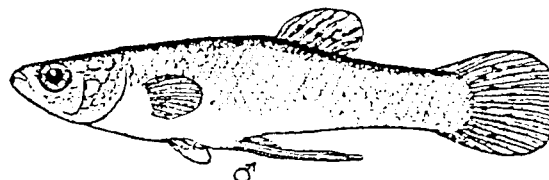
SAUGER, *Stizostedion canadense* (Smith).



THE SWAMP

An early article of mine, "Notes on the Grass Pickerel, *Esox americanus vermiculatus*," described a tiny swamp which manages to survive beneath the pillars of an expressway only five minutes from downtown Louisville. This type of water resource is not uncommon along the floodplains of many of our eastern rivers. Besides the Grass pickerel, fishes collected from this swamp included:

<i>Dorosoma cepedianum</i>	
<i>Ictalurus natalis</i>	Yellow bullhead
<i>Semotilus atromaculatus</i>	Creek chub
<i>Notropis whipplei</i>	Steelcolor shiner
<i>Gambusia affinis</i>	Mosquitofish



MOSQUITOFISH, *Gambusia affinis* (Baird and Girard).

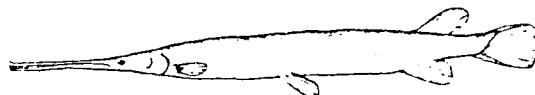
A CREEK THROUGH AN URBAN PARK

Beargrass Creek has had the misfortune of lying in the path of 250 years of urban development. It is not unlike hundreds of similar streams that meander through suburbs, business districts, and industrial developments in cities across the United States. Along part of its length the stream gains sanctity as it curls through Cherokee Park. Here, though partially channelized, the creek escapes degradation to a concrete-lined gutterway. It is also here that one finds an assortment of interesting and easily obtainable species of fish. At one time, the stream must have been quite clean. It supported such clean water species as the Least darter, *Etheostoma microperca*, and the Banded sculpin, *Cottus caroliniae*. These species have now vanished from the creek and more pollution-tolerant species remain. I have collected the following species in Beargrass Creek:

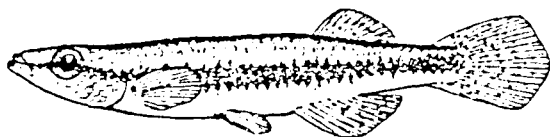
<i>Cyprinus carpio</i>	Goldfish
<i>Carassius auratus</i>	
<i>Semotilus atromaculatus</i>	
<i>Campostoma anomalum</i>	Stoneroller
<i>Notropis cornutus</i>	Common shiner
<i>Pimephales notatus</i>	Bluntnose minnow
<i>Ictalurus natalis</i>	
<i>Fundulus notatus</i>	
<i>Micropterus dolomieu</i>	Smallmouth bass
<i>Micropterus salmoides</i>	Largemouth bass
<i>Lepomis macrochirus</i>	
<i>Lepomis megalotis</i>	Longear sunfish
<i>Etheostoma flabellare</i>	Fantail darter

Other fishes such as the Longnose gar are known to enter the stream periodically from the Ohio River.

**LONGNOSE GAR,
Lepisosteus osseus (Linnaeus)**

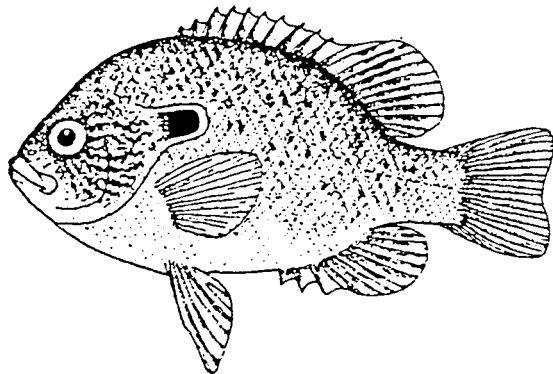
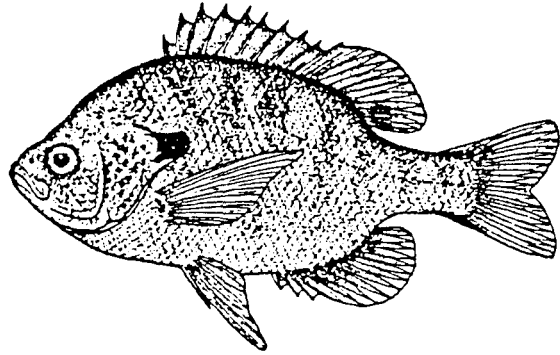


**BLACKSTRIPE TOPMINNOW,
Fundulus notatus (Rafinesque)**



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..... BLUEGILL,
Lepomis macrochirus Rafinesque

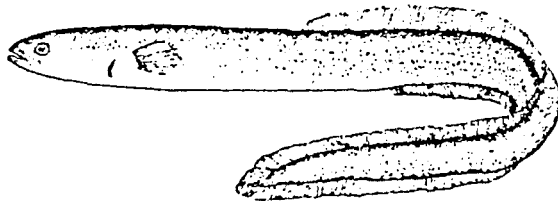
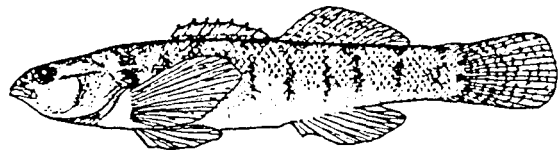


..... LONGEAR SUNFISH,
Lepomis megalotis (Rafinesque)

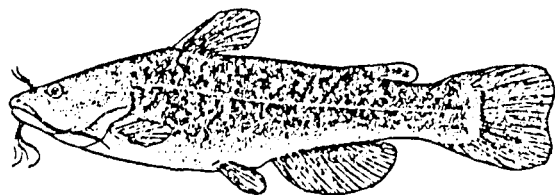
ALAS THE LOWLY DITCH

If one looks hard enough among the seemingly sterile ditches of the suburbs, he is likely to find one of the most interesting of the urban fishes. The Mosquitofish, *Gambusia affinis*, often manages to survive in great numbers in these intermittent waterways. This little livebearer is sometimes planted in urban ditches as an effective means of reducing the mosquito populations. Gambusias multiply quickly and thrive on mosquito larvae. In southern states, an attractive mottled variety, popularly known as *Gambusia affinis holbrocki*, can be found in some localities.

FANTAIL DARTER,
Etheostoma flabellare Rafinesque



Anguilla rostrata (Lesueur)
the American eel



BROWN BULLHEAD,
Ictalurus nebulosus (Lesueur)

WHAT'S MISSING

This casually prepared list of fishes which are easily obtainable from Louisville urban waters contains a total of 28 species. Though this may seem like a healthy number in terms of diversity, it is very disconcerting when contrasted to the large number of species which inhabit the streams just beyond the influence of the city's waste disposal systems. In these streams the Rainbow darter (*Etheostoma caeruleum*) is present in large numbers. A number of other darters are also found among the clean riffles of these waterways. These include: the Greensides darter (*E. blennioides*), the Orangethroat darter (*E. spectabile*), the Johnny darter (*E. nigrum*), and the Logperch (*Percina caprodes*). Note that only one darter, *Etheostoma flabellare*, was found in the city. This species seems to be quite tolerant of siltation and replaces all other darters in urban Louisville streams. A number of shiners seem to be excluded from the city's ichthyofauna.

The Rosefin shiner (*Notropis ardens*), the Bigeye shiner (*N. boops*), the Mimic shiner (*N. volucellus*), and the Silverjaw minnow (*Erycimba buccata*), are all quite common in waters outside of Louisville. The list continues with such species as the Banded sculpin, the Brook silverside (*Labidesthes sicculus*), and the Orange-spotted sunfish (*Lepomis humilis*).

Though there is undoubtedly a reduction in diversity of species at urban collecting sites, it is nonetheless interesting to survey those species which manage to maintain themselves in the midst of such adversity. It would thus behoove each urban-based native fish enthusiast to examine the streams in his area and to take special notes of the ecological factors delimiting his urban ichthyofauna.

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Jim Pitts is a charter member of NANFA and has written many articles for AMERICAN CURRENTS over the years. He also has a keen interest in electronics and is a licensed ham radio operator. --Editor