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**A LIST OF THE FISHES  
OF LAKE WINNEBAGO**

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By

**Gordon R. Priegel**

○ SOUTH ASYLUM BAY

● OSHKOSH

RESEARCH REPORT NO. 27

(Fisheries)

Research and Planning Division  
Wisconsin Conservation Department

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○ SUPPLES' MARSH

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Edited by Joyce A. Jais

## INTRODUCTION

This list of the fishes that are present, have been present, or migrate occasionally into Lake Winnebago has been developed to acquaint the angler, lake-shore resident, and the general public with the rich fish fauna of this lake. All of the fish listed have been observed by the author except the single lake trout which was reported taken in a fyke net out of Little Lake Butte des Morts in 1955 (pers. comm. Vern Hacker, area biologist). The remaining 75 species were collected from Lake Winnebago during the period from April, 1959 through December, 1966. Various means were employed including trawls, trap nets and seines used by state and private commercial fishermen. In addition, fish taken by sport anglers and minnow seiners and sent to the author for identification were included. The accepted common names, scientific names and authorities for scientific names are taken from A List of Common and Scientific Names of Fishes from the United States and Canada, published by the American Fisheries Society in 1960. Local common names are also listed in some instances.

A classification of the fish species on the basis of their abundance in Lake Winnebago is given. Very rare indicates that the species was observed only one to three times during the eight year period (1959-66) while rare indicates the observance of at least one specimen once each year. A fish is listed as common if it was observed frequently during each year but never in large quantities. Abundant indicates numerous observations of the fish species during the year, frequently in large numbers. Very abundant describes fish species that were encountered in large quantities whenever fish sampling was carried out on the lake.

Lake Winnebago, the largest lake in Wisconsin, has an area of 137,708 acres with a maximum depth of 21 feet and an average depth of 15.5 feet. The lake is roughly rectangular in shape: 28 miles long and 10.5 miles wide at its widest point. It lies in the Great Lakes drainage basin and drains into the Green Bay waters of Lake Michigan.

Lake Winnebago has a rich fauna of fishes. Seventy-six species belonging to 22 families are now present or have been reported in the past.

The families Cyprinidae (minnows), with 21 species, and Percidae (perch) with a total of 10 species, contribute the largest number of species to the lake. The Ictaluridae (catfishes) and Centrarchidae (sunfishes), each with 7 species, and the Catostomidae (suckers) with 6 species are also well represented.

Some species, like the members of the trout family Salmonidae, do not exist in the lake on a yearly basis but are migrants from Big Green Lake or trout streams flowing into the Wolf or Fox Rivers. Nevertheless they have been taken in Lake Winnebago and will probably occur in the lake again in future years.



## LIST OF FISHES

### PETROMYZONTIDAE--LAMPREYS

Chestnut lamprey, Ichthyomyzon castaneus Girard. Very rare; parasitic; found attached to other fish species. Very little is known about their life history.

Silver lamprey, Ichthyomyzon unicuspis Hubbs and Trautman. Common; most abundant lamprey in the lake. Parasitic; often seen attached to other fish. They may reach a length of 16 inches. When sexually mature the adults ascend the rivers to spawn and die soon afterward.

### ACIPENSERIDAE--STURGEONS

Lake sturgeon, Acipenser fulvescens Rafinesque. Abundant; the only species of sturgeon found in the lake. Provides for an annual spearing fishery during February. Official registration records since 1955 show that a 168 pounder was speared in 1957.

### LEPISOSTEIDAE--GARS

Longnose gar, Lepisosteus osseus (Linnaeus). Common; most abundant of the two species found in the lake.

Shortnose gar, Lepisosteus platostomus Rafinesque. Rare; first noted in the lake in September, 1963. The two species of gar are known to spawn in shallow bays and streams.

### AMIIDAE--BOWFINS

Bowfin or dogfish, Amia calva Linnaeus. Rare; found in shallow, weedy bays.

### CLUPEIDAE--HERRINGS

Gizzard shad, Dorosoma cepedianum (LeSueur). Very rare. One fish was recorded taken in 1959 and 13 (all at the same time, therefore constituting only one observation) in 1966 by commercial fishermen. This fish is abundant in the upper areas of the upper Fox River.

### SALMONIDAE--TROUTS, WHITEFISHES AND GRAYLINGS

Cisco or lake herring, Coregonus artedii LeSueur. Very rare; a young cisco was taken on June 5, 1962, while shoreline seining off Neenah. This lone specimen is believed to be a migrant from Big Green Lake.

Rainbow trout, Salmo gairdneri Richardson. Rare; a few specimens are caught each year in the lake. Migrant from tributary streams of the Wolf and Fox Rivers.

Brown trout, Salmo trutta Linnaeus. Rare; a few brown trout are reported caught by anglers almost every year. Three brown trout were caught off Fairy Springs during August and September, 1962. These fish migrate into the lake from the trout streams of the Wolf and Fox Rivers.

Brook trout, Salvelinus fontinalis (Mitchill). Rare; one brook trout was reported taken in trap nets in 1957 and another in 1958 by commercial fishermen. A few are taken by anglers periodically. These are migrants from trout streams entering the Wolf and Fox Rivers.

Lake trout, Salvelinus namaycush (Walbaum). Very rare; a 17-pound lake trout was caught in a fyke net in Little Lake Butte des Morts in 1955. Although not caught in Lake Winnebago, it did inhabit the lake for a short time as a transient from Big Green Lake.

#### HIODONTIDAE--MOONEYES

Mooneye, Hiodon tergisus LeSueur. Common; taken in all parts of the lake. Annual commercial harvest seldom exceeds 500 pounds. Anglers commonly refer to the mooneye as the cisco.

#### UMBRIDAE--MUDMINNONS

Central mudminnow, Umbra limi (Kirtland). Rare; found in shallow weedy bays. Seldom exceeds 4 inches in length

#### ESOCIDAE--PIKES

Northern pike, Esox lucius Linnaeus. Abundant; taken mainly along the shoreline and shallow bays. Spawns in shallow weedy bays and small streams. Most numerous of the two pike species found in the lake.

Muskellunge, Esox masquinongy Mitchill. Rare; a few specimens are taken most years. There is little to no fishing pressure on the musky so it is difficult to determine its abundance.

#### CYPRINIDAE--MINNONS AND CARPS

Stoneroller, Campostoma anomalum (Rafinesque). Very rare. This species reaches a length of 8 inches.

Northern redbelly dace, Chrosomus eos Cope. Very rare; only one specimen has been observed. It was taken along the west shore in September, 1960.

- Carp, Cyprinus carpio Linnaeus. Very abundant; taken in all areas of the lake. The commercial harvest since 1948, has varied from 11 to 285 thousand pounds annually.
- Hornyhead chub, Hybopsis biguttata (Kirtland). Very rare.
- Golden shiner, Notemigonus crysoleucas (Mitchill). Common; scattered around the lake but seldom taken.
- Pugnose shiner, Notropis anogenus Forbes. Rare.
- Emerald shiner (Lake emerald shiner), Notropis atherinoides Rafinesque. Very abundant; the most abundant minnow in the lake. It prefers the open water areas. Anglers refer to this minnow as the "Milwaukee shiner".
- River shiner, Notropis bienniuis (Girard). Abundant; taken in all areas of the lake. The second most abundant minnow species in the lake.
- Common shiner, Notropis cornutus (Mitchill). Common.
- Blackchin shiner, Notropis heterodon (Cope). Rare.
- Blacknose shiner, Notropis heterolepis Eigenmann and Eigenmann. Rare.
- Spottail shiner, Notropis hudsonius (Clinton). Common; taken along the entire shoreline.
- Roseface shiner, Notropis rubellus (Agassiz). Common; well scattered around the lake.
- Spotfin shiner, Notropis spilopterus (Cope). Common; well scattered around the lake and commonly taken.
- Sand shiner, Notropis stramineus (Cope). Very rare.
- Mimic shiner, Notropis volucellus (Cope). Very rare.
- Pugnose minnow, Opsopoeodus emiliae Hay. Very rare; five specimens were taken on June 14, 1962, while seining south of Oshkosh.
- Bluntnose minnow, Pimephales notatus (Rafinesque). Rare.
- Fathead minnow, Pimephales promelas Rafinesque. Very rare.
- Longnose dace, Rhinichthys cataractae (Valenciennes). Very rare; one specimen was observed in September, 1960.
- Creek chub, Semotilus atromaculatus (Mitchill). Very rare; one specimen was collected on August 16, 1966, while seining along the north shore.

CATOSTOMIDAE--SUCKERS

- Quillback (white carp), Carpoides cyprinus (LeSueur). Abundant; since 1948 commercial fishermen have removed from 1 to 36 thousand pounds annually.

White sucker, Catostomus commersoni (Lacépède). Abundant; the most abundant sucker species in the lake. Spawns along the shoreline and in tributary streams.

Lake chubsucker, Erimyzon sucetta (Lacépède). Rare; seldom exceeds 6 inches in length.

Bigmouth buffalo, Ictiobus cyprinellus (Valenciennes). Very rare; one specimen observed in October, 1966.

Spotted sucker, Minytrema melanops (Rafinesque). Very rare; one specimen was taken in South Asylum Bay in September, 1963. More common in the Wolf and Fox Rivers.

Northern redhorse, Moxostoma macrolepidotum (LeSueur). Common; found in all areas of the lake. The only redhorse species present.

#### ICTALURIDAE--FRESHWATER CATFISHES

Black bullhead, Ictalurus melas (Rafinesque). Abundant; taken abundantly along the shoreline, bays and tributary streams in spring during the spawning period.

Yellow bullhead, Ictalurus natalis (LeSueur). Common; not as abundant as the brown or black bullhead but attains a greater size.

Brown bullhead, Ictalurus nebulosus (LeSueur). Very abundant; the most abundant bullhead in the lake. Taken during the spring spawning period in all shallow areas around the lake and in tributary streams.

Channel catfish, Ictalurus punctatus (Rafinesque). Abundant; taken primarily on set lines.

Stonecat, Noturus flavus Rafinesque. Rare; a small slender, flatheaded catfish seldom exceeding 9 inches.

Tadpole madtom, Noturus gyrinus (Mitchill). Rare; madtoms are small, tadpolelike catfishes seldom exceeding 3 inches.

Flathead catfish or Mississippi bullhead, Pylodictis olivaris (Rafinesque). Common. The largest member of the catfish family, with fish weighing over 40 pounds being taken. More numerous in the Wolf and Fox Rivers.

#### CYPRINODONTIDAE--KILLIFISHES

Banded killifish, Fundulus diaphanus (LeSueur). Rare; small fish rarely reaching a length of 4 inches.

GADIDAE--CODFISHES AND HAKES

Burbot or lawyer, Lota lota (Linnaeus). Abundant; widely scattered. This fish spawns during January and February at which time they are harvested commercially. Since 1948, the annual commercial harvest has varied from 4 to 43 thousand pounds.

GASTEROSTEIDAE--STICKLEBACKS

Brook stickleback, Eucalia inconstans (Kirtland). Very rare; two specimens have been reported, one in 1960 and one in 1962. This fish seldom exceeds 2 inches.

PERCOPSIDAE--TROUT-PERCHES

Trout-perch (grounder), Percopsis omiscomaycus (Walbaum). Very abundant; at times the most abundant fish species in the lake. Seldom exceeds 6 inches. A valuable forage fish for walleyes and saugers.

SERRANIDAE--SEA BASSES

White bass, Roccus chrysops (Rafinesque). Very abundant; a cyclic fish reaching tremendous numbers at times and then decreasing to a small population. Most abundant member of this family in the lake.

Yellow bass, Roccus mississippiensis (Jordan and Eigenmann). Common; never reaches the abundance attained by the white bass. Seldom taken by anglers.

CENTRARCHIDAE--SUNFISHES

Rock bass, Ambloplites rupestris (Rafinesque). Common; seldom taken by anglers.

Pumpkinseed or common sunfish, Lepomis gibbosus (Linnaeus). Common; especially in the bays along the west shore of the lake.

Bluegill, Lepomis macrochirus Rafinesque. Abundant; especially in the bays along the west shore of the lake. Seldom harvested by the angler.

Smallmouth bass, Micropterus dolomieu Lacépède. Abundant; found especially along the north and east shores.

Largemouth bass, Micropterus salmoides (Lacépède). Common; found in weedy bays along the west shore.

White crappie, Pomoxis annularis Rafinesque. Rare.

Black crappie, Pomoxis nigromaculatus (LeSueur). Abundant; all areas of the lake. This fish is the most abundant species of the sunfish family found in the lake. There is little harvest by anglers other than during the spring spawning period when the fish move into the shallow bays and streams to spawn.

PERCIDAE--PERCHES

- Iowa darter, Etheostoma exile (Girard). Very rare.
- Fantail darter, Etheostoma flabellare Rafinesque. Very rare.
- Johnny darter, Etheostoma nigrum Rafinesque. Common; taken in all areas of the lake.
- Banded darter, Etheostoma zonale (Cope). Very rare.
- Yellow perch, Perca flavescens (Mitchill). Very abundant; found in all areas of the lake. Next to the white bass it is the most abundant panfish in the lake.
- Logperch, Percina caprodes (Rafinesque). Common; taken along the shoreline especially in gravel areas.
- Blackside darter, Percina maculata (Girard). Very rare
- River darter, Percina shumardi (Girard). Common; taken along the shoreline of the lake.
- Sauger or sand-pike, Stizostedion canadense (Smith). Very abundant; contributes greatly to the winter sport fishery. Spawns entirely in the lake during late-April or early-May.
- Walleye, Stizostedion vitreum vitreum (Mitchill). Very abundant; the most sought-after game fish in the lake. Spawns either during April in the lake along the west shore, or in marshes adjacent to the Wolf and Fox Rivers.

SCIAENIDAE--DRUMS

- Freshwater drum (sheepshead), Aplodinotus grunniens Rafinesque. Very abundant; all areas of the lake. From 1954 through 1966, commercial fishermen removed 37.1 million pounds of drum from the lake.

CICHLIDAE--CICHLIDS

- Tilapia, Tilapia mossambida Peters. Very rare; this species is a native of east Africa. It has been introduced into ponds in southeastern United States. Three specimens were illegally put into Supple's Marsh during the early part of summer, 1965. In August, 1965, a 7.5 inch tilapia was caught in Supple's Marsh by an angler using worms as bait. This species cannot tolerate the cold winter water temperatures of this area.

COTTIDAE--SCULPINS

- Mottled sculpin, Cottus bairdi Girard. Common; distributed along the shoreline. Seldom exceeds 2 inches in length.

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