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An Annotated Check-List of Fishes of the Wapsipinicon River Drainage System in Iowa

By ROBERT E. CLEARY

The Wapsipinicon rises in the southeast corner of Mower County, Minnesota, at an elevation of 1250 feet above mean sea level, and flows 255 miles in a southeasterly direction to enter the Mississippi River some five miles above Princeton, Iowa. In its course across northeast Iowa it falls approximately 685 feet, maintaining a rather gradual slope, the average seldom, if ever, exceeding 2.5 feet per mile. The major portion of the Wapsie basin lies within the area of the Iowan drift, and the topography for the major portion is a constructional type of the youthful stage. The Wapsie Valley is narrow (10 miles in width) and gives rise to no important major tributaries. Buffalo Creek, Little Wapsie, Otter and Plum Creeks are the largest of the tributaries. The flat, narrow valley of the main river probably contains more overflow areas and backwater ponds than any other river in the state. This feature, besides enhancing fishing prospects, attracts numerous waterfowl and gives the river the reputation of being the best duck-hunting inland river of the state.

The angling pressure is primarily for catfish, crappie, northern pike, and largemouth bass. Smallmouth are common in some reaches and the area adjacent to the Minnesota state line is annually stocked with trout. The 1951 Voluntary Creel Census reports show that it took 50 minutes to catch a trout, and the average warm-water game fish took slightly over an hour to catch.

Collections on the Wapsipinicon watershed have been made by Meek in 1889, 1890 and 1891 (Meek, 1892), by Salyer in 1932, Hubbs in 1933, and Bailey, 1939 to 1943 (the latter three collections listed only in unpublished field notes on file at the office of the State Conservation Commission and Iowa State College). A total of 65 collections from 55 stations in the watershed were made by the author from 1948 to 1951 inclusive. Most collections were made from flowing water. However, a few representative ponds were sampled. Since quite a few of these ponds were leased to fishing and hunting rights, most of them have been stocked with some atypical river forms from time to time, and these fish escape to the river during high water, which accounts for the yellow perch in Buchanan County, the largemouth bass in Mitchell County (nearly in the trout waters), and the silver bass in Otter Creek, Fayette

County. This may also account for the presence of redbfin shiner, *Notropis lutrensis*, in a backwater lake in Bremer County, the present site of Sweet's Marsh Public Hunting Grounds. This species has never been found in any of the flowing water collections and is definitely out of its known range, as it has never been taken recently in any flowing water north of Highway 30 nor west of the counties fringing the Mississippi River in northeast Iowa.

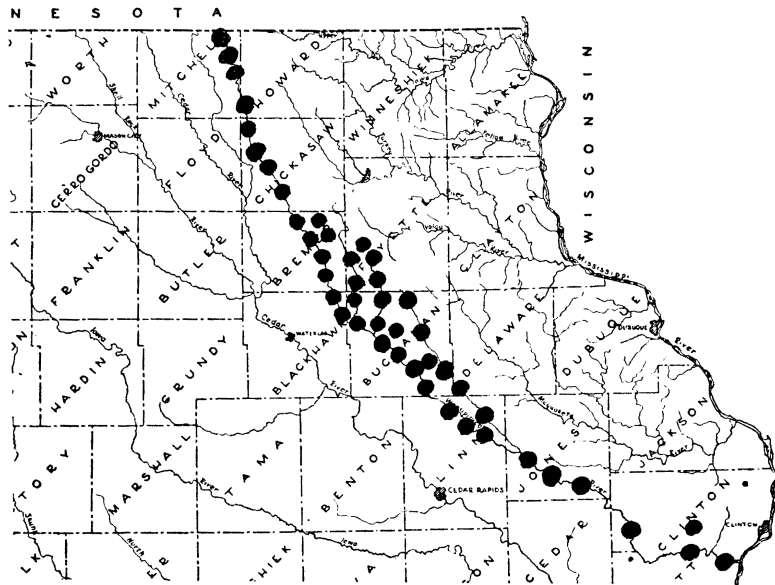


Figure 1. Location of Collection points in the Wapsipinicon River system in Iowa. 1948-1951.

Another rather remarkable collection was made in 1951 in an area where annual collections have been made since 1948. A series of 15 gravel chubs, *Hybopsis sp.*, were taken over a coarse gravel riffle on the Wapsie River in Buchanan County. This collection is remarkable in that heretofore only a single specimen of *Hybopsis sp.* has been taken in over 300 recent collections on the watersheds of northeast Iowa, and these specimens were taken at the selfsame location Meek reported taking them in 1890.

The relative abundance listed for each species is purely the author's opinion. This is of necessity, since certain populations shift in abundance at certain times of the year or even day, and in an overall distribution work, individual sample abundance is of relatively no importance. The collections were made with drag seines of various sizes, trap nets, hoop nets, and angling observations. The identification of the species collected recently were made

by the author, and questionable specimens were identified either by Dr. Reeve Bailey, Museum of Zoology, University of Michigan, or Dr. Raymond Johnson, U. S. Fish and Wildlife Service. Type specimens are in collections housed by the author, Iowa Conservation Commission, or the following museums: University of Michigan, Iowa State College, Coe College, Wartburg College, and Iowa State Teachers College.

The following is an annotated list of 73 species found in the watershed. Of this number, 61 have been taken in recent collections.

LEPISOSTEIDAE

Lepisosteus platostomus Rafinesque—Shortnose Gar.

Rare to occasional in lower reach.

Lepisosteus osseus oxyurus Rafinesque—Northern Longnose Gar.

Reported in backwaters and lower reaches by Meek. Not taken in recent collections.

AMIIDAE

Amia calva Linnaeus—Bowfin.

Rare in extreme lower reach.

SALMONIDAE

Salmo trutta Linnaeus—Brown Trout.

Salmo gairdneri Richardson—Rainbow Trout.

Both stocked in the extreme upper reaches of main stream.

CLUPEIDAE

Dorosoma cepedianum (LeSueur)—Gizzard Shad.

Reported by Meek and Bailey as rare in bayous of lower reaches. Not taken in recent collections.

UMBRIDAE

Umbra limi (Kirtland)—Central Mudminnow.

Wapsie River in Mitchell County. Rare. Not taken in recent collections but taken by Bailey in 1939.

ESOCIDAE

Esox lucius Linnaeus—Northern Pike.

Occasional in lower reaches of main river. Common to rest of river except headwaters.

CATOSTOMIDAE

Ictiobus cyprinellus (Valenciennes)—Bigmouth Buffalo.

Common in middle and lower reaches. Confined primarily to slack water areas.

Carpiodes cyprinus (LeSueur)—Quillback.

Abundant over watershed.

Carpiodes c. carpio (Rafinesque)—Northern River Carpsucker.

Abundant over watershed.

Carpiodes velifer (Rafinesque)—Highfin Sucker.

Common to abundant in middle and lower reaches of main river.

Moxostoma erythrurum (Rafinesque)—Golden Redhorse.

Occasional to common in upper two-thirds of drainage. Rare to absent downstream.

Moxostoma anisurum (Rafinesque)—Silver Redhorse.

Occasional in upper two-thirds of drainage. Commonly found in tributaries.

Moxostoma aureolum (LeSueur)—Northern Redhorse.

Occasional to common in upper two-thirds of main river. Specimens weighing between 8 and 10 lbs. taken in Linn and Buchanan Counties.

Hypentelium nigricans (LeSueur)—Northern Hog Sucker.

Occasional in upper reaches of main river and tributaries.

Catostomus c. commersoni (Lacépède)—Common White Sucker.

Occasional in upper reaches of main stream; rare to absent downstream; common in tributaries.

CYPRINIDAE

Cyprinus carpio Linnaeus—Carp.

Common to abundant in main river. Occasional in lower reaches of tributaries.

Notemigonus crysoleucas auratus (Rafinesque)—Western Golden Shiner.

Rare to occasional over drainage. Common to abundant in some pools and lakes.

Semotilus a. atromaculatus (Mitchill)—Northern Creek Chub.

Rare in main river except trout waters where common. Common in tributaries of upper drainage.

Hybopsis biguttata (Kirtland)—Hornyhead Chub.

Occasional in upper drainage. Rare to absent below Linn County.

Hybopsis storeriana Kirtland—Silver Chub.

Found by Meek and Bailey as common to lower reach. Not taken in recent collections.

Hybopsis sp.—Gravel Chub.

Rare. Found only once in main river in Buchanan County.

Rhinichthys atratulus meleagris Agassiz—Western Blacknose Dace.

Rare. Taken only once in headwaters of a tributary.

Phenacobis mirabilis (Girard)—Plains Suckermouth Minnow.

Rare to occasional throughout drainage.

Notropis a. atherinoides Rafinesque—Common Emerald Shiner.

Occasional in lower reach of main river; absent elsewhere.

Notropis rubellus (Agassiz)—Rosyface Shiner.

Occasional in upper two-thirds of drainage. Common in some tributaries.

Notropis umbratilus (Girard)—Redfin Shiner.

Rare. Found only in upper reach of Otter Creek, Little Wapsie and extreme upper reach of main river.

Notropis cornutus frontalis (Agassiz)—Northern Common Shiner.

Common—abundant everywhere except in extreme lower reach of main river.

Notropis blennioides (Girard)—River Shiner.

Rare in lower reaches. Taken by Bailey but not in recent collections.

Notropis d. dorsalis (Agassiz)—Central Bigmouth Shiner.

Abundant over entire drainage, except occasional in extreme lower reach.

Notropis spilopterus (Cope)—Spotfin Shiner.

Common to abundant in middle reaches and tributaries. Rare to absent in headwaters and extreme lower reach.

Notropis l. lutrensis Baird & Girard—Plains Red Shiner.

Absent in all waters except occasional in pond in Bremer County.

Notropis d. deliciosus (Girard)—Eastern Sand Shiner.

Abundant in entire drainage except occasional in extreme lower reach.

Notropis v. volucellus (Cope)—Northern Mimic Shiner.

Very rare. One specimen taken by Salyer in Buffalo Creek constitutes only record for inland streams of the state.

Dionda nublia (Forbes)—Ozark Minnow.

Found by Meek to be common in a small feeder creek in Jones County. Not taken in recent collections.

Hybognathus hankinsoni Hubbs—Brassy Minnow.

Occasional over entire drainage.

Hybognathus n. nuchalis Agassiz—Western Silvery Minnow.

Rare. Found in lower reaches of main river and lower tributaries.

Pimephales perspicuus (Girard)—Bullhead Minnow.

Rare to occasional in lower portion of main river.

Pimephales notatus (Rafinesque)—Bluntnose Minnow.

Common to entire system except in extreme lower reach, where rare to absent.

Pimephales p. promelas Rafinesque—Northern Fathead Minnow.

Occasional to common over entire system.

Campostoma anomalum pullum (Agassiz)—Central Stoneroller.

Occasional in upper and middle reaches of main river and tributaries.

Campostoma anomalum oligolepis Hubbs & Greene—Largescaled Stoneroller.

Very rare. Found in Buffalo Creek by Salyer. Not taken in recent collections.

AMEIURIDAE

Ictalurus l. lacustris (Walbaum)—Channel Catfish.

Rare to absent in upper system. Common to rest of river; occasional in lower reaches of tributaries.

Ameiurus m. melas (Rafinesque)—Northern Black Bullhead.

Occasional in middle and lower reaches of main river. Common to abundant in some overflow ponds.

Ameiurus natalis (LeSueur)—Yellow Bullhead.

Rare in middle and lower reaches of main river.

Pilodictis olivaris (Rafinesque)—Flathead Catfish.

Rare in middle reach and occasional in lower reach of main river.

Noturus flavus Rafinesque—Stonecat.

Rare to occasional in middle and lower reaches of main river.

CYPRINODONTIDAE

Fundulus notatus (Rafinesque)—Blackstripe Topminnow.

Rare to occasional in middle reach of main river.

ATHERINIDAE

Labidesthes s. sicculus (Cope)—Northern Brook Silversides.

Found occasionally in lower reach by Meek. Not taken in recent collections.

SERRANIDAE

Morone chrysops (Rafinesque)—White Bass.

Rare. Stocked behind dam in Fayette County on Otter Creek.

CENTRARCHIDAE

Micropterus d. dolmonieui Lacépède—Northern Smallmouth Bass.

Occasional except in lower reach where rare to absent. Common in some tributaries.

- Micropterus s. salmoides* (Lacépède)—Northern Largemouth Bass.
 Confined primarily to slack waters behind dams where occasional.
- Chaenobryttus coronarius* (Bartram)—Warmouth.
 Rare. Found only in Silver Lake, Clinton County.
- Lepomis cyanellus* Rafinesque—Green Sunfish.
 Occasional in main river; rare to absent in tributaries.
- Lepomis gibbosus* (Linnaeus)—Pumpkinseed.
 Rare. Taken only twice in survey, in middle reach of stream.
- Lepomis m. macrochirus* Rafinesque—Northern Bluegill.
 Occasional. Found only in main river and confined primarily to slack water or overflow ponds.
- Lepomis humilis* (Girard)—Orangespotted Sunfish.
 Common to middle and upper reaches of main river.
- Ambloplites rupestris rupestris* (Rafinesque)—Northern Rock Bass.
 Rare. Taken only once in main river in Buchanan County.
- Pomoxis annularis* Rafinesque—White Crappie.
 Common to abundant in middle reaches of main river.
- Pomoxis nigromaculatus* (LeSueur)—Black Crappie.
 Occasional in middle reach of main river.

PERCIDAE

- Stizostedion v. vitreum* (Mitchill)—Walleye.
 Rare. Found only in middle reaches of river.
- Perca flavescens* (Mitchill)—Yellow Perch.
 Rare. Taken from two stocked lakes.
- Hadropterus maculatus* (Girard)—Blackside Darter.
 Rare. Taken only in middle reaches of system in recent collections. Taken in headwaters by Bailey.
- Hadropterus phoxocephalus* (Nelson)—Slenderhead Darter.
 Very rare. Taken only once in main river in Buchanan County.
- Hadropterus shumardi* Girard—River Darter.
 Very rare. Taken in extreme lower river by Bailey. Not taken in recent collections.
- Ammocrypta clara* Jordan & Meek—Western Sand Darter.
 Found by Meek to be rare in middle and lower reaches of main river. Not taken in recent collections.
- Etheostoma n. nigrum* Rafinesque—Central Johnny Darter.
 Common to entire system except absent in extreme lower reach of main river.
- Etheostoma zonale* (Cope)—Banded Darter.
 Rare. Taken on three occasions in middle reach of main river. Taken by Bailey in Little Wapsie River.
- Etheostoma exile* (Girard)—Iowa Darter.
 Very rare. Taken only once in backwater pond in Buchanan County.
- Etheostoma caeruleum* Storer—Rainbow Darter.
 Rare. Taken by Meek and Salyer in tributaries and middle reaches. Not taken in recent collections.
- Etheostoma flabellare lineolatum* (Agassiz)—Striped Fantail Darter.
 Rare. Found on two occasions in middle reach of main river.

GASTEROSTEIDAE

Eucalia inconstans (Kirtland)—Brook Stickleback.

Very rare. Confined to headwaters of main river.

Literature Cited

Meek, Seth Eugene. 1892. Report upon the Fishes of Iowa, Based upon Observations and Collections made during 1889, 1890 and 1891. Bull. U. S. Fish Comm. for 1890. Art. 7, pp. 217-248.

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