

INSTITUTE FOR FISHERIES RESEARCH
DIVISION OF FISHERIES
MICHIGAN DEPARTMENT OF CONSERVATION
COOPERATING WITH THE
UNIVERSITY OF MICHIGAN

ALBERT S. HAZZARD, PH.D.
DIRECTOR

ADDRESS
UNIVERSITY MUSEUMS
ANN ARBOR, MICHIGAN

December 17, 1937

REPORT NO. 447

IN MEMORIAM

For a few dozen eels this title is probably premature, but for two million of their relatives it is appropriate. The few dozen remaining in our inland waters are merely marking time.

The history of the planting of eels in Michigan's lakes and streams is an especially interesting one and is more or less completely presented in a series of the biennial reports of the Michigan Fish Commission, which preceded the Department of Conservation in handling our fish and fisheries affairs.

The first stocking of eels in Michigan apparently was in 1877 when 265,000 young eels were obtained from the Hudson River in New York and were planted in thirteen southern Michigan counties.

In the biennial report for 1877 and 1888 the Superintendent of Fisheries gives these fish the following "send-off."

"Well, the eel has at length put in an appearance. He is now a veritable Michigan institution, growing and spreading himself beyond hope of check or eradication. Well aware am I that the greetings he received on his arrival into the State were not quite universally of a friendly character. Many there are who welcomed him with wild huzza, and with willing hands and quickened step provided him with "a habitation and a home," while here and there are a few who think, and not undoubtedly conscientiously too, that while we were in the emigration business we might have made choice of a better race of emigrants. Well, for the comfort and consolation of such as cannot see in the eel the summum bonum of gustatory desire and think his room better than his company, I

wish to say, our Eels were selected with great circumspection and care. We did not go to the slums and to the "five points" of the cities, nor to the correction and poorhouses, and jails of the east for them, but to the crystal flowing waters of the storied and verse-immortalized Hudson; and even from the silvery floods that roll at the feet of young Priam's Troy, we sharply discriminated, selecting only those who bore well attested testimonial of distinguished pedigree and good character. So we entertain high hopes that the eels of Michigan's adoption will fulfill the promise of our carefulness of selection.'>>

Seemingly there was already some skepticism regarding the stocking, or at least some antipathy for the fish, some of it probably due to the snake-like appearance of the eel. The same report says:

"But oh! how the anti-eelers cry out against the form of our eel,-- reptilian they say, and all that. Well, its form, it is pretty generally believed, is not unlike that which seduced from faith and fealty other forms of supposed supernal grace and beauty, barring the gates of Eden for all the ages. I do not know exactly how his form could be changed or improved, and the eel retain his eelhood. Man has never achieved any very pronounced success in his endeavors to refashion or reconstruct nature, and my faith is hardly of the size of a mustard seed that he ever will.'>>

As a final benediction:

'And now, that the eel, from no choice or election of his own, is an inhabitant of the State, square dealing, as well as sound policy require that we extend to him a fair chance,--throw about him the panoply of equal laws, and accord to him ungrudgingly all the benefits that come of amity and good neighborhood.'>>

However limited the Superintendent's knowledge of piscatorial matters may have been, there is no question regarding his understanding of the Scriptures and the Classics, or regarding his ability to express himself.

What happened to some of the eels is indicated in the following letter, dated Grass Lake, November 12, 1877:

"Our eels are doing tip-top,--have caught one about seven inches long, and seen them still longer. They are running out of the outlet, down stream about three miles, into the Leoni mill pond; from there they find their way out through the water wheel and most all get killed. Those that do not can never come back. They keep on going down into Grand River, and find their way into Lake Michigan. To stop all this, I have put a wire screen across the outlet. --

-C. FECKENSCHER.'>>

The eels apparently showed good growth and were being caught to some extent in the following year, as indicated in a letter dated Battle Creek, December 15, 1878:

"The eels in Goguac and St. Mary's are a fact. A. L. Clark, of this city, and a party with him, speared three in St. Mary's last June. The largest one was twenty-one inches long. Arthur Smith, of this city, caught one recently in Goguac, eighteen inches long, and Osgood ate the eel, or I should have sent it to you. A good many have seen them in Goguac this summer, and there have been others caught.

E. HARBECK"

In 1873 eels were again planted, this time in larger numbers (460,000) and in twenty-two counties. They were also stocked the following year and again in 1881, 1883, 1885 and 1891. According to compilations made by M. J. DeBoer of the Fish Division, a total of 2,266,000 young eels were introduced between 1877 and 1891 and they were stocked in waters in over half of our counties, all in the Lower Peninsula, but extending to the Straits.

Not long after their arrival in Michigan, these fish were inclined to do the unusual--on a number of occasions they apparently stopped the wheels of industry. This is indicated in the Fifth Biennial Report, where reference to the eel is limited to the following brief paragraph:

"His slimy majesty has been heard from on every hand; and the burlesque petition of Amos Goodrich, at the last session, has, in a number of instances, been witnessed in the stopping of the wheels of manufactories. But the question of their propagation in fresh waters is still one of "opinion" and not of fact."

The following are excerpts from letters received by the Commission in 1884:

"The eels planted in Dumont Lake, in 1878, have multiplied, and the waters are getting well stocked. They are a success in every lake in this county as far as tried."

The county referred to is Allegan.

Also from Allegan County:

" Eels that were planted here, I think, done well, as quite a good many have been caught from Miner Lake, two and one-half to three feet long. >

From Marshall:

" I will say that the eels have grown nicely, and already they have taken out of Northern Lake young ones that have been bred there this spring >>

And from Coldwater:

" The plant of eels in the lakes and streams of Branch County has proven a wonderful success. . . . they are so plentiful that some portions of the year they have clogged up the water wheels of two of the grist mills . . . the proprietors having to stop running and clean out the wheels. >>

After 1891 there are no records of eel planting in Michigan, but some years after that date information became available which helps explain the probable fate of our eels and which clearly indicates why some aspects of our eel planting were bound to be unsuccessful.

In 1896 G. B. Grassi, of Rome (Italy) made some interesting observations regarding the eel but the complete story of this fish was not unfolded until after Johannes Schmidt and his co-workers had literally combed the Atlantic Ocean for many years with nets. This great Danish investigator gradually learned that the habits of this unusual fish were extremely peculiar. The exact opposite of salmon which are born in fresh water, ~~which~~ mature in the ocean and return to the fresh water to spawn and die, these eels are born in the ocean, ascend our rivers and later return to the ocean to spawn and die. They are born in the Atlantic Ocean northeast and north of the West Indies. Their European cousins are born in approximately the same locality, the two areas overlapping. After birth the young larvae, quite different from the eels in general shape and appearance, start back for the waters which their parent's inhabited, those of American parentage returning to America and those from European stock, born in the same area, starting on their long trek to the "Old Country." The Americans make

the journey in a single year but their European relatives require three years to make the trip. Neither have made it before and neither have parents to direct the way. The adults apparently die at sea. After maturing in the fresh waters they return, eventually, to the place of their birth, to spawn and die.

The early Michigan fish culturists did not know that the young eels they obtained in the Hudson were globe trotters, that they had just arrived from a long trip and that they would eventually return if possible, to the Atlantic, east of Florida, to discharge the last obligation to their race. The clogging of the water wheels at certain times of year was probably due to the urge to make that final trip. Some few of these fish may have found their way back to the ocean, all probably tried to find it. Those which were planted in land-locked lakes never had a chance.

A few of these old fish, *A few remaining* now nearing their fiftieth birthday, or beyond it, still remain in Michigan waters today. Not all reports on their presence are reliable because of the confusion in the popular mind between eels and lampreys. In 1932, however, several specimens were sent to the Institute for Fisheries Research by W. H. Green of near Gaylord who had planted them in a lake 44 years earlier. Recently Conservation Officer V. D. Winey sent in a specimen from Sherman Lake in Kalamazoo County.

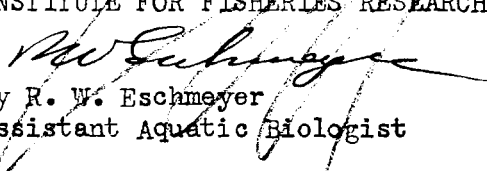
Each year these few remaining fish probably get restless and seek the flowing water which will take them back to the ocean and to the spawning grounds. Theirs was a one way ticket and they wait in vain.

The fish culturist who predicted an abundance of eels and those who believed the many accounts of the reproduction of this fish in Michigan waters were wrong. Their errors are excusable--in those days no one knew

the story of the eel, for it was not fully revealed until after the World War.

Their experiences, and the later developments, do suggest one important aspect of the fisheries problem which is as significant today as it was then. Investigation and practical fish management must go hand-in-hand if the angler is to receive a maximum return for his license fee.

INSTITUTE FOR FISHERIES RESEARCH


By R. W. Eschmeyer
Assistant Aquatic Biologist