A GIANT RESTORATION EFFORT

photo-Anna Scime

by Deborah Weisberg

A giant fish with a prehistoric past could roam the waters of Lake Erie once again if efforts to restore Lake Sturgeons succeed.

Nearly 6,000 sturgeons were stocked in the Maumee River, a Lake Erie tributary, over the past 2 years, in the hope to jump-start a naturally reproducing population of sturgeons.

"The stream-side rearing work on the Maumee River has the potential to restore sturgeon throughout Lake Erie," said Pennsylvania Fish & Boat Commission Biologist Chuck Murray. "The stocking last fall was the first time ever that sturgeons were stocked in the Erie Watershed."

Lake Sturgeon date back to the Jurassic Period and are native to the Great Lakes as well as the Mississippi River drainages. Sturgeons can live at least 100 years and grow to more than 6-feet long and 200 pounds.

Although sturgeons were once considered nuisances and wantonly destroyed, sturgeons were later prized for their caviar and overharvested by commercial fishermen. Sturgeons also suffered impacts from pollution, habitat loss and dam construction. Today, sturgeons are state-listed as endangered or threatened throughout the Great Lakes.

One of the last known sturgeon sightings in Lake Erie was in 2001, when an 87-inch fish washed up on Freeport Beach.

Historically, Erie supported 1 million sturgeons—the largest population in the Great Lakes. There have also been a couple of reports over the years of anglers landing smaller sturgeons while fishing off the Yellow Perch head boats running out of Erie. These fish are transients. But today, there are fewer than 10,000, according to Justin Chiotti, a United States Fish and Wildlife Service (USFWS) fish biologist, who is helping lead the restoration project. While 19 rivers on Erie once served as nursery waters, today just two—the Detroit and Niagara rivers—support sturgeon spawning and recruitment.

"We want to increase the number of rivers where populations exist, which is how the Maumee River stockings got started," said Chiotti, noting that the Maumee River was selected, because it has enough fast-moving water and large-cobble habitat conducive to a spawn.

A team of biologists constructed a 10 x 40-foot trailer, operated by the Toledo Zoo, pumped it with water and planted it with fertilized sturgeon eggs that had been collected at Port Huron and delivered in oxygenated bags. The eggs will develop into juvenile fish within the trailer for eventual stocking in the Maumee River.

"It could be decades, though, before scientists know whether their efforts will bear fruit since sturgeons are slow to sexually mature," said Jim Boase, a USFWS fish biologist partnering with Chiotti on the project. "They imprint as larvae, so they will return to the trailer. For males, it will take 10- to 14-years, but females will not return for 20 years, unless climate change speeds up the process."

"Erie's western basin warms up more quickly now and stays warmer longer, but that is not expected to be a problem," said Boase. "One of the promising things about Lake Sturgeons is that these fish have been in fossil records for millions of years, and when you think about all the climate change that has occurred in that time, it gives us high confidence that we will have success with this project."

In the open lake, sturgeons feed on bottom-dwelling insects, quagga and zebra mussels, round gobies, and small fish. "Sturgeon may range far from the Maumee River. We caught

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Justin Chiotti with juvenile sturgeons.

sturgeons in Huron last spring that had been tagged in Buffalo. Some sturgeons are homebodies, staying close to their home range, and others are roamers," said Boase.

A study of sturgeon movement being collected in Lake Erie, near Buffalo, is yielding valuable clues about where sturgeons spend their time in different seasons of the year.

Sixty-two sturgeons—mostly males—were tagged in the main lake at the headwaters of the Niagara River over the past 5 years. Scientists track the fish with acoustic telemetry. "Although two of the fish proceeded to the Detroit River, the majority stayed close to their natal range," said John Sweka, the USFWS fish biologist leading the study.

"In spring, the sturgeons spawned near Buffalo, and then dispersed throughout the lake, traveling in fall to the shallower waters on Erie's Canadian side, presumably for food, and then returning to Buffalo in the spring," said Sweka.

"It shows they have some fidelity to an area, but the fish will move around the entire lake," said Sweka.

Sweka is hoping his research will also provide insight into how long juvenile sturgeons remain in the river where spawned. "At what point do they migrate to the lake? We do not yet know," said Sweka. "But, it is important to determine, so we can protect their habitat."

Sweka is confident that Erie sturgeons will rebound, although it will take decades. "A lot of historical threats to sturgeons have been alleviated, and sturgeons are a sturdy species," said Sweka. "They are tough."

As the public becomes familiar with the work being done on sturgeon recovery, he believes they will be rooting for these charismatic mega-fauna.

Boase is also optimistic and eager to return sturgeons to their rightful place in the ecosystem. "These fish lived here before T-Rex was roaming the earth, they were here after T-Rex was gone, and they are still here, having survived everything we have thrown at them," said Boase.

Boase likens sturgeons to another iconic species—American bald eagles—which faced extirpation at about the same time but are now thriving in Pennsylvania and elsewhere due to restoration efforts.

"I think of sturgeons as the bald eagles of the Great Lakes aquatic system," said Boase.

Pictured are (left to right) Jeff Kalie and Jonah Withers with a sturgeon from the Buffalo Harbor area.