Ron Bruch and Ryan Koenigs

Welcoming back Namao



The great lake sturgeon returns to Keshena Falls.

Menominee tribal elders stand on the banks of the Wolf River below the historic Keshena Falls and watch with eyes misted by deep joy as lake sturgeon spawn at this sacred place for the first time in over 100 years. This was the scene of a truly historic event for the Menominee people and the state of Wisconsin in the spring of 2012, only one year following joint efforts by the Menominee Tribe and the Department of Natural Resources to restore adult migrant and resident lake sturgeon in the Wolf River on the Menominee Reservation.

Lake sturgeon (Namao in Menominee language) from Lake Winnebago are well known for their spawning run up the Wolf River each spring where thousands of people have been watching them spawn for decades at sites along the lower river like the Sturgeon Trail in New London, Bamboo Bend in Shiocton, and below the Paper Mill Dam in Shawano.

The dam in Shawano, and another like it 5.5 miles above Shawano, both built in the late 1800s, prevented the lake sturgeon from migrating upstream to Keshena Falls within the Menominee Reservation for the last century. Aquatic invasive species concerns including common carp and viral hemorrhagic septicemia (VHS) virus are deterrents to reopening the river migration routes for fish using traditional fish passage methods.

Lake sturgeon typically don't spawn for the first time until they are older, age 14 to 29 for males, and 21 to 34 for females, and the females only spawn ev-



History is made when lake sturgeon larvae are captured from the upper Wolf River below Keshena Falls on May 21, 2013. Capture of larvae indicates that transferred sturgeon are naturally reproducing below Keshena Falls.

ery three to five years after that. These fish can live for a very long time though, possibly over 150 years, and it is very likely that there are still some sturgeon in the Winnebago population that were hatched at Keshena Falls prior to the construction of the dams at Shawano in the late 1800s.

Lake Winnebago —

along with the Wolf and upper Fox Rivers, and their connecting tributaries — is home to the largest population of lake sturgeon in the world. Over the years this population has been the focus of subsistence, commercial, and recreational fisheries, and an aggressive and pro-active management program dating back to the 1870s has provided the protection and management strategies needed to sustain both the Winnebago sturgeon population and the fishery.

The primary fishery on Winnebago since 1932 has been the winter recreational spear fishery on the lake that currently enjoys iconic status in the local culture around the lake system. The fishery is



managed through harvest caps, which allow a sustainable annual harvest of over 1,500 fish by the 12,000 plus spearers who venture onto the ice each February to stare down their dark house spear holes waiting for their trophy to swim through.

The current sturgeon spearing culture has its roots in traditional Native American harvest methods that European settlers learned in the mid to late 1800s and subsequently adopted to harvest these prehistoric giants through the thick ice each winter on Lake Winnebago.

The Menominee people, led by Chief Oshkosh, selected the site of the current Menominee Reservation on the Wolf River north of Shawano shortly after Wis-

Having actively worked with the tribe since 1993 and as the Winnebago sturgeon biologist at the time, Ron Bruch proposed a renewed effort to capture and transfer sturgeon from the river below the dams to the river above the dams. The objective was to move sufficient numbers of fish to increase the probability that some would take up residence in the upstream river sections and that some would spawn at the ancestral spawning grounds below Keshena Falls.

Previous to this endeavor, Bruch's crew working with the Menominee Tribe captured and transferred limited numbers of sturgeon (10 to 20 fish per year) from 1995 to 2006. Results from these

> efforts were less than spectacular, difficult to measure, and transfers were discontinued altogether in 2007 following the discovery of VHS virus in freshwater drum from Lake Winnebago. By 2010, research demonstrated that lake sturgeon were not susceptible to the VHS virus, which once again opened the door for resumption of capture and transfer operations.

The renewed efforts in 2011 were supported by the newly appointed DNR Secretary Cathy Stepp, and called for increasing the number of fish transferred from 10 to 20 per year to 100 fish per year. Each fish would have a sonic transmitter surgically implanted inside its body cavity to allow for track-

ing and to determine if fish stayed in the river to spawn at Keshena Falls, took up residence above the dams, or moved back downstream to where they were originally captured.

Following the final agreement between the Menominee Tribe and the state, outlined in a new 10-year Memorandum of Understanding, Bruch and his crew used their electrofishing fleet to capture sturgeon from the Wolf River below Shawano in September and October 2011, and March 2012. During those three shocking events, 97 lake sturgeon were captured (mostly adult fish ready to spawn in the spring of 2012) and hauled on DNR fish stocking trucks to Keshena, and following transmitter surgeries, were released below Keshena Falls on the Menominee Reservation.

"The stage was set. Everyone's hopes were high, but not really knowing what to expect, as what we were attempting to accomplish had never been done before Menominee Tribal historian Dave Grignon with Ron Bruch after a successful sturgeon







DNR fisheries technician Colt Christopherson and fisheries biologist Ryan Koenigs transfer sturgeon from the DNR fish truck at Keshena.

consin became a state in part due to the annual spring run of sturgeon below Keshena Falls. The annual run of sturgeon provided much needed sustenance each spring to the tribe after the long Wisconsin winters depleted food stores by late April when the sturgeon would return to the Falls.

Department fisheries staff have been working with the Menominee Tribe and U.S. Fish and Wildlife Service since 1993 to restore lake sturgeon to the reservation by establishing a fishable population through fingerling stocking in the Legend Lake system. The state also provides 15 adult male sturgeon each year to the tribe for their annual sturgeon feast.

In 2011, Menominee Tribe and the DNR fisheries staff responsible for the Winnebago lake sturgeon management program agreed that more needed to be done to restore fish to the main-stem Wolf River above the dams and on the Reservation.



with any other sturgeon species or population," Bruch recalls.

As the spring spawning migration grew near following the transfer of the first 100 fish, Walter Cox, Director of the Menominee Conservation Department, and Craig Corn, Menominee Tribal Chairman, worked with DNR Law Enforcement Supervisor Carl Mesman and his staff to set up a Sturgeon Guard program at Keshena Falls to watch for fish if and when they showed up to spawn.

As fate would have it, the spring of 2012 was early but drawn out by alternating warm and cold weather patterns, which disrupted the lake sturgeon spawning activity on the Wolf River. Hopes to see fish spawning at Keshena Falls were still high, but grew slightly more tempered as time passed. Menominee sturgeon guards worked around the clock, and tribal elders silently watched day in and day out for the return of the fish. Ron Bruch and his crew joined Don Reiter and Richard Anamita, the



Menominee Tribal fisheries biologists, each day searching, waiting and hoping.

Then suddenly, but as sure and deliberate as the return each spring of migrating geese, the song of the spring peepers and the leaf burst of Wisconsin's aspens, the lake sturgeon captured and transferred to their ancestral spawning grounds on the Menominee Reservation were there. They were there, and spawning below the historic and sacred Keshena Falls. All those seeing this grand spectacle that had not been seen for over 100 years were moved and deeply felt the sense of historical and cultural significance of this event.

It's now late 2013, almost two years since the first new transfer efforts began, and over a year since the historic restoration of spawning lake sturgeon below Keshena Falls. Ryan Koenigs, the new Winnebago Sturgeon Biologist for the Department of Natural Resources following Bruch's promotion to a fisheries administrator position in Madison, has continued the capture and transfer effort. He and his crew working with the Tribe have released another 100 fish below Keshena Falls, which spawned there in early May.

Koenigs, Reiter and their crews, along with the U.S. Fish and Wildlife Service, also accomplished another historic milestone with this project and in the global science of sturgeon restoration this past spring. On the night of May 21, approximately three weeks following the observation of spawning lake sturgeon below Keshena Falls, Koenigs, Reiter and crew captured lake sturgeon larvae naturally produced by the transferred fish that spawned there just weeks earlier.

The capture of these 3/4-inch long lake sturgeon marks another important accomplishment of this success story. It also is an internationally significant scientific accomplishment as this is likely the first known documentation of successful natural reproduction by any sturgeon species or population through an adult capture and transfer operation.

Namao has returned to Keshena Falls. It took a common goal, some good cooperation and joint efforts, but they have returned! The future looks bright for this fish, the Wolf River lake sturgeon population, and for the people who hold it near and dear to their hearts.

Ron Bruch is the DNR Fisheries Service Section Chief and Ryan Koenigs is the DNR Winnebago Sturgeon Biologist.