

## La Crosse FRO Accomplishment Report

### 2003 Lake Winnebago Sturgeon Health Survey 02/08/2003

Wisconsin's 2003 sturgeon spearing season opened, Feb. 8, on Lake Winnebago. This lake sturgeon fishery is a unique fishery known worldwide. The Winnebago system probably holds the largest natural sustaining lake sturgeon population in the world. They are commonly used as an egg source for reintroduction throughout North America. These ancient fish can weigh in at 160 lbs and have been found to be over 80 years old. It takes fish between seven and 10 years to reach legal spearing size (36 inches). Males typically reach sexual maturity between the ages of 13 to 15 years of age and then spawn every other year. Females reach sexual maturity between the ages of 22 and 24 years of age and then spawn every three-to-four years.



Because of this slow reproductive rate and sexual maturity, the harvest rate is closely monitored. This year's harvest quotas were 400 juvenile females, or 400 mature females, or 1,300 males. Once the harvest numbers have approached 80 percent of any one of those numbers, the season comes to a close the following day. Dave Wedan from the La Crosse Fishery Resources Office, and Corey Puzach and Kelly Williams from the La Crosse Fish Health Center teamed up with Wisconsin Department of Natural Resources personnel to collect fish health samples from lake sturgeon harvested on the opening day of the season. A total of 60 spearers who registered their fish here with the DNR permitted Service staff to collect fish health samples. Length, weight, and spawning condition of each registered fish were also taken. Diagnostic tests are now underway at the fish health center to determine the overall health of the lake sturgeon fishery on Lake Winnebago. A kidney swab was taken to screen for the bacterial pathogens, *Aeromonas salmonicida*, *Yersinia ruckeri*, *Citrobacter freundii* and *Edwardsiella ictaluri*. A second kidney sample was taken to be later screened for *Renibacterium salmoninarum*, a causative agent of Bacterial Kidney Disease. Kidney and spleen samples were collected and screened for the viruses Infectious Pancreatic Necrosis, *Oncorhynchus Masou* Viruses and Infectious Hematopoietic Necrosis Virus. Barbel and fin clips were taken and fixed in Davidson's Fixative. Histological methods will be used for the detection of Irido-like viruses found in sturgeon. All 26 samples from the 2002 spearing season were negative for all of the pathogens and bacteria described above. These pathogens could significantly affect this ancient fish species, along with a wide variety of other fish species in the Lake Winnebago system. Test results are entered into the Service's National Fish Health Survey data base to improve efforts in protecting, restoring and managing fish populations across the country. For more information on the services National Wild Fish Health Survey, visit the internet at [www.wildfishsurvey.fws.gov](http://www.wildfishsurvey.fws.gov).

**Cory Puzach**

## **Genoa National Fish Hatchery hosts March Friends Group meeting 03/12/2003**



The Genoa National Fish Hatchery hosted the monthly Friends of the Upper Mississippi River Fisheries Services friends group meeting in March. Highlights of the meeting included guest speakers Kay and Russell Hively, of the Friends of the Neosho National Fish Hatchery Friends Group. Kay and Russell spoke on the benefits of having a Friends Group, how to get a group organized and described the incorporation process. Friends groups are currently a priority in the Service's Fisheries program, and are listed as such in the recently released Fisheries Vision Document. A group of 25 interested local citizens enjoyed fellowship, food and a dedication to the resource as they heard about Kay and Russell's experience in forming an effective and energized support group for Neosho. Their

experiences will no doubt be a great help in forming an active friends group for the La Crosse area FWS fishery stations. The group supports the La Crosse Fish Health Center, La Crosse Fishery Resource Office, and the Genoa National Fish Hatchery, and recently picked its officers in December. Efforts of the group so far include forming the articles of incorporation, and an active membership committee to stimulate growth. As a side benefit of the trip, 35 students from Saint Matthews Lutheran School and the Viroqua homeschool group were treated with a visit from Captain Clark of Lewis and Clark fame. Russell Hively is a William Clark character actor, and appeared in historical garb to tell the students about his adventures on the Corps of Discovery expedition.

**Doug Aloisi**

## **Volunteer Banquet a Huge Success 03/14/2003**

The FY 2002 Volunteer Banquet was held for the La Crosse District of the Upper Mississippi River National Wildlife & Fish Refuge and the La Crosse Fishery Resources Office. The event was held on March 14th, the 100th Birthday of the Refuge System, which added to this special event. Attendance was at a record level with approximately 90 people in attendance. Everyone enjoyed barbequed fish and chicken, and door prizes were also given out. Ann Blankenship provided the entertainment with an expertly produced slide show to music, which featured incredible natural resource photos.

In FY 2002 fishery volunteers contributed over 1,300 hours to the La Crosse FRO; assisting in lake sturgeon and paddlefish netting, endangered mussel propagation, exotic species monitoring, lake sturgeon tagging, fish collections for the wild fish health survey and several general fishery surveys. Over 30 individuals contributed to this volunteer effort and La Crosse FRO would like to recognize Don Schroeder (Onalaska, WI) as the volunteer who contributed the most hours in 2002 with a total of 390 hours. Don assists on almost every type of project our office is involved in. He is a huge asset to our program; and not only is he experienced with fieldwork, but he has fantastic shop skills and has conducted our shop safety course. Don is also a two-time Volunteer of the Year. La Crosse FRO also would like to recognize LaVerne Schaller, our 2002 Volunteer of the Year. Better known as Vern (Bangor, WI) to our staff, he would always be there when called on. During

Vern's volunteer career he contributed over 200 hours and never had a bad word to say about anything or anybody. Vern always came to work with a great attitude and willing to try any project. Vern is retiring from volunteering with La Crosse FRO and we wish him the best.

A new award was established this year and we call it the Volunteer Hall of Fame. Three fishery volunteers were inducted into the Hall in 2002. Our first is Jerry Schotzko (Winona, MN) a former Fish and Wildlife Service employee. Jerry volunteered on paddlefish netting and tracking during the early 90's, and weathered many a lousy day during the early spring to help on these surveys. Jerry died in 1998 and he will be surely missed. Our next nominee is also deceased and will be fondly remembered as an expert electrician and a rare gem who could work on electrofishing boats, and actually fix them. We want to thank Chuck Lawton (Onalaska, WI) for all he contributed. Our third nominee for the Hall of Fame is a man that has contributed over 900 hours in the last 3 years. He is our "do all and know all" volunteer that you can always count on, Don Schroeder. Thanks to Don we can attempt several extra projects.



**Scott Yess**

## **Fish Host Test Results Inconclusive for Winged Mapleleaf 11/26/2002**



The winged mapleleaf mussel (*Quadrula fragosa*) is a federal-listed endangered species that exists only as a remnant population in a 20-km reach of the lower St. Croix River bordering Minnesota and Wisconsin. One of the primary factors identified by the Winged Mapleleaf Recovery Team as limiting this population is a lack of knowledge of the mussel's life history. Today more is known about the winged mapleleaf reproductive cycle (e.g., gravidity peaks early in autumn) than when the species was listed in 1991. However, one of the most critical pieces of life history information that remains unknown and still poses a serious obstacle for recovery efforts is identification of the fish species that this mussel's parasitic larvae require as a host to successfully transform into

free-living juveniles. Researchers at the University of Minnesota have annually conducted long-term (3 to 6-month) laboratory tests since autumn 2000 to determine a suitable host fish for the winged mapleleaf, but none has yet been identified. Continued delay in identifying the winged mapleleaf's host fish represents a serious obstacle for the recovery of this endangered species and fails to reduce the risk of extinction for its only remaining population. Therefore, La Crosse FRO staff worked cooperatively with mussel experts at the U.S. Geological Survey's Upper Midwest Environmental Sciences Center (UMESC) in La Crosse, Wisconsin to conduct additional laboratory fish host tests for the winged mapleleaf at this well equipped aquatic research facility during autumn 2002. This initiative was also supported by an interagency team of divers who searched the St. Croix River reach inhabited by winged mapleleaf to recover gravid females (i.e., containing larvae), and by fish culturists at the Genoa National Fish Hatchery and the UMESC who supplied five lots of healthy fish for testing.

Just one gravid female winged mapleleaf was collected by divers during their 3-week autumn search period. This mussel released a total of about 300 apparently mature glochidia (larvae) early in October while held in laboratory captivity at the University of Minnesota. Roughly half of these glochidia were used for long-term fish host tests that are still continuing here, while the remainder were used for a short-term fish host test at the

UMESC. The viability of the microscopic (80- $\mu$ m diameter) glochidia was checked prior to the start of the test when several individuals were exposed to crystals of sodium chloride and responded appropriately by quickly closing their valves. Due to the limited number of glochidia, only one of the five lots of fish available for use at the UMESC were tested. Thus, about 30 glochidia were pipetted onto the gills of each of five large channel catfish. For the next 55 days, these fish were reared in an aquarium supplied with a continuous flow of 22°C fresh water. Fish were periodically anesthetized during the 8-week test to examine the gills and fins with a dissection microscope for attached glochidia. Debris was also siphoned from the bottom of the aquarium several times a week and passed through a graded series of fine-mesh filters. Particles retained by the filters were thoroughly examined under magnification by two or more individuals to detect glochidia that either sloughed off the fish and died or successfully transformed into juvenile mussels.

No glochidia were observed attached to the fish during the test. Likewise, no sloughed glochidia or transformed juveniles were observed among particles recovered from the bottom of the aquarium. However, numerous rotifers were detected in water filtered from the aquarium during the latter half of the test. Early life stages of this parasite likely infected the fish earlier in the year while they were in outdoor ponds and went previously undetected. Due to the small number of apparently viable glochidia that were collected from just one female mussel and the presence of predacious rotifers in the aquarium, the results of this short-term test should be considered inconclusive. Continued interagency collaboration is recommended to resume fish host testing at the UMESC in 2003 under a study design similar to that used in 2002, provided that a larger number of viable glochidia are collected from more than one female mussel and additional fish culture practices are taken to limit the possible introduction of unwanted parasites and disease organisms into the test system.

**Mark Steingraeber**