U.S. Fish & Wildlife Service

La Crosse Fish Health Center

February & March 2012 Monthly Highlights

The La Crosse Fish Health Center (LFHC) is located in Onalaska, Wisconsin and is responsible for fish health management within the Big Rivers/Great Lakes region of the upper Midwest. Primary responsibilities include inspection, certification and diagnostic services for federal hatcheries, providing inspection and laboratory services for state, federal and tribal agencies, surveillance of target pathogens as part of the National Wild Fish Health Survey, providing training in fish health management, monitoring use of drugs and chemicals for national fish hatchery use, researching fish health management and assisting in design and implementation of surveillance, and control of invasive aquatic pathogens in cooperation with state, tribal, federal and non-governmental agencies.

Aquatic Species Conservation and Management

Annual Spring Health Inspections

by Sarah Leis

Every spring, staff from the La Crosse Fish Health Center travel to the six National Fish Hatcheries in Region 3. This past February and March, LFHC staff members traveled to Iron River National Fish Hatchery (NFH), Jordan River NFH, Genoa NFH, Pendill's Creek NFH, and Sullivan's Creek NFH for their annual spring inspections. The inspections occur twice a year, once in the spring and once again in the fall. These inspections are an important component of hatchery production and management programs that ensure the fish are free of disease pathogens prior to transportation and stocking into the wild.

At each hatchery, all species and year classes of fish were examined for certifiable pathogens. These pathogens are: *Yersinia ruckeri, Edwardsii ictaluri, Renibacterium salmoninarum, Aeromonas salmonicida,* Infectious Pancreatic Necrosis Virus (IPNV), Infectious Hematopoietic Necrosis Virus (IHNV), Viral Hemorrhagic Septicemia Virus (VHSV), Spring Viremia of Carp Virus (SVCV), Largemouth Bass Virus (LMBV), and *Myxobolus cerebralis*. These bacterial, viral, and parasitic pathogens are a concern to fish health biologists and hatchery managers due to their economic and environmental impacts, as well as, their ability to cause high mortality events in hatchery settings.

Sturgeon Spearing 2012

by Sarah Leis

In early February, opening day of the Lake Winnebago System Sturgeon Spearing season occurred. Staff from the La Crosse Fish and Wildlife Conservation Office assisted the Wisconsin Department of Natural Resources register sturgeon, while the La Crosse Fish Health Center staff collected tissue samples for disease monitoring. LFHC staff screen the sturgeon for disease pathogens as part of the U.S. Fish and Wildlife Service's Wild Fish Health Survey program. LFHC has been monitoring the health of the Lake Winnebago system sturgeon since 1997. To date, no viruses have been detected in the sturgeon.

Nick Bloomfield tagging a speared sturgeon for the WI DNR while a volunteer checks for a PIT tag in the sturgeon USFWS S. Leis

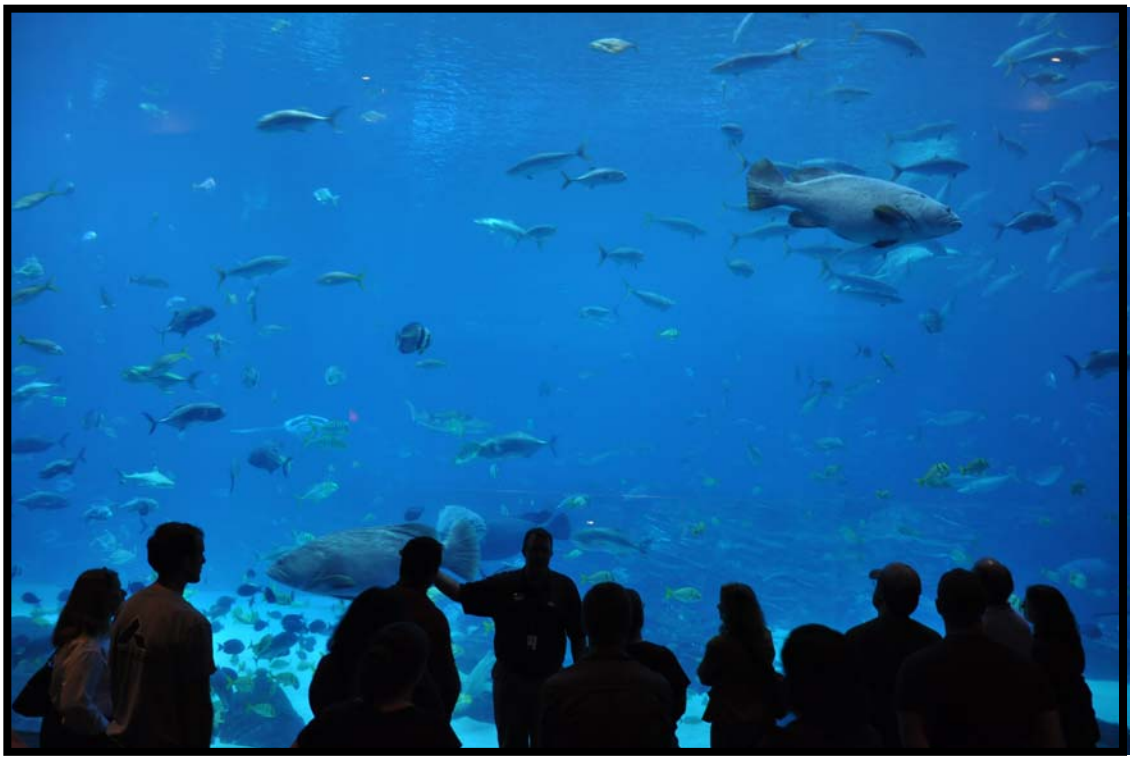
Eric Leis (center) and Sarah Leis (right) collect fish health samples from a sturgeon, while Rebecca Klaper (left) takes a blood sample for her research USFWS N. Bloomfield

Over the past 15 years, a few salmonid bacterial pathogens have been detected in the sturgeon, but with no sign of disease. The pathogenicity of the bacterial pathogens to sturgeon is unclear, but it is possible these fish are only carriers of the pathogens. Over the years, the sturgeon spearing event has become a great opportunity for researchers to take samples from these fish for different studies. This year, researchers from different universities took samples for diet and genetic studies.

Biologists Attend Annual Fish Health Meeting

by Sarah Leis

The week of March 12th, Ken Phillips, Eric Leis, and Sarah Leis attended the annual fish health biologist meeting in Pine Mountain, Georgia. The meeting is designed for fish health biologist from the nine USFWS fish health centers to get together and exchange ideas and current research. The meeting lasted two days and a third day was devoted to team building. On the first day of the meeting Joel Bader, the National Fish Health Coordinator, attended. There was dialogue between Joel, fish health project leaders and biologist about fish health policies, Title 50, the National Aquatic Animal Health Plan, and the National Aquatic Animal Health Pathogen Testing Network. The next day, the discussions focused on the wild fish health survey database, ring-testing and viral sensitivity between different fish health centers, current scientific research at several fish health centers, and a tour of the Warm Springs Fish Technology Center. The meeting provided excellent opportunities for veteran and new fish biologists to get together and discuss ideas and concepts.



Fish Health Biologist marvel at the 6.3 million gallon exhibit at the Georgia Aquarium USFWS S. Leis

Introduction to Fish Health Course Held at the La Crosse Fish Health Center

by Corey Puzach

In February, the La Crosse Fish Health Center taught its semi-annual Introduction to Fish Health Course. The course is administered through the National Conservation Training Center (NCTC). Students traveled from many regions of the United States and Canada. Participants this year are employed by many state and federal resource agencies. They had a wide range of careers including: hatchery biologists, fish health biologists, fisheries biologists, and administrative personal. All of the course instructors were employees of the La Crosse Fish Health Center. There were also guest speakers from the Upper Midwest Environmental Science Center USGS, the La Crosse Fish and Wildlife Conservation Office, the Upper Mississippi Wildlife Refuge, and Genoa National Fish Hatchery.

Introduction to Short Course Participants USFWS E. Leis

The course was divided into lectures and laboratory sections. The course included many fish health topics such as: fish anatomy, signs of disease, bacteriology, virology, parasitology, nutritional problems, molecular techniques, and proper disinfection techniques. In the lectures, the students also worked on treatment calculations, and situational fish health problems. Guest speakers presented on investigational new animal drugs (INAD), egg disinfection techniques, and invasive species. Participants also toured the facilities at the Upper Midwest Environmental Science Center.

Students were able to apply lecture material in a laboratory setting. In the lab, an orientation was given on proper microscope use. Students then worked on their necropsy techniques with different species of fish. On the second day, parasite searches were done on fish from the Mississippi River. The students found many different parasite groups. On day three and four of the laboratory sessions, participants worked on bacterial unknowns, biochemical testing, staining bacterial samples, screening viral unknowns, DFAT staining, PCR techniques, and an exercise displaying the dangers of random antibiotic treatments. The course was completed on Friday.

Successful Education Session

by Sarah Leis

In December, staff from the La Crosse Fish Health Center was contacted by the Michigan and Wisconsin Chapters of the American Fisheries Society to provide a continuing education workshop of a shortened version of Introductory to Fish Health. On February 6th and 7th, Becky Lasee, Ryan Katona, Beka McCann, and Sarah Leis provided an 8 hour workshop to 20 participants. The workshop consisted of 4 hours of lecture on viral and bacterial pathogens of fish, as well as fish parasites. The following day was a 4 hour laboratory that provided practical hands on experiences fish managers and biologists could utilize in the field or hatchery setting when they encounter a possible disease outbreak. The workshop participants learned how to take aseptic bacterial and viral samples and to screen fish for parasites. In the end, all workshop participants gained an introductory knowledge of fish parasites and signs of bacterial and viral diseases in fish.

Becky Lasee providing instruction to workshop participants
USFWS S. Leis

La Crosse Fish Health Center Assists with PCR Exercise at Western Technical College

by Eric Leis

In March, La Crosse Fish Health Center staff assisted Western Technical College in setting up a laboratory exercise which allowed students to learn about polymerase chain reaction (PCR). PCR is an assay which involves the amplification of a specific sequence of targeted DNA. The assay has many applications in a wide variety of fields. For example, it is used in the medical field to identify the presence of diseases and in law enforcement PCR can be used to link criminals to the crime scene. The LFHC uses the assay to confirm the presence of a variety of bacterial, viral and parasitic pathogens. Students gained practical knowledge of PCR and how to interpret the results of the assay.

USFWS La Crosse Fish Health Center Co-hosting Annual American Fisheries Society-Fish Health Section Meeting

by Becky Lasee

The La Crosse Fish Health Center will be co-hosting the 2012 American Fisheries Society- Fish Health Section (AFS-FHS) meeting in La Crosse, WI. For the first time the AFS-FHS meeting will be held in conjunction with three other fish management meetings. This is a great opportunity to attend some or all of the meetings at reduced travel expenses. See below for more information and check out the website **http://www.uwlax.edu/conted/fish/index.htm**

53rd American Fisheries Society (AFS) | Fish Health Section Meeting

New This Year - Attend Several Aquatic Animal Health Events & Reduce Your Carbon Footprint - All Held in La Crosse, Wis.!

Great Lakes Fish Health Committee Meeting
Radisson Hotel, La Crosse, Wis.
July 30-31, 2012
&
Veterinary Workshop on Fish Regulatory Medicine
Radisson Hotel, La Crosse, Wis.
July 31, 2012
&
18th Annual USFWS Aquaculture Drug Approval Coordination Workshop
Radisson Hotel, La Crosse, Wis.
July 31, 2012
&
53rd American Fisheries Society (AFS) | Fish Health Section Meeting
Radisson Hotel, La Crosse, Wis.
July 31-August 3, 2012

For more information about La Crosse, WI, the meeting venues, registration, accommodations and travel arrangements, please visit the website:
http://www.uwlax.edu/conted/fish/index.htm