U.S. Fish & Wildlife Service

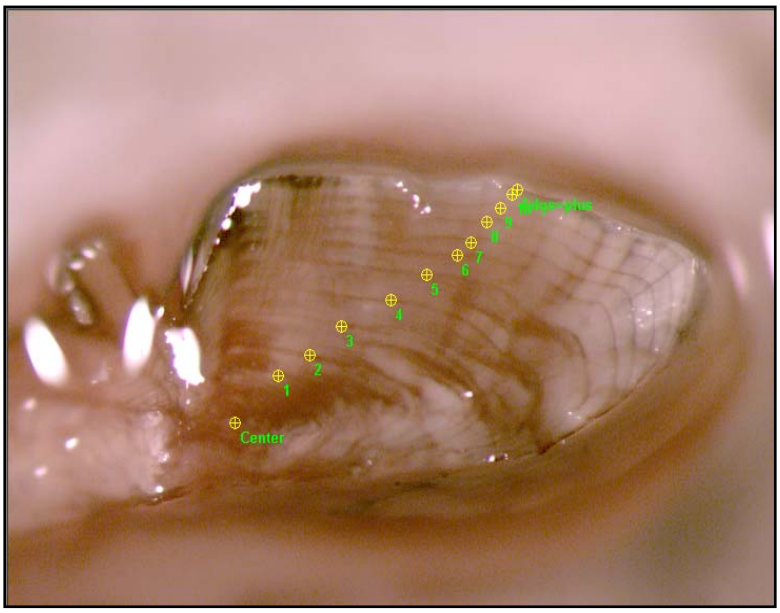
Alpena National Fish and Wildlife Conservation Office

January/February 2009 Station Activities

The Alpena National Fish and Wildlife Conservation Office (NFWCO) is located in Alpena, Michigan and works to meet the U. S. Fish and Wildlife Service's Fishery and Ecosystem goals within Lake Huron, Western Lake Erie, and connecting waters of the St. Marys River, St. Clair River, and Detroit River. Activities include Aquatic Species Conservation and Management, Aquatic Habitat Conservation and Management, Aquatic Invasive Species, Cooperation with Native Americans, Leadership in Science and Technology, Partnerships and Accountability, Public Use, and Workforce Management – all of which are conducted in alignment with the Service Fisheries Program's Vision for the Future. The station is one of many field offices located within Region 3, the Midwest Region.

Aquatic Species Conservation and Management

Aging Work Completed for 2008 Lake Whitefish and Lake Trout Surveys



Otoliths, in addition to other structures, were used to age lake whitefish captured during the 2008 fishery independent lake whitefish survey in Lake Huron. Photo credit: Scott Koproski, USFWS.

Submitted by Scott Koproski
Fishery Biologist

During the month of January, Fishery Biologists Scott Koproski and Adam Kowalski finished aging samples collected during the 2008 fishery independent lake whitefish and fall lake trout spawning surveys. As a signatory of the 2000 Consent Decree, the Service is responsible for working with State and Tribal agencies to establish safe harvest limits of lake whitefish and lake trout in 1836 Treaty waters. Alpena NFWCO fulfills the Service's responsibilities in northern Lake Huron by assessing lake whitefish

and lake trout populations in two management units: WFH-04 and WFH-05. The study sampling design was established by the Modeling Subcommittee (MSC) of the Technical Fisheries Committee (TFC). The MSC uses data collected from each management unit to establish safe harvest limits using catch-at-age models.

In 2008, Alpena NFWCO fished 40 gangs of gill nets in WFH-04 and WFH-05. Over 1400 fish were collected during field operations, and aging structures (i.e., scales, otoliths, and fin rays) were removed from almost 400 of these fish. Scales and otoliths were collected from all lake trout and lake whitefish, scales were collected from all round whitefish, and scales and dorsal fin rays were collected from all percids encountered. Ages were assigned to each structure by Koproski and Kowalski.

Scales were examined using a stereo-microscope and a transmitted light. While examining a scale sample, the seasonal patterns of circuli formation can be identified and counted. An annulus within a scale sample is assigned when circuli spacing is compressed and circuli cutting over is observed. This cutting over is typically associated with the change in growth patterns present on the scale between slower winter and faster summer growth.

Fin rays were also examined using a stereo-microscope and a transmitted light. The fin rays are cross sectioned and then a drop of vinegar is placed on each sample. While examining a cross-sectioned fin ray, broad summer and narrow winter growth bands can be identified. The winter growth bands are then counted and an age is assigned for that sample.

Similar to fin rays, patterns in summer and winter growth can be identified on an otolith sample. However, preparation is different and a crack and burn technique is used along with a reflected light. Individual otoliths are cracked transversely and placed in an alcohol flame for a brief period of time. Burning the otolith allows researchers to differentiate between the two distinct growth patterns within the structure: broad summer and compressed winter growth patterns. While viewing the sample a drop of mineral oil is placed on the structure to provide a clearer image. By counting the bands of winter growth, age estimates can then be obtained from the otolith.

Age data, along with other biological parameters, are used by the MSC in the catch at age models to develop the safe harvest limits of 1836 Treaty Waters.

Alpena NWFCO is fulfilling the Service's obligation as a signatory to the 2000 Consent Decree by serving as members of the TFC and the MSC, and by assessing lake whitefish populations in 1836 Treaty-ceded waters. This work is an example of Alpena NFWCO's commitment to the Service's Fisheries Program Vision for the Future priorities of "Aquatic Species Conservation and Management" and "Cooperation with Native Americans."

Aquatic Habitat Conservation and Management

Alpena NFWCO Staff Attend Michigan Stream Team Meeting

Submitted by Andrea Ania
Fishery Biologist

Alpena NFWCO Biologist Andrea Ania participated in a Michigan Stream Team meeting held on January 14, at the Service's East Lansing Ecological Services Office. The Michigan Stream Team is comprised of state, federal, and local government agencies. Currently, the Stream Team is working on developing regional reference curves for Michigan, which can then be used to restore streams and their floodplains for the benefit of fish and wildlife.

Topics at this meeting included a regional reference curve project update, future development of sediment rating curves, and upcoming training opportunities. An informative presentation on the regional reference curve project was made by Cyndi Rachol (U.S. Geological Survey), and Kristine Boley-Morse (Calhoun Conservation District and Michigan State University graduate student). Over 20 people, representing 11 different agencies, attended this meeting.

Completion of aquatic habitat restoration projects contributes toward the "Aquatic Habitat Conservation and Management" component of the Service's Fisheries Program Vision for the Future.

Huron Pines Annual Meeting

Image credit: Huron Pines RC&D

Submitted by Andrea Ania
Fishery Biologist

Alpena NFWCO Biologist Andrea Ania attended Huron Pines annual meeting held at the K of C Hall in Gaylord on Saturday, February 7, 2009. The meeting was well attended with approximately 100 government, non-government, and local citizens present. The focus of this year's meeting was invasive species. Presentations were made by the National Park Service, Michigan Nature Conservancy, and Michigan Department of Natural Resouces

(MDNR) to showcase current invasive species management projects in northern Michigan.

The U.S. Fish and Wildlife Service (Alpena NFWCO and East Lasing Field Office) have recently contributed to several invasive plant control projects in northern Michigan through the Coastal Program, including Lake Michigan Islands Phragmites Control (Beaver Island archipelago), and Grassland Restoration and Invasive Species Removal on Lake Michigan Coastal Property (Acadia Dunes).

Alpena NFWCO is working closely with Huron Pines on numerous projects for the 2009 field season, including their Invasive Species Program. This project will focus on inventorying, monitoring, and removing key nonnative species (i.e., purple loosestrife, buckthorn, and phragmites) in northeast Michigan.

Planning of aquatic habitat restoration projects contributes toward the "Aquatic Habitat Conservation and Management" and "Partnerships and Accountability" priorities of the Service's Fisheries Program Vision for the Future.

Partnerships and Accountability

Northeast Michigan Invasive Species Program Meeting

Submitted by Anjanette Bowen
Fishery Biologist

Alpena NFWCO Biologists Heather Rawlings and Anjanette Bowen participated in an invasive species meeting hosted and led by Huron Pines at NOAA's Great Lakes Maritime Heritage Center in Alpena, Michigan on December 12, 2008. The meeting was held to coordinate efforts to combat invasive species in northeastern Michigan. Three invasive species were selected for control efforts: phragmites (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), and buckthorn (*Rhamnus cathartica* and *Rhamnus frangula*). The goal of this project is to reduce the distribution of invasive species through public awareness and control methods. The group discussed volunteer reporting programs to document the current distribution of invasive species and strategies to initiate public involvement. Other agencies that participated in the meeting include The Nature Conservancy and the National Oceanic and Atmospheric Administration (NOAA). Another meeting will be held in the spring of 2009 to move efforts forward.

Service participation in efforts to reduce invasive species is consistent with the "Partnerships and Accountability" and "Aquatic Invasive Species" priorities of the Service's Fisheries Program Vision for the Future.

The Nature Conservancy Presque Isle Conservation Area Planning Workshop

Submitted by Anjanette Bowen
Fishery Biologist

Alpena NFWCO Biologists Heather Rawlings and Anjanette Bowen participated in The Nature Conservancy's workshop to assess and address threats to the Presque Isle shoreline of northeastern Lake Huron. The workshop was held January 29, 2009 at NOAA's Great Lakes Maritime Heritage Center in Alpena, Michigan. A number of partners participated in the workshop, including Michigan Department of Natural Resources, Michigan Sea Grant, National Oceanic and Atmospheric Administration (NOAA), and many others. The Nature Conservancy is planning to use information gathered at this meeting to develop a Conservation Action Plan for the Presque Isle shoreline.

Service participation in efforts to advance natural resource conservation contributes to "Partnerships and Accountability" and "Aquatic Species Conservation and Management" priorities of the Service's Fisheries Program Vision for the Future.

Biologists Teach Wilson School 2nd Graders

Submitted by Andrea Ania and Anjanette Bowern
Fishery Biologists

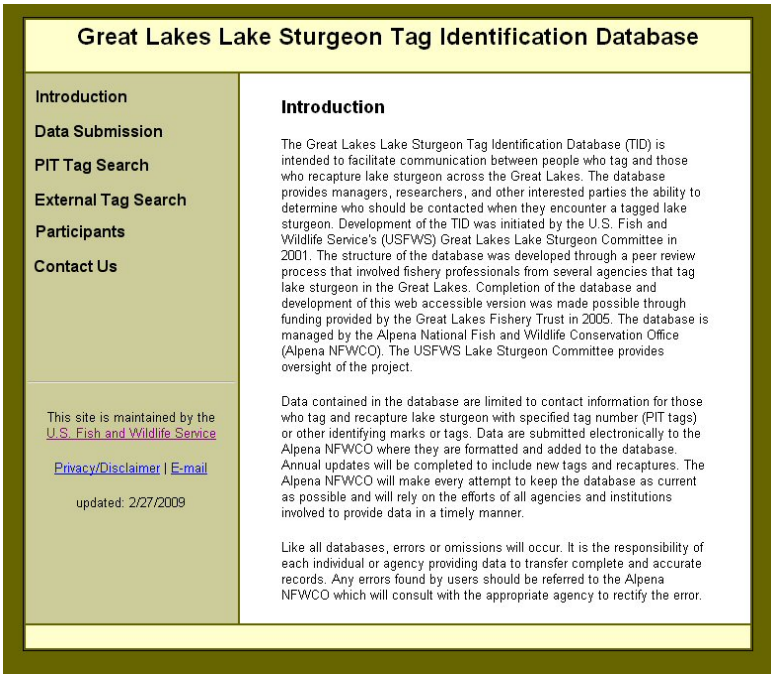
Alpena NFWCO is working in partnership with Alpena Public School District's Wilson Elementary School to provide in-class science education for Lisa Syma's 2nd grade class during the 2008-09 academic year. The following educational events are part of ongoing (monthly) Service efforts to connect children and nature.

On January 29, Alpena NFWCO Biologists Scott Koproski, Adam Kowalski, and Andrea Ania visited the 2nd grade class. Koproski taught the students about a variety of interesting natural resource careers. Kowalski explained how different animals adapt to northern Michigan winters. Ania described the three states of matter and the water cycle. The students were divided into small groups (10 or less) to enhance learning and rotated through each topic. Games and activities were used to engage the students.

On February 19, the students learned about molecules, how substances expand and contract, effects of temperature, and how water moves through substrates. Alpena NFWCO biologists Scott Koproski, Andrea Ania, and Anjanette Bowen taught the students about these topics and led them through experiments that reinforced their knowledge and understanding. Activities and experiments involved the use of a ground water model to show how pollutants can enter a watershed and impact ground water, how molecules move at different rates in water of different temperatures, and how temperature influences air molecule movement. Students were very interested in the topics and quickly grasped these potentially difficult concepts.

Educational activities like this help connect children with nature by teaching students about natural resource careers, animal adaptations and behavior, finite resources, matter, water pollution, and the hydrologic cycle. This outcome is consistent with the Service's Fisheries Program Vision for the Future priorities of "Partnerships and Accountability" and "Public Use".

Lake Sturgeon Tag Identification Database Contains Over 18,000 Tag Numbers



The searchable database has been operational since 2006, and now contains information on over 18,000 passive integrated transponder (PIT) tags and over 150 external tag sequences. Image credit: USFWS.

Submitted by Adam Kowalski
Fishery Biologist

During the month of February, Fishery Biologists Adam Kowalski and Anjanette Bowen updated the Great Lakes Lake Sturgeon Tag Identification Database (TID) and web site. Development of the database was funded by the Great Lakes Fishery Trust to house lake sturgeon tag information such as tag type, tag number, tag location, and tagger contact information. The searchable database has been operational since 2006, and now contains information on over 18,000 passive integrated transponder (PIT) tags and over 150 external tag sequences. Kowalski will continue to maintain and update the database by requesting and entering tagging information annually. Feedback to Kowalski has been positive and the database is used frequently by biologists looking up information on tagged lake sturgeon they have captured. The database is housed at the Great Lakes Fishery Commission's web site and can be viewed at: http://www.glfc.org/sturgeontag/index.htm.

This database improves information sharing between agencies and the general public that encounter tagged lake sturgeon. The multi-partner nature of this work is consistent with the Service's goal of establishing and maintaining open, interactive communication with its partner agencies under the "Partnerships and Accountability" priority of the Fisheries Program Vision for the Future.

Tall Ship Educational Program Planning Meeting

Submitted by Anjanette Bowen
Fishery Biologist

On February 18, Alpena NFWCO Fishery Biologists Scott Koproski, Andrea Ania, and Anjanette Bowen participated in a tall ship education planning meeting hosted by Michigan Sea Grant and NOAA-Thunder Bay National Marine Sanctuary. Examples of shipboard education programs conducted around the Great Lakes were presented, and the group began exploring outreach ideas to be implemented in late May aboard the S/V Denis Sullivan. The S/V Denis Sullivan tall ship is a 137-foot re-creation of a 19th century schooner that conducts educational and research programs. The ship will be at port in Alpena in late May. While at port, Michigan Sea Grant, Michigan Department of Natural Resources, NOAA-Thunder Bay National Marine Sanctuary, and U.S. Fish and Wildlife Service will be conducting aquatic educational programs for adults and youth.

This educational opportunity is consistent with the "Partnerships and Accountability" priority of the Fisheries Program's Vision for the Future.

Public Use

Alpena NFWCO Biologists Participate in Science Olympiad Tournament

Submitted by Andrea Ania,
Fishery Biologist

Michigan's Region 2 Science Olympiad Tournament was held at Alpena Community College on Saturday, February 28, 2009. Biologists Anjanette Bowen and Andrea Ania were judges for Division B (grades 6-9) and C (grades 9-12) Ecology events. Bowen and Ania developed, administered, and scored ecology tests for six junior high and five high school teams.

The tests covered ecological principles applied to North American Desert and Prairie biomes (~50%), and general principles of ecology (~50%). Bowen and Ania invested a considerable amount of time to develop the two tests. Medals were awarded for each event (1st through 3rd place), and trophies were awarded for Division B and C school teams earning the most points in the tournament. This year Science Olympiad celebrates their 25th year as a national non-profit organization committed to improving science education for grades K-12.

Alpena NFWCO's participation in the Science Olympiad Tournament contributes toward the "Public Use" component of the Service's Fisheries Program Vision for the Future. Approximately 25 junior high and high school students improved their understanding of ecological principles and resource issues through this outreach event.

For more information about Alpena NFWCO programs and activities contact us at:

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