

Inside Region 3

March 2008



Departments

From the Regional Director /3

Let's Go Outside /10

Around the Region /13

Quote of the Month /14

Editor's Note:

Connecting with nature does not look the same for everyone. Connecting with nature means different things to different people. For some it's hunting and fishing. For others, it's walking in the woods or on the beach. What does vour nature encounter look like? We want to know. To that end, we have added a regular section called "Let's Go Outside." We invite you to submit your personal nature encounters, as well as innovative ideas on how to connect with nature. We will run your accounts in this feature segment. E-mail: valerie redmond@fws.gov.

On the cover:

Some of the estimated 1.4

is the largest number ever recorded at the Refuge. The

previous record peak for snow geese was 600,000 in

November 1986.

million snow geese that were at Squaw Creek NWR in Missouri last week. This

Features



Snakes in the Grass /8

By Richard King and Frank Durbian



Women's History Month /4

The Mother of the Modern Environmental Movement

By Valerie Rose Redmond



Ecotourism /6

Digital Photography

By Valerie Rose Redmond



Fire Storms /7

 $2007\,Recapped$

By Lynda Knutsen

Spring Fever

March brings cause for celebration: daylight lasts longer, the cold of winter fades, migratory birds are heading north. These seasonal signals are wondrous and enduring; we honor them as part of our natural world.

The season's warming weather produces small, temporary wetlands that used to dominate the landscape of the northern prairie region. Along with larger or permanent wetlands, these were the "spring break hangout" for millions of migrating waterfowl, supporting their healthy and safe nesting or passage.

Until the last century. Then the expansion of agriculture, industry and communities was aided by machinery capable of quickly draining and converting these wetlands for other purposes.

Wildlife managers saw this happening. They documented impacts to birds. They conducted studies, wrote articles, hosted tours, and alerted partners and politicians. They were unstoppable about telling the story. Thanks to them, in 1958 Congress established the Small Wetlands Program that provides funds from the sale of Federal Duck Stamps to permanently protect some of the most productive but most threatened waterfowl habitat in the United States.

The areas that are protected by the Small Wetlands Program are called Waterfowl Production Areas; they are part of the National Wildlife Refuge System. Since 1958 the Small Wetlands Program has permanently protected more than 3 million acres of wildlife habitat, mostly wetlands and associative grassland in the Prairie Potholes Region of the Upper Midwest. This might be the most successful conservation program in U.S. history. But it might also be the least known.

To celebrate the 50th anniversary of the Small Wetlands Program this year, we're taking our cue from the biologists and wildlife managers of a half-century ago. We have renewed our effort to write articles, host tours, and alert partners and politicians. We will continue to tell the story, pointing out wetland values and wetland losses but also the remarkable conservation successes attributable directly to the Small Wetlands Program.

I encourage you to take some time this year to learn more about the Small Wetlands Program and the impact it has had on not only migratory birds, but all wildlife, over the last 50 years. Look for more information on this program, including a message from the Director, in the next few weeks.

The Small Wetlands Program is the legacy of biologists in the field who saw a problem, figured out ways to resolve it, and then made that happen. We honor them in our celebration of wetland conservation.

--Robyn Thorson Midwest Regional Director



"The easiest thing you can do to protect Prairie Pothole Region habitat is to purchase a Federal Duck Stamp and tell your friends to purchase a Federal Duck Stamp."

Women's History Month

Rachel Remembered: The Mother of the Modern Environmental Movement

This month is Women's History
Month. It is a time to celebrate the
amazing contributions that women
have made to our society. It seems
fitting to pause for a moment to
pay tribute to Rachel Carson and
her conservation legacy. Born in
Springdale, Pennsylvania, on May
27, 1907. Carson, known as the
mother of the modern environmental
movement, was a trail blazer on many
levels. She was a conservationist
who won a scholarship to complete
graduate work in biology at
John Hopkins University

unheard of for a woman in 1929. She was also a brilliant writer. Her best selling book, Silent Spring, was an indictment of wide scale pesticide use and brought environmental awareness to the forefront for the masses.

In the Service, it's relatively easy to remember all of Carson's great achievements. But it is just as important to remember her as a woman too—a human being. Yes, Rachel's achievements were monumental, but they came with great sacrifice. People with the foresight and fortitude for change are more often times than not the subject of vicious attacks. Rachel Carson was no different. She was a woman who endured terrible ridicule and scrutiny in her quest to save our environment from the ravages of chemical pesticides. Not only were

her credentials called into question, but her integrity and sanity were as well.

The Extra Mile, an initiative of the Points of Light Foundation reveals some of the criticism of Carson. Her greatest detractor was Dr. Robert White-Stevens, a spokesman for the chemical industry. He said that the major claims of the book were, "gross distortions of the actual facts, completely unsupported by scientific, experimental

company distributed
flyers that ridiculed
the book. And CBS
lost sponsorship
when it featured
an interview
with Carson.
Even Time
Magazine
discredited the
book by saying

evidence." At least one

"overwrought."

that it was

History makers

are almost inevitably the unfair targets of ignorance, fear and comfort in the stagnant status quo. In this month, as we pause to remember and honor phenomenal women—this one in particular—let's remember that Rachel Carson was not only a trailblazing environmentalist and talented, influential writer, but she was an enormously courageous human being.

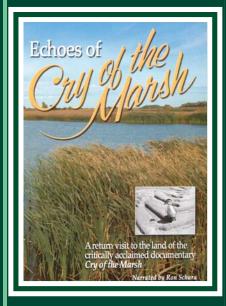
Rachel Carson died on April 14, 1964 in Silver Spring, Maryland.

--Valerie Rose Redmond, External Affairs

Cry of the Marsh

On Tuesday, March 11, at a Lunch and Learn event employees at the RO viewed "Echoes of Cry of the Marsh," a joint production of the FWS, University of Minnesota, and Pioneer Public TV. This excellent documentary explored the issue of wetland restoration through the eyes of Bob Hartkopf, a Minnesota resident who filmed the 1970 video essay "Cry of the Marsh." Incredulous, Hartkopf makes the compelling argument that we don't burn museums that exhibit dead species, but we think nothing of destroying a beautiful and diverse living ecosystem. FWS'ers Steve Delehanty and Rex Johnson were featured prominently in this production.

For DVD copies of "Echoes of Cry of the Marsh," contact Rex Johnson at the Fergus Falls, MN HAPET Office. Phone: 218-736-0606 Or view it online at: http://www.morris.umn.edu/ cryofthemarsh/



Neil Rettig, Award-Winning Cinematographer and Falconer, Receives Silver Eagle Award

Fish and Wildlife Service Midwest Regional Director Robyn Thorson will present Neil Rettig with the Silver Eagle Award – the highest award given to non-Service employees in the Midwest

The Midwest Region bestows the Silver Eagle Award on its most treasured friends and partners who have made sustained contributions to conservation.

Thorson and Deputy Regional Director Charlie Wooley presented Rettig with the award on Feb. 29 at the annual Fish and Wildlife Service Volunteer Banquet in La Crosse, Wis.

Neil Rettig is an award winning naturalist and filmmaker who began his career in the mid-1970s after attending the Chicago Academy of Fine Arts. He has been involved in making nearly 100 nature documentaries on a variety of wildlife, from grizzly bears to gorillas, in

habitats ranging from the Artic to the tropical rain forest.

Rettig's exceptional ability to capture our natural world on film has greatly benefited the wildlife resources of the Upper Mississippi River -- including habitat and species protected by the Fish and Wildlife Service here in the La Crosse area and on down the river.

Rettig has worked with production companies such as National Geographic, IMAX, BBC, Disney, Nature, and the Discovery Channel, and has been recognized with numerous awards including three Emmys. He most recently won an Emmy for "Outstanding Individual Achievement in Cinematography" for his contributions to *Mississippi: Tales of the Last River Rat*, which chronicles the stories and adventures of local legend Kenny Salwey.

Rettig travels the world to exotic and glamorous places and he could live

anywhere, but prefers to live near the Mississippi River south of La Crosse in Prairie du Chien. He has a special love for the Midwest and the Mississippi, and he brings his passion together with his skill to record the natural history and beauty that abounds here.

--Heidi Keuler, La Crosse National Fish and Wildlife Conservation Office, La Crosse, Wis. and Rachel F. Levin, External Affairs, Ft. Snelling, Minn.

Mark Your Calendars!

The Federal Duck Stamp Art Contest is coming to Minnesota!

October 17-18, 2008

Bloomington Art Center

Bloomington, Minn.

See beautiful works of waterfowl art... Meet current Federal Duck Stamp artist Joe Hautman and other talented local artists...

Watch as a panel of judges chooses one winner from hundreds of paintings... Celebrate the legacy of the Federal Duck Stamp, one of the world's most successful conservation programs ever...

Check http://www.fws.gov/midwest for more information in the coming months on the contest and many associated events.



Caption: Midwest Regional Director Robyn Thorson (left) and La Crosse National Fish and Wildlife Conservation Office Project Leader Pam Thiel present Neil Rettig with a Silver Eagle award. FWS photo.

Ecotourism

Digital Photography

Below: Budding digital photographers enjoy a lesson from Dudley Edmondson at Minn. Valley. Photos by Valerie R. Redmond and George Lewis







"Connecting People with Nature" is a U.S. Fish and Wildlife Service initiative designed to aggressively build a citizen base with a strong and enduring conservation ethic. The tight integration of technology into family lifestyles plays a significant role in the disconnect between people, particularly children, and the natural world. The U.S. Fish and Wildlife embraces this technology, as it quests to bring more people into the fold.













Fire Storms

2007 Recapped



Fire personnel accomplished plenty during a busy and safe 2007. Much of the Region experienced drought conditions for the majority of the year. However, autumn brought much needed moisture to many parts of the Region, which lessened the severity of drought conditions.

Drought conditions did occur however, and resulted in increased wildfire activity and reduced prescribed fire activity. Noteworthy wildfires within the Region included the Sleeper Lake Fire in Michigan's Upper Peninsula. Fire crews from Seney, Necedah, and Big Oaks NWRs, and Leopold WMD worked on a fire that blackened more than 18,000 acres. Personnel from Big Stone and Agassiz NWRs, among others, helped fight the Ham Lake Fire in the Boundary Waters Canoe Area in northeastern Minnesota. The Midwest Region's fire crews also invaded Florida to work on other large wildfires like the

Big Turnaround Complex on the Okefenokee NWR and the Big Cypress Fire on the Everglades National Park and National Panther Refuge. From mid-July through September it was common for 35-40 fire personnel from this Region to be on wildfire

Given weather-related challenges, the 2007 prescribed fire program enjoyed terrific success. Within the Region, the South Zone set a new record for acres treated and the West Zone used an array of multi-agency firefighters to assist with completing priority burns. Also, USFWS fire crews from Oregon, California, Texas, Kansas, and Nebraska contributed staff and equipment to support the Region's burns. The Midwest Region treated 71,755 acres during Wildland Urban Interface and Hazardous Fuels Reduction burns. More importantly, all of the above was accomplished with no reportable accidents. Several fire-related studies being conducted by USFWS personnel saw progress in 2007. Multiple sites were

assignments during any given week.

burned as part of an inter-regional (Regions 3 and 5) study aimed at evaluating the affect of fire on cattails. One 2,000 acre-plus unit at Agassiz NWR was burned in mid-August. Dry conditions resulted in impressive burn conditions where the fire burned into the unit's peat layer. Portions of this unit were still smoldering in early March, 2008. The consumption of peat creates a mosaic of unique micro habitats and mimics the historic wildfires that periodically swept through the region. Other fire research in the Region is being conducted at Sherburne, Big Oaks, and Seney NWRs. The above research projects demonstrate the Region's belief in a science-based fire management program for the benefit of our ecosystems.

All fire personnel in the Region took IS-700 and IS-800 Incident Management Training, Smoke Management Training was held in Wisconsin, and numerous Region 3 fire personnel participated in several landfire and fuels mapping

workshops.

Fire personnel in Region 3 can reflect back on many positive achievements in 2007 and have their sights set on another safe and successful year in 2008.

--Lynda Knutsen Fire Education Coordinator USFWS, Agassiz NWR



Lyndsey and Warren digging cattail tubers on Agassiz as part of the inter-regional Cattail Marsh Study project aimed at evaluat

Results of Multi-Refuge Research to be Published in Journal of Wildlife Management

Snakes in the Grass

Ecologists are often faced with a difficult question: how much habitat is required for population viability? Under normal circumstances, answering this question is problematic. When the species in question is among the rarest of all vertebrates in Region 3, is extremely elusive, and once found, will use deadly venom to protect itself, providing an answer to this fundamental question can be almost impossible.

The massasauga rattlesnake is anything but research-friendly. It inhabits marshy lowlands, laden with hummocks, thick ground cover, and an abundance of surface water. Forays into the swamp rattler's semi-submerged existence are usually cut short by exhaustion resulting from difficult foot travel and hoards of mosquitoes. The massasauga's cryptic coloration and willingness to lie silent at an intruder's approach can render useless even the most extensive surveys. The flash of exhilaration felt after finally hearing one rattle is at once tempered by the fact that a venomous reptile has just expressed dissatisfaction with you.

Few people have heard the rattle of a wild massasauga and still fewer captured one, fitted it with an implantable radio transmitter, and tracked it in the marshes and swamps it calls home. As a consequence, most massasauga studies are severely limited by small sample size. Staff from Necedah, Swan Lake, and Squaw Creek Refuges faced this exact limitation. Each had independently studied massasaugas but had very little hope of ever making large scale, meaningful conclusions or making the results available through peer-reviewed publication. The solution: a multi-refuge study.

Pooling data from three independent studies allowed interpretations about massasauga spatial ecology that were otherwise not possible. By stepping back and analyzing and interpreting the data at a broader geographic scale, key differences among states, populations, and cohorts revealed insightful regional trends. Data that would have languished independently, suddenly became pioneering research.

Results of this study are forthcoming in the April issue of the Journal of Wildlife Management. Readers of the paper will learn how massasauga spatial ecology affects road mortality, predation rates and seasonal movements. They will be provided with an answer to the question: How much area is required



for a viable massasauga population? This research goes one step further by providing readers detailed information related to the required juxtaposition of hibernation, basking, and feeding habitats within the area.

Although many Fish and Wildlife Service employees may not have a need to read the paper when it is published, we hope that our project will provide a useful model. Have you collected data at one point in your career that is still languishing? Now might be the time to conduct some pioneering research!

--Richard King and Frank Durbian Necedah National Wildlife Refuge

Above: Frank Durbian collects data on an eastern massasauga rattlesnake.

Left: The eastern massasauga rattlesnake is currently listed as a candidate species.



Fuller, Durbian Receive Awards

Our People

On March 4, Regional Refuge Chief Nita Fuller received the Director's Award of Honor for thirteen years of leading the Midwest Region in the strategic use of technology and training to enhance the safe and effective use of aviation in accomplishment of the Service mission.

> The Service's aviation manager, Mike Grant, presented Fuller with the award. Fuller helped to elevate the Region's aviation program by approving numerous equipment purchases

and

upgrades, including the aging regional airplane with a low-time Partenavia in 1998.

Fuller also approved a mentoring and training program between Bob Foster and Brian Lubinski from 2000 through 2001 that resulted in a safe and seamless transition between the out-going 17-year veteran and the 7th regional pilot for the Midwest Region. This program saved the Region money and elevated aviation safety for the entire Region and assured the wise use of aircraft to fulfill the Service mission would continue.

--Brian Lubinski National Wildlife Refuge System



Above: Aviation manager, Mike Grant prensents Nita Fuller with the Director's Award of Honor.

Squaw Creek National Wildlife Refuge Biologist Frank Durbian was selected as the Midwest Region Refuge Biologist of the Year for 2007. He recently received the award at the Region 3 Refuge Biologist Workshop held in Moline, Ill.,

on Feb. 27, 2008. The award was presented by Pat Hegland, Regional Refuge Biologist with Regional Refuge Chief Nita Fuller and Special Advisor to the Director Dan Ashe in attendance during the evening banquet.

Some of Frank's accomplishments during 2007

included being the senior or co-author on five peer reviewed manuscripts, serving as a Region 3 coordinator for a multirefuge/multi-region study (see story on page 8.) serving as an adjunct faculty member on three graduate student committees at Northwest Missouri State University, providing leadership within Region 3 by serving as Acting Refuge Manager and co-team leader of the Comprehensive Conservation Plan for Swan Lake NWR, and participating and graduating from the USFWS Stepping Up To Leadership Program. Congratulations to Frank from all of us at Squaw Creek.

- Ron Bell, Squaw Creek NWR



Above: Squaw Creek National Wildlife Refuge Biologist Frank Durbian

Let's Go Outside!

Teaching in the Outdoors

I am the Visitor Services
Manager for the Upper
Mississippi River National
Wildlife and Fish Refuge. I
joined the Service in 2000. A
previous boss of mine, Dave
Lescalleet, called me up in
August of 1999 and said, "There's
a perfect job for you where I
work – the Upper Mississippi
River National Wildlife and Fish
Refuge."

I had worked for the Corps of Engineers in Idaho, Iowa and Illinois, for 20 years as an interpretive park ranger. When the opportunity arose to work for the U.S. Fish and Wildlife Service I jumped at it. I love our mission – wildlife first!

I applied and was successful in getting that perfect job! The reason it is perfect is that I got a promotion and still got to stay in the field. To get the grade at my previous job I would have had to move up into management and away from what I like to do and what I think I do best—interpretation and environmental education. I was also able to move closer to my home town of Macomb, Ill., which is only 40 miles from the Mississippi River.

As Visitor Services Manager I try to facilitate emotional and intellectual connections between the meanings of the resource with the interest of the visitors through the signs, brochures,



Above: Refuge Ranger Cindy Samples



web sites and presentations I create. I try to help the visitors care about the refuge so that they will care for the refuge.

My husband Rick is Park Manager for Great River Bluffs State Park in Minnesota.

Up until I was 13, I always thought I would be a teacher. When I was 13 years old I saw my first National Park Service Park Ranger at the Everglades and realized I could teach outdoors! My first conservation job was as a Youth Conservation Corps kid in 1975 at Shawnee National Forest in southern Illinois. In my entire career, I have been able to do what I set out to do – teach about the outdoors in the outdoors. Reading Richard Louv's book reinvigorated my passion for doing this.

Each year I gain another "story" to put in my memory book. Last year I took a first grade class from Wabasha, Minn., out on the River Explorer houseboat. The students got to spend the day on the Mississippi River exploring our refuge. We were in the river up to our knees, collecting macro invertebrates. We kept going deeper and deeper so our rolled up pant legs were getting wet and one little boy looks up at me and says,

"My mom would never let me do this!" "You mean walk in the river?" I asked. He said, "Yeah." I told him, "You don't have to worry we'll be dry by the time we get back, are you having fun?" He said, "I'm having the time of my life!" Yes I do have a perfect job - I get to share nature with children on a regular basis.

--Cindy Samples, Upper Mississippi River National Wildlife and Fish Refuge

Above, Left: Ranger Cindy on board the River Explorer with a classroom of kids.

Afternoons with Leopold

I have always loved Aldo Leopold's writings. When my son was going to school at Macalester College he called one day and said, "Mom can I bring some kids home so you can take them to see the swans?" Having my son want to bring kids home to do "nature crap" (his words) was great, but then he added, "Oh you're going to love this mom; Ben is Aldo Leopold's great grandson." So Tyler came home with the kids and I got to take Aldo Leopold's great grandson out on the Refuge to see the tundra swans. I only wish I could write an essay in Aldo's words as to what that day meant to me and to Ben who saw his first Tundra Swans.

Friends in High Places

Hatchery Friends and Volunteers Build Interpretive Pavilion

Last summer, Jordan River NFH received a challenge cost share grant to build an interpretive pavilion on hatchery property. After much planning and brainstorming, the Friends of Jordan River National Fish Hatchery came up with a building plan. Hatchery Friends group representative Tim Smigielski was getting a bit nervous about the length of the "planning" effort, but he kept in mind that since this was the group's first such effort, everyone should have the opportunity to take ownership—and they sure did.

Friends Group Vice President Jon Sumner and board member Tim Moore coordinated the effort last October. First, they bored the holes for the pavilion's footing and posts. A few days later, the posts were set and concrete delivered, and the real work could begin.

The group thought by waiting until fall, they would encounter cooler weather for outdoor work. That didn't happen! On a beautiful autumn day with temperatures near 80 degrees, a group of Friends and volunteers began work on the first major project for the Friends of the Jordan River National Fish Hatchery. It was a long hot day, but Tim and Jon directed the lifters, holders, carriers and gofers, and by day's end, the hatchery had a

pavilion.

Many visitors and fall color tourists stopped to marvel and ask questions. The main question was, "Who is it being built for?" The answer? Well, it's for you and everyone like you. Come back and enjoy it in 2008!

--Tim Smigielski, Jordan River NFH, Elmira, Mich.



Seeing the Forest and the Trees

Celebrating Excellence

Interdependence is one of the hallmarks of the disability community. Kathleen Schlener and Sheryl Decker are a great example of how two people with different disabilities can come together to form a unique and successful partnership.

Schlener has had eye problems since the age of nine, and became legally blind when she was 15 years old. Since 1999, she has worked as a human resources assistant for the Fish and Wildlife Service with the federal government.

When she started her job with the Fish and Wildlife Service she used a closed circuit TV (a device that assists with reading), a magnifier and Sharpie pens to accommodate for her disability. In 2002 she experienced significant vision loss that required her to rethink how she would do her job. Schlener's supervisor came up with the idea for a "reader" position and researched this option. The supervisor found out that such a position already existed within federal government. They modified the position description to meet Schlener's needs.

Sheryl Decker fit the bill. Decker started as Schlener's reader in December 2005. Schlener believes with the right supports in place she can succeed. "This job is really important to me. I'm a go-getter and with the assistance of a reader I can just go and do it!"

Both women encourage people with disabilities who are looking for work to look for what they want to do. "Be confident; there is a job out there for you. You will find work. Anyone looking for a job has a tough road, and having a disability makes it harder, but don't concentrate on the negatives. You never know what life will bring!"

 $\hbox{\it --Reprinted from the Positively}\\ Minnesota~website$



Above, Left, Sheryl Decker, Right: Kathleen Schlener.

Port Louisa Manager Awarded 2008 Iowa DNR Partnership Award

Tom Cox, manager of Port Louisa NWR received the 2008 Iowa DNR Partnership Award at a ceremony held during a statewide meeting of conservation professionals last month. Thanks to Tom's willingness to build cooperative projects and develop partnerships, the DNR and FWS were able to combine their resources and programs to develop a successful river corridor management system.

Port Louisa NWR and the State's Odessa Wildlife Area make up a 7,000-acre wetland complex. The management of the complex is woven tightly together with the river inlet structure on the refuge and the outlet on the state wildlife area. Tom has played an active role in uniting the two agencies in an effort to educate the public on existing natural resource and recreational values of the managed area and to defuse controversy.

Tom's efforts to work with the Odessa staff did not go unnoticed. According

to the Iowa DNR, "Tom has been a critical player in the partnership between the Fish and Wildlife Service and the Iowa DNR. We have come to rely on Tom in arriving at mutually beneficial decisions. The key to the success of this partnership has been Tom's ability to be flexible. Tom has gone out of his way and put in a lot of hours to forge a partnership that benefits both agencies."

Tom Cox started his career as a interned at the famed Winous Point Shooting club on coastal Lake Erie. He then worked in both the Private Lands Program and Refuge management at Ottawa NWR. He transferred to Union Slough NWR and onto the Ohio River Islands NWR before coming to his current position at Port Louisa NWR in 2001.

- Information courtesy Iowa DNR
- --Juliana Jindra External Affairs



Above, Tom Cox receives a hearty congratulations. Left, Tom Cox, Right: Dale Garner, Wildlife Bureau Chief

Around the Region

Below Left: On March 8, the Eighth Annual Habitat Day program was held at Crane Meadows NWR in Minnesota. Children are the future of conservation and Habitat Day is an event for the entire family. The hope is to get children involved at a young age and promote proper land stewardship and ethics for our future. - USFWS photo by Gerald Meyer, Crane Meadows Refuge volunteer;



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Quote of the Month





Living nature is not a mechanism, but a poem. --Thomas Huxley

Genoa NFH Produces Disease-Free Food Source

Genoa National Fish Hatchery has been producing native aquatic species for conservation since 1932, and over the last 75 years has grown into one of the National Fish Hatchery System's most diverse field stations. The hatchery currently raises 23 species of cold-, cool- and warm-water fish and mussels for restoration efforts throughout the country.

One of the challenges of raising so many different types of fish and mussel species is keeping culture facilities free of disease pathogens that could potentially be transferred from one species to another. The introduction of a pathogen to one of these 23 native species could spell disaster for the station's programs and conservation commitments.

Careful planning and disease-hazard analysis help ensure Genoa maintains disease-free status and keep restoration efforts moving forward. One key to disease prevention is production of a certified, disease-free fathead minnows as a source of forage for pond-cultured fish.

Fathead minnows are often used as a forage species for larger fish cultured in the hatchery's ponds because they are a nutritious, natural food for fingerlings, young-of-the-year, and brood and future brood fish, all of which are key elements to the success of Genoa's native species restoration programs. Fathead minnows are native to North America; using them as a food source eliminates the risk of introducing a non-native species and associated pathogens to the hatchery grounds and surrounding environment. Because fathead minnows are part of the hatchery's production plan, they undergo health inspections for certifiable fish pathogens every six months, ensuring disease-free status before they are introduced to culture facilities and other cultured species.

Genoa NFH has been involved in the production of fathead minnows since 1995, and this year produced nearly 3.5 million minnows for the station's restoration efforts as well as programs at the Fort McCoy Army Base and Black River Falls Fish Propagation and Rearing Station in Wisconsin, and the Iowa's Fairport State Fish Hatchery.

Throughout the summer months, minnows are harvested from ponds and fed to brood fish and young-of-the-year walleye, yellow perch, bluegill, black crappie, and large and smallmouth bass. Young-of-the year fish are stocked annually into tribal, state, and federal waters to enhance sport and subsistence fishing. Yearling walleye, blue and channel catfish, and large and smallmouth bass, are also used to help recover wild populations of two endangered mussel species, the Higgins' eye pearlymussel and the winged mapleleaf.

These species also make suitable host fish for several other threatened mussel species and species of concern used in propagation and research at the station. Genoa NFH cultures these fish species for the first life cycle stage of these mussels.

Keeping host fish fit and healthy by feeding disease-free, nutritious minnows is a top priority for the mussel restoration program at Genoa NFH, and goes a long way in providing healthy juvenile mussels that will have a great chance for survival on their own.

--James Luoma, Genoa NFH, Genoa, Wis.

Right: (genoa-disease-free-2): Disease-free rainbow trout eggs from Ennis NFH incubate at Genoa NFH is Wisconsin. FWS photo.



We are pleased to announce that the Fish and Wildlife Journal (aka. ARS) http://ars.fws.gov is once again fully functional, and ready to accept your journal reports AND photographs.

Errors that surfaced a couple of months ago after the Service switched to a new server for Intranet applications have all been resolved. Journal users should no longer experience multiple login windows, and you should be able to upload photographs with your reports.

Your patience with this process is very much appreciated. Thank You and please start entering your reports and photos again.