



U.S. Fish & Wildlife Service

Winter 2010

Fish & Wildlife *News*



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USFWS



Service Director,
Sam Hamilton

The Changing Face of Conservation

As I reflect on my first six months as the Director, I cannot help but be humbled by the breadth of opportunity offered to me as an employee of the Service. It does not seem that long ago that I was a bright-eyed young man with a new job at the Service's Noxubee NWR with the Young Adult Conservation Corps. Now I am heading up the agency and directing a staff of more than 9,000 dedicated professionals.

In a short amount of time, you have helped me hit the ground running. We have worked nonstop, from releasing a strategic plan to dealing with climate change, to making sure the public is well-informed on how we are using American Recovery and Reinvestment Act funds to stimulate employment and economic development nationwide. To make sure you are kept up-to-date on these two critical priorities of Service priorities, there are articles on climate change and ARRA in this issue, as well as upcoming ones.

As public servants entrusted by the American people with stewardship responsibilities for America's wildlife resources, we act on behalf of past, present, and future generations.

The conservation challenges of the 21st century can only be successfully addressed with collaborative partnerships that help address the development of ideas and the creation of solutions that are beyond what any one entity can achieve. I know you share this belief when I see the work of our Wildlife Without Borders program, which awards grants and funds projects that help conserve the world's most endangered species. Government agencies, non-profit organizations, educational institutions, individuals and private sector entities are all entitled to the Service grants that help and support international conservation. This issue highlights just a few ways this program has had success over the years.

I hope you are as touched as I was by the article on the Fort Carson Wildlife Management Office's work with our nation's military Warriors in Transition program. Staff Sgt Ellis's Army service in Iraq reminded me of my father's Air Force service during the Korean War. My father assumed command of the Air Force ROTC program at Mississippi State University in 1960, and it's where he introduced me to the outdoors. I can recall catching my first fish with him not far from where he headed the ROTC program. I hope this is the first of many stories of soldiers not only working in wildlife management as part of not only a treatment program, but also embarking on a new career after the military.

As you know, the Service makes decisions every day that are important to America, its wildlife, and its people. The actions we take to ensure sustainability of our nation's fish and wildlife resources affect both public and private lands and impact the quality of life, the economic well-being, and the recreational enjoyment of our citizens. Our decisions and actions have both immediate and long-term implications. As public servants entrusted by the American people with stewardship responsibilities for America's wildlife resources, we act on behalf of past, present, and future generations.

And speaking of past generations, with this issue we say goodbye to Katherine Roberts, a sweet lady who worked for the Service as an artist, and became a dear friend to Rachel Carson, illustrating her book, *The Sea Around Us*. Katherine was known to take field trips around the country visiting many refugees, often bringing her grandchildren with her, showing she was a strong advocate for kids and a belief that embodied in the "Let's Go Outside" initiative. She will be dearly missed, and her legacy should inspire us.

The confidence with which I accepted this position as your Director is based on my recognition that the true strength and integrity of this organization rests not in me, but rather in the exceptional people who comprise this agency. From the outstanding biologists to our hard-working interns, Service employees are the most skilled, the most knowledgeable, and the most committed public servants any organization could hope for. Your passion to conserve, enhance, and protect the fish and wildlife resources of this nation inspires me every day, and it's not only my honor to be your Director, but it is my pleasure to represent the hard work you do. □

U.S. Fish and Wildlife Service Promotes Conservation Through the American Recovery and Reinvestment Act



The American Recovery and Reinvestment Act is breathing life into the Nation's

tough economy while benefiting wildlife conservation and local communities across the nation. Since President Barack Obama signed the legislation into law in February 2009, jobs are being created or saved, and lives are changing as the result of the powerful economic stimulus plan. Of the \$3 billion appropriated to the Department of the Interior, the Act provides \$280 million for the Service. These funds will help to complete projects and promote employment growth throughout communities and neighborhoods across America.

The Service is creating approximately 3,000 jobs through Recovery Act funding. The agency is developing partnerships with businesses that hire employees to perform a wide range of duties to promote the Service's mission to support nature conservation. Some of these jobs include restoring habitat for endangered plants, fish, and migratory birds; building trails; upgrading visitor centers; awarding historic preservation grants; and more.

"Our partnerships with private landowners for projects are helping the Service to make a tremendous difference in the lives of others, while conserving America's wildlife and habitat," said Service Director Sam Hamilton. "It is a rewarding experience for everyone."

The Recovery Act projects address long-standing priority needs identified by the Service through its capital planning process. The agency worked through a rigorous merit-based procedure to identify and prioritize investments meeting the criteria put forth in the Recovery Act. These projects worked on addressing the Department's highest priority mission needs; generating the largest number of jobs in the shortest period of time; and creating lasting value for the American public.

Interior Secretary Ken Salazar continues to make the call for change, announcing millions of recovery dollars to businesses in contract awards. "The Department of the Interior is working diligently to create jobs through the American Recovery and Reinvestment Act. It is so gratifying to know that these efforts are helping to make life easier for Americans by putting thousands of them back to work," said Secretary Salazar. "It's also a win-win situation for the

Department of the Interior, as those projects continue to conserve and protect America's national treasures."

For a full list of funded projects nationwide, visit the Interior Department's Recovery Web Site at <recovery.doi.gov/press/bureaus/us-fish-and-wildlife-service>.

Secretary Salazar has pledged unprecedented levels of transparency and accountability in the implementation of the Department's economic recovery projects. The public is able to follow the progress of each project on the recovery Web site which includes an interactive map that enables the public to track where and how the Department's recovery dollars are being spent. In addition, the public can submit questions, comments or concerns at <recoveryact@fws.gov>.

Secretary Salazar also has appointed a Senior Advisor for Economic Recovery, Chris Henderson, and an Interior Economic Recovery Task Force to work closely with the Interior's Inspector General to ensure the recovery program is meeting the high standards for accountability, responsibility and transparency set by President Obama. □

*Kim Betton, Public Affairs,
Region 9*

Recruiting Youth in the Northeast

In its second year, the Northeast Region's joint program with the Student Conservation Association (SCA), called the Conservation Intern Program (CIP), is proving to be a rewarding partnership. For many years the Service has partnered with the Student Conservation Association, whose mission is to "build the next generation of conservation leaders and inspire life long stewardship of our environment and communities by engaging young people in hands-on service to the land."

In 2007, the National Wildlife Refuge System in the Northeast Region initiated a search for methods to enhance diversity recruitment and targeted SCA for assistance in developing the CIP.

The Northeast Region's CIP program brings diverse young students, typically college freshmen and sophomores, together with Service employees, and introduces them to a wide range of the work and responsibilities associated with a career in natural resources.

Organized and managed by the refuge system staff, the program provides a week-long training session at a national wildlife refuge, followed by a 12-week learning and training experience on a refuge in the Northeast Region. Students have the opportunity to experience a broad range of natural resource management activities and work on an array of projects, such as



LAMAR GORE

Participants in the USFWS, Northeast Region's CIP received training at the Blackwater NWR in Maryland as part of their summer internship experience.

biological monitoring and habitat restoration; refuge maintenance; and recreational and interpretive public use programs.

Realty specialist, Rick Jorgensen, played a key role in developing and establishing the CIP for the Northeast. "Being afforded the opportunity to inaugurate the Northeast Region CIP has been one of the most rewarding aspects of my career. The investment our National Wildlife Refuge System's senior leadership team is making in diversifying the Service workforce has already begun to pay dividends," states Jorgensen.

In 2008, the Service hired 20 students for the summer program, and in 2009 increased that number to 30 students. Students are recruited nationwide to work throughout the Northeast Region. For many, the program offers a unique opportunity they may not otherwise experience. "I am very inspired by the efforts to make this program happen. It is exciting to know there are people who care enough to give us a chance to gain experience throughout the summer. This has driven me to learn more about the Service and

possible careers that are open to me," says CIP participant Abisola Adeosun, who is working at the Great Falls Discovery Center at the Silvio Conte National Wildlife Refuge in Massachusetts.

This innovative and mutually beneficial program directly complements the recent signing of a historic secretarial order establishing the Office of Youth in Natural Resources at the Department of the Interior. The new office will play a lead role in developing a signature program referred to as the "21st Century Youth Conservation Corps," which will aim to put thousands of young people from diverse backgrounds to work on public lands. The Department is hopeful that the dramatic expansion of youth programs will not only provide needed jobs, but also help develop the next great generation of conservationists, land stewards, and public servants. The Northeast Region's CIP will undoubtedly play a vital role and be a valued contributor in accomplishing this mission. □

Jennifer Lapis, Public Affairs, Region 5

Service Releases Climate Change Strategic Plan for Public Comment

The Service released its proposed climate change strategic plan for public comment on September 23. Comments are currently being evaluated and incorporated into the final version of the plan, which will help guide the Service's response to current and future impacts such as altered wildlife migration patterns, the spread of invasive species, changing precipitation patterns and rising sea levels.

The Service's plan is an integral part of an overarching Department of Interior's strategy announced by Secretary Ken Salazar on September 14, 2009. Salazar issued secretarial order establishing a framework through which the Interior bureaus will coordinate climate change science and resource management strategies.

"The growing impacts from climate change on wildlife, plants, and watersheds are a call to action," said Tom Strickland, Assistant Secretary of the Interior for Fish and Wildlife and Parks. "These impacts call for a coordinated and strategic response from the Department and its bureaus. We will help lead a national response that is grounded in sound science, an adaptive, landscape-scale conservation approach, and collaboration with partners. This is a crucial first step in that direction."

Prior to its public release, the Service received more than 400 separate sets of employee comments on the draft plan submitted by supervisors on behalf of their staffs.

"The quality of comments clearly demonstrates employees' interest in the topic of accelerating climate change and overriding concerns for the Service and its mission, as well as their collective passion for the resources we work to conserve," said the Service Director Sam Hamilton.

Employee comments were consolidated and reviewed by a team of former Service employees contracted specifically for this task. Their summary report was used by a team of 35 Service leaders who met at NCTC in September to determine how comments should be used in revising the plan. Team members said they were deeply impressed by the detail and thoughtfulness of employee responses, as well as their understanding of the challenges that lie ahead for conservation.

"It is not surprising that our employees recognize climate change as a transformational issue," said team member Paul Souza, Field Supervisor for the South Florida Ecological Services Field Office. "This is our chance to lead. In the end, we need the creativity and the energy and the passion of people in the field to help us understand how we conserve the species we care so much about in a climate-changed world."

The Service plan outlines a number of commitments intended to reshape the face of conservation and enable the agency to play a leading role in addressing the challenges of a changing climate system. These commitments include: >>

Climate, continued from page 3

■ Targeting conservation by working with partners to develop science-based methods to identify the most vulnerable species.

■ Prioritizing existing challenges that will be made more difficult as a result of changing climate, including water scarcity and habitat fragmentation.

■ Leading efforts to develop a National Fish and Wildlife Adaptation Strategy, as outlined in pending climate change legislation in the U.S. Congress, to serve as the conservation community's shared blueprint to guide wildlife adaptation partnerships during the next 50 years.

■ Creating a National Biological Inventory and Monitoring Partnership that strategically deploys the conservation community's monitoring resources. Working with DOI's Regional Climate Change Response Centers, the Partnership would generate scientific data needed to understand climate change effects on the distribution and abundance of fish, wildlife, plants, and their habitats; model predicted population and habitat change; and help us determine if we are achieving our goals.

■ Building Landscape Conservation Cooperatives that develop regional and field technical capacity by working with partners to provide cutting edge science and information. These cooperatives, guided by DOI's newly created Climate Response Council, will be the primary vehicle through which the Service and partners acquire and apply the best climate change science to inform fish and wildlife management decisions and actions.



Melting sea ice is a visible reminder of a warming climate.

"The Service, as one of the nation's leading stewards of America's wildlife, is taking an important step forward by committing itself to both reducing global warming pollution and safeguarding fish and wildlife from the impacts of inevitable climate change," said Larry Schweiger, President and CEO National Wildlife Federation. "Climate change has emerged as the single greatest threat to our nation's natural heritage and the Service is well-positioned to play a leadership role in confronting this threat. We especially commend the Service for its collaboration with partners in crafting a national strategy for safeguarding fish and wildlife from climate change impacts. It will take all of us working together to confront climate change and conserve natural systems for people and wildlife."

To view copies of the revised draft Strategic Plan and accompanying 5-Year Action Plan, along with related outreach and a detailed summary of how employee comments were evaluated and incorporated, visit intranet.fws.gov/climatechange. □

David Eisenhower, Public Affairs, Region 9

Searching for Jewels in the Rainforest

In late spring 2009, a small contingent from Washington, DC, including three members of the Service, made its way to the rainforests of Costa Rica, intent on visiting some of the country's smallest but most potent residents. This was not the pursuit of any ordinary amphibian; the search was for brilliantly colored poison dart frogs, named for the toxins they secrete through their skin. Known as the jewels of the rainforest, what these tiny frogs lack in stature—most are about the size of a quarter—they more than make up for in beauty.

Poison dart frogs, members of the family Dendrobatidae, have an ancient relationship with humans. The indigenous peoples of Latin America learned centuries ago that rolling a dart or an arrow over a live frog's skin creates a coating of toxins which can paralyze any animal, simplifying the hunt and capture process.

More recently, toxins isolated from poison dart frog skin samples have been discovered to have valuable medicinal uses. For example, toxins produced by the phantasmal poison dart frog (*Epipedobates tricolor*), native to Ecuador, have led researchers to develop a synthetic compound which shows promise as a pain killer more effective than morphine and non-addictive. The skin of the strawberry poison dart frog (*Oophaga pumilio*), shown here, contains compounds that have been reproduced in the laboratory for use as a cardiac stimulant. While scientists today are still seeking the answers to questions about the biochemistry of poison dart frogs, it is thought that the frogs accumulate toxins

based on their diet of termites, ants, and other invertebrates. Chemicals contained in the micro fauna eaten by the frogs are eliminated from their bodies as the frogs secrete them through their vibrant skins.



The strawberry poison dart frog is one of seven species that can be found in the tropical forests of Costa Rica. Poison dart frogs and other amphibians have suffered population declines due to habitat loss, climate change, pollution, and disease. Forest habitat in Costa Rica was disappearing at an alarming rate up until the 1970s, when a growing awareness of the altered landscape led the country to establish a network of conservation areas to protect its remaining wilderness. Today, approximately 25 percent of Costa Rica's land area is part of a world-renowned protected areas system with more than 30 national parks and wildlife refuges. The rich habitat types now conserved include nesting beaches for leatherback sea turtles, high elevation havens for birds such as the resplendent quetzal, corridors for migratory species like the jaguar and Baird's tapir, and sanctuaries for reptiles and amphibians, including green iguanas and poison dart frogs.

It is partly for this reason that Service staff from the Wildlife Without Borders Latin America and Caribbean (WWB-LAC) Regional program selected Costa Rica as their destination: they hoped for a glimpse of Latin America's incredible biodiversity, including an opportunity to see poison dart frogs. However, Service staff also had a broader conservation mission in mind: to share Latin America's biodiversity—and some of the region's most successful strategies for protecting it—with policymakers from Washington, DC.

The Service first began taking U.S. policymakers to learn about best practices and conservation innovation in Latin America in 2001 as part of a weeklong, intensive course focused on tropical ecology and conservation policy. Each year, up to 15 people travel to Costa Rica to participate in what has come to be known as the U.S. Decision Makers Course. The course has historically been run by the Organization for Tropical Studies and co-sponsored by WWB-LAC. The Service sponsors the course as a means of educating decision makers about the international conservation impacts of the policies they create and the importance of capacity building among natural resource managers throughout the Latin America and Caribbean region.

The course itself becomes a migration of sorts as it travels to various protected areas throughout Costa Rica. As they travel, participants acquire knowledge about the goods and services provided by the various tropical ecosystems visited. For example, last year's course participants toured the mangrove estuary at the mouth of the Terraba River in Southern Costa

Rica. Local scientists and guides highlighted the different species of mangrove tree and how they together provide a buffer for local communities against intense storms and sea level rise while underwater roots serve as a nursery for fish—many species of which are important to the regional economy. And, through guest lectures delivered by leading conservationists in the region, course participants learned about some of Costa Rica's greatest conservation successes: its national climate change strategy; its innovative approach to managing wildlife refuges as public-private partnerships with local landowners; voluntary conservation incentive programs that have dramatically increased national forest cover; and the broader implications of U.S. trade policies in tropical countries.

The course is one of several projects aimed at capacity building and knowledge exchange as part of WWB-LAC. While it is only one project among many that the program supports, it is unique in that it is the only ongoing WWB-LAC initiative which focuses on a U.S.-based audience. To learn more about the program, visit the Division of International Conservation's website: <www.fws.gov/international/DIC/dic_home.html>.

To learn more about the course, e-mail <WWB_LAC@fws.gov>. □

Sarah Gannon-Nagle, Acting Chief, Branch of Latin America and the Caribbean, Region 9



RON WOYCHAK / BLM

Western North Dakota District Fire Management Officer Doug Downs helped fulfill Australia's request to the United States for assistance to control a massive wildfire in February 2009.

Fire and Ice: A North Dakota Firefighter Goes Down Under

Most Februaries, Doug Downs is knee-deep in snow and ice in his hometown of Kenmare, North Dakota, where winter snowfall averages two to three feet. Last year, the Western North Dakota District Fire Management Officer was thousands of miles from home in Victoria, Australia, where he was leading other firefighters trying to control one of Australia's fiercest wildfires which eventually burned more than 620,000 acres.

Doug and other Service personnel—John Saltenberger from the Northwest Interagency Coordinator Center in Oregon, Kenneth Griggs from San Luis NWR complex in California, and Lisa Jameson of Loxahatchee National Wildlife Refuge (NWR) in the Florida Everglades—joined nearly 60 other fire management experts from 14 States.

Brian McManus, Chief of the Service's Fire Management Branch, located at the National Interagency Fire Center in Boise, Idaho, also visited Australia to represent the National Multi-Agency Coordinating Group at

the debrief and close-out for the American fire resources. His visit included a tour of burned areas, active fires and fire facilities to learn how fire is managed in Australia and identify ways to further improve coordination between the two countries.

In addition to the Service, team members represented the Bureau of Indian Affairs (BIA), the Bureau of Land Management (BLM), National Park Service (NPS) and the U.S. Forest Service (FS). Their purpose was to fulfill Australia's request to the U.S. for fire management and burned area rehabilitation expertise.

"The U.S. has a government-to-government agreement with Australia to provide and receive fire support," said team member Judy Chetwin, NPS Interpretive Specialist, who works as a public information officer during the fires. "Australia specifically requested help from our National Interagency Coordination Center for various fire support personnel, including a Burned Area Emergency Rehabilitation (BAER) team." >>

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Because fire management specialists work together to manage wildfires in the U.S., they know one another and have a unique set of skills that enable them to quickly develop wildfire action and recovery plans. Incident Management and BAER team members consider how fire affects a particular environment, including the safety of people and cultural sites, and environmental issues such as soils, plants, animals and water resources.

In Australia, each American was assigned a specific role. Some worked in regional coordination centers and supported all fires by providing intelligence, such as weather and status reports. Others served as firefighters assigned to suppress fires. Most worked on incident management teams conducting operations, planning or logistics such as providing transportation, food and lodging to support fire suppression activities.

As a sector commander, Doug supervised four to 10 crews to build and reinforce a section of fire line. He supervised the use of heavy equipment to clear a fire line and worked side-by-side with crew members wielding chainsaws to remove additional vegetation in unburned areas to contain the fire.

"Doug inspired a great deal of camaraderie and confidence with his crews, which quickly built their trust," Judy said. "This is particularly important in an emergency situation, where you have to act quickly and there's not a lot of time to get to know one another well."

Doug's firefighting career spans 23 fire seasons that include stints with the Service, Forest Service and BLM in a variety of capacities including serving on hotshot crews, which represent some of the top, elite firefighters in the country.

Today, based at North Dakota's Des Lacs NWR, Doug oversees all aspects of fire management for more than 250,000 acres in North Dakota, encompassing several national wildlife refuges and wetland management districts. Doug said managing the wildfire in Australia was similar to his work at home.

"Although the vegetation is different, they manage fire there much like we do in the U.S.," he said. "It was a great experience to work with people from all over Australia and other U.S. agencies. I saw how people across the world manage fire and learned that they share the same frustrations we do. After all, when it comes right down to it, fire is seamless across agencies and many of the issues are the same anywhere in the world." □

Debbie Felker, Information and Education Coordinator, Region 6

Lake Mead Becomes an Outdoor Classroom for Las Vegas Teen

Earlier this year, Lucia Rosatti, a career counselor at Foothill High School in Henderson, Nevada, contacted the Nevada Fish and Wildlife Office in Las Vegas. Lucia had a senior high school student named Ryan Ward who was interested in shadowing a wildlife biologist for a day to complete a class assignment. Erik Orsak, an environmental contaminants biologist, offered to take Ryan into the field. After completing the paperwork allowing Ryan to serve as a temporary volunteer, the two arranged to take part in a project involving the collection of razorback suckers on Lake Mead.

"Remembering how much I disliked getting up early when I was a teenager, I was worried about Ryan's reaction when I told him that I would need to pick him up at his house at 6 a.m. so we could meet the Biowest boat crew at the dock at 6:30, but Ryan didn't seem to mind and he was ready to go on time," Orsak said.

"Ryan jumped right in and got his hands dirty, asking questions... he really seemed to be engaged."

Trammel netting for razorback suckers, a federally endangered fish native to the Lower Colorado River, is not as glamorous as it sounds. The fishing nets consist of a small mesh with overlying trammel lines positioned in a diagonal pattern, and are very good at catching fish.

The problem is, for every razorback sucker you catch, you must untangle and remove dozens of non-native fish such as striped bass, channel catfish, and common carp. It can take a three-person crew more than six hours to remove upwards of 200 fish from three nets; and even then they may end up without a single razorback to show for all the work. It is dirty, monotonous work, but Ryan was lucky. This particular day the crew hauled in 14 razorbacks from Las Vegas Bay, a record catch for the year. Ryan even got to release a

Ryan Ward (left), a high school senior, with Ron Rogers (middle) of Biowest Inc. and FWS contaminant biologist Erik Orsak (right). Ryan spent the day sampling endangered razorback suckers on Lake Mead as part of a mentoring program.



BIOWEST INC.

juvenile razorback sucker back into the water once it had been measured and weighed. At the end of the day, Ryan seemed to enjoy the whole experience. "I would venture to guess that Ryan is the only high school student in the Las Vegas Valley that has seen a living razorback sucker," Orsak added. "Who knows, Ryan may even become a wildlife biologist himself some day."

Biowest, a private consulting firm from Utah, has conducted population studies on Lake Mead razorback suckers since the late 1990s, funded by both the U.S. Bureau of Reclamation and the Southern Nevada Water Authority. The Nevada Fish and Wildlife Office has worked with the U.S. Geological Survey for more than 10 years to assess the impacts of pollution on fish health in Lake Mead. Only recently did these two efforts forge a partnership to assess the reproductive health of razorback suckers. This project, and many others across the U.S., can serve as a living classroom for young people, sparking an interest in the outdoors that will last a lifetime.

This effort serves as just one example of the many outreach and mentoring opportunities available as part of the Service's initiative to conserve and protect the nation's wildlife resources. The Service believes a vital aspect of its mission is to share a passion for what we do with the next generation, planting seeds in today's youth that will hopefully grow into leaders in conservation tomorrow. □

Erik Orsak, Environmental Contaminant Specialist, Region 1

"Sense of Wonder" Preschool Camp at Parker River

Rachel Carson once said, "If a child is to keep alive his inborn sense of wonder...he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in." These words served as the inspiration for the second annual "Sense of Wonder" summer camp for three- and four-year olds and their parents at Parker River NWR.

As a child, my love of nature came from spending summers on the Massachusetts coast, not even a couple of miles (as the plover flies) from Parker River National Wildlife Refuge where I now work. I spent each day of the summer out on the beach, collecting shells, swimming in the Atlantic, and keeping a sand pail aquarium filled with starfish, periwinkles, sea urchins, sand dollars, and anything else I could find on a given day. Those days, along with the encouragement of my mother — who never turned away the sand pail critters I brought home — helped form the naturalist and park ranger I am today.

Fast forward to 2009 and you'll see more children playing indoors than out. Computers, video games and parental fears of the outdoors and strangers are keeping kids inside more than ever, where it's "safe." In an effort to reclaim childrens' curiosity and love of the outdoors, the "Sense of Wonder" camp provides a positive outdoor experience for young children and their parents. It was designed to inspire and excite, encouraging parents to make outdoor exploration a priority in their child's life, and help them be their guide for wonder.

The camp was held in the morning in early June 2009. On the first day, campers and parents explored ocean tide pools, looking for crabs, periwinkles, whelk, side swimmers, and sea stars. They also discovered how clams survive the changes in tides by watching them bury themselves under the sand!

On the second day, campers explored sand dunes and cranberry bogs, finding deer and raccoon tracks, and discovering a treasure trove of toad tadpoles in a dune puddle. They also learned how dunes are created by wind and water, by acting out the formation of a dune with their parents, then created original works of art using sand.

The third day of camp involved a forest and meadow study filled with scavenger hunts, leaf rubbings, meadow sweeps and making their own binoculars (with toilet paper tubes) to observe wildlife. Campers and parents observed spittlebugs hiding in the grass, caught ladybugs and slugs in critter containers, and chased after wolf spiders darting through the meadow.

On the fourth and final day of camp, campers and parents set about exploring the freshwater and salt marshes of the refuge. Together they dip netted for macro and micro-invertebrates in a freshwater swamp, finding backswimmers, insect nymphs, and diving beetles. Then they made their way to the salt marsh where they felt vibrations from walking on the thousands year old peat, and investigated the salt marsh mud snails and other small creatures hiding below the grass. The day wrapped up with pulling a



Preschoolers at Parker River National Wildlife Refuge.

minnow trap and finding over twenty mummichogs, small fish that love to eat mosquito larvae. Each parent and child got the opportunity to hold a mummichog and release it back in to the open water of the salt marsh.

At the end of the camp, parents and children were asked what they enjoyed most. Among some of their favorite activities, kids loved catching mummichogs, finding shells, spending time with mom, and touching the bugs and fish. Parents said they enjoyed exploring nature and getting the chance to learn with their kids. They also appreciated the patient and engaging leaders.

Before leaving, parents were also given a list of resources on ways to help continue connecting themselves and their children to nature and the outdoors.

The camp was a great success, and might be best summed up by a comment one mother made: "This camp will truly be a highlight and fond memory for me as a parent, and for my son as a curious little sponge of a boy!" We couldn't agree more and can't wait to offer it again next year!

For more information, contact Kate Toniolo at <Kate_Toniolo@fws.gov> or 978-465-5753 ext 210.

Kate Toniolo, Supervisory Park Ranger, Region 5

international **WATERS**



*Participants at the
Genoa National Fish Hatchery
in Wisconsin during a visit from
the Chinese delegation.*



Yangtze River

*East meets West in an effort
to conserve wildlife*

By Ashley Spratt

The Yangtze River in China and the Mississippi River that cuts through America's midsection are thousands of miles apart. Yet these two massive river systems face similar threats to the habitats they provide and the resources they supply.

The Mississippi River, first navigated by Native Americans and early explorers hundreds of years ago, is now one of the most heavily trafficked transportation corridors in the world. From the headwaters of the far north to the delta of the Gulf of Mexico, the Mississippi River basin feeds the agricultural lifestyles of the Midwest, waters the angler's thirst for sport fish, and provides habitat for some of the most threatened and endangered aquatic species in the country.

The Yangtze, the largest river in China and third longest in the world, flows from the southwest corner of the country to the east through Shanghai, the country's most populous city, before emptying into the East China Sea. It supports a commercial fishery that helps feed the country's 1.3 billion residents. It provides a thoroughfare for the transportation of goods across the country. And beneath its waters, the 6,200 km river holds some of the last remaining populations of Chinese fish species threatened with extinction.

The common challenges facing these rivers and their ecosystems have brought Chinese and American fish and wildlife agencies together to share conservation strategies and better understand the similarities and differences between their unique cultural views of conservation.

"When scientists work together across countries, we are increasing our opportunities to improve the environment on a more comprehensive, international scale," said Pam Thiel, fish biologist from

the Service's LaCrosse National Fish and Wildlife Conservation Office. Thiel was one of 10 American delegates who participated in a two-week fisheries resources expedition in China last fall. Thiel and other Service representatives hosted a Chinese delegation of managers and scientists during their cross-country trip to the United States in April 2009.

"We have to respond to the globalization of our economies and marketplaces at an environmental level as well," Thiel said.

The U.S.-China delegation exchange program developed as a result of a series of science and technology agreements signed in 1986 between the U.S. and the People's Republic of China. Under the U.S.-China Nature Conservation Protocol, the U.S. Department of the Interior and China's State Forestry Administration are working together to address environmental issues and increase cooperation and exchanges between the countries' conservation agencies.

"We are interconnected; what happens in one place, can happen in another," said Steven Kohl with the Service's Division of International Conservation. Kohl organized the Chinese delegation's tour in the spring of 2009.

"China has the largest population in the world; because of this, their experiences can help us understand how to respond to urbanization and other negative human impacts using new tools and resources," he added.

The exchange began with an October 2008 visit by fisheries biologists from the U.S. Fish and Wildlife Service to China, where they met with members of the Ministry of Agriculture and Academy of Fishery Sciences. The delegates visited the Chishui and Yangtze Rivers, Three Gorges Dam, and numerous fisheries research institutions, including the Chinese Sturgeon Research Institute.

"The threats facing the Chinese sturgeon are similar to those facing the species' close relative, the pallid sturgeon, here in U.S. waters," Thiel said. "Pollution, habitat degradation, dredging, the construction of dams—these are the challenges we face with fish both in the U.S. and abroad."

Both the Chinese sturgeon and pallid sturgeon are considered 'living fossils' because they existed as early as 140 million years ago and bear the prehistoric appearance of dinosaurs. The pallid sturgeon, with fewer than 300 individuals in the wild population, was protected as Federally endangered on the Endangered Species List in 1990. The Chinese sturgeon is categorized as a 'first class' species in China's National Catalogue of Protected Wildlife. Among China's first class protected wildlife, many are aquatic species, including the Chinese river dolphin, Chinese paddlefish, red coral and Asian giant softshell turtle.

The gravity of the threats facing the Chinese sturgeon led to the development of the Chinese Sturgeon Research Institute, one of the sites visited by the American delegation. The research facility studies the species' reproductive cycle and raises captive populations for propagation and release into the wild. Fan Xiangguo, Director of the Division of Aquatic Wildlife Conservation within the Ministry of Agriculture and member of the >>

The Chinese delegation and their American hosts in front of the Shedd Aquarium in Chicago.



“The opportunity to interact with our international counterparts on a face-to-face basis is rare, but it is so important...”

Steven Kohl, Service's Division of International Conservation

Waters, continued from page 9

Chinese delegation, said that more than 7 million Chinese sturgeon have been released into the Yangtze River in an effort to recover the species. However it remains uncertain whether the hatchery-reared fish are contributing to self-sustaining populations.

Pallid sturgeons are also captive-reared by state and federal hatcheries in the U.S. in an effort to reestablish populations in the lower Mississippi and Missouri rivers. But artificial propagation is just one element of recovery efforts for endangered fish species. Restoring habitat is critical for species like the sturgeon to survive.

Only a small number of fish released in the Yangtze were marked. Mass marking initiatives have become a key monitoring method for fish released into the wild in the United States. Thiel and other fishery conservation agents hope the U.S.-China exchange program will encourage effective monitoring tactics, like mass marking, to be adopted by Chinese fishery counterparts to help improve recovery efforts for the sturgeon.

Habitat degradation and loss are the main factors contributing to aquatic species decline in the U.S. and China. Three Gorges Dam, the largest hydro-electric power station in the world, provides clean energy, power to millions of Chinese citizens, and prevents flooding, but has also resulted in major barriers to fish passage and decreased water quality.

In the U.S., the construction of dams and channels has also contributed to loss of suitable spawning habitat for many species, including sturgeon.

According to Thiel, the paddlefish, a species of concern in the U.S., is another victim of habitat loss, and is functionally extinct in China. In the U.S., paddlefish are illegally harvested for their eggs, a threat that has caused growing concern among many fish and wildlife agencies.

“Overharvesting by commercial fishermen, pollution and public perceptions continue to remain the major issues for fisheries conservation in many parts of the world,” said Thiel.

Li Yanliang, Director General of China’s Fishery Law Enforcement Command, headed the Chinese delegation. “Compared to the United States, our country started a little bit later in terms of technology,” he said. “We are behind and we recognize the need to educate our public more on wildlife conservation.”

As part of China’s effort to become more environmentally conscious, the Ministry of Agriculture set a priority of establishing nature preserves and strengthening habitat protection of endangered aquatic wildlife. The Ministry currently oversees more than 200 nature preserves, a number that has tripled since 1999. According to members of the Chinese delegation, nature preserves have already resulted in positive effects for fishery resources, water, ecosystems and sustainability of fishing communities.

“More people are paying attention to the protection of wildlife,” said Yanliang.

China’s booming economy has increased mobility for its citizens. With increasing disposable incomes, demand for recreational activities has grown, including visitor centers and services in the country’s natural areas and reserves. “We have been able to share knowledge about our agency’s National Wildlife Refuge System and Visitor Services programs, to help them accommodate this growing demand,” said Kohl.



JONATHAN LESLIE / FLICKR

Construction of China’s Three Gorges Dam displaced millions of people and impacted fishery habitat.

The U.S.-China Nature Conservation Protocol exchange program is just one of several international exchange programs facilitated by the Service.

“The opportunity to interact with our international counterparts on a face-to-face basis is rare, but it is so important,” Kohl said. “Not only for the lessons it teaches us about conservation; but also the lessons it teaches us about cooperation between cultures.”

Ashley Spratt, External Affairs, Region 3



At Wildlife Without Borders, People are the Solution

Sharing responsibility across the planet

By Jennifer Anderson

"We don't focus on a particular species or habitat, but on people," says Herb Raffaele, chief of the Service's Division of International Conservation. "We like to say people created these conservation issues, and people have to be the solution." He added: "Our battle is to fight ignorance of conservation issues."

This past July, staff from the Service's Wildlife Without Borders Regional Program traveled to Mexico City to hold a brainstorming session with representatives from 50 organizations to identify three key audiences that would most benefit from conservation training. The winners: future protected area managers who, unlike current managers, have time to devote to education; high-level decision makers who may understand the need for a highway but not the ecological consequences; and community leaders, particularly those in and around protected areas.

Wildlife Without Borders, collaborating with the Mexican government and Non-Governmental Organizations,

will follow through and develop the programs, Raffaele said, calling his program's involvement "very hands-on and proactive."

Mexico is among Wildlife Without Borders' biggest regional programs, after the Caribbean and Latin America. Others include Africa, Russia and China—although the program essentially has no geographical limitations. As Raffaele explained, the Endangered Species Act requires Wildlife Without Borders and its staff of 27 to work worldwide. "The American public doesn't want to see elephants go extinct, even though they are not native to the United States," he said.

Western Hemisphere Migratory Species Initiative (WHMSI) Moves Conservation Forward

Getting the right people to the table can be challenging. Wildlife Without Borders seeks to participate in initiatives that bring stakeholders together to discuss conservation challenges.

WHMSI, an effort led in the U.S. by Wildlife Without Borders, sought to address a lack of collaboration among government and Non-Governmental Organizations that was causing frustration in the conservation community. Too often, governments would create laws that lacked the necessary funding, while Non-Governmental Organizations equipped with the creativity and motivation to

(Above) Staff of Federal nature reserves and national parks from Far Eastern Russia visit Jarina Waterfowl Production Area in Dupuyer, Montana accompanied by staff of Benton Lake National Wildlife Refuge and Division of International Conservation.

raise funds lacked the political authority to make their ideas take hold.

Both sides have increasingly realized that they could be more effective working together. This truly came to light in Chile in 2004, at a meeting that included wildlife directors from about 30 countries in the western hemisphere.

Discussion centered on aspects of conservation that all of the countries shared, which then led the directors to agree to work cooperatively on conservation of virtually all species of migrants, including butterflies, mammals, fish, and birds.

That effort, which started in South America and ultimately became known as WHMSI, “is still very active today,” Raffaele said. WHMSI meets every other year and has since expanded its efforts to support priorities set by the parties, such as delivering training programs to help local people better understand how to conserve migratory species. Funding from several big donors, including the Global Environmental Facility and the Organization of American States are facilitating their efforts, with grants ranging from \$500,000 to potentially \$5 million in the future. The fourth gathering of WHMSI is scheduled to take place this spring, possibly in the Caribbean.

Russia and China

While all of Wildlife Without Borders’ regional programs concentrate on training and communication among people who are capable of having an impact on conservation, two of those programs — Russia and China — are a bit different. They work to facilitate dialogue almost exclusively among specialists trained in biology, conservation or related fields. These programs thrive primarily based on each country’s similarities with the United States.

In Russia, there’s a common border, as well as shared species such as polar bears, Pacific walrus, sea otters, and migratory birds. In China, shared species include alligators and amphibians, while both countries grapple with sprawl and associated habitat loss and other conservation issues.

Of the two, the Russia program is the largest, centering around bi-annual meetings in which representatives from both countries gather to discuss upcoming conservation goals and objectives. Most recently in June, Wildlife Without Borders’ two program representatives, Peter Ward and Steven Kohl, along with

National Wildlife Refuge System AD Greg Siekaniec and directors from the Alaska field office, met with the Russians at Russia’s Ministry of Natural Resources and Environment in Moscow. “Luckily for both sides the Cold War never interfered with our continuous dialogue,” said Ward, an international affairs specialist.

The Wildlife Without Borders program is unique in building the capacity of local people to conserve wildlife and habitats.

Ward described the outcome of the meeting as routine, an indication of the stability of a program in existence for 37 years.

In addition to facilitating dialogue (Ward and Kohl, chief of the Russia and East Asia branch, both speak fluent Russian), the program also provides grants for conservation efforts in Russia including nearly \$340,000 awarded recently to help with the operational costs of nature reserves and parks. A portion of those funds will support a reserve providing habitat for polar bears and walrus as well as a park in need of clothing, sleeping bags, boats and other equipment for law enforcement to combat poaching. The program also has provided \$1.5 million for tiger conservation in Russia.

In September, the Russia program supported the inaugural meeting of the U.S.-Russia Polar Bear Commission, which is working on legislation to allow native peoples in both countries to hunt polar bears under conditions that will not threaten the survival of the species. The commission also will address the impact of climate change on polar bears and other topics.

Through the China program, Wildlife Without Borders hosts one to two groups of scientists a year, usually at a National Wildlife Refuge, and sends one to two groups of scientists each year to China. Visits usually last two weeks, although Ward noted that lately some scientists have arranged extended stays. Dialogue tends to focus on wetlands management and restoration — notably the 1998 floods. “That really awoke within China an understanding that when you conserve

ROY W. LOWE



Observation platform at Xianghai National Nature Reserve in Jilin Province of northeast China.

wetlands, you can reduce the impact of floods, improve water quality and increase habitat for wildlife,” Ward said.

Wildlife Without Borders also provides funding to help China conserve the Asian elephant, rhinoceros, tiger, and other threatened or endangered species.

Global Efforts

In addition to working in specific regions, Wildlife Without Borders also has a newer global program, which eventually will take the lead working with international institutions such as the World Bank and tackle cross-cutting issues that affect all regions, such as climate change.

Giving Conservation a Jumpstart

Wildlife Without Borders also issues \$15 million a year in grants worldwide through a process that evolves based on successes and conservation needs.

Raffaele explained that some countries with the greatest needs often do not have the capacity to develop grant proposals or management plans. The solution, he said, requires a more hands-on approach. Wildlife Without Borders works with partners to help countries figure out the best way to address their own conservation problems. He used Mexico’s need for a training program for protected area managers as an example. Wildlife Without Borders pulled together experts in applied conservation and had them first identify Mexico’s greatest needs for conservation training and then develop the best tools to meet their objectives.

“When you do this,” Raffaele said, “you automatically jumpstart to the highest quality program possible.” □

Jennifer Anderson, Freelance Writer, Arlington, Virginia

Fort Carson Soldiers *work, heal* In Wildlife



*The Army's Warriors In Transition
program takes on new meaning.*

By Leith Edgar

Paul Ellis was always infatuated with biology. After earning a Bachelor of Science with a double major in biology and criminal justice from Drury University, Missouri, he put his biological love affair on hold to enlist in the Army—a decision that would later lead him back to his passion, albeit via a circuitous route.

Fast forward to the present, Ellis is now a staff sergeant on active duty stationed at Fort Leonard Wood, Missouri. However, thanks to an unlikely stint managing wildlife, he is all but certain that upon completion of a 20-year career in the Army, he will return to his first love: the biological sciences.

Ellis came to the decision that life after the Army would involve biology while working in the Fort Carson Wildlife Management Office (FCWMO). The vertical construction engineer came to wildlife management by way of Carson's Warriors in Transition Unit (WTU) after sustaining injuries during his third combat tour of Iraq.

Carson's WTU is but one of the Army's 35 WTUs. Established in 2007, WTUs provide medical support to wounded soldiers who require a prolonged recovery involving rehabilitation. As part of his mission to heal, Ellis chose working for the FCWMO to see if field biology was in his future. More than 16 months later, he was hooked.

"I just volunteered out there every day when I didn't have appointments. It gave me something to do and I got a lot of good field experience out of it," said the 38-year-old Ellis. "I did a lot of surveys. It was great for me because I found out I do like doing it, so it's going to be something I'm going to pursue when I get out of the Army."

With more than seven years until retirement, Ellis is occupying the interim by taking his biological studies a step further. Currently, he is working on a

Paul Ellis holding a prairie dog as part of a wildlife management program at Fort Carson.



Master's degree in environmental management from Webster University, Missouri.

"I picked biology in college. But you never know if you are going to like what you picked until you do it," said the self-described Army brat who was born in Louisiana. "I basically got a good year's worth of field experience out of it and got paid. I did not have to do an internship."

In Ellis' case, participating in the wildlife management program for warriors in transition was a marriage made in nature. In fact, Ellis was the first of more than 10 soldiers who participated in the program at Carson to date. He also has spent the most time in the program, said Rick Bunn, Carson's senior wildlife biologist and Ellis' program manager.

"He fit real well in our program. Like all the other soldiers who come here from the WTU, he expects to basically follow our schedule. We have unusual hours and Paul was real good about that. Sometimes we start at six in the morning and work to six at night, or later sometimes. He was always willing to work with us," said Bunn, who has approximately 20 years of experience managing wildlife across Carson's 148,000 acres. "Everything that we do he participated in. He got a real broad introduction to wildlife science here."

During his time in the wildlife office, Ellis worked on a plethora of projects. He helped protect his fellow soldiers from plague by surveying prairie dog populations using a global positioning system. He also partook in surveys of amphibians, deer, and burrowing owls, which are a state-listed species. Ellis was one of a few people to spot the first swift fox on Carson. The swift fox is a species not documented on Fort Carson. But the highlight of Ellis' 16-month tour with the wildlife office was the transplanting of prairie dogs from construction sites in El Paso County to Carson.

"Paul (Ellis) was very engaged in that project. That was probably his favorite project that he did. He put together different types of proposals and policy statements. He had some really good ideas of how to manage prairie dogs on Fort Carson," Bunn said. "He could work not just as a tech (biological technician); he could be hired on as a wildlife biologist in this office."

Handling prairie dogs is light years from what Ellis had been doing as an Army engineer. After Operation Iraqi Freedom kicked off in 2003, Ellis completed combat tours in lengths of 12, three and eight months. During his first tour Ellis served with the 52nd Engineer Battalion, 101st Airborne Division. Then he joined the 10th Special Forces Group out of Fort Carson. Over two tours in Iraq he worked with the unit's engineer office to facilitate construction of projects the Special Forces teams needed. On his third tour Ellis was injured, joined the WTU and became the first soldier to work at the FCWMO.

Hands On, On the Job

For Ellis, working outside in nature rekindled an old flame.

"I could not sit in an office. When you are going out doing field research, it's a lot different than sitting in a biology lab," he said. "I would like to continue to do field biology."

After his Army career ends, Ellis wants to become a field biologist with the Service or another wildlife management agency, he said.

Ellis' passion for biology was evident in his work. Other biological technicians noticed Ellis' natural wildlife management abilities. Tracy Perfors, a former coworker of Ellis and former Service employee praised his work ethic and self reliance.

"Paul (Ellis) could do whatever he needed to do all by himself. He was just a lot more independent because he did have a background," said Perfors, a former

biological technician, who spent four years in the Army before working for the FCWMO.

Some of the other soldiers also take advantage of the program's hands-on, on-the-job training to segue into wildlife management careers, said April Estep, a current biological technician and Service employee who worked with Ellis and six other soldiers for more than a year.

"Our goal is to get them back involved in a working environment to take some of the stress levels off of them...Part of what they're learning is how to work, but not with an Army mindset."

April Estep, a biological technician who had worked with soldiers

"It makes a difference when they come out with us. We can tell they enjoy it when they come to work. We have had several soldiers who left the program, retired from the Army and want to come back and volunteer. We know (some of them) are going to school now just to do what we do, or something similar in wildlife," Estep said.

Unlike Ellis, not every WTU soldier who works for FCWMO has a biological science background. Nor do many of them intend to pursue a career in the field. But some interest in connecting with nature brings them to the program. >>



Two soldiers at the Fort Carson WMO.

Soldiers, continued from page 16

“We get all different kinds of guys. Some of them just like to hunt and fish, and just want to be outdoors. And others are considering wildlife science as a career choice when they get out of the Army. We try to provide opportunities to fit those two different types of soldiers we get here,” Bunn said.

They might have hunting or fishing backgrounds, so they really enjoyed being outdoors,” Perfors said. “Usually they would have an interest; they would love to hear about why we are doing what we are doing; and how all this data will help in the end.”

The program aims to accommodate both the career-oriented participant and the soldiers just looking to spend some time outdoors, said Bunn, who was instrumental in getting the program started in the Fort Carson Wildlife Office.

No matter a soldier’s intentions, he makes a contribution. Reciprocity is a hallmark of the program. Soldiers are able to rehabilitate while they contribute to wildlife management at their duty station.

“They might not have the science, but they have the wilderness experience to really be a help,” said Perfors. “For any kind of wildlife management, you have to be a field worker, so you have to be able to take care of yourself out in the middle of nowhere, and change a tire—all that kind of stuff. It’s not really the science, but it’s still a huge part of the job. They were all great at that. That’s not really all that different than what you do when you’re out doing a road march as a soldier.”

The Absence of Stressors

Two separate but equal missions govern the WTU soldiers assigned to the program and the FCWMO staff members who lead them. While the WTU soldiers’ charge is to heal, the staff members ensure the work environment is anything but stressful.

“These soldiers have a lot on their plate when they are coming back from a deployment: they have been injured, they have been away from their families for months and months and it’s just a lot to deal with. We just provide them an environment where they can go out, do some work and kind of relearn how the civilian world works—just not have to deal with as much stress as most of the other soldiers who are still with their units,” said Perfors, who deployed twice to Iraq. “It’s definitely good to have a place where you can just cool down.”

Some of the soldiers find solace in just showing up to work in the outdoors every morning. Returning to nature benefits those who grew up with an appreciation for the outdoors the most, Bunn said.

Up to four soldiers can participate in the program at a time. Typically, soldiers who participate are mid-level noncommissioned officers who’ve served for at least a few years. They work from one to nine hours per day and for periods of one week to several months. Work days start as early as 6 a.m. and usually run to 3:30 p.m. or sometimes later.

Part of the program’s cathartic quality is that it reintroduces the soldiers to working with people out of uniform in a less rigid and stressful environment, said Erin Barks, a current biological technician and Service employee, who has worked with three soldiers during her six months on the job.

“It’s an opportunity for them to get out with people who’re not in the Army. We do a variety of things, so it gives them something else to think about when they’re transitioning,” Barks said.

Sometimes a distraction from their wounds is just what the doctor ordered. The program’s staff occupies the soldiers’ time with oodles of projects: from mapping prairie dog colonies to conducting grassland bird surveys, installing wildlife water containment units to tagging deer, and everything in between.

“Our goal is to get them back involved in a working environment to take some of the stress levels off of them,” Estep said. “I think it’s beneficial to the soldier; it definitely helps them get back into a more natural setting. Part of what they are learning is how to work, but not with an Army mindset.”

The staff does its best to keep the focus on the tasks at hand and off the conditions which brought the soldier to the wildlife. Soldiers working for the program discuss their injuries as little or as much as they wish. The staff just listens.

“Generally, we do not ask them a lot of questions about what they came from. If they volunteer, we’ll talk about it with them. We generally just take them for who they are, and try to help them with what they want to do. We don’t go into their personal lives or pasts,” Bunn said. “We provide a supportive environment. That’s the main point of us doing this. It’s not really to help us, although they do, they do provide a service to us. But that’s not the reason we do it.”

However, sometimes the close collaboration on work does forge a bond between the staff members and the wounded warriors. In Ellis’ case, he and Bunn developed a friendship over the 16 months they worked with one another. Although Ellis is now in Missouri, the two still keep in touch via text messaging. Bunn plans to visit Ellis at his new duty station soon.

Natural Support

The reason the staff works with the WTU soldiers is to assist in their recoveries. Ellis is one example of a program participant who benefitted from the supportive work environment. Over his 16 months in the program Ellis noticed a shift in his perspective.

“I guess I regained an interest in life again. At the time I was going through the actions of life and not really living it...” **Paul Ellis**

“I guess I regained an interest in life again. At the time I was going through the actions of life and not really living it,” said the married father of three girls. “It was a good job and I had enough alone time that I could decompress.”

“It was definitely a different thing. It gives you a little time to get back in touch with yourself and not have to worry about everything else that’s going on,” Ellis said.

The time Ellis spent in the program is paying dividends. He continued his Army career after sustaining and then recovering from career threatening injuries. He is now assigned to the Fort Leonard Wood NCO Academy in Missouri where he lives with his wife and daughters.

Allowing the soldiers to open up when the time was right for them is what Perfors said makes the program so effective.

“A lot of them did start talking about this or that. If they did, I would just listen — just let them talk. When you’re holding everything in you are not really getting better or changing your perspective on anything. When you talk it’s a good chance for you to kind of get things straight in your head about the struggles and everything you are overcome,” said Perfors, who knows firsthand how hard transitioning from deployments can be and wishes the program had been available to her when she was transitioning. “Whenever a soldier would talk, I took that as a sign we were being good at being supportive (because) they felt comfortable talking to us.”

More than 10 soldiers have taken advantage of the Carson program to date with more to follow. Although biology and wildlife management are not substitutes for traditional armchair therapy, working out in nature with a supportive staff has done wonders for Ellis, and other wounded warriors.

“They know when they are here that the people in this office will provide anything they need,” Bunn said. “It’s an emotional support. There’s not much else we can do. We’re not medical people and we’re not trained psychologists or anything like that. We’re just biologists. But the people in here, I think, have a true empathy for what’s going on. You can’t work on an Army base and not.”

The program is a partnership between the Service’s Colorado Fish and Wildlife Conservation Office and the Fort Carson Wildlife Management Office. □

Leith Edgar, Public Affairs, Region 6

Arctic National Wildlife Refuge: My Experience

Fulfilling a dream in the frozen North

By Chelsea Woodworth



“Dad, do you remember where Chelsea is going?” My father was speaking to my 85-year-old grandfather, who seemed to be beyond our reach, his stare remaining frozen through the nursing home window. But just as we resigned ourselves to no response, my grandfather turned and looked directly at me with his old familiar smile and said, with great assurance, “Arctic National Wildlife Refuge!”

Growing up, I learned to appreciate the outdoor skills of my father and grandfather and over the years have formed a deep admiration of their respect for the land on which they hunted, camped, and fished. My grandfather had always dreamed of going to Alaska, but family and financial obligations had always gotten in the way. So when I received word that I was selected to spend my summer in Alaska, I felt like I was making the trip for my grandfather. I left my family on May 24, 2009, starting a once-in-a-lifetime journey to learn about, explore, and begin to understand one of the last great wildernesses, the Arctic National Wildlife Refuge.

My opportunity to spend a summer as a biological sciences intern with the refuge came through the Student Conservation Association (SCA). I decided to dedicate my summer to conservation within the refuge system because I wanted to expand my understanding of wilderness preservation. And I specifically chose to work with SCA as a liaison to the Service because I felt the need to join the national youth movement, to add my effort to those of the young people pushing to conserve our planet's finite resources.

During my tenure at Arctic Refuge I was given the opportunity to participate in a number of differing field assignments, each of which presented me with many challenges. The first involved accompanying a botanist on a float down the Porcupine River, located within the boreal forest on the southeastern portion of the Refuge. Our work focused on forest fire succession, and we were tasked with locating and resurveying old burned vegetation plots to better understand the ways in which the environment changes in the wake of wildfires. The sites represent some of the oldest forest fire succession plots in the state, with initial observations beginning in the 1970s. The days were long and the plots were often difficult to find due to thick underbrush and imprecise GPS coordinates.

Toward the end of this trip, I admit I felt somewhat discouraged because we had not been able to find all of our plots. My mood lifted on the last day, however, when we were lucky enough to float past a wading bull moose. I looked into the sky just as the wind shifted a cloud over the sun, causing the rays to scatter from the perimeter of the cloud. At that moment I realized that, though we had been unable to complete all of the objectives of our study, we had made progress towards a broader goal of bringing attention to the importance of maintaining the refuge. By spreading awareness through our work, we were doing our bit to ensure that the natural processes in this area will continue to function in the unaltered cycles that they've followed for thousands of years.

My second assignment was to conduct an invasive plant survey along disturbed areas near Arctic Village, an Athabaskan speaking Gwich'in community. We worked with the Youth Conservation Crew (YCC) to help survey and pull weeds. The YCC kids taught me many things about Arctic Village life and culture. I stayed in town at the home of the Crew supervisor, who had no running water or plumbing. We were 290 miles north of Fairbanks, but I felt as if I was worlds away. That evening I enjoyed my first taste of caribou, and listened to stories about the Porcupine Herd's migration and the spiritual significance of the Northern Lights. During this survey, we found eight different invasive species, some of which were not previously thought to have spread that far north. Further studies will help refuge biologists and local people understand how these invasive plants might impact the native vegetation.

Arctic National Wildlife Refuge has been the subject of work by scientists from all around the world. One of the most enjoyable memories I have is of driving the entire 441 miles of the Dalton Highway to Deadhorse with Salvador and Daniel, two older Spanish botanists who were visiting the refuge. They were attempting to finish a bio-geographical census of every biome on the planet. I felt inspired to share my first trip up the Haul Road with them. I took comfort from the realization that Arctic refuge is the subject of such international interest. Perhaps the international support generated by this one refuge will one day capture mankind's imagination and lead to

better conservation of all of the world's threatened wild lands. Conservation knows no boundaries and therefore needs to be considered an international priority—and not just one nation's concern.

My final summer field assignment took place on the North Slope in the 1002 Area. We stayed in the Inupiat village of Kaktovik on Barter Island located on the Beaufort Sea of the Arctic Ocean. The weather in Kaktovik is unpredictable and the ocean fog can settle in quickly. One such fog prevented planes from landing for four days while I waited for the rest of the crew to arrive. (If I could offer any words of advice about dealing with trip logistics in Alaska it would be “hurry up and wait!”)

The refuge only receives 1,500 visitors each year, but continues to have the support of millions of people, like my grandfather, who will never get the chance to explore this region for themselves.

Then, around 2:00 a.m. one morning, the fog lifted enough for the blazing midnight sun to hug the horizon of the Arctic Ocean and illuminate the lingering mist in brilliant oranges, pinks, and purples. During this magical moment, I watched two male polar bears picking through the whale bone pile on a spit outside of town. To see these majestic animals under the midnight sun, with a background of icebergs and ocean, left me awestruck, and the goose bumps I experienced were not due to the frigid temperatures. Seeing the bears in July, and knowing how much open water existed between the shore and the ice at that time, really brought their threatened status home for me.

Now, the late summer evenings carry a crisp chill signaling the changing seasons. I realize I am coming to the end of my time working for Arctic National Wildlife Refuge. As I conclude my internship, I reflect upon my travels in with a sense of accomplishment and satisfaction. The refuge employees have mentored me and inspired me with their determination to protect Arctic National Wildlife Refuge for generations to come. The refuge only receives 1,500 visitors each year, but continues to have the support of millions of people, like my grandfather, who will never get the chance to explore this region for themselves. You may ask yourself, as I did during the early portion of my experience, why so many continue to support this wild and distant place. For me, now, the answers to that question lie in the sound of the flap of a snowy owl's wings, or in the deep ruts of the migration trails of the Porcupine Caribou herd, or perhaps in that little voice in each of us that whispers that we should just let some places be. □

Chelsea Woodworth served as a Student Conservation Association Biological Intern on Arctic National Wildlife Refuge from May 24th through August 17th, 2009.



Chelsea at Arctic Village.

Hazard Reduction at Mashpee NWR

Response and recovery on Cape Cod

By Catherine J. Hibbard

“It’s amazing we pulled this off as well as we did,” said Jim Rassman of the Massachusetts Department of Conservation and Recreation (DCR). Rassman serves as stewardship coordinator of the Waquoit Bay National Estuarine Research Reserve, site of a meeting of partners of Mashpee National Wildlife Refuge. Several other partners, including representatives from Eastern Massachusetts National Wildlife Refuge Complex, the Service’s Northeast Fire Program, the planning and fire departments of the Town of Mashpee, and the Mashpee Wampanoag Indian Tribe were on hand to review a road-clearing project the refuge had implemented to reduce the risk of wildfire in the area.

The project, coordinated by Deputy Refuge Manager Tom Eagle, was a challenge from the start. Mashpee National Wildlife Refuge, located in the towns of Falmouth and Mashpee on Cape Cod encompasses 4100-acres of non-contiguous public and private ownership managed through a unique partnership among nine federal, state, and private conservation groups. Fewer than 350 acres are owned by the Service. “It’s hard enough to get work done on your refuge, but when you have this many players, it really increases the level of complexity,” said Eagle.

Mashpee National Wildlife Refuge is entirely within the wildland urban interface, where natural areas abut buildings. Undeveloped woodlands, bogs, and marshes of the refuge are dominated by pitch pines and oaks, disturbance-dependent species promoted by logging, grazing, agriculture, and wildfires. More urban than natural areas exist in the wildland urban interface of this area, and brush and trees had encroached on narrow refuge roads, making them impassible for

fire engines. This threatened efforts to keep wildfires as small as possible and protecting human life and homes in and around Mashpee.

Clearing roads to improve access and protect firefighter safety was the highest priority recommendation of a Wildland Fuel Hazard Assessment conducted for the refuge in 2008. Tom Eagle worked with the regional fire program to secure funding to clear vegetation along 64,000 feet of roads owned by the Service, Massachusetts DCR and Fish and Game, the Town of Mashpee, and the Wampanoag Indian Tribe in the spring/summer of 2009. Due to budget and equipment issues, the project did not get the green light until late April, leaving little time to react. But Eagle and other partners sprang into action. They scheduled equipment, worked with Massachusetts Heritage and the Service’s Endangered Species Program to protect the Eastern box turtle, made presentations to local government groups, and issued a press release that was published in the Cape Cod Times. On May 19 roadside clearing began.

Service personnel from Eastern Mass. National Wildlife Refuge Complex, the Service’s Northeast Regional Office and Wallkill River and Moosehorn National Wildlife Refuges pitched in to help. Throughout the project they tested the effectiveness of various pieces of heavy equipment on loan from the Chesapeake Marshlands and Rhode Island National Wildlife Refuge Complexes. The Town of Mashpee Department of Public Works provided road signs, a chipper, and labor, while the Fire Department offered a staging area at their fire station and technical expertise through Fire Department Chief George Baker. Rassman also supplied guidance and coordinated labor and logistics for



Regional Fire Planner Rick Vollick (left) addresses partners of Mashpee National Wildlife Refuge on a field trip to review the project.

Massachusetts DCR. Workers wrapped up the initial phase of road clearing on June 12. “This project would not have been a success without the support of our partners,” said Eagle.

Future efforts will be improved by lessons learned during this initial effort. Energized by momentum, the Mashpee Wampanoag Indian Tribe bought a new truck and hired a staff person to patrol the refuge and deter or report illegal dumping that increases fire threats. The Town of Mashpee instituted a fall neighborhood campaign to chip homeowner brush dropped at the curb. The Friends of Mashpee National Wildlife Refuge discussed outreach to educate homeowners about fire, as well as steps they can take to fireproof their homes. And the Service plan chainsaw and basic wildfire training for local fire departments.

The refuge will be undertaking future actions recommended by the hazardous fuels assessment to reduce fire risk and benefit pine barrens, and the scattered Atlantic white cedar swamps, both systems dependent on conditions created by fire. This will include clearing more vegetation along roads to improve their function as fire breaks, using prescribed fire to remove flammable understory plants, thinning trees to open up tree canopies and reduce the risk of dangerous crown fires, and providing defensible space around buildings. “We are going in the right direction,” concludes Chief Baker, “but we need to do a lot more.” □

Catherine J. Hibbard, Wildlife Refuge Specialist, Region 5



A Job in the Washington Office?!

What's in it for me?

By Noreen Walsh



If you are one of those Service employees who balks at the very idea of applying for a position in the Washington, DC headquarters office, you are not alone. Many

fellow employees I have met through the years are reluctant to even consider such a move. Some of the concerns are admittedly valid. Such drawbacks as the high cost of living, and family considerations related to a spouse's career path or a child's schooling can constrain employment mobility for any of us. Nevertheless, I am convinced that other concerns may be rooted in perceptions about pursuing "Washington Office experience" that are simply not true.

For example, have you heard the one that goes, "If I take a position in the Washington office I might never make it back to a region or the field"? That one is pretty easily refuted. Just take a look at the organizational chart in any region or at any list of field project leaders, and count how many Service employees have spent time in the Washington Office and made it out alive! In fact, they seem to be thriving. And that's not just a coincidence.

The fact is that there are some real benefits to Washington Office experience that may not readily meet the eye. They certainly were not apparent to me when I was working in an Ecological Services Field Office. Back then, I shared a jaded view of the Washington Office. I was often frustrated with the time it seemed to take get a final decision on actions or recommendations that were sent up to headquarters. There were only about 15 people in the field office I worked in, and not many layers to be penetrated in

getting a signature on things that could be decided at the field level. I learned, though, that certain actions needed to make their way through that mysterious thing called a "surname route" that appeared to meander, at a leisurely pace, through unknown territories called "THE Regional Office" and "THE Washington Office" (certainly they were unknown to me!). Sitting in my cubicle, I complained silently (and sometimes aloud) that there was No Earthly Reason for anything to take that long! Ah, back then I did not know just how much I did not know.

New Experiences, New Perspectives

What I did know was that I wanted to have a variety of experiences during my Service career. So eventually I applied for and was lucky enough to land a Washington Office position. I say "lucky" because it did not take me long in the job to realize that some of my strongly held positions, even on wildlife resource issues, were at best narrow in scope. I came to appreciate the fact that given the limits of my understanding, I lacked the ability to make fully informed decisions. Had I been the decision maker at that juncture, undoubtedly there would have been unintended and undesired consequences from decisions made from my narrow vantage point. Over time, I gained quite a bit more knowledge of the how and why of government processes and ways to leverage that knowledge to get things done for fish and wildlife. I stopped complaining about how long it took a listing package through the mysterious surname route and started using my newly acquired savvy to move packages faster.

The longer I was in the Washington Office, the more new ideas I was exposed to—not only ideas about conservation, but also about communication and leadership. I learned, for example, the value of brevity in pitching an idea; that if you cannot get

your message across strongly in the first two minutes, you lose not only the attention of busy decision makers, but also the chance to have real influence. Early on, I noted to myself, "Do not be a windbag!"

I also had the opportunity to observe some talented leaders at work, in the Service and elsewhere. These leaders were skillful diplomats. They ran meetings with polarized factions seated together in the same room, negotiated concessions among them, and ultimately made difficult decisions that would often impact the Service nationwide. They taught me the difference between science and policy, i.e., that while science can help us predict the likelihood that a particular outcome will occur in nature or as a result of a management action, our laws, regulations, and policies rarely dictate only one right answer. Today, I am grateful for all the people I met during my time in our headquarters office. They have become part of a network of colleagues and friends that I continue to count on for support and wise counsel.

Professional Development

While in Washington, among the things I witnessed was how an agency budget is put together and all the strategic thinking that goes into creating the final product. At the field level, I had no way of knowing just how many considerations are taken into account when crafting the Service's budget. In the Washington Office, I observed firsthand the tradeoffs that occur when balancing the needs of the wildlife resource, other Service priorities, the position of the Department, the likelihood of support from the Office of Management and Budget and from Capitol Hill, and the probability that asking for an increase in funding for one priority will result in a decrease in funding for another. I got an even broader perspective when I did a 60-day detail in the Department of the Interior's budget office and saw how recommendations from all the different bureaus are viewed by the Department. You simply cannot get that kind of vantage point on the budget process anywhere else in the country. >>



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Yes, I learned a lot from my stint in the Washington Office. And as I look back now, I realize I was taking in, digesting, and storing away for future use far more than I was even aware of. Since then, there have been many times I have been glad to have that storehouse of lessons learned to draw upon in figuring out a course of action in a particularly sticky situation. Along with that, I now appreciate that every level of the Service, from the field, to the regional offices, to the Washington Office, has a necessary and important role to fulfill in our organization. I know unequivocally that we really are all on the same team, something I occasionally doubted when my experience was more limited.

What I gained has served me well in my own professional development, as I know it would for anyone willing to take on a job in our headquarters. Washington Office experience provides an outstanding opportunity to develop the competencies that the Service has identified as necessary to both obtain and succeed in leadership positions. There is no better place than our national headquarters for developing political savvy, or awareness of the external trends impacting our mission, or the ability to negotiate and influence others, or the ability to articulate and sustain a clear vision. If you are interested in knowing more about these and other Service leadership competencies, check out the National Conservation Training Center's website at fws.gov/branchsites/led/competencymodel/index.html.

Opportunity to Serve

In addition to what each of us can gain personally from taking a job in the Washington Office, there is another important consideration to take into account—that's the opportunity it provides to be of service to our organization and its mission. I believe the idea of public service as a high calling is making a long-overdue comeback, and our mission of conserving the nation's



ISTOCK PHOTO

fish and wildlife resources and habitats surely deserves the best each of us has to give to it. Consider for a moment what would happen to the Service and our mission if the Washington Office was composed entirely of employees who had never worked in the field or in a regional office. Who would bring the reality check about the needs of field staff? Who would contribute the perspective about what is relevant and realistic given the constraints we face at the field or the regional office levels? Who would speak up about whether a particular "Critical Success Factor" *really* measures the results we are after? While Washington Office staff members who lack field or regional office experience still bring essential skills and perspectives to our organization, what they can't bring is that firsthand knowledge of the unique challenges faced by those serving at National Wildlife Refuges or National Fish Hatcheries or Ecological Services field offices. The Washington Office needs those of us who have had this experience to provide a perspective as only we can. Many decisions with far-reaching consequences are made at the headquarters level. I believe it is in our collective best interest to have those decisions discussed and debated with all the viewpoints—field, regional office, national office—at the table.

Think It Over

Each of us makes many choices in the course of our careers, and only we can decide what is right for our particular situation. My hope is that the next time someone asks you whether you would consider applying for a job in the Washington Office, you will give it some serious consideration. Weigh your doubts and concerns against the benefits of exposure to new experiences and perspectives, the opportunity for professional development, and the chance to be of valuable service to our organization and our mission. Ask yourself if getting Washington Office experience might be a way for you to help yourself and the Service become even better at carrying out a mission we all love—conserving America's fish, wildlife and habitats for present and future generations. I know it was the right choice for me, and it may be for you, too. □

Noreen Walsh is the Deputy Regional Director of the U.S. Fish and Wildlife Service's Mountain-Prairie Region, headquartered in Denver, Colorado. During her nearly two decades with the Service, she has held field, regional office, and Washington Office positions.

Correction

Due to an editing error, the partial image of a mute swan was inadvertently incorporated into a design element on page 18 of the summer special Migratory Birds issue. We regret the use of this invasive species in the design of the issue and have taken steps that should prevent mishaps like this from happening again.



southwest

Recovery in Arizona

The ASARCO Ray Mine and Hayden Smelter, located in Pinal County, Arizona, contaminated habitat in and around Mineral Creek and the Gila River with copper and selenium. The riparian areas associated with these waterways provide important nesting habitat for species such as the endangered southwestern willow flycatcher, threatened bald eagle and candidate yellow-billed cuckoo. Agreements recently negotiated through the Service's natural resource damage assessment and restoration authorities, memorialized in a Consent Decree lodged April 9, 2009, require ASARCO to transfer three San Pedro River properties, totaling 995 acres, to the Arizona Game and Fish Department. Addition of this property will substantially increase the habitat encompassed by areas protected on the San Pedro River, including the Salt River Project's Adobe, Black Farm, Spirit and Stillinger Reserves, the BLM's San Pedro River National Conservation and Aravaipa Wilderness areas, and The Nature Conservancy's Aravaipa Canyon Preserve. □

Karen Cathey, Regional NRDAR Coordinator, Region 2

Restoring a Unique Treasure

The Sonoran Desert of southwestern Arizona does not usually bring to mind a lush marsh teeming with wildlife, including federally-listed fish and birds. But that is just what you'll find at the Bill Williams River National Wildlife Refuge (BWR NWR), located on over 6,000 acres along the Lower Colorado River between Lake Havasu City and Parker. The Bill Williams River is named for mountain man Bill Williams, who traveled throughout Arizona in the early 1800s. The BWR NWR has one of the best examples of a mature riparian forest remaining in Arizona.

Due to the enviable mix of native Fremont cottonwoods, Goodding's willows, seepwillow and honey mesquite, the BWR NWR's forest attracts 448 species of birds, mammals, reptiles and amphibians. Of particular notice: this forest is the last remaining location on the lower Colorado River that hosts the entire known historical riparian suite of birds and butterflies. Two of the riparian bird species which use this forest are the yellow-billed cuckoo (*Coccyzus americanus*), a candidate species, and the endangered southwestern willow flycatcher (*Empidonax traillii extimus*). Another endangered species, the Yuma clapper rail (*Rallus longirostris yumanensis*), breeds and overwinters in the cattail marshes that lie west of the cottonwood/willow forest at the Bill Williams River/lower Colorado River delta. The Bill Williams River delta may have been home historically to the endangered razorback sucker (*Xyrauchen texanus*), and it is currently part of the critical habitat for the endangered bonytail chub (*Gila elegans*).

Unfortunately, even protected and sensitive areas like those on the BWR NWR can be threatened by fuel spills. Two accidents involving oil tanker trucks (in 2000 and 2006) have occurred on the BWR NWR where the Arizona State Highway 95 bridge crosses the river and marsh. During the 2006 incident, burning fuel dripped off the bridge causing a fire that burned nearly 300 acres of the heavily-vegetated freshwater marsh and the nearby riparian forest. Fortunately, interagency fire crews, including those from the Bureau of Reclamation, Bureau of Land Management and the Service, responded quickly with helicopter and fixed wing support, water bucket drops, fire boats, and hand crews. Due to concerns regarding the listed species and important habitat in the area, the refuge manager requested support from the Arizona Ecological Services Field Office Environmental Contaminants Program to analyze of impacts and contact the responsible party.

Environmental Contaminant (EC) Specialists are specifically trained to respond to oil or fuel

spills, assess the injuries to resources, collect samples of contamination or animal carcasses, and to coordinate with responsible party, States, the EPA or the U.S. Coast Guard during a spill response. Knowing the areas affected by the spill and fire hosted federally listed species and among the highest diversity on the lower Colorado River, the EC Specialist worked with the refuge ecologist to identify important resources that had burned or been affected. For example, stands of cattail and coyote willow in the marsh, where Yuma clapper rails were known to nest, were lost in the fire. At the time the only known Yellow-billed cuckoos' nests at the time were located near the fire and the nesting birds were known to have used portions of the burned forest just weeks before.

Fluvial marshes exhibit high resilience, quickly redeveloping after disturbance such as scouring by high flows. While the marsh was able to recover quickly, the riparian forest and desert washes affected by the burn would not quickly return to their pre-spill condition >>

A hazard of oil spills.



Treasure, continued from page 23

without assistance from biologists. Desert upland habitat takes up to 100 years to fully recover from such a disastrous, traumatic event. Important components of this habitat include palo verde trees and saguaro cacti and several of each were killed by the fire. These native plants are used by many of the Sonoran Desert's most famous inhabitants: bighorn sheep, mule deer, coyotes, javelinas, jackrabbits, bats, and owls. Up to 50 species of native bees use the palo verde flowers and bats are important pollinators of saguaro cactus flowers. Riparian trees lost included Fremont Cottonwood, Goodding's willow, and honey mesquite. Fire also favors the increase of invasive salt cedars (Tamarisk species) over native trees and shrubs because salt cedar, unlike the natives, appears better able to survive fires.

In dealing with the responsible party the refuge worked with the Arizona Contaminants staff to use the information gathered, and the Natural Resource Damage Assessment and Restoration (NRDAR) authorities to quickly negotiate funding support for emergency restoration. It was used to distribute native plant seeds in the desert uplands and encourage native plant growth over aggressive, non-native species and took advantage of the mild fall and winter rains to start germination.

EC and refuge staff worked closely to calculate the total habitat services lost due to the spill and resulting fire and negotiated with the responsible party for further restoration funds to return the affected area to its pre-spill condition. Using the money obtained in a settlement with the responsible party, the BWR NWR is developing a restoration plan which will consider alternatives such as listed species habitat improvement or acquisition and/or habitat enhancement. Enhancement could include establishment of an upland buffer zone in habitat affected by agricultural use to return it to native vegetation, thus creating habitat for use by listed species. In either option, restoration projects will offset the losses that occurred after the fuel spill and fire, and staff of the BWR NWR and the EC Program will work together to complete the restoration process. After this process is complete, the BWR NWR, the prized ecological treasure of the lower Colorado River, will be returned to its former glory. □

Karen Cathey, NRDAR Coordinator, Southwest Region, Region 2

Carrie Marr, EC Specialist, Ecological Services, Region 2



Engineers Team Up on the Big Muddy NFWR

The Big Muddy National Fish and Wildlife Refuge built a foot bridge on its Jameson Island Unit in the spring of 2006. The bridge crossed an ephemeral stream occasionally dammed by beavers creating a beneficial wetland.

Since construction, the area has experienced higher than normal precipitation and the occasional dry stream and beaver marshes have become a raging torrent. Beaver dams were abandoned and the stream has not stopped flowing. Since the flowing water has gradually eroded away the soil around the piers supporting the bridge. The Refuge attempted some in-house designs to stem the erosion without success, and in the spring of 2008, the refuge approached the University of Missouri Civil Engineering Department for some advice on saving the structure.

After several visits to the site with professors and engineering students, they came up with a plan. Dr. John Bowders of the University of Missouri Civil Engineering Department orchestrated the idea and helped organize a team of engineers to accomplish the work. Adam Frankenberg, an engineering student designed a rock weir to catch sediment in the stream. Frankenberg mapped the watershed and calculated sediment transport. He also planned rock armoring around the piers and up to the weir to reduce further erosion. The weir design catches lost sediment to help build the foundation of soil lost around the bridge piers.

A volunteer team of seven engineering students and Dr. Bowders joined four refuge staff members and a local volunteer to move almost 40 tons of ditch rock. Rocks averaging 6 to 18 inches in diameter and weighing from 5 to 30 pounds. Each rock was placed over a layer of geotextile fabric to prevent erosion. Most of the rock

University of Missouri engineering students use a chain of people to pass rocks across the stream to armor the bank the foot bridge. Weir in the background pools water under the bridge.



has to be hand-placed by using teamwork to pass rocks between team members. The construction site was too difficult to access with full sized vehicles, so the rock was delivered to the site with use of all terrain vehicles.

After eight hours of solid work, the armoring and weir were completed. Fortunately for the crew, the weather cooperated with mild and sunny temperatures reaching nearly 70 degrees. The budding engineers plan to monitor the site for success and document it as a class project.

The project will allow the Refuge to utilize the footbridge for many years. The footbridge and associated trail connect the historic town of Arrow Rock, Missouri to the refuge and the Missouri River. The town of Arrow Rock is visited by hundreds of thousand visitors each year. In 2006, it was designated as one of only a dozen distinctive historic destinations by the National Trust for Historic Preservation (NTHP). It was designated a Preserve America Community in 2008. Eight interpretive signs along the trail help interpret the tie between the cultural history of the town, Lewis and Clark, Santa Fe Trail and the natural history of the Refuge. □

Tim Haller, Park Ranger, Region 3



Disaster Responders Get Top-of-the-Line Training

The Service's Law Enforcement agents from across the country came to Atlanta to participate in Surge Team Disaster Response Safety Training, a course designed for law enforcement agents who could respond when requested during federally declared disasters where additional security is needed. Other agencies like BLM, Park Service and Forest Service will also provide teams to support major disasters or incidents.

The training is focused on real-world situations the team could be called upon to provide security support.

"These trained and equipped law enforcement special agents come to the team with a vast array of the skills needed to perform this mission," said Course Leader Brian Hardison. "The specialized disaster response training and lessons learned from actual events provides a more effective, cohesive response, and helps ensure maximum safety for our responders.

Hurricanes, major spills or other disasters provided the bulk of the case studies, but others included chemical, biological, radiological, nuclear and explosive incident response, safety hazards,



Jill Birchell readies her mask for fit testing in the mini-tent prior to deploying to a potential disaster.

decontamination, and chemical identification. Participants studied crisiscommunication—with media, as well as policy and regulations review.

"This training gave an excellent overview of response requirements for Law Enforcement agents to know in order to respond to a major national disaster," said Jill Birchell, Assistant Special Agent-in-Charge, Southwest Region, who attended the training. "We came away with a real understanding of what we need to be prepared for, to stay safe, and provide support in a national disaster."

A special portion of the class was devoted to ensuring that the team is equipped and trained to use personal protective equipment. This included issuing and training with half face or full

face respirators masks. After determining the proper sized respirator for each team member (if they did not already have one) the agents were placed under a small portable half tent to smell a pungent non-toxic chemical.

Once they identified the smelly stuff, the students then donned their respirator and again entered the one-person tent to ensure the mask was working properly and filtering out the ill-smelling aromatic test solution Bitrex.

"People are a lot more comfortable wearing a respirator in a potentially hazardous situation if they know it works," said Hardison. □

Tom Mackenzie, Public Affairs, Region 4

northeast

Birding for the Blind

Patuxent Research Refuge staff and volunteers were pleased to present their second annual Birding for the Blind program—a program designed to share enthusiasm and appreciation of nature with visually impaired people. This program was originally developed by Steve Bouffard, former Refuge Manager at Minidoka National Wildlife Refuge in Idaho.

David Klinger, NCTC writer-editor, characterizes Bouffard as, “one of our brightest outreach proponents... (Steve) told me he wanted to bring the program east, so I thought of Patuxent, which has a diversity of birds and habitat, and close proximity to the population base of Baltimore and Washington. Nell Baldacchino, Michelle Donlan, and Brad Knudsen got some interest generated in their own backyard, and demonstrated that outreach to sight-impaired audiences can be done. The birds may differ from site to site, but the concept remains the same and the audience is consistently receptive—one that the Fish and Wildlife Service needs to be addressing, if we are at all serious about connecting people of all abilities with nature.”

This year's program began with a brief presentation on why birds vocalize. Participants then went on a conservation tram tour led by Patuxent Wildlife Research Center scientist Barbara Dowell. The tram tour allowed participants to travel through different habitats of the Refuge to get an opportunity to hear different bird species. After the



Refuge education intern Brittany West introducing a duck to a participant.

tram tour, staff and volunteers led participants through a series of education stations highlighting bird species found on the Refuge—one station included live Wood Duck chicks, which could be touched and handled.

In preparation for their public programs for the blind community, Patuxent staff developed several partnerships. The Maryland State Library for the Blind and Physically Handicapped was instrumental in getting the word out by posting information on Newslane, a news phone service available through the National Federation of the Blind and by making large print and Braille copies of the event flyer available at the library.

Another key partnership was forged with the Maryland School for the Blind located in Baltimore. Physical therapist Stephanie Lazor Smith visited Patuxent before the programs to give the staff some pointers about working with the blind. The session included an exercise of blindfolding staff to have them experience walking with a cane.

She also reassured staff to not be embarrassed using common expressions such as “See you later.” The relationship with the school has now expanded beyond the annual public event to include several programs held both at the Refuge and at their school.

After making these important connections with the blind community, staff did not have to look far to reach bird experts. The refuge is very fortunate to

have birding experts from their research partners at the USGS Patuxent Wildlife Research Center. Chan Robbins and Barbara Dowell have been especially helpful. Chan Robbins is the author of several birding books including *Birds of North America*. Robbins and Dowell brought birding to life by identifying several bird species by ear and by painting vivid pictures in the participants' minds.

This program was rewarding for both the participants and the refuge staff and volunteers. Participants appreciated the comfort level of the staff and volunteers, spending time with the wood duck chicks and the sense of humor of tram driver Wayne Smith. Refuge volunteer Lucy Grimes, after serving as a personal guide to one of the program participants, exclaimed, “Today, I had so much joy in my heart”—a sentiment that expressed how everyone felt at the end of the day. □

Michelle Donlan, Park Ranger, Region 5

Guidelines for Photo Submissions



Please help *Fish & Wildlife News* maintain a high-quality publication by

following a few guidelines when shooting images for submission.

- Use a high-quality digital camera (5 megapixels or higher) to produce a print-quality photo.
- Set your camera to the highest resolution—sometimes labeled large or superfine.

■ Take more than one photo of a subject or event (especially when shooting people and/or if the event will happen only once)—from different angles and close up versus far away.

- Send multiple options so our staff can select the best image.
- Send original unedited images.

Thank you for spreading the word to your staff and for helping us to ensure the best quality for FWS publications.

around the

serviceRegional Office Transformation

Until a year ago, the patio leading to the Northeast Regional Office employee entrance in Hadley, Mass., was a swath of concrete studded with oversized concrete planters, picnic tables and a few struggling trees. The 200 employees who walked it every work day found it uninspiring at best. Only a few braved the summer heat to eat lunch there. The patio has been transformed now, replaced by a path wandering through native plantings and a pollinator garden, courtesy of the Regional Office Green Team and many other volunteers.

The patio's transformation actually began in 2006. The regional office Green Team landscaping committee, led by Will Waldron and former employee Pam Rooney, envisioned a new patio that would both appeal to employees and help the environment. The committee offered the patio renovation as a studio project for a landscape architecture design class at nearby University of Massachusetts. Students learned about the Service and its mission, links between habitats and species, and sustainable landscaping.

The landscaping committee incorporated the students' ideas into a plan to reduce the amount of concrete by about half, replacing it with native trees and shrubs strategically placed to provide shady nooks for picnic tables. The renovation would



Regional office employee entrance after renovation includes pollinator garden planting.

reduce the regional office carbon footprint, benefit pollinators and birds, improve water quality, educate staff and visitors about alternatives to conventional landscaping, and set an example of government greening. Then-Deputy Regional Director Rick Bennett and his successor, Wendi Weber, supported the plan.

Facilities manager Jeff Parsons explained the merits of the project to the building owner. In the spring of 2008, with all the necessary approvals in place, the building owner agreed to do the renovation.

Workers and heavy equipment arrived one mid-summer day and over the next couple of months tore up the old concrete patio and hauled it off. Out went the concrete planters and picnic

tables. A new patio was poured, leaving plenty of space to lay soil for the trees and shrubs. Decorative boulders were strategically paced to serve a dual purpose as security barriers. New picnic tables were brought in and some 60 native trees and shrubs were planted.

In mid-October regional office and field staff, retirees, former employees, and the building owner celebrated the new patio during a lunchtime potluck. Regional Director Marvin Moriarty dedicated the new patio to all of the employees who walk through it to fulfill the Service's mission.

Over the winter Shelley Small (Region 5 pollinator coordinator), Willa Nehlsen, Peggy Labonte, Christine Beauregard, Sue Fuller, Gale Hubley, and Will Waldron

planned a native plant pollinator garden that would flower along the walkway to the building. Early in May more than a dozen regional office staff ripped out an exotic groundcover to prepare the site. Late May found the regional office staff, joined by national pollinator coordinator Dolores Savignano, celebrating again at a catered lunch planned by Roseann Montefusco. A native river birch tree was dedicated in memory of Regional Web Manager Ron Rothschild, who passed away during the winter. Afterward, everyone pitched in to plant the garden.

By mid-summer, the pollinator garden was in flower, the new picnic tables were in full use, and birds and butterflies were regular visitors. Now, Will Waldron jokes he needs reservations to eat lunch on the patio. □

Willa Nehlsen, Ph.D., Senior Biologist, Fisheries, Region 5

alaska

Polar Bear Conservation

Along the barren, wind-scoured coast of Alaska's icy Beaufort Sea, an unexpected mix of humanity and wildlife co-exists within a vast expanse of Arctic isolation. Barter Island, Alaska is home to Kaktovik, a small Inupiaq Eskimo village of about 300 residents who maintain strong ancestral ties to the land. Like farming, their lifestyle is seasonal and tied to harvest of the earth's resources, in the form of fish, birds, berries, caribou, Dall sheep, and marine mammals such as seals and whales. Relatively speaking, modern commodities and conveniences are sparse, although the Service does maintain a bunkhouse there. The village itself has a school, fire station, airstrip, store, and a "hotel" for visitors. Barter Island is located within the Arctic National Wildlife Refuge and, despite its remote location, has over the years captivated the interest of a variety of stakeholders, including the Air Force, the oil and gas industry, tourists, hunters, and biologists.

The Service's interest in Barter Island was sparked by increasing use of the area by polar bears, particularly during the open water period which occurs in late summer and fall when the Arctic marine ice cover has receded away from the coast. In 2002, biologists set out to learn more about polar bears congregating in the area by initiating a study to document the number, age, sex and behavioral patterns of these animals. The most obvious reason

for their presence at Barter Island relates back to the Inupiaq subsistence lifestyle: polar bears feed on unused portions of whale carcasses that are deposited at a "bone pile" a few kilometers from the village during Kaktovik's whale harvest season. Seal density and distance of the ice edge from shore are other factors that have also been correlated to bear distribution in the area.

Two additional factors have made Kaktovik a unique study site:

1) brown bears were also making use of the bone pile and interacting with polar bears; and 2) an increase in tourists and visitors was starting to contribute to a small polar bear viewing industry, raising concerns regarding potential bear-human conflicts. As a result, in 2005, biologists expanded monitoring efforts to include documentation of polar bear interactions with other polar bears, brown bears and humans, to better understand the social dynamics between the two bear species, and to develop effective polar bear-human safety guidelines.

Over the years it's been estimated that an average of 25 bears were present around Barter Island on any given September day, and that all age-sex classes (adults, sub-adults, family groups) can co-exist quite peacefully, contradicting the notion that polar bears are always solitary. Bears were relatively inactive during the day, then arising and traveling together to feed with the onset of darkness. Despite their larger size, polar bears were often chased from the bone pile by their tundra counterparts (brown bears). While brown



RAC BUCHANAN

The polar bear is found throughout the Arctic Circle and adjacent land masses.

bear numbers were far fewer (about 4 to 5 bears per season), they frequently dominated the feeding site and often precluded its use by polar bears. While the bone pile probably plays an important role to some nutritionally stressed polar bears, it's believed that the contribution to the Beaufort Sea polar bear population as a whole is limited by the following factors: less than 10 percent of the population comes to shore, while the vast majority of polar bears still chose to remain on the pack ice; the availability of this food source is limited to the remains of Kaktovik's legal harvest limit of three whales; and the presence of brown bears may continue to deter polar bears from using the bone pile.

Although the original reason for coming to Barter Island was to conduct biological studies, it soon became apparent that

Barter Island is also an important location for focusing polar bear conservation initiatives. Simultaneous with monitoring efforts, biologists started working with the community to share information and address mutual concerns. This was accomplished by: conducting an annual "Polar Bear Open House," during which both observations from residents and monitoring results were discussed; participation at city and tribal council meetings to respond to community safety issues and concerns; airing of local public service announcements when studies were underway to explain why they were there; conducting classroom visits at the local school to educate students about polar bear biology; and, working with a local artist, students, and residents to create polar bear safety posters, brochures, and signs.

These outreach efforts have resulted in development of a good working partnership to address polar bear-related issues. In a place as distant as Kaktovik, active local involvement is a critical component in minimizing bear-human conflicts, since the field office does not maintain a year-round presence in the village. A significant development in this partnership occurred when the Native Village of Kaktovik received a tribal grant to develop a bear-human safety plan, in response to a growing concern for public safety. The proposed plan has been funded for three years (2007–2010) and consists of three primary components: establishing village patrols to deter (non-lethally haze) bears from the village; minimizing attractants in and around the village; and developing educational materials. A local “polar bear committee” has been formed and is currently developing specific measures to minimize bear-human conflicts, as called for in the grant.

In the meantime, the Service is using monitoring results obtained to date for environmental planning, such as oil and gas related activities. Service personnel also turned over some of the biological monitoring to Kaktovik residents in an effort to further engage locals in polar bear co-management. Kaktovik can also serve as a good model for other coastal Alaskan communities experiencing similar issues with polar bears, as these icons of the Arctic continue to make their presence increasingly known on land. □

*Susanne Miller, Wildlife Biologist,
Marine Mammals Management,
Region 7*

pacific/ southwest

Desert Tortoise Recovery

Kim Field, Desert Tortoise Recovery Biologist has long recognized the potential of the Desert Tortoise Conservation Center (DTCC) in making a stronger contribution to desert tortoise recovery. Her initiative and foresight has been instrumental in creating a new partnership that represents the first large-scale collaborative effort between the Service and the Conservation Centers for Species Survival (C2S2), in the contiguous 48 States. This new partnership will serve as a national model to encourage new approaches to complex conservation issues.

The DTCC was constructed in Las Vegas in 1990. Since its construction, the DTCC has been used primarily as a holding facility for formerly wild tortoises removed from development sites and for tortoises from Clark County's tortoise pick-up service. Although the Center has occasionally hosted various research projects, it has had limited value for conservation and recovery of the desert tortoise.

In 2005 and 2006, Kim coordinated the development of a master plan. It described a transformation of the DTCC into a facility that would enhance desert tortoise recovery, provide for improved desert restoration techniques, foster cooperative scientific research supporting our knowledge of Mojave Desert ecosystems, and enhances public education and awareness of conservation needs of the Mojave Desert. Since 2007, Kim has worked with the DTCC



Kim Field, NFWO Desert Tortoise Recovery Biologist, attaches a radio transmitter to a desert tortoise so its movements can be tracked when it's released in the wild.

manager to improve husbandry conditions and coordinate various aspects of the DTCC operations. She secured clinical training for staff enabling them to better evaluate health of the tortoises. She has worked diligently to secure operational funds, to account for both expenditures and tortoises at the DTCC, and has coordinated with BLM on a successful grant proposal to continue development of the Master Plan.

Last year, Kim spearheaded development of a new partnership with the C2S2, consisting of five American Zoological Association accredited institutions with a keen interest in assisting with the conservation of rare species worldwide. In 2009,

a memorandum of understanding between the Service, C2S2, BLM, and Nevada Department of Wildlife for the operation of the DTCC was signed. A cooperative agreement between the Service and the Zoological Society of San Diego (a member institution of C2S2) for the operation of the Center was also signed. In addition to animal husbandry expertise, the San Diego Zoo and other C2S2 members will bring innovative outreach, training, and education techniques, along with a reputable applied conservation science background to the partnership. This new partnership will be a great step forward in conservation and recovery efforts for the desert tortoise. □

*Jeannie Stafford, Public Affairs,
Region 8*

A Tale of Two Western Red Bats

Two distinctive, secretive nocturnal inhabitants of the Southwest were recently followed by a team of biologists in Northern California for a solid week. Very little information exists about the western red bat (*Lasiurus blossevillii*), listed as a sensitive species by most State and Federal agencies unlike its cousin, the eastern red bat, it is rarely captured by biologists.

This beautiful bat has dense fur ranging from brownish-yellow to an almost bright orange with white hair tips and white fur on its neck. The bat's wing membranes are black and they roost in foliage, such as tree leaves. Despite their red color, these animals are well camouflaged in their tree roosts. They fold their wings over their bodies and, resemble a dead leaf.

This research effort was designed to gain insights about effective western red bat capture techniques, roosting preferences, and how they utilize the landscape. Adult females were targeted because of their biological importance to the population. A three week effort resulted in the capture of 16 western red bats, but only two were adult females.

Western red bats are thought to be heavily reliant on cottonwood/sycamore galleries along the river and streams so those habitats were initially intensively surveyed. Capture success was very low in these areas and biologists gradually switched their capture effort to focus on orchards and ponds in oak woodlands.

After nearly 10 nights of trapping, two adult female western red

bats were captured on consecutive nights. Project crew affectionately nicknamed the two bats, Beauty and Nutty, because the roost of the former was found in a small mountain range in the Sacramento Valley called Sutter Buttes, and the latter in a walnut orchard. Radio transmitters were attached to the backs of both between the shoulder blades, enabling biologists to follow them using receivers and directional antennas. The transmitters were attached with a latex, medical adhesive. Some of the findings from following these two animals surprised biologists and contradicted some of the existing conventional wisdom about the animal.

Although the bats roosted in very different habitats, both animals came back to their roost not only during the day, but also in the middle of the night. Despite roosting in a very small area, both animals would forage 4 to 5 miles away in open air habitats. The female that roosted in the walnut orchard foraged over tomato and safflower fields. The other female foraged over open oak woodlands and a private waterfowl hunt club.

The flight of western red bats is swift, attaining speeds of 40 miles per hour. This presented biologists with a daunting challenge in trying to follow these animals with radio tracking equipment in rough terrain. Discovering the entire route the bats traveled from their roost to foraging areas normally took three or four nights. Each night, biologists would track them as far as they could before they disappeared from radio contact. Based on their direction and a thorough study of maps and access points, biologists would place themselves in the area



KEITH PAUL

Transmitters are placed between the shoulder blades so they doesn't interfere with the bat's ability to fly.

where they last disappeared and again follow them as far as possible before they disappeared. This process was repeated until the travel lane they used from the roost to final foraging areas could be determined.

Bat telemetry at best is challenging. The transmitters used are small to keep the weight of the attached device to less than five percent of the bat's body weight. As a result, they emit weak signals. Most of the work is at night on a fast moving target. This particular effort had additional hurdles that included hot weather and rough topography in some areas, not to mention avoiding rattlesnakes at night while hiking.

The habitat study required a large field staff equipped with vehicles, field packs, telemetry receivers/antennas, two-way radios, Global Positioning System units, field maps, compasses, and field forms. Two manned stations were needed for rough triangulation, with three or more preferred to validate the animal's location.

This complex, cooperative effort was led by the Red Bluff Fish and Wildlife Office, but included staff from Sacramento National Wildlife Refuge, Sacramento

Fish and Wildlife Office, California Department of Fish and Game, Sacramento City College, U.S. Forest Service, NRCS, consultants, and private landowners. It is a unique Service effort because Ecological Services, Fisheries, and Refuges all contributed to the project's success.

State and Federal wildlife agencies have long recognized the need for information about the western red bat's population status, trend, and ecology during status reviews. In most cases, habitat use and roosting preferences has been inferred from museum specimen collections or extrapolated from what is known about the eastern red bat. This bat is known in the U.S. from California, Arizona, New Mexico, Texas, and southern Utah and Nevada.

There is still much to be learned. Efforts scheduled for 2010 will likely provide additional insights about the animal that will help wildlife managers conserve this little known inhabitant of the Southwest. □

Lyle Lewis, Assistant Project Leader, Region 8

transitions

Pacific

Brad Bortner, the Pacific Region's Chief of Migratory Birds and Habitat Programs since 1992, has been elected Chair of the Intermountain West Joint Venture's (IWJV) Management Board. The board represents a partnership of 18 State and Federal agencies, nongovernmental conservation organizations and corporations dedicated to strategic bird conservation in the Intermountain West.

Bortner brings a strong science perspective to the board at a time when the partnership is experiencing significant growth in its capacity to deliver Strategic Habitat Conservation (SHC). He has a long record of involvement with numerous partnership efforts to further migratory bird conservation.

"I am honored to have been elected by the Management Board to lead the joint venture in this exciting time," Bortner said. "The IWJV partners are making great progress in landscape level conservation planning and implementing SHC. I look forward to working with our State Steering Committees to engage local landowners and communities to protect, restore and enhance bird habitats throughout the 11 western States of the Joint Venture."

Bortner will serve as Chair for two years. Larry Voyles, Director of the Arizona Game & Fish Department, was elected Vice Chair of the joint venture. □

Northeast



When **Sal Amato** took the job as Special Agent-in-Charge (SAC) of Law Enforcement in Region 5, he moved

just 50 feet to his new office. He brought with him a wealth of knowledge about the Northeast gleaned from nearly eight years working in the region, first as a special agent, then as resident agent in charge in Baltimore, Maryland, and finally, three years as assistant SAC in the regional office.

Amato began his wildlife law enforcement career with the California Department of Fish and Game, where he worked for 10 years. He worked aboard marine fisheries enforcement vessels and did undercover work with the State's special operations unit, including an undercover investigation that dismantled an illegal abalone poaching and commercialization ring.

In 1998 Amato joined the Service as a criminal investigator in the Service's Baltimore Law Enforcement office. One of his cases exposed a sophisticated caviar smuggling operation and secured a \$10.4 million criminal fine, the largest ever for a wildlife trafficking prosecution. After three years, he was promoted to resident agent in charge of the office, which oversees both Maryland and Delaware.

Amato was special agent in charge of the Service's Branch of Special Operations for nearly four years, overseeing special agents in long-term, complex covert investigations in Washington, DC. He planned and launched a new intelligence unit to collect and analyze information about wildlife trafficking and other wildlife law violations.

Amato returned to Region 5 as assistant SAC, overseeing enforcement efforts of special agents throughout the Region and wildlife inspectors at seven ports, including New York, the nation's busiest port for wildlife trade.

Amato graduated from both the Service's Stepping Up to Leadership Program and the Advanced Leadership Development Program and has worked on curriculum development for the Project Leaders Academy.

With 20 years of service in the U.S. Naval Reserves, Amato retired as a commander in 2007. In his last assignment he supervised a department that provided real-world Command Center Watch Team support on the status and position of all Military Sealift Command assets worldwide. □



Thomas J. Healy retired after 22 years with Law Enforcement for the Service, most recently

as special agent in charge in the Northeast Region.

Healy's Service career took him from Fort Worth and Victoria, Texas, to a stint in the Washington Office where he was part of a groundbreaking anti-poaching training mission in the Russian Far East. As resident agent in charge in Baltimore, Healy helped investigate the black market caviar trade. He moved to the Northeast Regional Office in Hadley, Massachusetts, in 2001 where he became the longest-serving SAC for the Region.

Healy was a DOI incident commander providing security at the 1996 Olympics, directed the Service's security detail at Boston's Logan International Airport after the September 11 attacks, and was

a DOI incident commander in New Orleans in the wake of Hurricane Katrina.

Before working for the Service, Healy worked in wildland fire suppression and resource management law enforcement for the U.S. Forest Service, serving on a hot shot crew for three summers. He subsequently worked for the National Park Service as a park ranger at Big Thicket National Preserve in Beaumont, Texas.

Healy was born in Cranston, Rhode Island, and was raised in East Greenwich. He attended Northwest Community College in Powell, Wyo., where he began his career in wildlife law enforcement as a student volunteer for Wyoming Game and Fish Commission. He later attended the University of Wyoming, graduating with a bachelor's degree in parks and recreation administration.

Ken Sprankle has been selected as the new project leader for the Connecticut River Coordinator's Office located in Sunderland, Massachusetts. Sprankle is an American Fisheries Society certified fish biologist who currently works for the Service in the northeast regional office in Hadley, Massachusetts, in the Wildlife and Sport Fish Restoration Program. Sprankle is currently president-elect for the Southern New England Chapter of the American Fisheries Society.

Previously, Sprankle served as assistant project leader at the Service's Central New England Fishery Resources Office in Nashua, New Hampshire. He was also employed by the New Hampshire Fish and Game Department as a regional fisheries biologist and the warm water fisheries research and management program coordinator, involved with the restoration and enhancement of Atlantic salmon, American shad, river herring, and other interjurisdictional species.

Sprankle began his professional career as a Service fish biologist with the Sunderland Office of Fishery Assistance and later with the Maine Anadromous Fish Coordinator's Office. He entered these positions after his graduation in 1994 from the University of Massachusetts at Amherst where he earned a master's degree in fisheries biology through the NOAA Cooperative Marine Education and Research Program. Sprankle's introduction to fisheries began with seasonal resource positions for the State of Connecticut on the Long Island Sound Trawl Survey and Anadromous Fish Restoration Program.

Sprankle will begin his new job at the Connecticut River Coordinator's Office in May. He and his wife Kimber, and daughters Kate and Julie, live in Gill, Massachusetts. □

honors

Pacific

Washington Fish and Wildlife Office Named Nisqually Land Trust's Partner of the Year

The Nisqually Land Trust, a non-governmental organization based in Yelm, Washington, has named the Washington Fish and Wildlife Office in Lacey, Washington the recipient of its President's Award for Partner of the Year 2009. The award was presented during the organization's Twentieth Anniversary banquet last March. Rich Carlson and Joanne Stellini, the primary Service contacts with the trust, accepted the award.

According to Joe Kane, Executive Director of the organization, the award was presented for "the Service's great work on the Mount Rainier Gateway Initiative [acquisitions] and on recent restoration projects on Land Trust lands. We also want to acknowledge the tremendous role the Service has played in the conservation of the Nisqually watershed down through the years."

The Service has been working with the land trust for nearly a decade to help enhance and

restore fish and wildlife habitat within the Nisqually watershed. The watershed originates on Mount Rainier and runs through a combination of private, State, Federal, and Nisqually tribal lands before emptying into Puget Sound at the Nisqually National Wildlife Refuge. Through the Partners for Fish and Wildlife Program, the Puget Sound Coastal Program, and non-traditional Section 6 grants, the Service has provided funding and technical assistance for the acquisition and management of significant portions of nearly 3,000 acres of trust-owned land. The land is being managed for multiple species, including endangered northern spotted owls, marbled murrelets, Chinook salmon, and steelhead. □

Northeast



Col. Dabney Watts Jr. of the Virginia Department of Game and Inland Fisheries' Law Enforcement Division

honored the Service's Richmond, Va., Resident Agent-in-Charge **Rick Perry** for his 31-year wildlife law enforcement career in an August ceremony.

Perry began his career as a game warden in Virginia and received the Virginia Wildlife Federation's Game Warden of the Year award during 1985. He joined the Service as a special agent in 1987. After working in New York and Maryland for 14 years, Perry returned to Richmond, supervising eight field stations and staff in four States.

Watts expressed gratitude for the cooperation and friendship between the State and Federal agencies during Perry's tenure. He cited Perry's investigations into illegal commercialization of striped bass on the Potomac River and Chesapeake Bay, unlawful harvesting of waterfowl in the Susquehanna Flats of Maryland, and other waterfowl cases on Long Island and in Boston Harbor as examples of Perry's work to uphold wildlife laws. □

Mountain-Prairie

Steve Kettler, a Mountain-Prairie Region biologist working through Fort Carson, Colorado, received the **2009 Plant Conservation Award** from the Rare Plant Conservation Initiative (RPCI) for his outstanding work to conserve the imperiled plant species and their habitats in the Arkansas River Valley.

The award recognized more than two years of Kettler's work to proactively conserve some of Colorado's plants of concern, which have no Federal protection. Kettler primarily worked to conserve the following Colorado plants of concern: Golden blazing star (*Mentzelia chrysantha*), Pueblo goldenweed (*Oenopsis puebloensis*) and Round-leaf four-o'clock (*Mirabilis rotundifolia*).

Coordination was at the root of Kettler's conservation efforts.

"It seemed like a good proactive approach," Kettler said. "All I did was coordinate with some groups to get together and try to promote and support conservation on public and private lands."

Employees from the Washington FWO



For Kettler, the challenge was bringing together different groups — governmental agencies, nongovernmental agencies and citizens — to identify threats and opportunities that could lead to successful conservation, which might otherwise have been missed.

Kettler's accomplishments did not go unnoticed by his supervisor, Bruce Rosenlund, who said Kettler exemplifies the collaborative approach necessary to bring partners together for real conservation.

"In addition to Steve's outstanding individual efforts, this award also represents the vision of Fort Carson to work collaboratively to conserve native species in Colorado. Working together is the only way to effectively conserve these species. Steve's work is proof positive that collaboration is the means to our end as conservators," Rosenlund said.

Part of Kettler's work involved bringing together like-minded groups, which might have been unaware of each other's similar interests. Kettler called the effort part information sharing and part educational outreach. He did not see the work as anything special, just the logical progression of his position.

The RCPI stated he received the award for "For protecting the globally imperiled roundleaf four o'clock, golden blazing star, Pueblo goldenweed, and other imperiled plants of the Arkansas Valley near Pueblo, an area that is experiencing rapid residential development." □

in memoriam



Katherine (Kay) Louise Howe Roberts, former illustrator for the Fish and Wildlife Service, died on September 4, 2009. Roberts

was born in 1919 in Utica, New York. After graduating from Syracuse University in 1939, Roberts earned a Master of Fine Arts degree from the University of Iowa. She taught art at the University of Omaha and Wilson College.

From 1944 to 1949, Kay worked for Service as an artist. She met Rachel Carson, who became a life-long friend, and illustrated her book *The Sea Around Us*. They took field trips around the country working on "Conservation in Action" series, even taking a train from New York to the Bear River Migratory Bird Refuge in northern Utah. Kay married Major Sam Andrew Roberts, a confirmed bachelor until he met her, on December 18, 1950, in St. John's Episcopal Church, Washington, DC. With her husband's assignments Sam, Kay and four children traveled around the world living in Atlanta, Ft. Leavenworth, Ft. Jay, Governors Island, Bangkok, Thailand, Ft. Sill, Oklahoma, and Ft. Douglas, Utah.

Her love for animals (especially big dogs), birds, and the environment was enormous. Kay was a gifted artist spending years painting mostly watercolors and teaching others. She captured landscapes of upstate New York where she spent summers as a child in a Victorian cottage built by her great-grandfather. Her zest for life, helping others and her adventurous, creative spirit will be greatly missed. A memorial service celebrating her life was held October 3, 2009 in Salt Lake City. □



Joseph A. Piehuta, a beloved presence in the Service known throughout the agency as an esteemed

counselor, meeting planner, and early advocate for more professionalized employee training in the agency, died November 14, 2009, in Washington, DC. Piehuta, 74, a management and program analyst based in Arlington, Virginia, served the Interior Department and three of its bureaus for 35 years — the Bureau of Land Management, Bureau of Mines, and during two tenures in the Service — all in various training management capacities. Unknown to many agency employees, however, was Piehuta's earlier background and career as a draftsman, psychiatric researcher, mental health counselor, and family therapist for organizations ranging from the USO, National Institutes of Mental Health, St. Elizabeth's Hospital in Washington, and several churches in the Nation's Capital.

He served as chief training officer for the Fish and Wildlife Service between 1981 and 1989, where he took a highly decentralized agency training budget of \$3.7 million to new professional heights and built the climate for the Service's expansion into an improved and expanded training curriculum that culminated with the construction of the NCTC in 1997. His strengths, however, excelled in the realm of human relations, and Piehuta was often called by agency management

to coordinate high-level managerial discussions and to ease the agency's transitions in eras of rapid budgetary and technological change.

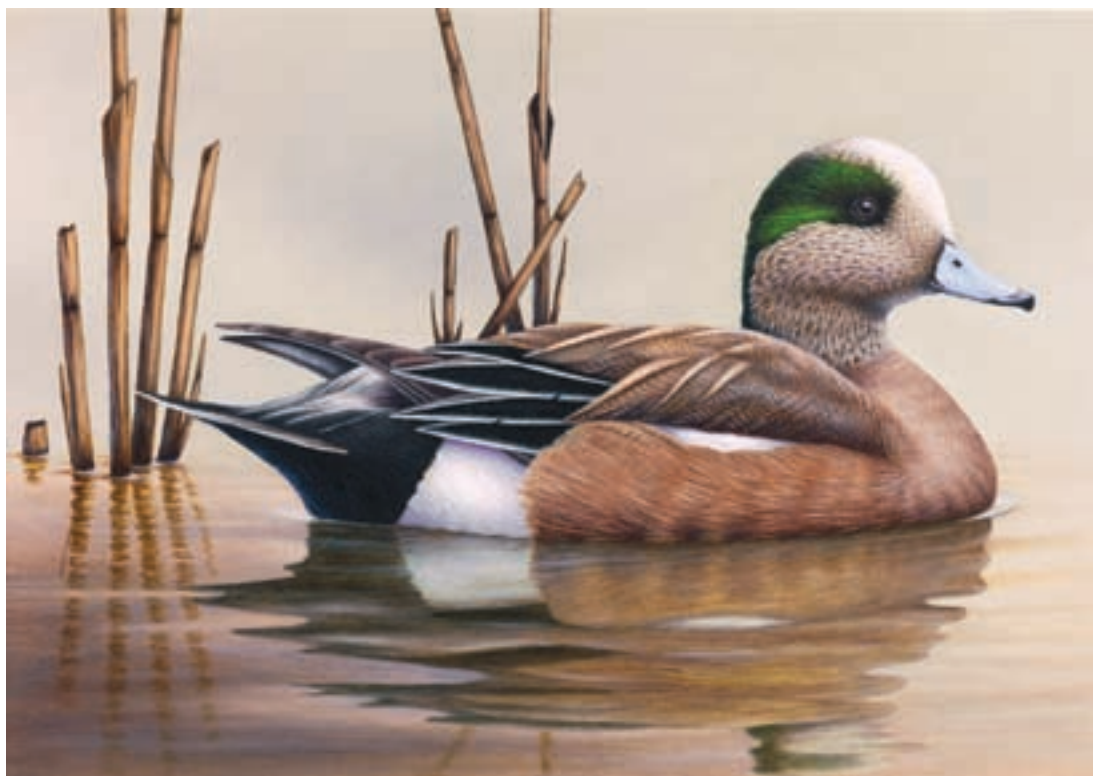
"Joe guided us through crises and transitions, both personal and professional. And he challenged us to view problems and challenges through the eyes of others," said Jay Slack, NCTC director and Piehuta's supervisor, in remarks delivered at Piehuta's burial mass in Washington on November 20. "People confided in Joe...because people had confidence in Joe. There was something about Joe Piehuta that made people want to surrender their prerogatives...if only for a little while. In an agency of strong personalities, that's no inconsequential skill."

Piehuta received his bachelor of arts in philosophy from Catholic University in 1961 and his master of arts in human resources development from George Washington University in 1974. He is survived by his wife, Marca. Contributions in his memory are invited and may be made to Food for the Poor, 6401 Lyons Road, Coconut Creek, Florida 33073, or to the National Conservation Training Center, 698 Conservation Way, Shepherdstown, West Virginia 25443. □

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2009 Federal Duck Stamp Contest Winner. *Robert Bealle, an artist from Waldorf, Maryland, took top honors at the 2009 Federal Duck Stamp Art Contest. Bealle's painting of an American wigeon will be used for the 2010–2011 Federal Duck Stamp, which will go on sale in late June 2010. The U.S. Fish and Wildlife Service produces the Federal Duck Stamp, which sells for \$15 and raises about \$25 million each year to fund wetland habitat acquisition for the National Wildlife Refuge System.*

Fish & Wildlife News

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Deadline for future issues:

Spring Issue 2010 by: February 1
Summer Issue 2010 (Law Enforcement)
by: April 1