



U.S. Fish & Wildlife Service

Fish & Wildlife News

July/August 1999

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Bald Eagle Proposed for Delisting at White House Ceremony

On the eve of Independence Day weekend, President Clinton marked the culmination of a three-decade effort to protect and recover the bald eagle by announcing a proposal to remove this majestic bird from the list of threatened and endangered species.

“The American bald eagle is now back from the brink of extinction, thriving in virtually every state of the union,” President Clinton said. “I can think of no better way to honor the birth of our nation than by celebrating the rebirth of our proudest living symbol.”

President Clinton was joined by Interior Secretary Bruce Babbitt, bald eagle recovery team leader Jody Millar, a bald eagle named Challenger and members of the Eagle Corps, a group of young people from Washington, D.C., who have been cleaning up the Anacostia River and introducing bald eagles back into the watershed for the first time since the 1940s.

The announcement was made on the south lawn of the White House. A number of bald eagle recovery team members came to Washington to join in the celebration, including Robert Mesta, Steve Spangle, Linda Walker, Paul Nickerson and Rob Hazelwood. Many other partners from around the country joined the Service for the announcement.

On the Cover:

Celebrating the bald eagle. At the July 2 event on the White House lawn were, left to right, Jody Millar, bald eagle recovery team leader from the Rock Island, Illinois, field office; Al Louis Cecere, founder and president of the National Foundation to Protect America's Eagles, with Challenger; President Bill Clinton; and Levar Simms of the Eagle Conservation Corps. White House photo: James Thomas.

Newspapers and broadcast outlets began running stories weeks before the event in anticipation of the proposal to remove the bald eagle from the endangered species list. However, that did not stop media from around the world from covering the July 2 announcement. Fox News and CNN broadcast the announcement live from the White House, and Richard Hannan, deputy chief of the Division of Endangered Species, represented the Service on “Good Morning America” and “CBS This Morning” along with a bald eagle from the University of Minnesota's Raptor Center.

The announcement opened a 90-day public comment period with an expectation that a final announcement will be made in July 2000. It also marked a turning point in the history of endangered species protection. The bald eagle, the ambassador for all other endangered and threatened species, is ready to fly off the list, leading the way towards recovery with other species including the peregrine falcon, the Columbian white-tailed deer, and the Tinian monarch butterfly.

Hats off to all of the Service employees who helped bring back the bald eagle!

*Cindy Hoffman, Public Affairs,
Washington, DC*



Soaring free once again. *The bald eagle once ranged throughout every state except Hawaii. By 1963, only 417 nesting pairs were found in the lower 48 states. Today, as a result of the Service's recovery efforts in partnership with other federal agencies, tribes, state and local governments, conservation organizations, universities, corporations and thousands of individuals, this number has risen to an estimated 5,748 nesting pairs.*

Shortly after World War II, the use of DDT and other organochlorine pesticides became widespread. Eagles ingested DDT by eating contaminated fish, and the pesticide caused the shells of the bird's eggs to thin and resulted in nesting failures. Loss of nesting habitat also contributed to the population decline.

If the Service removes the bald eagle from the list of threatened and endangered species, the bird will still be protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. If the bald eagle is delisted, the Service will work with state wildlife agencies to monitor its status for a minimum of five years, as required by the Endangered Species Act. If at any time it becomes evident that the bird again needs the act's protection, the Service would relist the species.

FWS photo: John and Karen Hollingsworth

Revealing Contaminants in Maine's Bald Eagles

After the Environmental Protection Agency banned the pesticide DDT in 1972, bald eagle populations across the nation began to rebound. Eagles reproduced so successfully that the Service reclassified the species from endangered to threatened in 1995, and recently proposed removing bald eagles from the endangered species list.

The rebound has been slower in Maine, however, where bald eagles are still struggling to reproduce at a healthy rate. Several years ago, a University of Maine graduate student began investigating the situation; her research helped bring to light several environmental contaminants affecting Maine's bald eagles, including polychlorinated biphenyls, or PCBs, dioxin and mercury.

In the late 1980s, environmental contaminants biologists in the Service's ecological services field office in Concord, New Hampshire, began working more closely with the New England states to identify joint research topics. Maine's bald eagles were high on the list. Enter Linda Welch with her graduate study proposal to determine whether or not environmental contaminants might play a role in the eagles' low reproductive rate.

Sponsored by the Service and assisted by a professional tree-climber, Welch took blood and feather samples from six to eight-week old eaglets in their high-rise nests. In all, during the summers of 1991 and 1992, Welch took more than 200 blood and feather samples from nests located both inland and along the Maine coast.

The results of Welch's research proved alarming. She found four types of contamination: DDE, a derivative of DDT that lingers in the environment; dioxin, a chemical discharged primarily from Maine's paper mills; PCBs, used in the manufacture of electrical equipment and banned in 1979; and mercury, both naturally-occurring and air-borne from fossil fuel plants in the Midwest. Maine's inland eagles were contaminated with high levels of mercury and the coastal birds carried the highest load of PCBs ever recorded in the United States. The levels of both contaminants were high enough to interfere with the eagles' productivity.

Welch's ground-breaking work with the popular bird caught the attention of many organizations and agencies, including the Environmental Protection Agency and the media. Research expanded beyond eagles. State health agencies reviewed and updated old studies on mercury contamination in freshwater fish populations. Eventually, every New England state issued public health advisories on the consumption of freshwater fish because of mercury contamination.

The impacts of contaminants on the environment even began to affect policy and legislative proceedings. In 1995, the Lincoln Pulp and Paper Company in Lincoln, Maine, sought approval from EPA for renewal of a discharge permit to continue releasing wastewater containing dioxin into the Penobscot River. The section of the river receiving the discharge provides habitat for several nesting eagle pairs as well as wintering eagles.

New England Field Office biologists reviewed the permit application and wrote a formal biological opinion. They determined that the contaminated discharge would hamper reproduction in adult bald eagles or cause the death of eagle chicks, constituting illegal take under the Endangered Species Act.

In the end, Lincoln Pulp and Paper's permit required the company to lower levels of dioxin in the discharge, take steps to minimize impacts to bald eagles, and monitor dioxin in the eagles' food chain. The monitoring studies will provide biologists with more information on the impacts of dioxin on fish and wildlife.

Linda Morse, New England Field Office, Concord, New Hampshire

Director Announces New Appointees



Gary D. Frazer. DOI photo: Tami Heilemann

Director Jamie Rappaport Clark recently filled two vacancies in the Service Directorate. Gary D. Frazer was named Assistant Director for Ecological Services after acting in that capacity for several months, and Cathy Short is the new Assistant Director for Fisheries. Both appointments became effective in June.

Frazer has been with the Service since 1984 and has spent nearly his entire Service career in the Washington Office. He began as a biologist in the White Marsh, Virginia, Ecological Services field office, and came to Washington, DC, in 1989, holding positions in the Division of Habitat Conservation and the Division of Fish and Wildlife Enhancement (precursor to Ecological Services).

He spent nine months as a detailee to the Senate Committee on Environment and Public Works, and was project leader at the Ecological Services field office in Columbia, Missouri.

Frazer was named deputy assistant director for Ecological Services in April 1998 and became acting assistant director with the departure of Gerry Jackson several months ago. Jackson is now the project leader at the Ecological Services field office in Olympia, Washington.

Director Announces New Appointees (continued)



Cathy Short. DOI photo: Tami Heilemann

Short returns to the Washington area after a six-year tenure as deputy regional director for the Northeast region in Hadley, Massachusetts. Prior to that, Short served as the deputy division chief and then division chief of the Division of Habitat Conservation, as well as a staff assistant to the Assistant Secretary for Fish and Wildlife and Parks.

Short also served as a policy analyst and the chief of the technical services section at the National Ecology Research Center in Fort Collins, Colorado.

Former Assistant Director for Fisheries Gary Edwards is now deputy regional director for the Alaska region.

In other news, Lori Williams is the new special assistant to the Director. She is returning to the Service from the Center for Marine Conservation where she served as the Vice President for Ocean Programs. Prior to that Williams was the chief of the Service's Office of Congressional and Legislative Affairs. She was also the minority counsel to the Committee on Environment and Public Works, and the majority counsel to the Committee on Merchant Marine and Fisheries.

Rachel F. Levin, Public Affairs, Washington, DC

Service Addresses Current Issues at Outdoor Writers Meeting

The Service and its activities and current issues held a strong presence during the annual meeting of the Outdoor Writers Association of America held in June in Sioux Falls, South Dakota. Nearly a thousand writers and broadcasters who cover the outdoors attended the gathering this year.

Acting Service Director John Rogers co-chaired a panel discussion along with Wyoming Game and Fish Director John Baughman concerning the Endangered Species Act and recent developments in non-game funding from the federal and state perspective. During the session, Rogers offered a brief overview of the history of the act, calling it "a sound law that has worked to bring species back from the brink of extinction" but adding that the Service must "get ahead of the curve and take steps to conserve species before they become endangered."

Rogers pointed out that flexibility built into the act has made possible the many partnership opportunities now being pursued through hundreds of habitat conservation plans, candidate conservation agreements and safe harbor agreements in place across the country.

Wyoming Game and Fish Director Baughman also highlighted opportunities for cooperative management at the state and federal level and echoed the importance of the private landowner in habitat enhancement or planning efforts.

During another session, facilitated by Tom Melius, assistant director for External Affairs, meeting participants turned their attention to waterfowl breeding habitat conditions and law enforcement issues, including changes in regulations governing the baiting of waterfowl and other game birds.

Deputy Assistant Director for Refuges and Wildlife Paul Schmidt offered outdoor writers a brief report on the condition of duck breeding habitat this year based on the annual survey of wetlands in Canada and the pothole country of the United States. In general, he reported, water conditions were adequate in most areas but some areas remained dry.



State of the act. John Rogers tells OWAA members about the successes of the Endangered Species Act. FWS photo: Laurry Parramore.

Schmidt also outlined new regulations aimed at making it easier for states to manage burgeoning populations of non-migratory Canada geese, and described the current situation regarding snow geese and the requirement for preparing an environmental impact statement prior to taking actions to reduce their growing populations.

Kevin Adams, chief of the Division of Law Enforcement, addressed how the proposed changes in the baiting regulations will impact hunters. He followed this with a brief presentation on upcoming issues in law enforcement. An extended period of questions covering myriad Service topics concluded the session.

For the past five years, the Service and the Department have been a significant part of the agenda for this annual meeting of outdoor communicators; they will likely continue to be a strong presence in the future.

Craig Rieben, Public Affairs, Washington, DC

Rule Gives States Flexibility to Manage Resident Geese

Recognizing a growing problem, the Service has now made it easier for communities to manage resident goose populations attracted and sustained by the ideal conditions at parks, golf courses and school campuses nationwide, Deputy Assistant Director for Refuges and Wildlife Paul Schmidt told members of the Outdoor Writers Association of America.

A new rule that went into effect in June streamlines the Service's existing permit process to allow state wildlife agencies to design their own management programs and take actions to control specific populations without having to seek a separate permit for each action.

The new special permits will allow states to act as soon as it becomes apparent that resident Canada geese are a problem. The Service will issue permits on a state-specific basis that specifies the terms and conditions of potential management actions. As long as states satisfy those conditions, they can implement management actions without seeking separate permits every time a problem arises.

Rising Canada goose populations are increasingly coming into conflict with human activities in many parts of the country. Increasing urban and suburban development

has resulted in the creation of ideal goose habitat conditions—park-like open areas with short grass adjacent to small bodies of water—for resident populations on public and private property.

In parks and other open areas near water, large goose flocks denude lawns of vegetation and create conflicts with their droppings and feather litter. Goose droppings in heavy concentrations can overfertilize lawns, contribute to excessive algae growth in lakes that can result in fish kills, and potentially contaminate municipal water supplies.

Under the new program, states could contract with private companies and individuals to conduct management activities on resident populations of Canada geese. They or their representatives could use their own judgement when deciding on the methods and implementation of any control measures, so long as those measures are consistent with accepted wildlife management guidelines. States would also be required to either donate the carcasses to food banks or dispose of them properly, but are prohibited from selling the birds or otherwise profiting from the take.

*Chris Tollefson, Public Affairs,
Washington, DC*

Changes in Baiting Rules Support Wetlands Management

At the June Outdoor Writers meeting, Law Enforcement Chief Kevin Adams and Paul Schmidt, deputy assistant director for Refuges and Wildlife, announced that the Service will revise regulations governing migratory game bird baiting for the first time in more than 25 years. The new regulations are designed to promote habitat restoration and make it easier for hunters to comply with federal and state regulations.

The new rule will allow the hunting of all migratory game birds over natural vegetation that has been mowed, tilled or manipulated in other ways. Landowners will have the flexibility to maintain, develop, manage and hunt wetland habitat essential for migratory birds without violating federal regulations that prohibit hunting over areas where seed or other feed has been exposed or scattered.

Hunters now will have assurance that the inadvertent scattering of seed from standing or flooded standing crops when they enter or leave a hunting area, place decoys, or retrieve downed birds does not constitute illegal baiting. The rule also allows the use of natural or agricultural vegetation to conceal hunting blinds, provided hunters do not expose or scatter seed or grain when making blinds in agricultural fields.

Last October, a new public law was passed that eliminated strict liability for baiting offenses and instead made it unlawful for anyone to hunt with the aid of bait "...if the person knows or reasonably should know..." that an area is baited. This law has been in effect for much of the 1999 migratory bird hunting season.

*Chris Tollefson, Public Affairs,
Washington, DC*

Learning opportunity. To register for this free learning adventure about watersheds visit the Prince William Network Web site at <http://www.pwnet.org>. Click on Wild Things '99. This adventure is brought to you by the National Wildlife Refuge System, the National Conservation Training Center, the Division of Fish and Wildlife Management Assistance, and the Prince William Network.



Service Withdraws Snow Goose Rules

Days after the Service withdrew rules designed to reduce exploding populations of mid-continent light geese, Deputy Assistant Director for Refuges and Wildlife Paul Schmidt told outdoor writers not to count on any similar management actions next spring.

Speaking at the Outdoor Writers Association of America annual conference, Schmidt noted that the Service is beginning to compile an environmental impact statement that evaluates a wide range of management options for lesser snow and Ross' geese.

But Schmidt said that given the amount of time required to document the impacts of management actions under consideration, there is little chance the Service can complete its analysis in time for states to implement any approved changes to migratory bird regulations for this coming season.

The Service published rules in February giving 24 Midwestern and southern states the flexibility to allow the use of normally prohibited electronic goose calls and unplugged shotguns during the remaining weeks of their light goose seasons after all other waterfowl and crane seasons had closed. States were also given the authority to implement a conservation order under the Migratory Bird Treaty Act allowing citizens to take light geese outside of traditional migratory bird hunting season frameworks.

The Service's action, designed to halt ongoing destruction of fragile arctic breeding grounds due to overgrazing from overabundant snow goose populations, was challenged by the Humane Society of the United States, which sought an injunction in federal court to block implementation of the rules.

A federal judge rejected that request, but did find cause to believe that a full environmental impact statement, rather than the more concise environmental assessment performed by the Service, would probably be required by the National Environmental Policy Act to support the conservation measures. The new rules were withdrawn on June 17.

*Chris Tollefson, Public Affairs,
Washington, DC*

Partnership Will Boost Refuge Hunting, Wildlife Watching



Talking turkey. Service Deputy Director John Rogers (left) and Rob Keck, executive vice president and CEO of the National Wild Turkey Federation, signed a Memorandum of Agreement on June 21 in Sioux Falls, South Dakota. FWS photo: Eric Eckl.

Expanded cooperation in the protection, conservation, and management of habitat for wild turkeys and other upland game birds should be the result of a Memorandum of Agreement inked by the Service and the National Wild Turkey Federation in June.

“The National Wild Turkey Federation, with its extensive network of state and local chapters, is an ideal partner that can provide expertise and support to national wildlife refuges all around the country,” said Deputy Director John Rogers, who signed the agreement on behalf of the Service.

“The Memorandum of Agreement gives us a framework for communicating and invites our chapters and refuge managers to work together so this partnership can make things happen on the ground,” said Executive Vice President and CEO Rob Keck, who signed on behalf of the federation.

Hunting and wildlife watching are considered priority uses—wildlife dependent recreational activities—on the 93-million-acre National Wildlife Refuge System, a nationwide network of lands and waters managed for wildlife. Nearly 450,000 hunters hope to bag turkeys and other upland game birds on refuges each year. Visits by wildlife watchers have expanded by more than 20 percent since 1994 and now exceed 25 million each year.

The National Wild Turkey Federation, headquartered in Edgefield, South Carolina, is a 200,000-member conservation and education organization dedicated to conserving wild turkeys and preserving hunting traditions. The federation's Wild Turkey Super Fund expenditures, combined with cooperator dollars, have reached nearly \$100 million on nearly 10,000 projects in the past decade. The MOA commits the federation to periodic meetings with Service representatives and paves the way for the Service to use monies generated by the Wild Turkey Super Fund.

This MOA also marks a step towards the vision laid out by *Fulfilling the Promise*, a long term road map for the system's future, which envisions refuges as providing opportunities for public stewardship, with organizations such as the National Wild Turkey Federation actively participating in that stewardship.

“From hunting programs to habitat improvement, the National Wildlife Refuge System and the National Wild Turkey Federation are natural partners,” said new Refuge Chief Jim Kurth. “National wildlife refuges' dedication to conservation and the solitude of these special places translate into prime conditions for turkey hunters to seek their quarry.”

*Eric Eckl, Public Affairs,
Washington, DC*

Law Enforcement Chief Addresses Program Issues

Chief Kevin Adams of the Division of Law Enforcement addressed issues such as funding and staffing for his program during a presentation at the Outdoor Writers meeting in South Dakota.

Funding for the Service's law enforcement activities has not kept pace with the agency's increased wildlife conservation responsibilities and personnel and operating costs. Thirty special agent positions remain unfilled because of funding shortfalls, Adams said, and upcoming mandatory and elective retirements in the near future will create more vacancies.

Staffing and funding shortfalls affect resource conservation, service to the public and officer safety, Adams said. He also pointed out that changes in migratory bird baiting regulations will substantially increase time, money and personnel needed for investigations, and enforcement of the regulations will require new equipment, techniques and resources.

Adams said that goals for restoring Service law enforcement activities include rebuilding basic operating capability, funding new officers to fill existing vacancies, providing adequate funding to address mandatory retirements, and ensuring the health and safety of officers on the job.

*Rachel F. Levin, Public Affairs,
Washington, DC*

Blue Goose Comes Home to Roost

A May memo from Service Director Jamie Rappaport Clark left no doubt that the blue goose, long an unofficial symbol of the National Wildlife Refuge System, has found permanent habitat on refuge signs nationwide.

"Recognizing the longstanding significance of J.N. 'Ding' Darling's blue goose design, created as a symbol of the National Wildlife Refuge System, I have established the blue goose as a permanent design element to be displayed proudly in concert with the U.S. Fish & Wildlife Service logo," Clark said. "Specifically, this means the blue goose will be incorporated into refuge-related visual media and refuge entrance and boundary signs."

Clark acknowledged the tradition of the blue goose as a reminder of the importance of the nation's 500-plus refuges.

"To Rachel Carson, the blue goose was an emblem worthy of our respect, for it meant the land behind it was 'dedicated by the American people to preserving, for themselves and their children, as much of our native wildlife as can be retained along with our modern civilization,'" she said. "As the Service's front yard to more than 34 million visitors each year, the refuge system is in a special position to help the Service gain public recognition of all of our conservation efforts on behalf of fish, wildlife and plants."



Regional publications coordinators and sign committees will work with the Division of Refuges to incorporate the blue goose into the Service's Manual of Graphic Standards and Sign Manual. These committees and the Division of Refuges will make recommendations on its use as a permanent design element to ensure consistent incorporation and best promote public recognition of the refuge system.

The blue goose is more than merely a logo, Clark emphasized. It is also a key part of implementing a recommendation from *Fulfilling the Promise*, the Service's road map for strengthening the refuge system.

*Eric Eckl, Public Affairs,
Washington, DC*

Exciting find. *The discovery of two Canada lynx kittens in northwestern Maine in June confirms the rare cats reproduce in that state. Service and state biologists found the kittens, one male and one female, while tracking an adult female lynx they had radio-collared last March. Canada lynx, the only lynx species in North America, were historically found throughout much of Canada, the northern forests of the United States and the subalpine forests of the central and southern Rocky Mountains. The Service has proposed listing the lynx as threatened under the Endangered Species Act in 16 of the lower 48 states. Maine Department of Inland Fisheries and Wildlife photo: Jennifer Vashon.*



Former Service Director John Gottschalk Dies at 86



Meeting of minds. Former Director John Gottschalk shares his wisdom with late Service Director Mollie Beattie. FWS photo.

A Message from Acting Director John Rogers

The cause of international wildlife conservation lost one of its most tireless and effective voices August 13 with the death of former Service Director John Gottschalk. John dedicated more than four decades of his life to protecting wildlife and its habitat, and the results of his efforts are with us today.

Without his leadership and foresight, endangered species conservation may not have played the prominent role it did throughout the late 1960's and early 1970's, culminating in passage of the 1973 Endangered Species Act.

John joined the Service in 1945, when it was still the Bureau of Sport Fisheries and Wildlife. As director, he oversaw implementation of the nation's first Endangered Species Act and presided over an unprecedented expansion of the National Wildlife Refuge System.

A fisheries biologist by training, John repeatedly emphasized the importance of protecting the nation's marine fisheries and wetlands. At the same time, he expanded public access to the refuge system by permitting compatible recreational activities on hundreds of refuges, hatcheries and research stations.

But those of us who knew him well remember the rare compassion and understanding he brought to his profession. No administrator cared more for his or her employees than John Gottschalk. We will truly miss him.



Beginning of an era. Gottschalk is sworn in as Service Director while Interior Secretary Stewart Udall (center) looks on. FWS photo

From Service Director Jamie Rappaport Clark...

John cared not only about wildlife resources but also about human resources—his staff. Longtime Service employees have told me that he always had a kind word for them and that he made it a point to be a special friend to junior staff members.

It was a great pleasure and an honor for me to have met John last year when the former Service Directors assembled at the National Conservation Training Center. I learned a tremendous amount as I listened to John recount his experiences as he came up through the Service ranks and served as Director. Thankfully, present and future generations of Service employees will benefit from his wisdom, captured that day on videotape and preserved for the ages. His contribution to fish and wildlife conservation is a legacy that has not yet been equaled.

Conservation Leaders Share Their Recollections...

John Gottschalk was admired by many in and out of the Service as a Director who exhibited the kind of leadership that drew people to him. He engendered an unusual loyalty perhaps unmatched by any other contemporary Service leader.

He was a true gentleman. He gave people time and listened well. He was always learning, and called to ask questions about issues, or question our positions. He had a sense of humor, common sense about people and great insight on the history of conservation events.

Most of all, John was a gracious human being who regarded other people with respect. We all are fortunate to have known him.

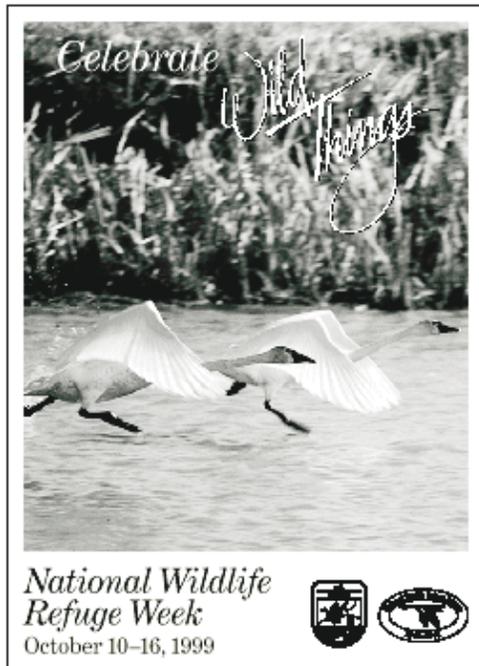
Rollin D. Sparrowe, President, Wildlife Management Institute, Washington, DC

He was... a great mentor, friend and source of inspiration to me and hundreds of others in our field.

If and when a conservation hall of fame becomes a reality, John should be one of the first inductees. In this century, no professional conservationist had a greater positive impact on our wild living resources. John was simply the best of us.

Jack Lorenz, former President, Izaak Walton League, Alexandria, Virginia

Coming to a Field Station near YOU... National Wildlife Refuge Week October 10-16, 1999



This year, the Service will celebrate National Wildlife Refuge Week with special events nationwide. The Service is encouraging every employee—not just those on refuges—to participate in and promote this weeklong celebration. Many field stations, including national fish hatcheries and ecological services field offices, will host special events and open houses.

Any time is a great time to visit one of the more than 500 national wildlife refuges or thousands of waterfowl production areas in the United States—just about anyone can find one within an hour's drive from their home.

National Wildlife Refuge Week is an especially good time to visit one of these wild places. During Refuge Week, refuges will host bird and wildflower walks, wildlife watching hikes, guided tours, and open houses, among other activities.

Events on the Information Superhighway

To find out more about happenings nationwide during Refuge Week click on the refuge system Web site at <http://www.refuges.fws.gov>. Scroll down to special events, click on National Wildlife Refuge Week, then hit the search button.

You can list your station's events on the 'Net—it's easy and takes only a few minutes. To enter your planned events go to the Division of Refuges' site on the Service's Intranet. Click on special events database and follow the instructions for posting your event. This is an on-going, Service-wide event listing...start now with National Wildlife Refuge Week and let the public see what we're all about.

Let us help you promote National Wildlife Refuge Week...

The Division of Refuges has created a variety of products to use at your Refuge Week events.

This year's National Wildlife Refuge Week poster, depicting a Southwest desert scene, will arrive at your station in time for Refuge Week. Additional products include refuge system bookmarks, invitations with envelopes and note cards.

Reaching farther. To appeal to a more diverse audience, the Division of Refuges has produced a Refuge Week public service announcement in Spanish. It will be sent to all refuge field stations and Spanish-language magazines in an effort to reach Spanish-speaking communities near national wildlife refuges. The Division of Refuges is also translating into Spanish the refuge system video, "America's National Wildlife Refuge System... Where Wildlife Comes First." This Spanish version will be made available to all field stations and will be out before the end of this year.

Debbie McCrensky, Division of Refuges,
Arlington, Virginia

Regional refuge outreach contacts:

Region 1

Susan Saul
503/231 6121

Region 5

Kathy Zeamer
413/253 8321

Region 2

Laurie Rosenthal
505/835 1828

Region 6

Sheri Fetherman
303/236 8145 x649

Region 3

Dan Sobieck
612/713 5403

Region 7

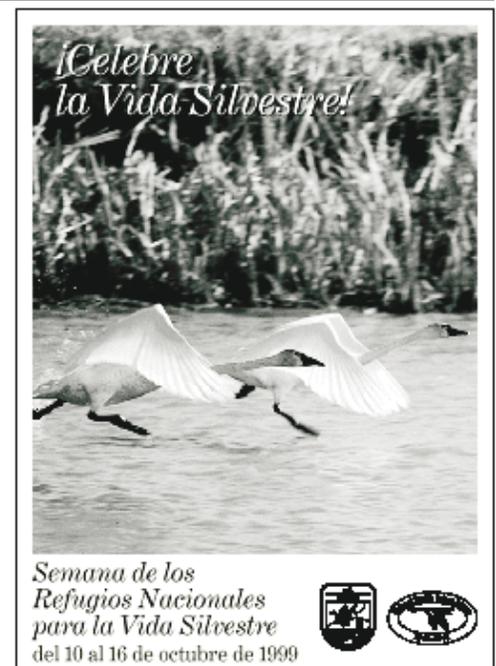
Cathy Rezabeck
907/786 3351

Region 4

Cheryl Simpson
404/679 7166

Field stations other than refuges that are hosting an event may obtain these products from the Publications Unit (phone: 304/876 7203, fax: 304/876 7689) or by contacting your regional refuge outreach coordinator (see list above).

Deborah McCrensky, Division of Refuges,
Arlington, Virginia



Plane Crash Takes Lives of Moose Researcher and Pilot

A plane crash claimed the lives of Agassiz NWR moose researcher Eric Cox and Minnesota Department of Natural Resources pilot and Conservation Officer Grant Coyour as the pair conducted an aerial moose telemetry survey over the Red Lake Wildlife Management Area near Baudette, Minnesota, on June 11.

A Ph.D. candidate at the University of Idaho, Cox, 29, had headed the joint Service/DNR Northwest Minnesota Moose Research Project since its inception in 1996. On the day of the crash, Cox was tallying one of the final aerial moose calf counts of the season.

Coyour, 43, was a Minnesota Conservation Officer and experienced DNR and Army National Guard pilot. Along with his enforcement duties, he frequently supported wildlife research projects such as the Minnesota moose project. One of five DNR pilots, Coyour had flown moose surveys many times before.

The cause of the crash is still under investigation. The aircraft was a Minnesota DNR Piper Cub.

In addition to serving as the Service lead on the joint moose project, Cox worked under contract for the DNR. During the project he lived on-site at both the Agassiz NWR and the DNR's Red Lake WMA and worked closely with Service and state biologists to investigate the cause of the declining northwest Minnesota moose herd. Much of the research involved collaring moose and locating them after their deaths in the wild to determine the causes.

A Michigan native, Cox was in the process of completing the field work portion of the moose study, which was to be included in his doctoral dissertation. The next phase of his work was to include an analysis of the data gathered from over three years of moose research. This research involved tracking moose fitted with electronic collars, collecting blood and tissue samples, conducting field necropsies of dead moose, determining parasite impacts and analyzing the animals' nutritional requirements.

The deaths of Cox and Coyour shocked the staff at Agassiz NWR and the Red Lake facility.

"Eric was going to wrap things up here by the end of June and then take a couple months off to visit family before starting his analysis this fall," said Agassiz NWR Manager Maggie Anderson. "This has been a terrible tragedy."

"Eric was an extremely hard worker, very dedicated," said Manager Gretchen Mehmel of the Red Lake WMA. "You could never say never with Eric. There was always a way to get the job done. He would stay overnight in the bog and hike in the next day to conduct a moose necropsy if that's what it took."

Although he took naturally to the field work, Cox also oversaw the activities of dozens of research volunteers and technicians over the course of the project.

"This was a very important project, and we will follow through on Eric's research," said Anderson. "The data is there and we know Eric would want us to see this through. Many people in the Service, DNR and local community have contributed to this project and we are very close to some answers based on Eric's work."

Cox's parents have been given permission to scatter his ashes over the Red Lake WMA. A memorial marker will also be placed in the future. Donations to a memorial account established for Cox and Coyour may be sent to:

Eric Cox and Grant Coyour Memorial Fund
for Moose Research
c/o Department of FWS Resources
University of Idaho
Moscow, Idaho 83844

*Dan Sobieck, External Affairs,
Minneapolis, Minnesota*

New Orleans Signs Urban Treaty for Bird Conservation



Chirp if you love birds. Cartoon bird Tweety joined Julie St. Louis of the Migratory Bird Management Office and Paul Schmidt, deputy assistant director for Refuges and Wildlife, at the signing of the first Urban Treaty for Bird Conservation in New Orleans. FWS photo: Patricia Fisher.

Joining forces to protect urban songbird populations, the Service and the City of New Orleans signed the first Urban Treaty for Bird Conservation in June at the U.S. Conference of Mayors' annual meeting.

The Urban Treaty pilot program, a voluntary partnership between a city and the Service, is designed to help cities conserve migratory bird populations and their habitat. The new program recognizes the increasingly crucial role urban communities can play in migratory bird conservation efforts.

"Birds are a critical component of every ecosystem and tell us much about the overall health of the environment," said Paul Schmidt, the Service's deputy assistant director for Refuges and Wildlife. "But they have a special significance in urban areas that transcends their place in the natural world. In an age when more than 80 percent of Americans live in urban areas, birds represent the only day-to-day contact many people have with wildlife."

Natural Features Preserve Employees' Memories



New Orleans, which includes the 23,000-acre Bayou Sauvage NWR within its city limits, was awarded a \$50,000 matching

grant as part of the treaty. The Service will work with the city to provide expert advice and educational resources to develop bird conservation programs using the grant money.

As an integral part of the program, legendary Warner Bros. cartoon canary Tweety will serve as official spokesperson for the program. Tweety will share his wit and wisdom to raise awareness of steps that can be taken to ensure survival of birds in the urban environment.

New Orleans Mayor Marc Morial told an audience that included mayors from across the country that his city's support for the innovative program grows out of its commitment to improving residents' quality of life. By protecting and enhancing urban bird populations and the habitat in which they live, Morial noted, a community can also make life better for its citizens.

The Service's Migratory Bird Management Office developed the Urban Treaty pilot program in the hope that it may serve as a model for future habitat restoration and education partnerships. Future designations of Urban Treaty cities will follow as the pilot program is successfully implemented and funds are appropriated.

Urban birds are among the nation's most endangered bird groups. According to the most recent breeding bird survey conducted by the U.S. Geological Survey and the Service, only 31 percent of urban bird species are estimated to have increasing populations. Their generally declining populations likely reflect the cumulative effects of habitat loss, deaths from improper pesticide applications and predation from domestic housecats.

*Chris Tollefson, Public Affairs,
Washington, DC*



Memorial. Shannon Callow cuts the ribbon during the dedication of Callow Overlook as a memorial for her father, Mike. FWS photo: Susan Saul.

Families, friends and co-workers gathered June 12 to dedicate Kathy's Pond and Callow Overlook at Oregon's Umatilla NWR as memorials to employees Kathleen Mary Cheap and James Michael Callow. Cheap and Callow died in a plane crash while conducting a waterfowl survey of the Columbia River's Hanford Reach in November 1998.

Cheap, 47, was a wildlife biologist at Umatilla refuge and had worked for the Service for 20 years. Callow, 50, had recently taken the post of refuge manager at Umatilla after working for the Service for 12 years.

Family members conducted ribbon cuttings to dedicate Kathy's Pond and Callow Overlook as lasting memorials. Kathy's Pond is a refuge wetland along Paterson Ferry Road that Cheap had rehabilitated. The pond is fed by return flows from the Irrigon Fish Hatchery, where her husband works for the Oregon Department of Fish and Wildlife.

Representative of her passion for sharing the refuge and its wildlife with others, Kathy's Pond features a disabled-accessible wildlife viewing kiosk with interpretive panels.

Callow Overlook provides a broad overview of his upland rehabilitation work and McCormack Slough.

"Mike was a farmer at heart," said Gary Hagedorn, Mid-Columbia NWR Complex manager. "He was well known for his ability to restore native prairies." The overlook is on the refuge's auto tour route and features an accessible observation deck with interpretive panels.

Tom Dwyer, deputy regional director for the Pacific Region, described Kathy's Pond and Callow Overlook as "truly wonderful places."

Dwyer and Bill Shake, geographic assistant regional director for the Columbia Basin Ecoregion, also presented the refuge staff with a framed wildlife print to display in the headquarters as a tribute to Cheap and Callow from Service employees.

*Susan Saul, External Affairs,
Portland, Oregon*

Campaign Will Involve More in Fishing, Boating, Aquatic Resource Conservation



Conservation on the water. *Recreational anglers and boaters will benefit from a \$36 million outreach campaign from the Recreational Boating and Fishing Foundation. FWS photo.*

There's an army of aquatic resource conservation advocates in America's school rooms, living rooms and board rooms. Problem is, they just don't know it yet.

They soon will, however, thanks to a new national outreach campaign aimed at encouraging more Americans to take to the water to boat, fish and develop a commitment to conserving the nation's aquatic resources. The five-year, \$36 million campaign will be administered by the Recreational Boating and Fishing Foundation under a cooperative agreement with the Service.

"Boaters and anglers are the first line of defense in protecting the quality of our waterways," said Interior Secretary Bruce Babbitt. "They care about clean and fishable waters, and they pay the biggest chunk of our nation's aquatic resources conservation bill through license sales, excise taxes on boat fuels and fishing equipment, and other user fees. By passing the 1998 Sportfishing and Boating Safety Act, Congress recognized the need to increase the ranks of this conservation army by reversing recent declines in boating and angling participation."

The Sportfishing and Boating Safety Act directed the Interior Secretary to develop, in cooperation with the federally-chartered Sport Fishing and Boating Partnership Council, a national outreach plan to encourage greater public interest and participation in boating and fishing. The plan also aims to provide more information about recreational boating and angling opportunities, reduce barriers to participation in these activities, and promote conservation and the responsible use of aquatic resources.

Following stakeholder meetings, the council named an outreach planning team to review and distill the raw data and draft a plan. The resulting strategic plan for the National Outreach and Communication Program was completed last September and approved by the Secretary in February. A cooperative agreement establishing the framework for federal funding of the foundation was signed March 28, as was a Memorandum of Understanding among the Service, the foundation, the partnership council and the International Association of Fish and Wildlife Agencies.



Recreational Boating and Fishing Foundation President Bruce Matthews. American Sportfishing Association photo: Michele Savage.

The strategic plan lists five objectives to increase public interest and participation in boating and fishing:

- Create a nationally recognized theme for the campaign.
- Educate people about how and where to boat and fish.
- Target market segments and tailor messages for these segments.
- Educate boating and fishing stakeholders about marketing, outreach and implementation of strategies to targeted user groups.
- Improve access to boating and fishing.

The foundation's work to achieve these objectives accelerated after mid- July, when its new president, Bruce Matthews, came on board and began to hire staff to implement the Strategic Plan. The foundation is located in the Washington, D.C., metropolitan area.

Matthews, formerly chief of the office of information and education for the Michigan Department of Natural Resources, will conduct a national search for other key staff positions for the foundation, including a chief financial officer, a director of communications and three other key positions.

Laury Parramore, External Affairs, Alexandria, Virginia

Service Finds New Challenge in Underwater Habitat Management

Measuring only millimeters long, colonizing by the thousands and creating one of the earth's most productive, biologically diverse ecosystems, the coral polyps that form coral reefs are finally getting the attention they deserve as wildlife of the sea.

In June 1998, President Clinton signed Executive Order 13089 on Coral Reef Protection to increase conservation of coral reefs and associated habitats. With that, a new era began for the Service in South Florida as managers learn about protecting sensitive habitat under water as well as on land.

Biologists estimate that coral reefs contain one quarter of the world's undersea species, including 65 percent of all marine fish species. Yet these sensitive ecosystems cover less than 0.2 percent of the oceans' floors. Reefs protect tropical shorelines and provide habitat for the many fish and invertebrate species that feed a substantial portion of the world's population.

Hard, or stony, corals generally have external skeletons of limestone that they deposit to create a living coral reef. Hundreds of species of hard and soft corals exist worldwide today. More than 450 coral species are known in the Australasia region, and 67 species live in the Caribbean region. And some coral reef habitat is located within the Service's jurisdiction.

The Service established Key West and Great White Heron national wildlife refuges in the Florida Keys to protect native and migratory birds and their habitat. These two refuges—both satellites of National Key Deer Refuge and respectively 91 and 61 years old—together encompass island feeding and nesting habitat for migratory birds. They also stretch into the depths of the Atlantic Ocean and the Gulf of Mexico and include portions of the nation's only continental reef tract as well as many patch reefs.

This combination of underwater and land-based habitat has made managing these two refuges challenging.



Under the sea. *New challenges await refuge managers below the surface as they learn to manage coral populations. FWS photo.*

"Management here has historically centered on the roughly 9,000 acres of island land mass within these refuges' boundaries," said Barry Stieglitz, former project leader at National Key Deer Refuge, who is now chief of the Branch of Policy and Planning in the Division of Refuges, "while jurisdiction of the roughly 390,000 acres of marine submerged lands fell into the State of Florida's hands."

However, as with many other wild places, Stieglitz said, human encroachment has begun to pose additional challenges to traditional management techniques. In 1992, the Service entered into an agreement with Florida to manage the submerged lands as refuge lands. Then in 1997, the state partnered with the National Oceanic and Atmospheric Administration's Florida Keys National Marine Sanctuary to protect the unique and treasured waters of all of the Keys—including those within refuge boundaries.

Also in 1997, addressing the Service's ecosystem approach to resource management, Stieglitz initiated a marine resource management program at the refuge.

"The ecosystem doesn't end at the high tide line," he said. "Two of our refuges comprise roughly 98 percent submerged marine habitats, yet we had no marine expertise in how to manage them.

"With this new program, the Service will strengthen the refuge system's connection: wading birds eat fish, and fish need healthy habitat too," Stieglitz said.

The Service is stepping up its involvement with coral reef systems and marine resources management. The Florida Keys refuges are developing a program to focus on the status and health of the marine ecosystem and working collaboratively with the Florida Keys National Marine Sanctuary and other agencies to address marine resource management with a Service spin—augmenting existing programs while focusing on wildlife.

Coral reef managers—including the Service's staff in Florida—now are getting support regionally, nationally and internationally. Significant numbers of coral communities in Service jurisdiction are primarily found off Florida, through the Caribbean, the Hawaiian islands and across the Pacific.

The Service, with partner agencies and organizations, is providing direction on U.S. priorities and goals for long-term management, logistical coordination throughout the government, and financial support to carry out a coral reef management program.

"Through our efforts, the Florida Keys refuges will evolve their marine program, with permanent staff and support equipment and an increase in the knowledge base," Stieglitz said. "It is time to acknowledge the critical role our marine and coral habitats play in the overall picture of our refuges."

Susan White, Florida Keys National Wildlife Refuges, Big Pine Key, Florida

Restoring Northwest Fisheries



Special treatment. *Abermathy Fish Technology Center Director Carl Burger and fishery biologist John Holmes examine juvenile chinook salmon reared on a special diet developed at the center. FWS photo: Ken Burton.*

(First in an occasional series of snapshots of fisheries facilities, this article looks at Spring Creek National Fish Hatchery, Lower Columbia Fish Health Center, Abermathy Fish Technology Center and Olympia Fish Health Center, all in Region 1).

Spring Creek National Fish Hatchery

Around 1898, workers from the Little White Salmon National Fish Hatchery placed a few salmon eggs in incubation boxes with spring water entering the Columbia River from the base of basalt cliffs. One of these boxes accidentally spilled eggs into the trickle of a stream.

“By 1901, salmon were trying to jump a waterfall to get back into the creek,” said Ed LaMotte, the current hatchery manager. “Workers lifted fish over the falls and placed them in pools of spring water. That’s how the Spring Creek National Fish Hatchery was started.”

Spring Creek hatchery has changed a lot in 98 years. Its original location is not visible, having been flooded when the Bonneville Dam was built in 1938. Redesigned and extensively rebuilt by the Corps of Engineers in 1972, the hatchery now carefully nurtures more than 15 million Tule fall chinook salmon each year, ensuring that as many as possible will make the 167-mile swim to the Pacific Ocean.



Checking in. *Manager Ed LaMotte of Spring Creek NFH examines egg trays. The hatchery raises fall chinook salmon for Northwest rivers. FWS photo: Ken Burton.*

Spring Creek today is the largest producer of fall chinook salmon in the Pacific Northwest for recreational and commercial fishing; eggs from the hatchery at one time even went to the Great Lakes and as far away as New Zealand, though LaMotte is careful to note that such transfers are no longer done.

Today’s hatchery sits on the Washington State side of the spectacular Columbia River, next to the little town of Underwood, taking advantage of the pure water available from springs emerging at the base of cliffs just north of the hatchery. To conserve water and reduce pollution, the hatchery recycles 90 percent of its water through oyster shell filtration beds.

In June, LaMotte and his 11-member staff released 4.1 million fall chinook; LaMotte acknowledges with a grin that “it’s nice to see a product that gets used.”

In the 1950s, biologists at Spring Creek collected up to 96 million eggs; today the hatchery can accommodate up to 60 million eggs, and needs about 20 million eggs a season. However, “we’ll do with what we get,” said LaMotte.

Tule fall chinook salmon are native to this part of the Columbia, and have always been an important food source for residents. Columbia River Indians called the fish “mutila” or “white salmon” because of the light color of the chinook’s flesh.

Unlike other chinook, which spend weeks or months in fresh water before spawning, Tule fall chinook spawn quickly after reaching their home rivers. Returning fish live off stored fat as their bodies produce milt and eggs, so they typically appear darker and in worse condition than other salmon species when they arrive on the spawning grounds.

Starting in the 1930s, dams blocked spawning habitat and made migration more difficult for both adult salmon and smolts heading to sea. A growing human population has taken a heavy toll: in California, 85 percent of the spawning streams that existed in 1850 are now either inaccessible or too polluted to support fish.

Lower Columbia Fish Health Center

To ensure the health of hatchery fish, the Service conducts disease and nutrition research at four fish health centers—one of which is tucked into a small, neat building on the grounds of Spring Creek hatchery. Seven men and women work quietly here at the Lower Columbia Fish Health Center, motivated by a single concern: to ensure that the fish produced at Spring Creek and six other Northwest hatcheries remain healthy.

“A common complaint is that hatchery fish carry disease,” said Susan Gutenberger, who runs the center, “but hatchery fish originated from wild fish. And all fish, in the wild or in the hatchery, carry bacteria, viruses or parasites that can cause problems. The difference is that if we find these things at this level, we can and do make a difference. Fish that carry or contract a disease in the wild are not as fortunate.”

Begun in 1953 as the Little White Salmon Laboratory and staffed by a single biologist, the center today is staffed by fish pathologists, microbiologists and technicians who inspect fish, diagnose fish disease and make recommendations for treatment.

The lab's primary job is to diagnose disease, inspect fish prior to release and provide remedial recommendations to prevent any suspected disease outbreak through treatment, altered hatchery practices or improved health management.

On request, Lower Columbia routinely provides services for seven Lower Columbia River hatcheries and two Indian tribes and for state and private facilities. The center's mission supports the National Fish Health Policy and the Endangered Species Act. Work done at the Lower Columbia River Fish Health Center ensures healthy hatchery stocks and minimal impact on wild fish.

Abernathy Fish Technology Center

In 1965, the Service established fish technology centers to develop and improve fish culture techniques and to provide assistance and advice on fish culture to hatcheries, other federal and state agencies, tribes, other countries and to the aquaculture industry. One of those facilities is the Abernathy Fish Technology Center, nestled next to scenic Abernathy Creek near Longview, Washington.

Biologists at Abernathy research Pacific salmon, white sturgeon and steelhead. Scientists provide technical assistance to fish culture and management professionals in the public, private and Indian tribal sectors. They focus on water quality, fish feed quality, management, genetics, statistics and disease control and treatment.

Abernathy once incubated an average of 1.5 million Tule fall chinook salmon every year. As that effort was redirected, production was halted at Abernathy; now the 13-member staff focuses on applied research in genetics, nutrition, pathology and developing new fish husbandry methods for regional fish production facilities.

"We are now the only Service facility doing applied research on Pacific salmon, steelhead and white sturgeon," said Abernathy Director Carl V. Burger. His team is also deeply involved in genetics; Burger has proposed development of a rapid-response ESA-related genetics laboratory for fish and wildlife that would benefit managers involved in listing, delisting and recovery issues.

Because it possesses one of only two cooker-extruders in the Service, Abernathy can also develop new fish feed and run nutrition experiments "almost at once," according to Burger. The \$300,000 cooker-extruder gives the center's fish nutritionist the capacity to manufacture new fish food on site and immediately test it on fish.

Olympia Fish Health Center

Genetics has taken on new importance as well at the Olympia Fish Health Center, located in Washington State's capital city. Ray Brunson, who oversees a staff of five, believes that "hatcheries of the future can be doing for fish what the Service has done for wolves and condors"—they can help species recover through captive breeding and subsequent reintroduction.

Starting in 1994, in fact, the Olympia Fish Health Center entered a cooperative effort with the National Marine Fisheries Service to help in restoration of the Redfish Lake sockeye, a species listed under the Endangered Species Act. Brunson's staff tested and evaluated captive broodstock long before release, ensuring that disease-free species would be released among wild fish.

"The role of fish health in restoring and preventing the loss of threatened and endangered species will increase in the future as the need to reduce disease on wild and listed species becomes more urgent," said Brunson.

The Olympia Fish Health Center provides state-of-the-art diagnostic and clinical services to fish production at coastal Washington and mid-Columbia River hatcheries. The estimated economic value of fish production at Service hatcheries on the Washington coast is more than \$7.8 million; the estimated value of fish produced in the mid-Columbia for restoring chinook and steelhead is more than \$1.2 million.

"Fish health services have an estimated survival benefit of 10 percent in fish production," said Brunson. That means the direct economic benefit of the Olympia Fish Health Center amounts to more than \$900,000 a year.

*Ken Burton, Public Affairs,
Washington, DC*

Grandiose. *High canyon walls mark geologic time—and make a grand backdrop for Service fishery workers. One of the few remaining populations of the endangered humpback chub persists here in the Little Colorado River. Biologists from the Grand Canyon Fishery Resources Office in Flagstaff, Arizona, measure humpback chub habitat to further the species' recovery. Text by Craig Springer, Division of Fisheries, Albuquerque, New Mexico. FWS photo: Owen T. Gorman.*



Georgia Case Secures Successful Endangered Species Prosecution



Polluters pay. *Two top chemical company executives received prison sentences for polluting tidal marshes and harming endangered wood storks. FWS photo.*

A team effort by Service law enforcement and ecological services staff in southern Georgia helped hold a chemical company and its officers accountable for polluting the state's tidal marshes and harming endangered wood storks.

A federal investigation of the New Jersey-based company's Brunswick, Georgia, plant, jointly conducted by the Service and the Environmental Protection Agency, resulted in a prosecution for the illegal take of an endangered species by industrial contamination.

"This investigation shows how important the collaborative efforts of scientists and law enforcement officers are to protecting a healthy environment for wildlife and people," said Southeast Regional Director Sam Hamilton. "Our success should send a strong warning to any company or individual who pollutes our lands and waters, harming America's fish and wildlife."

The chemical company, Hanlin Group, Inc., pleaded guilty last year to conspiracy and violations of four environmental laws, including the Endangered Species Act and Clean Water Act, in connection with the mercury contamination of coastal waters surrounding Georgia's Golden Isles—a popular travel destination known for luxury resorts and scenic beauty.

Prosecutions in the case concluded this summer with the sentencing of two top-level Hanlin executives, who will serve prison terms of nine and nearly four years for conspiracy, environmental violations, and endangering workers. The former plant manager, who was found guilty on similar charges, will spend 6-1/2 years in prison. Three lower-ranking company officials also charged in the case previously pleaded guilty and were sentenced in April.

The Service's work on the case began when biologists discovered mercury poisoning in endangered wood storks on St. Simon's Island. Special Agent Pat McIntosh, who works in the law enforcement office in Savannah, Georgia, helped trace the source of the contamination to Hanlin's LCP Chemicals plant. That facility had been declared a Superfund site when it closed in 1994 and was already under EPA scrutiny.

Through numerous interviews and the painstaking review of hundreds of boxes of company records, McIntosh compiled evidence showing that from the mid-1980s until its closure the LCP plant discharged nearly 150 tons of mercury into Purvis Creek, a tributary of the Turtle River, and the surrounding tidal marshes. The investigation also indicated that this dumping of untreated wastes occurred with the knowledge and sanction of company and plant officials and that workers at the plant had been unlawfully exposed to mercury and other contaminants.

Mercury, a highly toxic metal that accumulates easily in the food chain, causes neurological damage in humans at even low concentrations.

The company could have been fined as much as \$3.5 million for its culpability. In April, however, the presiding U.S. District Court judge declined to sentence the corporation because LCP Chemicals is engaged in bankruptcy proceedings and any financial penalty would come at the expense of its creditors.

Sandy Cleva, Office of Law Enforcement, Arlington, Virginia

Learning to “Move Dirt”



Pay close attention. Mike Preddy of Mid-Atlantic Steel/Chainsaw gives a demonstration on chain saw safety at the Operations '99 workshop. USFWS photo.

Although maintenance workers, equipment operators and other wage grade employees make up a relatively small portion of the Service's field staff, they face the same issues as biologists, outdoor recreation planners and other general schedule employees: career advancement opportunities, pay and benefits concerns, and uniform policy questions.

However, wage grade staff in the Service also deal with their own unique issues, and in the Northeast region, they came together to address the relationship between equipment and wildlife management during the Operations '99 Workshop held in April at the National Conservation Training Center.

Maintenance staff from some 30 refuges and one hatchery in the Northeast huddled with refuge system leaders at NCTC for classes on waterfowl identification, stress management, chainsaw equipment, heavy equipment, health and safety, habitat management, and boating. Service instructors were joined by representatives from manufacturers John Deere and Stihl.

“Twenty percent of our field staff are maintenance personnel, and they are a critical part of our team,” said Tony Leger, programmatic assistant regional director for Refuges and Wildlife in the Northeast. “Skilled operation of reliable equipment is crucial to most refuge habitat management activities, and the public needs well maintained visitors centers, boardwalks, and other facilities to have a good, safe experience.”

Participants agreed the workshop was a valuable, and even critical, training experience.

“It was an uplifting experience for all the folks who attended. Participants learned a lot and had the opportunity to do some valuable networking,” according to Mike McMenamain, a maintenance specialist at the John Heinz refuge near Philadelphia and one of the principal organizers of the event.

Service leaders and participants discussed such issues as discrepancies between position descriptions and actual job duties, the need for training and career advancement opportunities, questions about uniform policy, compensatory and overtime, and the need for better representation at the regional office.

“There are some issues unique to wage grade staff, and the participants formed a committee to represent the field on these issues to the regional office,” added Teri Neyhart, who co-chaired the committee that organized the event and secured the instructors.

“With *Fulfilling the Promise*, we committed to nurturing leadership and building esprit de corps among refuge system employees,” said Dan Ashe, assistant director for Refuges and Wildlife. “Taking the initiative to put this program together sets a great example for the rest of the system and the Service of putting those ideas into practice.”

*Eric Eckl, Public Affairs,
Washington, DC*

Region, University Explore Innovative Partnerships

Region 2 employees recently met with officials from Langston University to discuss partnership projects with the school, the only historically black university in Oklahoma.

Through Oklahoma's Tishomingo NFH, the Southwest Region has enjoyed an ongoing relationship with Langston's Department of Agriculture and Natural Science over the past few years. The hatchery works cooperatively with the university's Fisheries Program on research, propagation, fisheries outreach with agricultural communities and native fish conservation.

A recently-signed Memorandum of Understanding between the Service and Historically Black Colleges and Universities nationwide encourages more such cooperative efforts (see article in March/April 1999 *Fish & Wildlife News*). Region 2 has wasted no time in exploring further opportunities.

Currently, the Service and Langston University are cosponsoring a National Fish and Wildlife Foundation grant proposal to work with minority farmers in Oklahoma. Other types of initiatives being explored include plans to work with Langston's Center for Outreach Programs to develop a cooperative program to recruit minority students from the university for permanent positions with the Service.

Recently, two students from Treasure Lake Job Corps, located on Wichita Mountains Wildlife Refuge in Oklahoma, were accepted into Langston for a full degree program.

“This kind of partnership is exactly what the Service needs to keep fresh ideas rolling,” said Nancy Kaufman, regional director for the Southwest Region. “We can really get some good things going when we expand the realm of our partners to include educational institutions, where social concerns are a top priority, and energy and innovation abound.”

*Ben Ikenson, External Affairs,
Albuquerque, New Mexico*

An Investment in “Fulfilling the Promise”



Training grounds. Student trainees in Region 6 spend time as both biologists and managers at one of the region’s many national wildlife refuges, such as J. Clark Salyer in North Dakota. FWS photo: John and Karen Hollingsworth.

Region 6 has developed an innovative and well-crafted training system to recruit talented students and support them while they get their feet under them and learn about the Service and the National Wildlife Refuge System. *Fulfilling the Promise*, the refuge system’s long-term roadmap, envisions refuges as places that identify and mentor America’s best and brightest to staff refuges and be future leaders within the system and the Service. Student Career Experience Program trainees are recruited at the under-graduate and graduate school levels, provided support throughout their education and training with the Service, and then, if successful, placed as a trainee at one of the region’s premier national wildlife refuges to experience first-hand how a successful refuge staff operates.

The five trainee positions are unique in that they combine two professional series: refuge manager and refuge biologist. As newcomers to the Service, trainees wear both the manager’s hat and the biologist’s hat to gain a more holistic understanding of how the agency functions and get a feel for where their own interest lies.

For example, as a trainee at North Dakota’s J. Clark Salyer NWR, I not only wrote prescribed burn plans and participated in the burning, but I also took on the biologist’s role of designing ways to monitor vegetation response to our use of prescribed fire. As well as making biological decisions to recommend purchase of wetland easements, I also did the manager’s task of making surveillance flights to check for violations on those easements.

Whether trainees become managers or biologists, this comprehensive involvement in refuge issues is crucial, allowing them to see both sides of the fence when it comes to the give and take of adaptive refuge management.

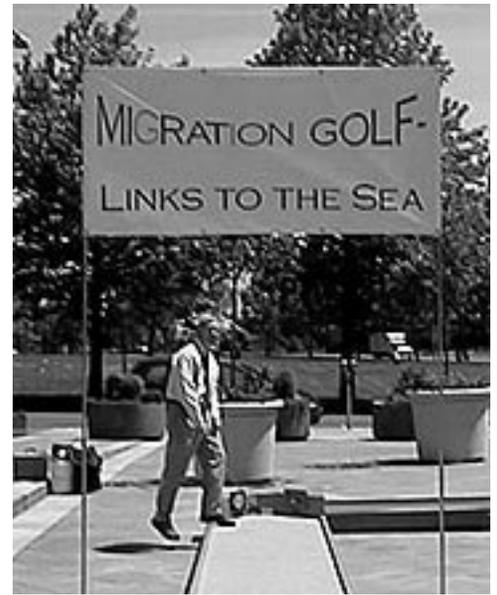
In 1998, I attended the Refuge Academy training, which in the past was oriented mostly toward refuge managers. Though my primary interest is in the biologist series, the training program managers in Region 6 understand that I need a common foundation with refuge managers to function well within the refuge system.

My supervisors have also encouraged me to remain a part of the scientific community by allowing me to submit peer-reviewed articles on my graduate research for publication. I have also attended several national scientific meetings to establish a rapport with biologists from other agencies and the private sector. Region 6 recognizes that the Service’s credibility for our land management policies depends largely on their acceptance by the scientific community as a whole, and that our biologists must be a part of that forum.

The challenge of honing my skills as a biologist now rests mainly on my own shoulders. However, the burden feels much lighter now that I possess a solid knowledge of Service operations and strong connections with the scientific community, thanks to this program.

Elizabeth Madden, J. Clark Salyer NWR, Upham, North Dakota

Golfers Take a Swing at Salmon Outreach



Fore! Tom Dwyer, deputy regional director for Region 1, avoids predatory birds as his golf ball smolt begins migrating to the sea. FWS photo: Judy Maule

Service and Bonneville Power Authority employees in the Portland, Oregon, area helped to kick off National Fishing Week with a game of miniature golf—salmon-style.

Bill Thorson, manager of Carson NFH in Washington State, hatched the idea for the portable miniature golf course a few years ago and with help from his maintenance staff and input from others at the hatchery, “Migration Golf—Links to the Sea” recently became a reality. Funding from the Leavenworth NFH Complex helped make the construction possible this past winter.

The course has five holes; each hole allows the player to face some of the same hazards salmon confront during their lives. The golf ball “smolts” leave the hatchery starting point only to be confronted by the dangers of disease and predation. They pass through a dam, then on to the ocean to face el niño—a weather pattern that has caused problems for salmon along the Pacific Coast. Once golfers navigate through the ocean, their “fish” head back upriver, climbing the fish ladder at the dam and avoiding harvest. The lucky fish return to the hatchery to spawn.

Station Salutes Veterans

Carson hatchery staff provided suggestions along the way and Cheri Anderson, information and education specialist for the Columbia Gorge fish hatcheries, finalized a score sheet that provides the background information for each hole.

Migration golf made a splashy debut at Carson NFH. Players had high energy as they tried to avoid holes where avian predators awaited the tasty fish. They then navigated to the hole that allowed the fish to go over a dam with the spill—water passed over the dam—rather than going through the turbines; tried to survive the perils in the ocean; and fought their way back up a fish ladder.

Though some players lost a number of fish along the way, others gleefully “swam” by fishing nets and other obstacles. Players began with 100 smolts and lost one fish per stroke and 10 fish for each of the traps they hit. Adult salmon returns tended to be higher in the game than in real life, but most players were still dismayed by the number of fish they lost along the way.

Golfers left the course with a better understanding of the perils Pacific salmon encounter as they migrate, and Thorson reported that he was besieged with requests to borrow the course for their own outreach events.

“People love it,” beamed Thorson, “They have fun playing, and they go home knowing more about the challenges salmon face once they leave the hatchery.”

*Judith Maule, External Affairs,
Portland, Oregon*

Each month, Richard Cronin National Salmon Station sponsors a Veterans Fishing Program for patients at the Veterans Administration Hospital in nearby Northampton, Massachusetts. The May program took on special meaning as Project Leader Mickey Novak officially dedicated the station’s fishing pond as the Veterans Pond.

“Here today we remember not only our fallen veterans who gave their lives for their country, but all the living veterans gathered here,” said Novak, himself a veteran. “If it were not for the men and women who answered their nation’s call, we might not be here to enjoy the best of a New England spring day. This pond is dedicated as a living memorial to you so that future generations will know this place as the Veterans Pond.”

A bronze plaque attached to a 3-ton, 10,000-year-old New England glacial stone marks the memorial site on the pond’s shore.

Following the dedication ceremony, a crowd of 90 veterans and volunteers reeled in brown, brook, rainbow and tiger trout. All vets caught and released their fish.

Staff from the Massachusetts Division of Fisheries and Wildlife and the Local 98 chapter of the International Union of Operating Engineers, as well as private area companies, assisted in making the event a success, Novak said.

The Cronin Salmon Station sponsors numerous community education programs. As part of a wildlife habitat and community service project, eight students from the Traditional Alternative Program in the area recently removed, trimmed and cut invasive plants at the station.



Comments. *Mickey Novak, project leader at Richard Cronin Salmon Station, speaks to a reporter following the dedication of a memorial, shown in the foreground, to Vietnam veterans. USFWS photo.*

To mark National Fishing Week, Richard Cronin Salmon Station, in partnership with the Sunderland, Massachusetts, Volunteer Fire Department, sponsored a children’s catch and release fishing program at Veterans Pond. Some 250 children angled for trout.

Job Corps Honors Missouri Mentoring Partnership

Recently a visitor to Washington, D.C., asked me, "How is the Fish and Wildlife Service involved in Job Corps?" I explained that for the past 35 years, the Service has operated two Job Corps centers and has afforded many young men and women the opportunity to receive high school diplomas, GEDs, vocational skills and job placement.

In June, the Job Corps community celebrated its 35th anniversary and the Fourth Annual Alpha Awards, sponsored by the National Job Corps Association. The Alpha Awards recognize employers, community organizations and individuals who have contributed to Job Corps in areas such as advocacy, job placement, education, training, promotional service, and enhancing Job Corps' positive visibility, and have shown outstanding leadership on behalf of Job Corps at a center, in a state, or on the national level.

The Missouri Mentoring Partnership of Cape Girardeau, Missouri, was honored with an Alpha Award for Outstanding Community Organization. The Partnership was nominated by the Mingo Job Corps Civilian Conservation Center located near Mingo NWR in Puxico, Missouri. In October 1998, Steve Fowler of the Mingo Job Corps Center and Marge Sullivan of the Partnership established a positive relationship which has since become an invaluable resource to the center.

The Partnership has been active in providing all aspects of the award criteria, including student recruitment, placement opportunities, post placement counseling and financial assistance, and, most importantly, they have mentored Mingo graduates, significantly enhancing their adjustment and continued employment.

Since November 1998, six graduates have taken advantage of the Partnership's services. "The connection has been invaluable in their success," Fowler said. "The graduates are still working and continue to receive the services and support that make them successful citizens in their communities."



Valuable partner. *The National Job Corps Association honored a Missouri group for its commitment to graduates of a Service Job Corps Center. Pictured: (back row, left to right): James Banks and Kerry Hinton of the Service's Job Corps office; Mary Silva, national director of Job Corps; and Richard Schubert, co-chair of the National Job Corps Association. Front row, left to right: Marge Sullivan of the Missouri Mentoring Partnership and Don Riggle, director of the Service's Mingo Job Corps Center. FWS photo: Herman Farrar.*

When the students depart from Mingo, the Partnership provides assistance in areas such as helping with their first month's rent; giving taxi coupons to help get them to work while waiting to purchase a vehicle; taking the students shopping for work clothes; and for one young man, providing monetary support so that he could pay fines and fees to regain his driver's license.

In a recent letter to Senator John Ashcroft of Missouri, Sullivan wrote, "We are consistently impressed with their [Mingo graduates'] training, abilities, and seriousness about making successful lives for themselves. I believe in this program strongly enough to make time in my schedule to serve as a member of the Mingo Job Corps Community Relations Council. As a taxpayer, I believe the Job Corps program is an excellent return on the investment."

*Kerry Hinton, Job Corps Office,
Washington, DC*

Employees Give Russian Counterparts a Leg Up

In another sure sign that the Cold War is long over, Service employees have donated thousands of outdated uniform pants to their counterparts in Russia, who are coping with serious budget shortages.

Eighty percent of the staff on Russian wildlife refuges, or *zapovedniks*, have been laid off. Remaining employees, who have not been paid for months, were told to kill wildlife and to farm refuge ground to feed themselves.

On a recent trip to the National Conservation Training Center, Glenn Carowan, refuge manager at Blackwater NWR, told his colleagues about a refuge manager he knows in Russia who attempted to stop several poachers as they prepared to haul a moose they had killed off the refuge. The poachers ran over the manager with a tractor, breaking both his legs. Another refuge employee shot and killed the four poachers before they could escape.

Upon hearing Carowan's story, Rick Coleman, then chief of the Division of Refuges, publicized the idea of sending outdated but still usable Service uniform pants to Russia so that their Russian colleagues would have serviceable clothing—and one item off their budgets as they tried to do their jobs under harrowing conditions. When the Service uniform changed, many employees were left with new or nearly new pants.

The staff at Great Bay NWR, a former military base with ample storage, agreed to collect and package the donated items, which they accepted through June 1. Steve Kohl, of the Office of International Affairs, arranged for the pants to be shipped this summer.

*Ward Feurt, Great Bay NWR,
Portsmouth, New Hampshire*

Ranch Conversations Aim to Restore the Range



Some of the first multi-agency outreach efforts of the High Plains Partnership for Species at Risk, a cooperative effort initiated by the Service, have generated a series of open meetings involving state and federal agencies and private landowners. These ranch conversations are dialogues between ranchers and biologists dedicated to conserving the lesser prairie chicken, one of many plains species in decline primarily because of habitat lost to cultivation, poor grazing management and herbicide spraying.

Today, with more than 90 percent of the land in the High Plains region privately owned, and more than 70 percent of lesser prairie chicken habitat existing on private land, the Service and its partners arranged the ranch conversations with landowners to explore specific solutions to extensive problems.

“These meetings are the first step towards a larger goal and the lesser prairie chicken is a sort of pioneer, a flagship species, that has been highly profiled locally,” said biologist Stephanie Harmon of the Service’s Ecological Services Field Office in Tulsa, Oklahoma.

The larger goal Harmon refers to is recovering species before the need to list them arises, a preventative measure designed to include everyone affected. The High Plains Partnership will address other declining grassland species including the swift fox, mountain plover, black-footed ferret and black-tailed prairie dog.

Meetings in Oklahoma, Texas, Colorado and New Mexico have served as brainstorming sessions on efficient ways to conserve the

lesser prairie chicken. Typically during the first half of the meeting a Service or state wildlife biologist describes the scientific reality of the situation. The second half of the meeting is devoted to soliciting ideas and response from ranchers and the public.

Service personnel involved in the meetings have found the reaction from ranchers to be very positive.

“The ranchers were genuinely interested in lesser prairie chicken conservation,” said Erich Langer, Service outreach coordinator in Tulsa, Oklahoma. “Most want to do what they can to help.”

Ranch conversations may mark the beginning of a new trend in American thought: that economic viability and environmental responsibility truly depend on one another and that long-term economic health requires sustainable natural resources. As concern for the environment spreads, so will the demand for ecologically sound practices.

Nancy Kaufman, regional director for the Service’s Southwest region, appreciates the significance of the recent ranch conversations.

“All too often in the Southwest,” she said, “conservation is pitted against ranching and agriculture. These ranch conversations are examples of putting the two interests on the same side.”

*Ben Ikenson, External Affairs,
Albuquerque, New Mexico*

Southwestern Tribes Preserve Tradition by Preserving Nature

Long before public land managers coined phrases such as “ecosystem approach” and “habitat conservation plan,” Native Americans possessed an inherent understanding of nature’s delicate balances and the human connection with nature. In 1855, Chief Seattle of the Duwamish Tribe of the Pacific Northwest observed: “What is man without the beasts? If all the beasts were gone, man would die from great loneliness of spirit. For whatever happens to the beasts, also happens to man. All things are connected.”

This belief is reflected strongly in current resource management approaches on many tribal lands in the Southwest; conservation efforts on Native American lands there have been nearly as diverse as the land itself. Reservations in Arizona and New Mexico encompass more than 25 million acres of grassland prairies, desert shrublands, montane juniper woodlands, ponderosa pine and spruce-fir forests, and alpine tundra at the peaks of the southern Rockies; more than 150,000 surface acres of lakes and ponds; and nearly 700 miles of rivers and streams.

Southwest Indian tribes employ more than 100 full-time wildlife personnel to administer a wide variety of programs from game management to endangered species to law enforcement.

“Nearly all of the 83 tribes in this region are working with the Service in one way or another for the benefit of a healthy landscape, for healthy natural resources,” reported John Antonio, the Native American liaison for the Southwest region.

In cooperation with the Service’s Office of Management Authority, for example, Navajo and White Mountain Apache tribes in Arizona monitor the taking of bobcats. By administering programs to fulfill exportation requirements, the tribes stop a large portion of illegal cat pelt trade out of the United States.

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Southwestern Tribes Preserve Tradition by Preserving Nature (continued)



Conservation partner. *Daniel Parker, a White Mountain Apache, stocks fish. Native American tribes in the Southwest administer a number of wildlife conservation programs. FWS photo.*

Many tribes have implemented habitat enhancement projects such as water development, fencing projects, and reseeded of native grasses and forbs, benefitting a variety of wildlife species. In northern New Mexico, Jicarilla Apaches execute controlled burns to stimulate forage for wildlife.

Some tribes manage fish hatcheries or water impoundments to provide sport fish or to restore declining populations of native fish. The White Mountain Apache support native populations of Apache trout; the Jicarilla Apache support native Rio Grande cutthroat populations, endangered by deteriorating conditions in the Rio Grande watershed.

The Hualapai of central Arizona, implemented a native fish restoration project to restore endangered Lower Colorado River species such as the razorback sucker and humpback and bonytail chub, all of which have been jeopardized by the introduction of non-native fish, as well as severe damming and channelization of the Lower Colorado.

Protecting endangered species is a top priority for many tribes. The Zuni Pueblo of New Mexico provide protected habitat for a large population of Southwestern willow flycatchers, endangered neotropical migrants. By restricting livestock access to streamside vegetation, the Zuni protect choice flycatcher habitat.

“Also,” said Steven Albert, Zuni director of fish and wildlife, “we are removing vast amounts of non-native salt cedar, and restoring miles of native riparian habitat for willow flycatchers and other species of birds important to the Zuni culture.”

Many tribes use the same monitoring technology Service biologists use, “which makes gathering data and survey information a lot easier and more consistent,” says Antonio. White Mountain, Mescalero and Jicarilla Apache, Navajo, and Laguna and Zuni Pueblo tribes have used radio telemetry, geographic information systems, and global positioning systems to analyze migrations and habitat use of elk, deer, bighorn sheep, pronghorn antelope, bear, mountain lion, and turkey.

“I feel privileged to work with the Native American tribes in Region 2,” said Nancy Kaufman, Southwest regional director. “They are, after all, the original land managers of this continent.”

As early as 1934, in fact, Navajo and other Indian tribes enacted legislation to protect wildlife in response to many changes resulting from the settlement of the Southwest.

“Railroads were built, market hunting was widespread, land was cleared for farming and the overall increase in the human population brought a gradual decline of wildlife resources thus prompting the need to implement measures to protect wildlife,” said Antonio.

Ben Ikenson, External Affairs, Albuquerque, New Mexico

Nine Partners Dedicate Lower Columbia River Project



Model partnership. *Mae Schultz, Ducks Unlimited's Washington State chair, presents Pacific Regional Director Anne Badgley with a carved decoy award at the dedication of the Lower Columbia River Ecoregion Restoration Project on Ridgefield NWR. FWS photo: Susan Saul.*

Nine partners gathered on the Ridgefield NWR in Washington State on June 10 to dedicate the first two phases of the Lower Columbia River Ecoregion Restoration Project.

Partners pooled financial resources and leveraged \$9.5 million to restore 7,948 acres and acquire 1,041 acres of wetlands. The project benefits the second largest wintering and migratory waterfowl populations in the Pacific Northwest, as well as hundreds of other species, including endangered salmon stocks.

Project partners include the Service, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, Vancouver-Clark Parks and Recreation Department, Clark Public Utilities, regional government, Ducks Unlimited, and the Wertheimer family.

Pacific Regional Director Anne Badgley, speaking at the dedication, cited this partnership as representative of the vigor of the Pacific Coast Joint Venture. In 8 years, it has raised \$200 million and restored almost 100,000 acres.

Susan Saul, External Affairs, Portland, Oregon

The Service and The Conservation Fund: A Natural Partnership

by Jack Lynn
Special to Fish and Wildlife News

Kodiak, Izembek, Pelican Island, Quivira, Big Branch, Blackwater, Canaan Valley, Grand Bay and Lower Rio Grande Valley—all are national wildlife refuges that gained important habitat last year through the Service's partnership with The Conservation Fund, a national nonprofit organization. Current Service/Fund partnership efforts include adding vital habitat for the red-cockaded woodpecker in North Carolina and for the desert tortoise in Utah.

In the past decade, the Fund has helped the Service protect 718,000 acres on 30 national wildlife refuges from Alaska to Florida. "The Service continues as our priority partner in habitat protection and our alliance is a natural partnership," said Conservation Fund President John Turner. Turner was Service Director from 1989 until 1993.

This conservation partnership helped create the nation's 500th refuge at Canaan Valley, West Virginia, when the Fund acquired the initial land for the new refuge. In the far West, the Fund, aiding the Richard King Mellon Foundation, retired 374,000 acres of grazing privileges at Sheldon NWR as a gift to the Service. In partnership with the Service and private philanthropy, the Fund helped purchase 13,000 acres to create Big Branch NWR in Louisiana.

Just across Lake Pontchartrain from Big Branch, the Fund, working with the Service, local residents and officials, donated 18,000 acres to enhance Bon Secour NWR. With its partners and support from the Florida Congressional delegation, the Fund is preserving key lands at Pelican Island, America's first refuge.



Reaping the rewards. *The Conservation Fund has helped the Service to acquire thousands of acres for the National Wildlife Refuge System. Aside from benefitting wildlife, these acquisitions have provided recreational users with unforgettable sites to enjoy, such as this one at Blackwater NWR. FWS photo: Rob Shallenberger.*

"The Fund has the necessary experience and ability to leverage the resources of its diverse partners in ways that add critical habitat to the nation's refuge system," Turner said. "For instance, in Alaska, Anheuser-Busch Corporation, the Orvis Company, the Richard King Mellon Foundation, the National Fish and Wildlife Foundation, the Camp Fire Conservation Fund, the Fuller Foundation, the Weeden Foundation, the Richard and Rhoda Goldman Fund, the Exxon-Valdez Trust, the Kodiak Brown Bear Trust, Wildlife Forever and the North American Wetlands Conservation Act Account all worked with the Fund to add vital land to Kodiak National Wildlife Refuge."

In North Carolina, the state Department of Transportation, the Service, Duke University and the Fund combined forces to protect 9,700 acres that are home to one of North Carolina's largest populations of the elusive red-cockaded woodpecker. The \$16.9 million needed to buy the property came from the state's highway mitigation funds. The property will be used to offset habitat lost through construction elsewhere in the state.

Working with Duke and the Service, The Conservation Fund will manage the area for several years as a working forest—in ways that improve the habitat for the woodpecker—before giving the property to the Service.

The new woodpecker sanctuary is centered in the region that includes Alligator River and Pocosin Lakes refuges. The latter was created by a gift from the Richard King Mellon Foundation in partnership with The Conservation Fund. Local residents and officials see the new refuge as a major addition to the outdoor attractions that now draw visitors from around the world.

The refuge will also be a primary destination on the state's new bird trail aimed at increasing year-round tourism in eastern North Carolina. Tentative management plans include selective timbering to improve the habitat for the woodpecker.

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The Service and The Conservation Fund: A Natural Partnership

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In a growing number of communities, national wildlife refuges contribute to the character of the region by maintaining traditional landscapes. That is especially true along the lower Rio Grande, where the Fund purchased 12,638 acres of wildlife-rich tidal flats, open ponds and brush. The Yturria family, owners of the land for 100 years, sold the property to The Conservation Fund, which in turn transferred it to the Service (see sidebar).

Dan McNamara, Jr., representing The Conservation Fund in Texas, praised the landowners. "By making the property available for conservation they have ensured it will remain an important part of the local landscape and a legacy for Texans of the next century," he said.

With Fund's Help, Service Acquires Important Wetlands

With some help from The Conservation Fund and the Department of Agriculture's Natural Resources Conservation Service, one of the most important coastal wetland ecosystems along the lower Rio Grande corridor—12,638 acres of wildlife-rich tidal flats, open ponds and brush in Cameron County, Texas—became part of the National Wildlife Refuge System in March.

The property, about 10 miles northeast of Brownsville near the Brownsville Ship Channel, was acquired from the Yturria family by The Conservation Fund and transferred to Fish and Wildlife Service. The Natural Resources Conservation Service obtained a 30-year conservation easement on the property. Funding for the acquisition was provided by the Migratory Bird Conservation Commission; the easement was acquired through the Agriculture Department's Wetland Reserve Program, which will help enhance and maintain wetlands on the property.

As the 100th anniversary of the first refuge nears, the National Wildlife Refuge System plays an important role that wasn't envisioned a century ago. Today, refuges not only protect wildlife habitat but also contribute to the economic future and the quality of life of neighboring communities.

A key element of The Conservation Fund's mission is to seek ways that blend economic and environmental goals; working in partnership with the Service not only does both but helps create a national legacy of land and water for future generations.

Jack Lynn works for The Conservation Fund in Arlington, Virginia

"This land has exceptional value to waterfowl, songbirds, and other wildlife native to South Texas," said Larry Ditto, project manager for Lower Rio Grande Valley NWR. "Its tidal flats, scattered wetlands and scrub brush habitats once dominated the Lower Rio Grande Valley and today host an incredible number and variety of wildlife."

In addition to providing essential habitat for an abundance of native species, this property is also part of a larger ecosystem along the Rio Grande and the Gulf of Mexico that provides wintering grounds and stopovers for North America's migratory birds. Several national birding organizations list South Texas as one of the nation's top birdwatching destinations.

Hans Stuart, External Affairs, Albuquerque, New Mexico

Witnessing the Nocturnal Rituals of the Sage Grouse

On a chilly April night a few intrepid souls braved fog and wind at the U.S. Army's Yakima Training Center in central Washington State, bound together by a common mission: to find and collar western sage grouse on the center's shrub-steppe landscape. Once distributed throughout much of the western United States and southern portions of three Canadian provinces, sage grouse have been in decline since before the turn of the century. The Service is trying to halt the decline and avoid listing the sage grouse as an endangered species.

In pickup trucks heavily loaded with capture and telemetry equipment, we cruise the dark, rutted paths of the training center, spotlights in hand. We are headed to several leks—areas where the sage grouse gather at dawn to perform their ritual mating dance—but we spot no birds.

When we arrive at a lek, we pile out of the vehicles and walk through the sagey underbrush. The cold fog shrouds our activity in a quiet intensity. High above the Columbia River, we stare into the frosty darkness for the upright figure of a male bird. A spotlight picks him out; we carefully walk toward the beam carrying a "squawk" box to produce a distracting background noise.

With the light in his eyes the handsome male sage grouse freezes in place. In minutes, state biologist Mike Schroeder's deft handling produces a radio-collared, banded, weighed, measured and blood-sampled bird.

The sage grouse is the largest North American grouse species. Early on spring mornings, male and female sage grouse gather at the leks to mate. The male puts on a spectacular exhibition with long, lapel-like white breast feathers, a fan of white-tipped black tail feathers, and fleshy air sacs on each shoulder. He seems to draw his shoulders up around his head so his plumage all but engulfs his head.

Conservationists Celebrate a Legend



Ritual. During courtship, the male sage grouse puts on a spectacular exhibition with long, lapel-like white breast feathers, a fan of white-tipped black tail feathers, and fleshy air sacs on each shoulder. FWS photo.

He then hunches over, draws in a huge breath, takes a step forward, raises his head, and releases it all with a series of clucks—like water going down a drain—and a loud “pop!” at the end.

Early the following morning as we quietly watch a lek from a polite distance, more than 25 males strut their hearts—air sacs—out. Only a few seemingly uninterested females watch the show beneath them. Only a few dominant males—about 7 percent—will father the offspring.

“I don’t know how the females tell them apart,” biologist Mike Livingston exclaims “they all look the same to me!”

As large portions of the state’s once abundant shrub-steppe ecosystem have been converted for agricultural use and urban development or modified by grazing sage grouse were virtually eliminated from all but 4 of the 16 Washington counties in which they originally existed.

The determined folks out wandering at the Yakima Training Center on that April night also documented the efforts of the Western Sage Grouse Working Group, a partnership of federal, state and tribal agencies working to increase the population and distribution of western sage grouse in Washington.

The Service, the Army, and the Washington Department of Fish and Wildlife have participated in a conservation agreement for western sage grouse at the training center since 1992. The workgroup formed several years ago to join the land resources of numerous other agencies and increase habitat available for sage grouse. The proactive steps envisioned by the working group could help conserve the species before it requires formal protection under the Endangered Species Act.

Chris Warren, a Service biologist from Spokane, heads the working group and assists the Army in nightly outings as part of a long-term research and habitat restoration program the military has been conducting over the past decade for this now-rare bird.

“Human activities in Washington State have placed heavy demands on the sage grouse’s historic range,” Warren said. “At the Yakima Training Center, the U.S. Army and our military allies conduct large-scale, brigade-level maneuver training. That puts great strain on the sage grouse’s habitat and survival.”

Elsewhere in the state, permanent conversion of shrub steppe habitats for crop production, hydro power generation and urban development, as well as less permanent impacts from grazing and recreational activities, have all taken their toll, Warren said.

The working group’s challenge, as they try to assimilate issues of land use and sage grouse life history, is to manage human demands on the land and ensure that enough space is left unfettered for the birds to continue their ancient ceremonies—such as the mating game the biologists witnessed out on the steppe that April night.

Taylor Pittman, Western Washington Field Office, Lacey, Washington



Generations. Service Director Jamie Rappaport Clark (left) chats with Nina Leopold Bradley (far right) and Estella Leopold at a gathering celebrating the life of their father, author and conservationist Aldo Leopold. FWS photo: Carl Zitsman.

More than 150 people gathered at the National Conservation Training Center May 14 and 15 to celebrate the life of legendary conservationist and author Aldo Leopold and to discuss Leopold’s hallmark conservation theme, the land ethic, and how to apply it to land management in the next century.

This year marks the 50th anniversary of the publication of Leopold’s *A Sand County Almanac*, which has been called “the closest text to a Bible the conservation movement has produced.”

Public land managers, biologists, academics, philosophers and representatives of nonprofit organizations—conservationists and Leopold lovers one and all—came together for two days packed with conversation, debate, education and inspiration.

Sponsored by the Service, the Defense Department, the Leopold Education Project and the Aldo Leopold Foundation, the conference got off to a strong start with welcoming remarks from Service Director Clark and other sponsors. Nina Leopold Bradley, daughter of the late conservationist, set the tone for the next two days with her remarks on unity and integration.

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Conservationists Celebrate a Legend

(continued)

“Throughout Aldo Leopold’s life,” she said, “he persisted in his personal, intellectual struggle to better understand the land community and his participation in it.”

Conservation biologist and author Curt Meine bridged the past to the present with a thought-provoking discussion of popular images of Aldo Leopold. Above all, Meine said, Leopold’s wide and profound influence on several succeeding generations is a result of “his capacity to integrate, to bring together fields of knowledge.”

However, Meine pointed out, most readers of *A Sand County Almanac* remain unaware of Leopold’s life story, concentrating instead on his words and on Leopold as a “prophet for the modern environmental movement” and an “all-purpose hero for conservationists.”

“He is less a person than a standard,” Meine said.

Director Jamie Rappaport Clark emphasized the Service’s commitment to Leopold’s principles in her keynote address.

“Government should be responsible for exemplifying the best in land stewardship,” she said. “But it’s not something that should come from a statute or a regulation... For us a land ethic requires a renewed perspective, a progressive attitude on how we look at and care for our natural world.”

For the Service, Clark said, that progressive attitude takes the form of a landscape approach to land management.

“In 1994, the Service adopted the Ecosystem Approach to Fish and Wildlife Conservation, answering Leopold’s call to treat the landscape as a community... I am continually heartened by our folks in the Service who already have ingrained a sound land ethic in their hearts.”

In a break from speakers behind podia, Richard Bodner, a writer and recording artist, brought Aldo Leopold alive during an evening performance. Dressed in 1912 U.S. Forest Service garb, Bodner used poetry, conservation history, philosophy and

Leopold’s own words—from his journals, books and other published works—to bring the fabled conservationist to life.

Bodner captured the essence of Leopold and the audience’s imagination with his casual monologue, weaving in many well-known, and lesser-known, Leopold truisms such as, “We live on a kind of round river, flowing into itself.”

A distinguished panel of conservationists, academics and land managers, as well as Leopold’s daughter Estella, a botanist, brought the conference to a close with a lively debate on integrating public land management and the land ethic into the next century.

Rachel F. Levin, Public Affairs, Washington, DC

Service Loses Two Young Prospects

Two recent tragedies have taken the lives of young people close to the Service.

Jackie Kornish, a co-op student at Great Meadows NWR, died in a scuba diving accident in June. Kornish, 23, a native of Goshen, New York, was a recent graduate of Northeastern University’s School of Journalism in Boston. She worked at Great Meadows under the University’s Co-op Education program, a professional year included in her five-year degree program. She received the Paul Kiehl Environmental Journalism Award at Northeastern in May, just a week before she was converted into a permanent Service position.

On June 15, Paul Starkey, 19, a participant in the Service’s Career Awareness Institute, passed away suddenly of an apparent heart seizure. He was three days shy of his 20th birthday when he collapsed while playing volleyball with his CAI colleagues at the National Conservation Training Center in Shepherdstown, West Virginia.

Starkey was an avid fisherman and hunter with plans to work at Yukon Delta NWR this summer, and with hopes for a career with the Service down the road. Staff at NCTC recently held a tree-planting ceremony in Starkey’s memory.

Fish & Wildlife News will soon feature a “Transitions” column about Service folks on the go. If you’ve got information about someone who has become a project leader, changed regions, programs, field stations or agencies, or retired, send it to:

“Transitions”
Fish & Wildlife News
U.S. Fish & Wildlife Service
1849 C Street, NW, Room 3024
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fax: 202/219 9463
e-mail: rachel_levin@fws.gov

Due to space limitations, we can only accept items in the above categories.

Angling for Fun

Some 450 students from 11 middle schools in the District of Columbia and Maryland turned out June 7 to try their luck at the annual National Fishing Week kickoff on the National Mall. The free catch-and-release fishing day has become a popular local benchmark to symbolically kick off the sportfishing season throughout the United States.

The kickoff is sponsored by the National Fishing Week Steering Committee, a non-profit coalition whose membership includes

a broad range of federal and state agencies, conservation groups, and representatives of the fishing and tackle industries. Focusing on environmental stewardship and fishing education, National Fishing Week is designed to provide fishing skills to young people in urban, suburban and rural areas. The bluegill, bass, channel catfish and koi originally stocked in the Mall pond have since become self-sustaining populations.

*Ken Burton, Public Affairs,
Washington, DC*



A day of fishing is better than... Service Director Jamie Rappaport Clark took some time away from the office to cast a line on the Mall. DOI photo: Tami Heilemann.

The basics. Participants in the National Fishing Week kickoff got a few pointers before trying their hands at fishing. DOI photo: Tami Heilemann.

The "Big E"-xhibit Tells the Service Story



Outreach, New England-style. Region 5 staff members (from left) Tammy Hogan, Ron Essig, Mickey Novak and Linda Morse were among those who staffed the Service's booth at the Eastern States Exposition. Thousands of fair-goers dropped by to learn about Service activities in the Northeast. FWS photo.

Each year, more than two million people visit the Eastern States Exposition, New England's largest fall festival, held in West Springfield, Massachusetts. During the past few years, nearly half of these visitors spent time at an exhibit produced and staffed by Service employees in the Northeast region.

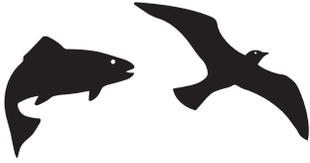
Recognizing the opportunity to reach thousands of people, the regional 100 on 100 outreach team spearheads the development of an annual exhibit for the "Big E." Each exhibit has focused on a different theme such as national wildlife refuges, fishery programs, law enforcement efforts and endangered species recovery. More than 100 employees from the Northeast regional office and field stations located in New England help staff the exhibit.

Past exhibits have featured a life-sized tree with mounted eagles perched in its branches, seized wildlife products, displays on endangered species and migratory birds, and an appearance by Theodore Roosevelt impersonator Jim Foote.

Visitors to the Big E last year had the rare opportunity to see three species of sturgeon—endangered pallid and shortnose sturgeon, and Atlantic sturgeon—together in one tank. This year's exhibit will focus on the work of the Service nationwide.

*Terri Edwards, External Affairs,
Hadley, Massachusetts*

Ecosystem Approach Initiatives



North Florida Team Rallies Around Scrub Jay

The clouds still blushed pink in the April morning sky as a handful of surveyors trudged through the sand among spiky saw palmetto leaves. Elizabeth Souheaver held a small plastic speaker aloft and pressed “play,” broadcasting a raucous squawking towards a nearby stand of palm trees.

A handful of jays promptly appeared to investigate, swooping and diving like the Blue Angels at an air show, while the surveyors peered through binoculars and scribbled their rising tally on clipboards.

Souheaver, who is the manager of Crystal River NWR, joined more than 30 staff from throughout the North Florida ecosystem in the first scrub jay survey on Merritt Island NWR, part of the ecosystem team’s overall effort to restore and manage Florida scrub jay habitat and monitor long-term population trends.

“Scrub habitat is one of the most threatened habitats in the southeastern United States—it’s prime territory for housing developments and golf courses,” said David Hankla, field supervisor for the Jacksonville Ecological Services field office and leader of the North Florida Ecosystem Team. “It’s also home to 23 threatened and endangered species, so conservation work in scrub habitat easily rises to the top of the priority list.”

The team selected the Florida scrub jay, listed as threatened in 1987, as an indicator species for more than 30,000 acres of scrub habitat at Merritt Island NWR. Beginning in 1998, North Florida Ecosystem Team stations began turning back the hands of the successional clock—plowing up unsuitable habitat, removing hardwood species and conducting prescribed burns throughout the management area.

“It was a joint project; some stations would give money to pay for per diem, others provided staff or sent equipment and operators,” said Refuge Manager Ken Litzenberger from Lower Suwanee NWR. “It was a total ecosystem team project.”

Fulfilling the Promise, the long term road map for the National Wildlife Refuge System, envisions refuges as anchors for ecosystem conservation, and cross program cooperation such as this is expected to increase.

To gauge the success of this effort and estimate numbers of jays inhabiting these areas, team members marched through more than 15 miles of scrub habitat, using recorded calls to flush out the jays. The blue and gray birds are known for their piercing call, and many native Floridians recall when these bold jays would visit backyards and feed from their hands.

However, the population has dropped by some 50 percent over the past two decades and continues to decline as land development increases.

“The final estimate was 1,562 scrub jays,” said Merritt Island’s Gary Popotnik, who designed the survey. “We will use this baseline data so that we can begin to follow population trends over the long-term. Over the next decade or so, we may be able to determine if management practices are helping the scrub jay population.”

“Our work is really more than what we do within the boundaries of our stations,



Counting. Elizabeth Souheaver and Joyce Kleen call and tally scrub jays. FWS photo: Eric Eckl.



Threatened but not shy. A Florida scrub jay surveys the scene as a biologist surveys scrub jay habitat. FWS photo: Eric Eckl.

to really measure what we do, we have to measure it in the field,” said former team leader Vince Mudrak from the Warm Springs Regional Fisheries Center in Georgia.

Kyla Hastie, Ecological Services, Brunswick, Georgia

Eric Eckl, Public Affairs, Washington, DC

Exploring Our Past



Depression, Dust and a New Deal for Ducks

Dust Bowl farmers were not the only victims of the “Dirty Thirties,” when a severe drought was drying up vital migratory bird breeding ground across the nation’s mid-section. Migratory waterfowl also suffered from the harsh climate conditions. As the wheatfields of North America dried up and blew away so did many of the wetlands essential to migrating ducks, geese and other waterfowl.

By the early 1930s, the winds brought hunters more dust than ducks; drastic measures were required. President Franklin Roosevelt appointed a special committee in January 1934 to find a means to conserve migratory waterfowl—to create a New Deal for ducks. Headed by Thomas Beck, editor of *Collier’s* magazine, the committee eventually included conservationist and author Aldo Leopold and cartoonist Jay Norwood “Ding” Darling. The Beck Committee urgently requested more funds and better management of the nation’s waterfowl.

With surprising swiftness both occurred that March as Darling was appointed the new chief of the Bureau of Biological Survey, a forerunner to the Fish and Wildlife Service, and Roosevelt signed the Migratory Bird Conservation Act of 1934, also known as the Duck Stamp Act. The act, among other things, provided the government authority to purchase wetland habitat for national wildlife refuges to provide places for migratory waterfowl to breed, feed, nest and rest.

The act did not provide a continuous source of funding so “Ding” Darling came up with a solution, designing the first duck stamp showing two mallards landing in a lush wetland, a scene ironically rare in North America during this period. Six hundred and thirty five thousand of the stamps were sold for \$1 apiece and the program was instrumental in providing a solid financial foundation for migratory waterfowl protection.



Nowadays the Service sells some 1.2 million to 1.4 million \$15 Federal Duck Stamps each year to hunters, stamp collectors, art enthusiasts and other conservationists. The Duck Stamp Program has become one of the most successful conservation efforts, raising more than \$20 million each year—half a billion dollars overall—to purchase wetlands for the National Wildlife Refuge System.

On the 65th anniversary of the Beck Committee and the Federal Duck Stamp, the National Conservation Training Center is commemorating these visionaries who found dollars for ducks in the midst of Depression, recently dedicating the new J.N. “Ding” Darling Lodge, which accompanies the existing Aldo Leopold Lodge in providing a refuge for tired conservationists.

In addition, NCTC recently hosted a special conference on Aldo Leopold’s Land Ethic, a gathering of land managers, conservationists and scholars designed to help reach consensus on further efforts that might be made to preserve the nation’s natural resources even in these times of prosperity and relative abundance of species. (See article on page 25)

Mark Madison, National Conservation Training Center, Shepherdstown, West Virginia

Fish & Wildlife Honors...

Federal Aid Management Specialist Receives "Legend" Award

Lanny Moore, a financial management specialist in the Division of Federal Aid, received the prestigious 1999 Legend Award from the American Recreation Coalition during Great Outdoors Week in June. Moore's "tireless efforts in the financial management arena over the last few years have resulted in the identification and eventual deposit of nearly \$22 million in additional funds into the Sport Fish and Wildlife Restoration program for distribution to state fish and wildlife agencies," said Service Director Jamie Rappaport Clark. "Without Lanny's intervention it is entirely likely these funds would never have been placed in the proper accounts."

Moore has also aided in the creation of numerous industry-government partnerships and he is known in the conservation arena for the "unrelenting diligence and creativity with which he applies his fiscal foresight and skills on behalf of the Sport Fish and Wildlife Restoration Program," Clark said.

Texas Biologist a Star of the Century

For "ensuring the conservation of some of Texas's most valuable natural resources," David Blankinship, senior biologist for the Santa Ana and Lower Rio Grande Valley National Wildlife Refuge Complex, was awarded the Texas Audubon Society's Centennial Award for Conservation. One of only six recipients, Blankinship received the award at Audubon's recent 100th Anniversary Gala in Dallas. Other award recipients included former first lady Lady Bird Johnson.

"Considering we only give them once every hundred years, it's an incredibly prestigious award," says Catriona Glazebrook, executive director for Texas Audubon. Throughout his 16-year career as a research biologist with Audubon, as well as during his tenure with the Service, Blankinship has played a major role in the recovery of two species on the brink of extinction, the brown pelican and the whooping crane.

Nancy Brown, Santa Ana/Lower Rio Grande Valley Refuge Complex, Alamo, Texas

Justice Department Applauds Enforcement Work

At an April ceremony, the U.S. Department of Justice recognized 11 Service law enforcement employees for their success in fighting environmental crime. Attorney General Janet Reno praised those honored as "people who work countless hours to protect something we all cherish."

Special Agent Pat McIntosh, who staffs the Service's law enforcement office in Savannah, Georgia, was recognized for his role in a major chemical contamination case involving mercury poisoning of the state's coastal waters (see article, page 16).

The Justice Department honored Special Agent Kevin Ellis for his work on a case involving a different type of assault on wildlife. Ellis, who is based in Flagstaff, Arizona, investigated four ranchers who hired a bounty hunter to rid their national forest grazing allotments of mountain lions.

Although the ranchers later claimed that the big cats had harmed their herds, Ellis found no evidence of any damage to livestock. The Service's investigation resulted in the successful prosecution of the hired hunter, who killed 20 mountain lions in a four-month period, as well as his four employers, on Lacey Act charges.

The Justice Department also praised the Service's work on Operation Chameleon, which broke up global smuggling networks trafficking in some of the world's rarest and most endangered reptiles. Those honored included Special Agents Kenneth McCloud, George Morrison, Rick Leach, Robert Jarmuz and Samuel Jojola, all of the Office of Law Enforcement's Branch of Special Operations, and Special-Agent-in-Charge Ernest Mayer, who directs that group.

Senior Resident Agent Vance Eaddy and Special Agent Patrick Lund, both of the St. Petersburg, Florida, law enforcement office, and Bruce Weissgold, a former Special Operations intelligence analyst who now works with the Office of Management Authority, were also recognized for their work on this case.

Sandy Cleva, Office of Law Enforcement, Arlington, Virginia

Region 5 Agents Recognized

Special Agent Christopher Dowd of the Division of Law Enforcement in Boston recently received national recognition from the 14,500-member Federal Law Enforcement Officers Association for his role in investigating a major oil spill three years ago.

The law enforcement officers association presented a group achievement award to Dowd and enforcement officers from the Environmental Protection Agency, Federal Bureau of Investigation and U.S. Coast Guard for their investigative work following the 1996 North Cape oil spill off the coast of Rhode Island.

The North Cape oil barge ran aground off Matunuck, Rhode Island, spilling 828,000 gallons of home heating oil. The oil damaged wildlife habitat on Ninigret NWR and killed hundreds of migratory birds, including loons, waterfowl, grebes and gulls.

The corporation responsible for the spill paid \$8.5 million in fines, more than half of which will be used to finance the purchase of land in the area of the spill and natural resource programs in the northeast. The fine is the largest ever imposed for an environmental case in New England.

Dowd's colleague, Special Agent Richard Moulton, was commended by the U.S. Attorney's office in Connecticut for his assistance in cracking an illegal shellfish harvesting ring. Moulton is stationed at the Law Enforcement office in Hartford, Connecticut.

Moulton and several other federal and state law enforcement officers received awards for their efforts in bringing a significant illegal shell-fish harvesting case to a successful conclusion.

In October 1997, conservation officers caught Michael Desmond harvesting clams in a restricted area of Long Island Sound where the shellfish are considered unfit for human consumption. They followed Desmond across state lines, where he intended to sell the tainted clams to a seafood wholesaler.

Fish & Wildlife... In Brief

With assistance from federal agents, Desmond was arrested on various state charges. Following a grand jury investigation, Desmond was also charged with violating the Lacey Act, which prohibits interstate transportation of illegally harvested shellfish. He was sentenced in May 1999 to a 10-month prison term and a \$4,000 fine.

*Terri Edwards, External Affairs,
Hadley, Massachusetts*

Biologist Wins Wildlife Award

John Organ, Ph.D., chief of the Wildlife Division of the Federal Aid Program in Region 5, received the John Pearce Memorial Award at The Wildlife Society's Northeast Wildlife Conference in Manchester, New Hampshire.

Organ works with 13 states in the Northeast region to develop wildlife research and management projects as part of the Federal Aid in Wildlife Restoration Program. The Wildlife Restoration Program returns federal taxes collected on firearms, ammunition, and archery equipment to states to purchase and restore habitat, do research on wildlife populations, and conduct hunter education programs.

In addition to his work in the Northeast, Organ was specifically cited for his national leadership in developing the future of wildlife management, including sponsoring professional meetings and workshops that help biologists explore the historical origins of wildlife management and the influences of an urbanized society.

The award is named for avid outdoorsman and biologist John Pearce, who was deeply interested in forest-wildlife relations. He worked for the U.S. Forest Service and the Fish & Wildlife Service.

*Dee Mazzaresse, Federal Aid,
Hadley, Massachusetts*

*Diana Weaver, External Affairs,
Hadley, Massachusetts*

Passport to Your Wildlife Refuges

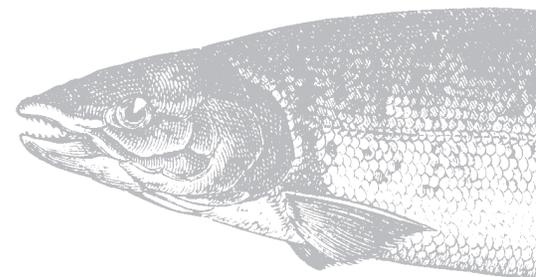
A new souvenir guidebook to national wildlife refuges is now being sold at cooperating association bookstores and refuge visitor centers nationwide. The Blue Goose Passport, named after the symbol of the refuge system, was published by Wilderness Graphics, Inc., with assistance from nineteen refuge support organizations. The Blue Goose Passport contains information on wildlife viewing opportunities at all 514 national wildlife refuges and allows visitors to have a record of their trip to a refuge; many refuges will use ink stamps to "cancel" a visitor's passport. Liberally illustrated with wildlife species, the pocket-sized 256-page passport is hardbound and lists the date each refuge was created and what purpose it serves. Based in Tallahassee, Florida, Wilderness Graphics has assisted in creating indoor and outdoor interpretive exhibits at a number of refuges.

ESA Consultation Handbook Issued

The Service and the National Marine Fisheries Service, in conjunction with other agencies, in June issued the Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act. The handbook is designed to promote flexibility, consistency and a streamlined process for completing consultations. Section 7 of the Endangered Species Act requires all federal agencies to ensure that any action they authorize, fund or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. The handbook provides information and guidelines on the various consultation processes outlined in government regulations and is intended to promote consistent implementation within and between the two agencies. The Service issued a draft consultation handbook in 1994.

Updating the Promise

Several appointments have been made in the Division of Refuges to lead implementation of particular recommendations in *Fulfilling the Promise*. Jerry Olmsted has been appointed law enforcement coordinator, a step towards assessing the "status of public safety and resource protection provided by refuge law enforcement officers," as called for in Recommendation P1. Michael Ielmini has been appointed invasive species coordinator. Recommendation WH7 calls for the system to "strengthen support and action for problem and invasive species." Finally, Jon Kauffeld has been assigned as water rights coordinator to work on "water rights and needs for water quantity and timing in each region," which is Recommendation WH5. In addition, the reformed Refuge Outreach Team, coordinated by Janet Tennyson, met June 15 and 16 to begin revising the refuge outreach campaign as called for in recommendation P9 and to begin preparing for the refuge system centennial. The team includes staff from refuges and external affairs and represents all Service regions. Watch for a thorough report on implementation in the September/October issue of *Fish & Wildlife News*.



Invasive Species: A Call to Arms

As you read this column, a crucial battle is being waged in the Great Lakes. The enemy: the North Atlantic sea lamprey, an invasive species that has wreaked havoc on the lakes' fisheries. The battleground: Saint Marys River on Michigan's Upper Peninsula, likely the largest remaining regional spawning area for this aggressive invader.

Since the 1930's, the sea lamprey has devoured the fish of the Great Lakes, leading to the collapse of lake trout fisheries. In the late 1950's, as part of an international effort, the Service vigorously researched a potential silver bullet to fight back. After testing more than 6,000 chemicals, we discovered a compound that proved deadly to sea lamprey but is generally regarded as harmless to other aquatic life. Use of this lampricide, together with other control methods, has brought much of the sea lamprey population in the Great Lakes in check.

If we have success on the Saint Marys, it will be a substantive feat, giving us hope and inspiration for the present challenge: More than 6,300 non-native species have infiltrated the United States, inflicting \$123 billion in annual damages. Next to habitat destruction, invasive species pose the greatest danger to biodiversity.

I have made it one of my personal priorities as director to lead the charge against invasive species. Few organizations have had as much experience with invasive species on as broad a scale as the Service. We have been at the forefront, fighting kudzu in the southeast, brown tree snakes in the Pacific, and mitten crabs on the west coast, to name just a few of the multitude of invaders across the nation.

The invasive species issue has gained national attention and a growing sense of urgency. President Clinton signed an executive order directing federal agencies to expand and coordinate their efforts to combat the introduction and spread of invasive species. To build on this momentum, we have prepared a battle plan titled "Invasive Species: A Call to Arms," which will enhance the Service's capability and leadership role to effectively respond to present and future invasive species issues. I would like to share some of the plan's highlights.

■ **Service-wide action:** To bring the Service's resources and expertise to bear on the invasive species problem, all aspects of our operations, where appropriate, will integrate invasive species prevention and control efforts in their work.

■ **CITES:** To prevent further invasive species introductions into the United States, the Service will explore authorities to monitor the movement of species under the Convention on International Trade in Endangered Species.

■ **Voluntary measures:** To prevent the introduction of new invasive species and the spread of existing ones, the Service will encourage the pet industry and the American Zoo and Aquarium Association to adopt voluntary control measures.

■ **Training:** To prepare not only our personnel but that of our partners, the National Conservation Training Center will develop a course on invasive species, instructing participants on how to identify the problem and sharing with them the latest control methods and technologies.

■ **Survey of Service lands:** To address the problem on our nation's most valuable wildlife habitat, we will take stock of the situation on our properties. Many of our lands are excellent demonstration areas for control techniques.

■ **A report on "hot spots":** To focus our efforts on the most threatened and biologically valuable areas, we will publish a report that identifies invasive species hot spots and recommends actions to protect at risk natural communities.

Ultimately, the battle against invasive species is not the Service's alone. The success we have enjoyed has been due in large part to collaborative efforts with international, national, state, tribal and private partners. For our efforts to be effective, we must get everyone involved, from those who transport the invaders, to those who live on the infested lands, to academics and scientific professionals who have the know-how to fight back. If we are to turn back invasive species like we have with the sea lamprey at the Great Lakes, we must lead the charge and rally others by issuing a call to arms.



Jamie Peppert Clark

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