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U.S. Fish & Wildlife Service

Fish & Wildlife News

September/October 1999

Babbitt Lauds Voluntary Conservation 2
Another Bird Wings Off "The List" 3
New Division Focuses on Reaching Out 3
Group Studies Towering Concerns 4

Fight Back Against Hackers 5
Gore Salutes a Restored River 9
Feathered Friends Harbinger Hardy Hurricanes 9
A Family Reunion at a Remote Refuge 18

Coming to Your TV: Conservation History 19
Kids Catch Fish and Fun 21
Fire and Grit at NCTC 22
Fish & Wildlife...In Brief 31



Babbitt Honors Texas Landowners for Conservation Efforts

Interior Secretary Bruce Babbitt in September honored a group of Texas landowners for their efforts to conserve the endangered Attwater's prairie-chicken while highlighting new policies that encourage property owners to voluntarily manage their land to benefit declining species.

The eight landowners entered into a Safe Harbor agreement with the Service that guarantees that they will not face any further restrictions under the Endangered Species Act if they take actions to improve prairie-chicken habitat on their property.

With this assurance, the landowners have taken steps to help restore more than 17,000 acres of native prairie that are home to the species. These actions include controlling or eliminating brush through prescribed burning and reestablishing native vegetation.

"The long-term conservation of endangered species cannot succeed without the voluntary partnership of the people who live on and work the land," Babbitt said at a ceremony at Attwater Prairie Chicken NWR near Eagle Lake, Texas. "These landowners are helping to make it possible to snatch a once-abundant species from the jaws of extinction and restore its habitat so that it someday may once again flourish in the wild."

A Safe Harbor agreement provides incentives for private and other non-federal property owners to restore, enhance or maintain habitats for listed species. At the end of a Safe Harbor agreement, landowners are allowed to return the property to its original condition if they choose. This means they may develop, farm, ranch or make any other lawful use of the property, even if such use incidentally results in the loss of endangered species or habitat so long as they at least maintain the original condition. They are required to notify the Service and give it an opportunity to relocate any endangered species expected to be adversely affected by such actions.

"It's a win-win situation for everyone," Babbitt said. "Landowners can improve their land for an endangered species while knowing that they will not face any greater restrictions on using their land in the future."

The Attwater's prairie-chicken is a bird in the grouse family that inhabits native coastal prairie habitat. This chicken-sized bird was once very numerous throughout coastal grasslands of Texas and southwest Louisiana.

The species has declined sharply as its coastal prairie habitat has been destroyed and fragmented. Today less than 1 percent of the species' historic habitat and fewer than 50 individual animals remain. The bird also faces a variety of other threats including parasites, disease, inbreeding and fire ants.

The Service is working with a variety of partners in an aggressive captive-breeding program to provide birds for release into the wild to bolster dangerously small populations. Breeding facilities include the Houston Zoo, the Fossil Rim Wildlife Center, the San Antonio Zoo, Texas A&M University, Sea World of Texas and the Abilene (Texas) Zoo.

Currently, more than 40 Safe Harbor agreements across the nation encompass more than one million acres. North Carolina's Sandhills Safe Harbor Agreement was the first of its kind, protecting 5,200 acres of privately owned land for the red-cockaded woodpecker. Others cover endangered shorebirds in Hawaii and threatened butterflies in Oregon. One of the largest of the agreements covering several counties in Texas will support the reintroduction of one of the world's most endangered falcons, the Aplomado falcon.



Safety net. A newly-signed Safe Harbor Agreement will protect endangered Attwater's prairie-chickens. FWS photo: George Lavendowski.



Guest of honor. Interior Secretary Bruce Babbitt holds an endangered Attwater's prairie-chicken near a prairie-chicken release pen. With him are (left to right) Southwest Regional Director Nancy Kaufman and Safe Harbor participants Frank and Bonnie Reznicek. FWS photo: Nancy Morrissey.

Existing Safe Harbor agreements cover properties ranging in size from 2.5 acres to 825,000 acres, making them attractive to both small landowners and corporate interests. The Service expects to receive hundreds of requests for Safe Harbor agreements in the next few years.

On the Cover:

Graceful symbol. This image of tundra swans at Montana's Bottom Lake NWR graces the cover of the newly-released Fulfilling the Promise document, the blueprint for the future of the refuge system. See article, page 11. FWS photo: Don Hultman.

Aleutian Canada Goose: Another ESA Success Story

Thanks to a concerted recovery effort spanning more than three decades, the Service has proposed to remove the Aleutian Canada goose, one of the first animals protected under the Endangered Species Act, from the list of threatened and endangered species.

Populations of the goose, found only on a few of Alaska's remote, windswept islands and in areas of California and the Pacific Northwest, numbered only in the hundreds in the mid-1970s. Today, biologists estimate there are 32,000 birds and the threat of extinction has been eliminated.

The Aleutian Canada goose joins a growing list of once-imperilled species on the road to recovery, including the bald eagle, the peregrine falcon and the Columbian white-tailed deer.

Identifiable by a distinctive white neck band, the Aleutian Canada goose nests on islands within the Alaska Maritime NWR and winters in Oregon and California. Biologists trace the decline of this subspecies back as far as 1750 when fur farmers and trappers introduced foxes on islands in the goose's Alaska nesting range.

The foxes decimated the birds, which had no natural defenses against land predators on the previously mammal-free islands. Biologists found no Aleutian Canada geese from 1938 until 1962, when a Service biologist discovered a remnant population on remote Buldir Island in the western Aleutian Islands. The first accurate count of the birds in 1975 revealed only 790 individuals. In the early 1980s, biologists found small numbers of breeding geese on two other islands.

For the past 35 years, biologists have worked to remove introduced foxes from former nesting islands and reintroduce geese. Removing foxes benefitted many other bird species on these islands, including puffins, murres and auklets.

As a direct result of these recovery activities, the population increased to 6,300 birds by 1990, enough for the Service to reclassify the subspecies from endangered to threatened.



Success. *Thanks in large part to Endangered Species Act protection, Aleutian Canada goose populations have skyrocketed. FWS photo: Glen Smart.*

The overall population of Aleutian Canada geese is four times greater than the recovery goal established by the Service. It is on the strength of recovery in the western Aleutians that the Service bases its proposal to delist this subspecies.

If the Service decides to delist the Aleutian Canada goose, biologists will monitor the population for five years. The Service will pay particularly close attention to the small number of geese that nest in the Semidi Islands and winter on the north coast of Oregon.

Although the goose would no longer be protected under the provisions of the Endangered Species Act, it would still be protected under the Migratory Bird Treaty Act.

*Cindy Hoffman, Public Affairs,
Washington, DC*

Conservation Partnerships Division Established

Director Jamie Rappaport Clark recently approved establishment of a new Conservation Partnerships Liaison Division in External Affairs.

"The idea here was to create an office that could effectively manage the Service's support for two important external, but Service-related activities, the Sport Fishing and Boating Partnership Council and the new Recreational Boating and Fishing Foundation," said Clark. "At the same time we will be able to assist other Service offices in developing partnerships with outside conservation groups and organizations."

Phil Million, former special assistant to the Director for conservation partnerships, will head the division. Staff will include Sport Fishing and Boating Partnership Council Coordinator Laury Parramore, program analyst Linda Potter and secretary Virginia Takang. The position of Recreational Boating and Fishing coordinator was advertised recently and is expected to be filled soon. The division eventually will be located in the Webb Building in Arlington, Virginia.

The Sport Fishing and Boating Partnership Council was created in 1993 as a federally chartered advisory board to counsel the Director and the Secretary of the Interior about recreational boating and fishing issues.

"The council has been a real force for aquatic resources conservation since its inception and is a catalyst to increase communications and consensus on a host of tough issues among groups representing industry, government, and individual anglers and boaters," said Assistant Director for External Affairs Tom Melius. The 18-member council currently is chaired by Helen Sevier, chief executive officer of the Bass Anglers Sportsman Society.

The Recreational Boating and Fishing Foundation was formed in 1998 to implement the five-year, \$36 million National Outreach and Communication Plan to increase boating and fishing participation and promote conservation and the responsible use of aquatic resources as mandated by the 1998 Sportfishing and Boating Safety Act.

Conservation Partnerships (continued)

The nonprofit foundation is governed by a 20-member board which recently hired Bruce Matthews as its president (*see article in Fish & Wildlife News, July/August, 1999*). Matthews, who was information and education chief for Michigan's Department of Natural Resources, is recruiting a five-person staff. Chairing the board is Tom Bedell, president of Pure Fishing (formerly Outdoor Technology Group).

"It's a busy time with the foundation coming rapidly online and the partnership council addressing a recent Service charge to mount a major one-year effort with recreational fishing stakeholders to provide input for a strategic plan to guide the National Fish Hatchery System," said Million. "I hope the division also will be able to contribute to the development of stronger national partnerships in other areas to help advance the Service's conservation mission."

Correction

Due to an editing error, the following paragraph was omitted from the "Georgia Case Secures Successful Endangered Species Protection" article on page 16 of the July/August issue:

"The Service's Brunswick, Georgia, Field Office provided the scientific evidence needed to successfully charge the company under the Endangered Species Act. Ecological Services biologist Greg Masson found mercury in shellfish, fish, crabs, and shrimp taken in coastal waters and in the area's birds, including wood storks. He concluded that mercury levels detected in these large, long-legged wading birds had disrupted their normal breeding patterns—an impairment that constitutes an illegal take under the Endangered Species Act. Wood storks, which feed upon small fish, have been protected as endangered under that law since 1984; only about 5,000 pairs breed each year."

The *News* regrets the error.

Communications Towers Raise Concerns

The Service is leading an effort to take a renewed look at one of the least understood or publicized causes of migratory bird deaths: collisions with radio, television and telephone towers.

Scientists believe that more than 4 million birds are killed every year in North America in collisions with communications towers, but more research needs to be done to document the full extent of the problem and to explore ways to minimize deaths. Migratory songbirds may become confused by the lights on towers, "abandoning their reliance on the stars or their own internal compasses. Spiraling aimlessly around the towers, they collide with guy wires, the towers themselves, other birds or the ground," said Dr. Albert Manville, Service wildlife biologist and co-chair of a recent workshop on avian mortality at communications towers.

The Service co-hosted the groundbreaking, first-of-its-kind workshop August 11 at Cornell University to chart the future course of research and policy on avian tower collision mortality. The workshop brought together more than 100 of the world's leading ornithologists, representatives from federal and state agencies, industry and conservation organizations and established research priorities for a newly-formed Communications Tower Working Group. The meeting was covered extensively by local and national media.

In the age of telecommunications, a proliferation of tall cellular telephone, television and radio towers has led to growing concerns in the scientific community that entire migratory bird populations could be in jeopardy.

Researchers have known for years that tall towers pose a threat to migratory birds. Published accounts of birds striking tall, lighted structures such as lighthouses—although often anecdotal—appeared as early as 1880. One Service estimate in the 1970s placed the number of birds killed at 1.4 million birds per year. That estimate was based on the 1,100 tall towers then in existence.

Today, there are nearly 49,000 towers greater than 200 feet in height, and industry reports indicate there may be as many as 100,000 new towers built in the next decade. Because of present Federal Communication Commission mandates to digitize all television stations by 2003, at least 1,000 of these new towers will exceed 0.2 miles in height, creating a potentially serious threat to birds because taller towers require more lighting and guy wires, increasing the probability of fatal bird collisions.

Bird species vulnerable to communications towers comprise nearly 350 species of neotropical migratory songbirds — thrushes, vireos and warblers seem the most vulnerable — that breed in North America in the spring and summer and migrate to the southern United States, the Caribbean or Latin America during the fall and winter. These species generally migrate at night and appear to be most susceptible during their migrations to collisions with lit towers on foggy, misty nights with low cloud ceilings.

All towers greater than 199 feet above ground are required by the Federal Aviation Administration to be lighted for purposes of public and pilot safety. An unknown number of smaller towers are also lighted.

Manville is optimistic that the workgroup will eventually uncover solutions to the hazards of lighted towers.

"We're at the beginning of a long journey. We need to determine the magnitude of the problem, do a thorough analysis and clearly identify ways to reduce bird deaths. But we've made progress in defining research needs and have a working group in place to implement the protocols we identify," he said. "I'm confident this work will shape the course of future policy and prevent future bird deaths."

*Chris Tollefson, Public Affairs,
Washington, DC*

Service Images Hit CD



Image is everything. A compact disc containing more than 100 digital Service photos will be sold at several heavily-visited refuges. FWS photo.

It's becoming a digital world—and photographic images are no exception.

During the last several years, the demand for high quality wildlife images has skyrocketed, spurred by heightened outreach efforts, implementation of the Service's publication design standards and a burgeoning World Wide Web publishing effort.

In order to meet this demand, the office of Public Affairs, the National Conservation Training Center and the Division of Information Resources Management undertook a project to establish a digital image library—a catalogue of images scanned onto computers or shot using digital cameras—and produce a compact disc collection of the Service's most popular photographic images. The CD, entitled "Highlights," contains 103 of the photos most often lent by the Service's national image library.

A second CD, entitled "Working for Wildlife," brought together 100 photos showing Service employees at work in a wide variety of settings. This collection was developed primarily for an internal audience, such as employees working on outreach projects, and for print publications and interpretive exhibits. The Service distributed these CDs widely to regional and field offices with the intention that every employee have access to both discs.

As part of a test marketing effort, Friends groups at four national wildlife refuges with high levels of public use soon will offer the "Highlights" CD for sale at a nominal price—likely under \$10. The CD will be for sale at San Francisco Bay NWR in California, Blackwater NWR in Maryland, J.N. "Ding" Darling NWR in Florida and Bosque del Apache NWR in New Mexico.

Other CD image collections are in the works; the next will feature a collection of art depicting a variety of fish species by wildlife artist Duane Raver. Another, which Region 1 employee Cynthia Barry and California/Nevada Operations Office employee John Engbring are compiling, will offer outstanding images of the Klamath Basin in California and Oregon.

For additional information check out the Service's online image library at <http://www.fws-nctc.org> or contact Elizabeth Jackson in Media Production at NCTC at 304/876 7675.

*Craig Rieben, Public Affairs,
Washington, DC*

Did you know...

The Service has 20,000 Web pages posted on the Internet... About 15 percent of Service offices produce their own Web pages.

Don't Get Hacked

Question: What has 15,000 fingers, a warped sense of humor and the ability to embarrass the Service?

Answer: About 1,500 computer hackers testing our ability to keep them from replacing our official Web pages with... ugh... inappropriate pages.

We don't know how many people are actually testing the electronic locks on the Service's Internet site, but a few have already been successful. If you saw what appeared in place of the National Wetlands Inventory Home Page on July 8, you would have seen why the Service is so concerned about guarding passwords.

"Hope all of you .gov animal conservationists like this..." taunted the as-yet unknown hackers. The misspelling of "conservationists" was typical of a hacked site, according to Bill Brooks, chief of the Service's Division of Information Resource Management, but the very-graphic graphic drew most of the attention anyway.

Web pages are a great way to communicate information to the general public and our specialized audiences—state natural resources agencies, non-government organizations, and any individual who has Internet access and is interested in Service issues. Every Service office is encouraged to create its own Web page and soon, if you know WordPerfect you will be able to publish on the Internet (see next article). Publishing reliable information, written in clear, plain language and combined with appropriate photos and graphics, garners the right kind of attention.

What you say on your Web page is what the customer gets; no newspaper or television reporter spins the story, Brooks said, making the Web an ideal way to communicate directly with our constituents.

"Unless, of course, we fail to protect our passwords or computers, allowing someone outside the Service—a hacker—access to our systems, as happened on July 8," he said.

continued on page 6

Don't Get Hacked (continued)

Brooks reminded potential Web publishers that posting to Web pages is akin to speaking in front of a local Rotary Club or tour group in uniform. "What we say on our Internet sites is official Service information, and we have to protect the credibility of the agency's image," he said.

Though computer security procedures are a little cumbersome at times, Brooks said, we've learned that anything valuable is worth protecting—and our credibility and image on the Internet are very, very valuable.

Brooks emphasized that individuals can safeguard their own PCs by protecting their passwords.

"Pick words that are not in the dictionary and include a number, such as 'hot57chevy,'" he said. "The bad guys have dictionary checkers that can try every word in the book... so pick a password that is not in the book."

Brooks also advised that employees close their e-mail when they leave their computers so no one can send a message in their name that might include improper remarks. And though computer viruses account for less than 10 percent of the total losses related to information security, Brooks said it's easy to protect against them.

"If you don't have a virus scanner on your PC, don't open files or use floppy disks from untrustworthy sources," he said.

For more information on Web publishing, contact your regional or programmatic Web Publishing Council representative (see list in next article). For more information on computer security, contact your IRM coordinator or system security administrator.

*Charlie Grymes, Public Affairs,
Washington, DC*

Help for the "Web-challenged"

Q: I keep hearing that the Internet is a great outreach tool but I don't understand this Web stuff. How can I become a Web publisher?

A: You will be able to use WordPerfect to fill in the blanks on a template—an online form—which will provide basic information such as station name, address and resource responsibilities. You will be able to post this form after it is reviewed by your representative to the Service's Web Publishing Council (*see list*), thereby creating a Web page for your station. Your project leader will determine how much additional information should be posted, and how much outreach to do via the Web in addition to other methods—brochures, maps and press releases, for example.

Q: Can we afford all of this Web publishing?

A: The Service is committed to outreach...we can't afford *not* to explain who we are and what we do if we expect to carry out our mission. Fill-in-the-blank forms should take no more than an hour to complete, and larger offices with major outreach initiatives may discover that Web publishing can reduce costs for printing and mailing documents.

Q: Now that I know I can be a Web publisher, what's next?

A: Our official Web sites must be organized to communicate key messages to target audiences. Each regional director and assistant director has a Web Publishing Plan (a Servicewide plan is in the works, too) and a representative on the national Web Publishing Council to coordinate efforts and share ideas. However, the real initiative will stay with field offices. Each office has the opportunity—and the responsibility—to determine what to say on the Internet about its activities, when to say it and how much information is enough.

Q: Will there be enough security?

A: Forgery in electronic communications is possible, just as it is with material on paper. The Service deals with some controversial issues, and we'll need to make sure our Web sites are distinctive. Through our logo and other tools, we will try to ensure that the public is not confused by imitators.

*Charlie Grymes, Public Affairs,
Washington, DC*

Web Publishing Council Regional Contacts

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Habitat Restoration and Exotic Species: Two Service Programs Pitch In

On the edge of the Grand Canyon, the Hualapai Tribal Council and the endangered southwestern willow flycatcher have the same problem: native plant communities are being overrun by a tenacious exotic tree called saltcedar.

For the flycatcher, this means a loss of vital habitat. For the Hualapai, this means a loss of plants important for food, medicine, crafts and religion.

This scenario is playing out across the country. A host of exotic plants and animals flourish today, causing severe ecological damage. More than 30,000 non-native species live in the United States and account for over \$123 billion a year in economic losses, according to a recent study by ecologists at Cornell University.

"These species arrive in a variety of ways and once here have no natural predators to keep their populations in check, allowing them to spread rapidly," said Sharon Gross of the Division of Fisheries. Gross is a coordinator for the multi-agency Aquatic Nuisance Species Task Force.

The problem has become so prevalent that on February 3, 1999, President Clinton signed an executive order aimed at preventing the introduction of invasive species, providing for their control, and minimizing their economic, ecological and human impacts.

As a component of their habitat restoration efforts, the Service's Coastal and Partners for Fish and Wildlife programs have been working to manage exotic species. Partners for Fish and Wildlife provides financial and technical assistance to private landowners to help them restore degraded wildlife habitat on their property.

The Coastal Program is a cooperative effort with other federal agencies, state and local governments, land trusts and private partners to protect and restore coastal habitat on private and public lands.



Unwelcome guest. Combating exotic invasive species such as saltcedar is a top priority for the Service. FWS photo: Dan Dinkler.

In many cases, restoration projects involve removing or managing exotic species. Examples of the work of both programs include:

- Working with the Hualapai Tribal Department of Natural Resources to remove saltcedar and restore the native vegetation in Arizona.

- Working with the Washington State Department of Fish and Wildlife on the monitoring and management of the European green crab.

- Controlling melaleuca, Brazilian pepper, Australian pine and many other damaging species in Florida.

- Working to reestablish native fish species in Maine that have been affected by populations of nonindigenous bass.

The work of the Coastal and Partners programs goes beyond individual restoration projects; program staff also provide technical assistance to the public and other agencies for eradicating non-native species and on the importance of native species in the natural landscape. Examples of technical assistance include developing invasive species tracking systems, developing native plant display gardens, hosting workshops on native species and many other activities such as:

- In California the Coastal Program has been working with the San Francisco Estuary Institute on "Strategies for San Francisco Invasive Species," an initiative to develop strategies for invasive species management and learn more about effective control techniques.

- In Montana, the Partners program has initiated the Blackfoot Ecosystem Demonstration Weed Management Area. Service biologists are bringing together land management agencies, county weed control officials, state agencies, and private landowners to develop and implement a cooperative, integrated approach to vegetation management.

"We may never fully eradicate exotic species in the United States, but we must try to reduce negative effects on our ecosystems," said Benjamin Tuggle, chief of the Service's Division of Habitat Conservation. "These are just a few examples of the many activities that the Service is involved in through Partners for Fish and Wildlife Program and the Coastal Program. Working with others we may be able to get a better handle on the problem and move toward eliminating some invasive pests."

Don MacLean, Division of Habitat Conservation, Arlington, Virginia

Celebrating Half a Century of Hunter Safety



Safety counts.
Mandatory hunter education courses have reduced hunting accidents and made the sport safer for everyone.
FWS photo: Mike Hemming.

Hunting is a safe sport and it is getting safer — and hunter education deserves the credit.

Fifty years ago New York became the first state to mandate hunter safety classes for youngsters ages 14 and 15. The goal was to reduce hunting accidents.

Since then all states have developed a hunter education program and many lives have been saved. Every state keeps data on hunting accidents and statistics show a reassuring downward curve in hunting accidents that kicked in right after adoption of formal hunter education programs.

The International Hunter Education Association celebrated New York's pioneering program by holding its annual meeting in Buffalo last summer. The association is the professional organization for the 63 state and provincial conservation agencies and the 65,000 volunteer instructors involved in hunter education in North America. Since 1949, volunteer instructors have certified more than 20 million students.

The Service became formally involved with hunter education when amendments to the Wildlife Restoration (Pittman-Robertson) Act earmarked half of the excise taxes on handguns and archery equipment for hunter education and shooting ranges.

"We have a genuine commitment to continuing the Fish and Wildlife Service's involvement in hunter education," said Tom Melius, assistant director for External Affairs, during the plenary session at the IHEA meeting.

The Service has encouraged states to go beyond safety and include more encompassing education concepts to improve outdoor ethics, recently facilitating the development and adoption of standards for all hunter education classes in North America. Endorsed by state fish and wildlife directors, the standards establish knowledge- and skills-based objectives for hunter education courses.

"If a student walks away from the class and doesn't know the safe zones of fire, for example, then we have failed in our job," said Steve Hall, chair of the IHEA standards committee and conservation education director for Texas Parks and Wildlife. Continuity among classes is important, Hall said, because all states recognize and reciprocate each other's hunter certification processes.

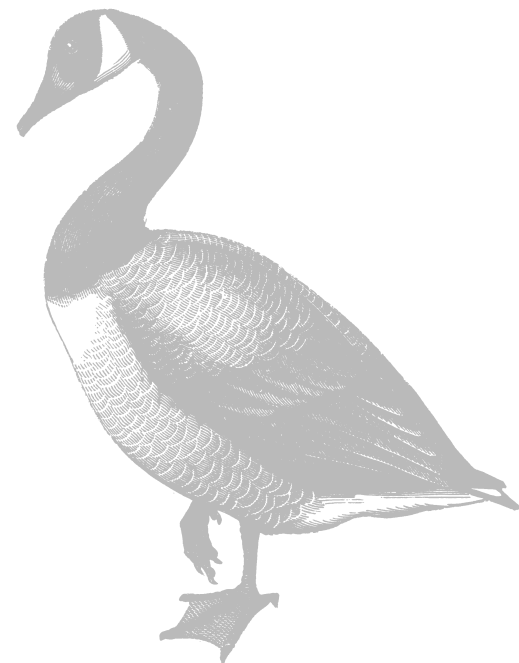
The challenge for hunter education is to change with the times, said Dr. David Knotts, president of IHEA. Knotts identified lack of hunting access and changing demographics as the forces that demand change.

But change also brings opportunity. "More and more women are finding it is okay to be hunters," said Sally Jones of the National Wild Turkey Federation and one of the speakers at the IHEA meeting.

"In a time when hunting is under fire, it is more important than ever for hunters to be knowledgeable, proficient and respectful in their sport," said Melius. "The Service intends to continue to promote hunting and hunter education."

Elizabeth Slown, Federal Aid, Albuquerque, New Mexico

Editor's note: National Fishing and Hunting Day, September 25, celebrates the personal and financial contributions of this country's 40 million hunters and anglers.



Vice President Announces Connecticut River Funding



Celebration. Service officials and Vice President Gore attended an event commemorating the Connecticut River's designation as an American Heritage River. Pictured from left to right with the Vice President are Ron Howey, program supervisor for Fisheries-North; Mike Bartlett, supervisor at the New England Field Office; and Northeast Regional Director Ron Lambertson. FWS photo.

Vice President Al Gore recently joined a crowd of more than 300 people in New Hampshire to celebrate the designation of the Connecticut River as one of 14 American Heritage Rivers. Gore announced at the riverside event that more than \$800,000 in federal funds will be available for flood damage control, visitor center construction, a salmon study, grants to help farmers find markets for their products and other projects in the Connecticut River watershed.

More than 40 Service employees devote their time and expertise to projects in the Connecticut River ecosystem. The Silvio O. Conte National Fish and Wildlife Refuge and the Atlantic salmon and American shad restoration programs most visibly demonstrate the Service's presence on the river.

The Connecticut, New England's longest river, flows more than 400 miles from the Canadian border to Long Island Sound, draining 11,560 square miles in four states—Connecticut, Massachusetts, New Hampshire and Vermont. The river in large part has defined the historic, environmental and economic character of the region, which is home to 2.3 million people.

Northeast Regional Director Ron Lambertson attended the event along with several other Region 5 officials. Also participating were Governor Jeanne Shaheen of New Hampshire; the Environmental Protection Agency's regional administrator for the Northeast; the executive directors of the Connecticut River Joint Commissions, Inc., and Connecticut River Watershed Council; and representatives of numerous other federal and state agencies, conservation groups and communities along the river.

*Terri Edwards, External Affairs,
Hadley, Massachusetts*

And Now the Weather Forecast... Chirp, Chirp

Weather forecasters tracked the path of Hurricane Bret, which pounded southeastern Texas with wind and rain in late August. At Laguna Atascosa NWR near Brownsville, neotropical migratory birds also may have served as harbingers of the approaching storm. Several days before the hurricane struck, Refuge Manager Stephen Labuda noticed heightened activity at the bird feeder that hangs outside his office.

"For the last six to eight weeks it has been visited regularly by two or three green jays, and nothing more. Just before the storm, however, there were nine green jays, two golden-fronted woodpeckers, two groove-billed anis, and three white-tipped doves," Labuda said. "The sudden increase in numbers and species of birds present and their feeding frenzy may have had nothing to do with the approaching would-be hurricane. Then again, it could have been telling us something."

As a biologist and trained observer, he said, he has spent his life watching wildlife, especially birds and trying to interpret their behavior.

"I can tell you I've seen this same exact behavior before on at least four other occasions, all just before hurricanes hit," he said.

Hurricane Bret roared ashore in Texas on August 21. After hugging the coastline the storm made landfall some 30 miles north of refuge headquarters.

"What remarkable accuracy these feathered friends displayed!," Labuda said. "They predicted a direct hit with three days advance notice at a time when the National Weather Service showed only a 10 percent chance of the storm's coming all the way up to South Texas."

Damage to the refuge itself was minimal—mainly wind damage to buildings, signs and fences. There was no apparent, long-term damage to the birds' habitat, Labuda reported. He remains certain that the birds sensed the approaching storm.

Potomac River Day Celebrates Stewardship on the Water



River day. *Acting Deputy Director Marshall Jones announced new Service participation in helping to restore the Potomac River. Friends of the Potomac photo: Karen Zachary.*

As part of a cooperative effort to preserve the natural and cultural resources of the Potomac River, the Service joined forces a year ago with federal and state agencies, private organizations, and members of Congress to assist the Friends of the Potomac in its initiative to restore the river.

The Service will step up its role in Potomac River restoration by assisting river advocates through the National Conservation Training Center, located on the Potomac in Shepherdstown, West Virginia.

The program, Leadership Potomac, will kick off in the fall of 2000 at the training center as 50 representatives from various organizations around the Potomac Basin begin a series of four 2-day meetings.

At Potomac River Day, held July 30 on Theodore Roosevelt Island near Washington, DC, acting Service Deputy Director Marshall Jones announced the new initiative.

"This program will be a new approach to watershed leadership," Jones said, "and will draw on the experiences of community leadership programs... around the United States."

Potomac Leaders who participate in the program will learn facts and figures about the river and the people who live in its watershed, and will study a variety of subjects from agriculture to urban development to gain a better understanding of what stewardship of the Potomac will entail in the new millennium.

In July 1998, President Clinton designated the Potomac and 13 other rivers nationwide as American Heritage Rivers, part of an initiative designed to help communities restore and revitalize their rivers and waterfronts. The Friends of the Potomac serves as the lead community organization for the Potomac American Heritage River initiative and is committed to a variety of activities aimed at preserving the river's heritage.

The group includes business and community leaders, local elected officials, experts in river basin issues, non-profit organizations and private citizens from throughout the Potomac River watershed, which includes four states and the District of Columbia—a total of 15,000 square miles.

Jones emphasized the Service's long-standing commitment to conserving, restoring and revitalizing the Potomac River watershed through its participation in more than 50 projects over the last 10 years. Jones said that fisheries restoration in the Potomac watershed continues to be one of the Service's main objectives.

"In the Potomac, fish will be free to migrate from the sea, through the Chesapeake Bay, and to Great Falls [Virginia], when Little Falls Dam, the first dam on the Potomac River, is retrofitted with a fish passage next month," Jones said. "This will provide 10 additional miles of spawning habitat for American shad."

American shad populations have declined so precipitously that both Virginia and Maryland imposed shad fishing moratoriums in the Chesapeake Bay. The Service is currently working with local and national groups to remove other Potomac River barriers upstream in West Virginia.

The Friends of the Potomac recognized the Partners for Fish and Wildlife Program during the event as they presented an award to the Headwaters Riparian Partnership, a cooperative effort between West Virginia farmer Lyle Tabbs and the Service's West Virginia Field Office, the Agriculture Department's Natural Resources Conservation Service, and the Interior Department's Leetown Science Center. John Wolflin, project leader at the Chesapeake Bay Field Office in Annapolis, Maryland, accepted the award on behalf of the Service.

Rachel F. Levin, Public Affairs, Washington, DC

Meet the New Refuge System Leadership Team

Jim Kurth and Greg Siekaniec came on board as new chief and deputy chief of the Division of Refuges in early June, completing the leadership roster for the 93-million-acre National Wildlife Refuge System. On July 26, Kurth, Siekaniec and Assistant Director for Refuges and Wildlife Dan Ashe sat down with Fish & Wildlife News, other members of the press and refuge system stakeholders for a free-ranging discussion of the current situation and outlook for the refuge system, which is one of Director Clark's four resource priorities. Here are some highlights of their conversation.

Dan Ashe: These are good times for the National Wildlife Refuge System, maybe it wouldn't be too bold to say they've never been better. The Keystone conference [of refuge managers, stakeholders and other Service employees last October] was a huge success and led to *Fulfilling the Promise*, the collective Service vision for the National Wildlife Refuge System. So overall, there are reasons to be very optimistic as we look forward to the 100th anniversary in 2003.

Jim Kurth: I agree that maybe these are the best times for the system, but they are certainly not the easiest times for the resources we protect. That's why it's so important to have this vision. *Fulfilling the Promise* is a very centrist American conservation ethic. [It says] that we're willing to take care of the needs of wildlife and we're willing to set aside special places, but that the American people want to be able use those resources and enjoy their wildlife heritage when it is compatible with the purposes of the refuge system.

Question: Jim and Greg, what perspectives do you bring from Alaska?

J.K.: The whole Service approach to conservation is an ecosystem approach, and the Alaska refuges are good examples of that. The Alaska refuges are sometimes whole ecosystems unto themselves, and the fisheries and wildlife resources they support are extremely important to the state's economy and the subsistence of the 220 Native American tribes, so we are used to working with partners across the landscape.



The state of the system. Greg Siekaniec (back to camera), Dan Ashe (center) and Jim Kurth speak to members of the media and stakeholders about the refuge system. FWS photo: Eric Eckl.

Greg Siekaniec: Acting as a system has never been more important. At Izembek, I used to send birds up to Arctic for nesting that would return to Izembek before they headed off to Washington state, California and Baja, Mexico. When I was discussing the impact of the proposed road through the refuge with Congress, the message that really delivered was the system message — it was important to protect these refuges because wild critters were depending on them, as a system, to be there.

How are partnerships with stakeholders evolving?

J.K.: It's hard to imagine having a closer association with some of these groups. Audubon has been with us since the Pelican Island days. Many refuges owe their origins to partners — citizens established the National Wildlife Refuge System. I hesitate to say that they will be with us more because they have always been with us.

D.A.: The refuge system is certainly becoming more willing to communicate and discuss things with our partners. In the past we only put regulations out for public comment, but now we are taking that extra step and putting refuge management policies out for public comment as well.

G.S.: At the local level, both the conservation comprehensive planning process and the compatibility determination process encourage involvement from partners.

How are you going to carry out the wilderness recommendations in *Fulfilling the Promise*?

D.A.: The Service has some of the best wilderness managers in the world, but we can make a much greater contribution to wilderness protection. Having individuals like Jim Kurth and Greg Siekaniec at the helm of the refuge system provides us with a greater level of experience and leadership on wilderness issues than we have had in a long time. We are poised to make great progress.

What goals do you have for the Division of Refuges?

G.S.: Obviously, the day-to-day operations will largely hinge around *Fulfilling the Promise*, but we have to be alert and take advantage of opportunities as they arise — such as the Vice President's Clean Water Action Plan and other initiatives. These things can become tools to achieve some of our *Promises* goals and become, to quote [former Washington Office Refuges Division employee] Mike Boylan, “an exceptional system rather than a system of exceptions.”

Meet the New Refuges Team (continued)

D.A.: I want to encourage the trend of field people stepping up to the plate and coming into Washington. People are starting to realize that if they come to Washington and help us run the system, they're not going to get stuck here and spend the rest of their days commuting in heavy traffic. Look at the incredible contribution of [former Refuges Deputy Chief] Don Hultman, who came in for a year and was one of the principle forces behind *Fulfilling the Promise*, and then returned to Minnesota.

"It started with one guy, with one boat and one dollar a month back at Pelican Island. Look how far we've come."

Refuge System Chief Jim Kurth

What obstacles do you anticipate? This is an ambitious agenda.

D.A.: When you consider the amount of dollars and staff that we have to manage the system, it's sobering to say the least. Also, some of these things are complicated — they're just plain hard to do, such as being more strategic about growing the system... if there was an easy way, we would have done it a long time ago. That being said, the Service is an expert at doing a lot with a little and we're going to go at this with a dogged and methodical approach.

J.K.: It started with one guy, with one boat and one dollar a month back at Pelican Island. Look how far we've come. I don't think there is any stopping this organization from becoming an even more significant part of American conservation.

Prairie Roots of the Ecosystem Approach

A symphony of rustling grass, rumbling tractors and the piccolo calls of redwing blackbirds blew in with the June breeze as Steve Kallin, manager for the Windom Wetlands Management District, showed off a patch of Minnesota prairie. With satisfaction, he pointed to the advancing native grasses and retreating exotic thistles and weeds.

Suddenly, a frightened mallard hen, wings pounding, erupted from a clump of tall grass at Kallin's feet and streaked across the marsh. He bent down and pulled aside the tall stalks to reveal a hidden nest full of eggs.

A slow smile spread across Kallin's face. "Not bad for an area that was plowed black soil just a couple of years ago," he said.

Kallin and many others in the Service believe that the conceptual roots of the Ecosystem Approach to Fish and Wildlife Conservation can be found out on the prairie, where there is a well-rehearsed tradition of diverse interests working together to make a difference. For example, Windom WMD participates in a loose coalition of agencies, conservation groups and sporting clubs known as the Heron Lake Restoration Association. Together they purchase and restore wetlands and upland prairie in the Heron Lake watershed, an important migratory stop for canvasback ducks and other waterfowl.

"There are really just two things we have to do on the prairie — restore wetlands and grow grass," said Don Hultman, refuge supervisor for Minnesota and northern Iowa. "But it happens the same way it was lost, little by little, piece by piece, year by year."

The ecosystem approach calls for all programs and partners to come together in holistic, landscape-based conservation efforts. Windom WMD and its partners strategically acquire land in crucial locations and adjacent parcels around the lake's watershed. Service biologists now plant native species which provide habitat and forage for a broad variety of wildlife instead of the domestic species once selected to provide optimal bird nesting cover.

To protect aquatic vegetation and preserve water quality in Heron Lake, state fisheries biologists have removed thousands of non-native carp and installed a fish barrier to prevent their return.

An ecosystem approach also demands good community relations. Windom WMD manages more than 50 waterfowl production areas in 12 counties, meaning that Kallin has plenty of neighbors to deal with, deftly soothing anxieties about weeds, securing services, and broaching the delicate subject of selling land titles and easements. In some cases, a partner such as Ducks Unlimited or a private individual makes the first approach.

"Farmers want to make decisions about selling land with their whole family, so patience is often the key," said local resident Doug Anderson, who has helped acquire land by encouraging other farmers to sell.

Windom is just one of many wetlands management districts that make up the Small Wetlands Program in the prairie pothole region. Using the same basic approach, the program has purchased, leased or acquired easements on more than 2.5 million acres in prairie country.

This watershed-based strategy for resource management not only mirrors the Service's ecosystem approach but also the long-term strategy for managing the National Wildlife Refuge System.

"*Fulfilling the Promise* envisions national wildlife refuges as anchors for ecosystem conservation, and the approach taken by the wetlands management districts is a great example for us to follow," said Jim Kurth, chief of the Division of Refuges. "You just can't beat the thrill of watching a piece of property that has been drained, plowed or grazed come back to life."

*Eric Eckl, Public Affairs,
Washington, DC*

New Partnerships for Amphibian and Reptile Conservation Formed



In need of help.

Like many of the other 32 rattlesnake species indigenous to the Western Hemisphere, the secretive and docile timber rattlesnake is declining throughout much of its range.
FWS photo:
Earl Possardt.

Entering the twenty-first century a few months from now will have consequences far beyond the much-anticipated Y2K computer snafus. How we manage fish, wildlife, plants and their habitats will also change as we enter the next millennium.

More than 200 representatives of state and federal natural resources agencies, conservation groups, universities, and the timber, pet and turtle farming industries gathered in Atlanta in June to discuss one aspect of evolving resource management at a workshop entitled "Conserving Amphibians and Reptiles in the New Millennium."

These diverse organizations have formed the Partnership for Amphibian and Reptile Conservation. Participants at the workshop worked toward developing this public-private network to facilitate greater conservation efforts for amphibians and reptiles in North America.

Staff from the Service's Southeast Regional office and the Office of Scientific Authority helped plan the partnership and the workshop, and a number of Service biologists and managers representing the Washington Office and most regions attended the meeting.

"I see PARC as a great synergist as it is not led by any one organization or agency, but will provide an opportunity to coordinate and bring together diverse interests and activities," said Sue Lieberman, chief of the Office of Scientific Authority. "I see the Service taking a major leadership role in amphibian and reptile conservation in the future."

The Partnership for Amphibian and Reptile Conservation is modeled after the highly successful Partners in Flight effort for neotropical migratory birds.

"This new alliance, like Partners in Flight, is founded in the belief that public-private partnerships are the key to the conservation of reptiles, amphibians and their habitats," said Dr. Peter Stangel of the National Fish and Wildlife Foundation. "The Partnership for Amphibian and Reptile Conservation will also focus on proactive, habitat-based conservation that will keep common species common."

Dr. Whit Gibbons, a herpetologist at Savannah River Ecology Laboratory and a strong force behind the new partnership, told workshop invitees, "This workshop will be one of the most important conservation events ushering in the new millennium and developing a coordinated, cooperative and strategic approach for [amphibian and reptilian] conservation."

Workshop attendees identified high priority conservation actions in the areas of management, research, monitoring, education and policy/regulations/trade and established five working groups to take action in those areas. Regional groups and an international working group will also form.

The partnership is based in the Southeast because of that area's importance to amphibians and reptiles. More than 90 species of salamanders and 45 species of frogs inhabit the diverse regions and vast network of wetlands of the southeastern United States. With only 400 species of salamanders occurring globally this makes the Southeast one of the two most important regions in the world for this group.

The global plight and threats to some herp groups such as frogs and salamanders have been well publicized. In fact, Bill Brown, scientific advisor to Interior Secretary Bruce Babbitt and keynote speaker at the workshop said that the federal government will spend \$8 million annually in the next few years for amphibian conservation.

Unfortunately, the plight of reptiles generally is not well appreciated. A recent report by the World Wildlife Federation's TRAFFIC program said that the United States is the world's largest consumer of live reptiles for the pet industry, about 80 percent of which were turtles. Further, in 1996 this country exported or re-exported nearly 10 million reptiles.

Habitat loss, degradation and fragmentation make it increasingly difficult for snakes and turtles in particular to subsist or safely traverse smaller and more fragmented home ranges.

PARC members hope to provide wildlife with a voice among experts who can influence those organizations and institutions that can make on the ground conservation happen.

For more information about the Partnership for Amphibian and Reptile Conservation, check out the Internet at <www.parc.org>.

*Earl Possardt, Ecological Services,
Carrollton, Georgia*

Hatcheries Thrive on Partnerships with Tribes

(One in a periodic series of snapshots of Service fisheries facilities, this article looks at Quilcene and Quinault national fish hatcheries in Region 1).

Quilcene NFH

Built in 1911 and located about 50 miles west of Seattle, Quilcene National Fish Hatchery was originally established for the propagation of salmon and other fish. Today, the station's mission is to restore and enhance fish runs in the Hood Canal and along the north coast of Washington State.

Nowadays the tanks at Quilcene hold coho salmon, fall chum salmon and summer chum salmon, which the Fish and Wildlife Service and National Marine Fisheries Service recently listed as threatened under the Endangered Species Act. Each year the staff at Quilcene releases more than 3.4 million fish weighing a total of more than 44,000 pounds. Annually an average of 6.2 percent of the coho released survive to spawn or are caught in sport, commercial or tribal fisheries from Alaska south to Washington's Puget Sound.

Summer chum runs, which have declined dramatically since the late 1970s, are a major focus at Quilcene. In 1992, the Service, the Point No Point Treaty Council and the Washington State Department of Fish and Wildlife began a rearing program at Quilcene as a component of a plan to restore this depressed stock of salmon.

The goal is to rebuild the naturally spawning population to be self-sustaining, at which time the hatchery will reduce or eliminate its production. A great deal of the plan's success so far lies in habitat restoration and careful harvest management. (While summer chum are not deliberately targeted for harvest some are caught incidentally in coho fisheries in Hood Canal and the Strait of Juan de Fuca).

The program has been successful enough to launch a summer chum run at Big Beef Creek on the eastern shore of Hood Canal. An egg isolation building built this year will enable hatchery staff to take an even more active role in future fish recovery programs.



Artifact. A handmade Indian river canoe, found buried at the Quinault NFH on the Quinault Indian Reservation, during excavation to correct a flooding problem. Hatchery director Marjorie Park believes it to be an important artifact that should be salvaged. FWS photo: Ken Burton.

Each May since 1990, biologists have released some 447,000 coho yearlings, averaging 5 1/2 inches in length, into the Big Quilcene River. In addition, 300,000 presmolts have been transferred to tribal net pens in Quilcene Bay and 500,000 eyed eggs have gone to a Washington State hatchery to be reared in tribal net pens in Port Gamble Bay in the north end of Hood Canal.

Quinault NFH

Quinault National Fish Hatchery is on the Quinault Indian Reservation, 81 acres on the north bank of Cook Creek, a tributary of the Quinault River. Quinault hatchery was established in 1964 as part of a conservation partnership between the Service and the Quinault Indian Tribe to restore and enhance depleted salmon and steelhead runs on the reservation and in other areas along the north coast of Washington.



Breeding grounds. Raceways at Quinault NFH. The hatchery was established in 1964 as part of a conservation partnership between the Service and the Quinault tribe. FWS photo: Ken Burton.

Species native to reservation waters have included sockeye, spring and fall chinook, chum and coho salmon, and steelhead and cutthroat trout; historically, the Quinault Indians depended on the salmon runs for a large part of their diet. The Quinaults are a fishing people and when the runs began to thin badly in the early 1960s, there was cause for real concern.

The decline in fish runs proved double-edged; the Quinault tribe also permitted extensive logging on reservation land, causing a degradation in fish habitat that in turn took a heavy toll on the fish population. Combined with an increasing commercial harvest, the population drop grew staggering.

Since then, said hatchery director Marjorie Park, herself a member of the Quinault tribe (as are five others of her seven-member staff), the hatchery has contributed significantly to a restoration of salmon and steelhead runs in the Quinault River, increasing a food supply and making substantial contributions not only to the tribal fisheries but also to Indian, sport and commercial fisheries of the Pacific Northwest.

Coho and steelhead production started with native fish from the Quinault River caught on hook and line by local sport fishermen, held in live boxes and transported to the hatchery. The fall chinook salmon were also started from native stock and later, native Queets River fall chinook were captured and added to production.

Wisconsin Bird Festival Takes Flight



There are few better places to feast one's eyes on a multitude of birds than Wisconsin's Horicon Marsh. America's largest freshwater cattail marsh, a Wetland of International Importance, a Globally Important Bird Area, and home to the largest heron nesting rookery in Wisconsin as well as numerous threatened and endangered bird species, the area also encompasses the 21,000-acre Horicon NWR.

Held May 7-9, the second annual Horicon Marsh Bird Festival brought together thousands of birdwatchers of all ages and abilities. Some 2,000 eager participants identified 132 species of birds, searching for them from sunrise to sunset using canoes, pontoon boats, buses and cars, bicycles and feet, during this unique marsh-wide event.

Famous as an autumn stop-over for interior Canada geese, the 32,000-acre Horicon Marsh is also renowned for the sheer abundance and diversity of bird species it attracts. Notable species observed during the festival included American white pelicans, sandhill cranes, northern harriers, Forster's terns and yellow-headed blackbirds. Participants also ferreted out 14 duck species, 10 shorebird species and 8 species of sparrow.

Although last year's festival was a tough act to follow with its well-publicized release of 12 trumpeter swans, this year's event stood on its own two feet with high attendance at activities such as guided hikes, tours, demonstrations, exhibits and art displays. Horicon NWR sponsored a reception for local winners of the Federal Junior Duck Stamp Contest and a number of people enjoyed local freelance writer Tim Eisele's slide show called "Ding's Darling."

The refuge also hosted "Wild Things!," a series of wildlife activities for children of all ages, at the rustic Environmental Education Barn. Youngsters dissected owl pellets, took guided bird hikes and enjoyed a marsh scavenger hunt, among other activities.



Helping hand. Molly Stoddard, a park ranger at Horicon NWR, helps a young scavenger hunt participant at the Horicon Marsh Bird Festival in May. FWS photo: Bill Holmes.

Numerous partners worked together to make this fledgling festival a success, including the Horicon Marsh Area Coalition, four chambers of commerce, the Midwest Interpretive Association, the Wisconsin Department of Natural Resources, the Wisconsin Society for Ornithology, the Horicon Marsh Bird Club, Marsh Haven Nature Center, Blue Heron Landing, the Wild Bird Center and many individual volunteers. The partners plan to hold future bird festivals each year in celebration of International Migratory Bird Day.

*Molly Stoddard, Horicon NWR,
Mayville, Wisconsin*

Returning natives. A contract worker notches the fins of coho fry at Quilcene NFH. Each May since 1990 biologists at Quilcene have released some 447,000 coho yearlings into the Big Quilcene River. FWS photo: Ken Burton.

The Service works closely with the Quinault Indian Nation under an agreement to cooperatively manage Quinault NFH. Most production is released directly into the Quinault River but a portion is transported to the Hoh River at the request of the Hoh Indian Tribe. In the past, the Quinault hatchery has transferred coho or steelhead eggs to the Quinault Tribal fish hatcheries, Makah NFH and the Washington State Department of Fisheries.

For Park, it wasn't enough to work at replenishing the fish supply from one end of the problem; to address habitat degradation issues, she became a member of the Quinault tribe's board of directors that governs tribal business ventures — one of which is logging.

"Since then, the tribe's logging practices have turned around," Park said with a smile.

*Ken Burton, Public Affairs,
Washington, DC*

Service Clears Obstacles to Native American Artifact Repatriation

Last minute legal research, intra-agency negotiations, and coordination with a number of groups by staff of the Service and Interior Department's solicitor's office paved the way for the return this summer of a 19th century Native American religious artifact to its rightful owners.

Because of the religious and cultural significance of the artifact—a garment called a Ghost Shirt—and the Interior Department's trust responsibilities to Native Americans, helping return the garment to South Dakota from a museum in Scotland became a priority for the Service. Several offices in Washington as well as in Region 3 became involved.

"Bringing the Ghost Shirt home was clearly important to the Lakota Nation," said Deputy Law Enforcement Chief Tom Riley. "Wildlife importation laws could have derailed this repatriation, but we found a creative solution to the problem."

The shirt, a sacred item of the Ghost Dance religious ritual, is a cotton tunic trimmed with buffalo fur and golden eagle, great horned owl, and raven feathers. Although the United Kingdom issued a permit authorizing export of the Ghost Shirt, importation of such an item into the United States is prohibited under the Migratory Bird Treaty Act and Eagle Protection Act, both of which ban international trade in protected birds and their feathers and parts.

The Service decided to co-sponsor the transfer of the Ghost Shirt by accepting the garment on its arrival in this country and facilitating its transit through U.S. Customs. The actual importation occurred while the shirt was in U.S. government custody and thus was not subject to import restrictions.

Both Service officials and Interior Department solicitors agreed that this unusual arrangement would fulfill long-standing U.S. trust responsibilities to Native American tribes and uphold the American Indian Religious Freedom Act, which commits the federal government to protecting and preserving the rights of Native Americans to "believe, express, and exercise [their] traditional religions."



Long-awaited return. *The Glasgow Art Gallery and Museum returned this Lakota Ghost Shirt, a religious artifact, to its rightful owners with Service help. Glasgow Art Gallery and Museum photo.*

The story began in late July when the office of Senator Tom Daschle of South Dakota contacted the Service about the Scottish museum's plans to import the religious artifact and repatriate it to a South Dakota-based Native American group, the Wounded Knee Survivors Association. Ceremonies had been scheduled to celebrate the return of the Ghost Shirt, which an employee of Buffalo Bill's Wild West Show sold in 1892 to the Glasgow Art Gallery and Museum.

On July 28, Service Wildlife Inspector Linda Benson and Supervisory Special Agent Richard Dickinson met a delegation from the Glasgow museum at Minneapolis International Airport. The Service officers took custody of the Ghost Shirt, escorted it through Customs, and presented it to an attorney acting on behalf of the Wounded Knee Survivors Association, the Cheyenne River Sioux Tribe, and the South Dakota Historical Society. The historical society will care for the shirt on the association's behalf at its museum in Pierre.

Ghost Shirts were worn by men and women performing the Ghost Dance, a sacred ritual of a late 19th century Native American religious movement. The religion's founder, a Paiute spiritual leader named Wovoka, taught that peaceful living, hard work, and performance of the Ghost Dance would drive the white man away, resurrect dead ancestors and traditional ways, and call forth a promised land full of abundant game.

A Lakota delegation visited Wovoka in the spring of 1890 and introduced the new religion to the Lakota people, who enthusiastically embraced it. The Ghost Dance offered hope and the prospect of cultural renewal during a time of starvation, epidemics and U.S. government repression.

In the fall of 1890, nearly half the U.S. Army went to the Dakota Territory to stop ghost dancing; on December 29, troops at Wounded Knee Creek fired on a Lakota encampment under their control, killing 300 people, among them many women and children. The Ghost Shirt in the Glasgow museum's collection allegedly was removed from the body of a Lakota warrior who died in that massacre.

Service staff who helped coordinate the Ghost Shirt importation included the Washington offices of Law Enforcement, Legislative Affairs and Migratory Bird Management and the Division of Law Enforcement in Region 3.

Sandy Cleva, Office of Law Enforcement, Arlington, Virginia

DeSoto Refuge Plays a Key Role in Monarch Butterfly Migration

Though DeSoto NWR is known more for its migratory waterfowl than for its migratory insects, it serves as an important winter stopover for rare and beautiful monarch butterflies. As DeSoto's outdoor recreation planner and a volunteer for Monarch Watch, a private organization, I enjoy watching—and tagging—flocks of monarch butterflies that migrate through DeSoto each September.

I am one of hundreds of volunteers for Monarch Watch, which is based at the University of Kansas in Lawrence. Monarch Watch supplies tags, instructions and encouragement to volunteers who tag as many monarchs as possible. I began tagging monarchs at DeSoto two years ago because of their great abundance at the refuge.

I never expected that scientists in El Rosario, Mexico, might find three of the 120 monarchs I had tagged on the refuge. These colorful, fragile insects had intrepidly flown more than 1,500 miles from DeSoto in Nebraska to a butterfly reserve in El Rosario.

Only in recent years have biologists known that monarchs fly from the northern extent of their range in Canada all the way back to the spot in the mountains of Mexico where their ancestors originated several generations earlier. These delicate orange creatures, though they have never been to Mexico, somehow home in on the exact forested grove of fir trees where their great grandparents hatched the previous year.

Located along the Missouri River on the Nebraska-Iowa border, DeSoto refuge is in the heart of the Midwest, and monarch butterflies commonly pass through the refuge by the thousands as the prairie grasses and autumn flowers reach peak bloom.

The process is simple. Net them... put an adhesive number on the wing... release them... and hope that someone finds them as they did the butterflies I tagged. Their journey is difficult; they fall victim to predators, pesticides and weather. Up to last year, Monarch Watch volunteers had tagged more than 80,000 butterflies but only 418 had been recaptured. Now, because of increased research at the Mexican reserve and small payments to local residents, more tagged butterflies are being recovered.



A man and his net. Bruce Weber displays the net he uses to tag monarch butterflies. FWS photo.

It takes monarchs about a month to migrate from Canada to Mexico. When they begin the return trip in the spring, however, they mate along the way, lay eggs and die shortly afterwards. The newly hatched butterflies proceed north and eventually the fourth or fifth generation of descendants from those original butterflies end up in Canada—a place they've never been.

Only a small percentage of the monarchs that begin the 2,000-mile journey from Canada actually arrive back in Mexico. Because monarchs do not always fly on a straight line, the three I tagged may have flown as many as 1,800 miles each. The trip directly between DeSoto and El Rosario is 1,539 miles.

Despite the popularity of monarchs, biologists do not know much more about butterflies' migration routes. Release and retrieval data is gradually yielding precise locations and times, which biologists then map to create a more precise picture of butterfly migration. About 20 years ago, researchers found that most of the monarchs in Canada and the United States migrated to winter on fir trees in mountains near Mexico City. The Mexican government designated several groves of these fir trees as reserves for monarchs.



Beautiful travelers. Monarch butterflies may fly up to 1,800 miles from Canada to their wintering grounds in Mexico. FWS photo: John and Karen Hollingsworth.

These groves are now popular spots for butterfly lovers to visit, although logging near the reserves and changing environments still threaten the 100 million butterflies that winter there.

Scientists believe monarchs orient themselves as they migrate using the position of the sun and the magnetic field of the earth. However they manage to find their way from one end of the continent to the other, though, I am very glad that they pass through DeSoto and add some more color to the spectacular Midwestern autumn each year.

*Bruce Weber, DeSoto NWR
Missouri Valley, Iowa*

Fish Springs NWR Hosts "Family" Reunion

Despite being 78 miles from the nearest town and 23 miles from the nearest paved road in the mountainous desert of southern Utah, Fish Springs NWR drew 18 former employees and managers back, many after 30 years or more away from the refuge, to celebrate the 40th anniversary of this desert oasis.

Among those veterans attending the March celebration were former Fish Springs Manager and Service Director Lynn Greenwalt and his wife Judy, who returned for the first time in more than 35 years.

Greenwalt was the first manager at Fish Springs, holding down the fort between 1959 and 1962. He later served as Service Director under the administrations of Presidents Nixon, Ford, and Carter. Managing Fish Springs was Greenwalt's first project leader position.

Fish Springs NWR, which encompasses a unique 10,000-acre wetland surrounded on all sides by the arid Great Basin, is the most geographically isolated refuge in the lower 48 states. The refuge did not receive commercial power until 1971 and did not have telephone service until the early 1980s. Even today, refuge employees drive 55 miles to pick up mail or buy groceries.

Over four decades, said former employees, Fish Springs has been a unique and memorable place to work; change is slow and natural rhythms predominate. This marsh in the desert is completely spring-fed by water that takes 10,000 years to come up in the springs after it has fallen as rain.

"Only those of us who have been privileged to be assigned to this place can fully understand how fortunate we are to have been here," said Greenwalt.

The refuge is also a significant cultural resource, protecting evidence of prehistoric occupation at least 5,000 years old. An infamous stop on the nation's first transcontinental highway, Fish Springs also served as a stop on the historic Central Overland Stage route and the Pony Express route. In addition, decades old pole stubs reveal that the site lies along the route across which the first transcontinental telegraph line was laid.



Momentous occasion. Twenty-four former and current staff members from Fish Springs NWR gathered to celebrate the refuge's 40th anniversary. FWS photo.

Despite its solitude, the refuge is actively involved in restoring the least chub, a sensitive fish species, both on and off the refuge. Biologists are enhancing migration and breeding habitat for the white-faced ibis, another species of concern.

Former employees summoned forth memories and marveled at the changes that the refuge has undergone.

"I was struck by the silence, which used to be filled by an electric generator running 24 hours a day," said former Manager Brent Giezentanner. "During my time, silence meant that the refrigerator wasn't working and where did I put that darn flashlight!"

"Going back to Fish Springs truly felt like going home," said Kim Forrest, a former assistant manager. "It will always be my favorite refuge, with great people, incredible wildlife values, and beautiful landscapes."

Current Refuge Manager Jay Banta began organizing the reunion in 1997, he said, to share the anniversary milestone with those who most appreciated the refuge's resource and solitude values.

"In talking with former employees, it was clear that nearly all shared a tremendous passion for the refuge," said Banta. "What better way to celebrate 40 years of preserving a critical ecosystem?"

Banta added that the reunion was a rare opportunity to call on a total of more than 300 years of refuge management experience. The advice he received, he said, will help reshape his management focus as the refuge heads towards its 50th anniversary.

*Jay Banta, Fish Springs NWR,
Dugway, Utah*

*Karen Miranda Gleason, External Affairs,
Denver, Colorado*

Earth Camp a Huge Success

Flocks of cardinals, goldfinches, bluebirds and hummingbirds cavorted in abundance at Cross Creeks National Wildlife Refuge last June. However, these were no ordinary avian species. These “birds” were actually a covey of 53 fourth and fifth graders, divided into four groups and sporting brightly colored hats that transformed them into feathered beauties.

These young “birds” migrated gracefully through a wide variety of fun and educational programs at the seventh annual Stewart County Earth Camp near Dover, Tennessee, designed to teach environmental stewardship.

Service staff from Cross Creeks refuge joined natural resource professionals from a number of other area agencies, universities and organizations to host hands-on activities at the camp. Learning stations for campers covered such diverse topics as conservation ethics, forestry, Tennessee water pollution control, frog identification, illegal wildlife trade and wild turkeys.

“Earth Camp represents an effort by numerous organizations and individuals to teach fourth and fifth graders the value of good environmental stewardship. Small communities such as Dover have few programs that can better convey the message that many kinds of animals and plants play a role to promote a healthy environment,” said Cross Creeks NWR Assistant Manager Walter Neasbitt.

“This camp and the many participants have made a big difference in the way people in a small community can learn to regard wildlife,” said Dr. James Byford of the University of Tennessee at Martin, a presenter at the camp. “There is more understanding and respect for the role all creatures have in a healthy environment.”

More than 40 volunteers aged 13 to 70 also helped by serving on the steering committee or as group leaders and presenter helpers. Community support for the camp is a big factor in the program’s success. Support came in the form of volunteerism, money, publicity and good old-fashioned teamwork.

The week-long morning camp was co-sponsored by the Fish and Wildlife Service, National Park Service, U.S. Army Corps of Engineers, University of Tennessee Agricultural Extension Service and Dover Kiwanis Club. Additional area sponsors providing monetary support this year included Stewart County Farm Bureau, First American Bank, D&D Shirt Printers and Sills Insurance.

This year’s Earth Camp received a Four Star Award from the Tennessee Recreation and Parks Association, the highest honor the association presents to recognize achievement in programming and environmental education.

*Sarah Welker, Cross Creeks NWR,
Dover, Tennessee*



Up close and personal. Steve White from Murray State University presents a raptor program to children at the Stewart County Earth Camp. FWS photo.

Video Offers a Trip Back in Time

Want to hear the **real** story of the late-night debates that accompanied the listing of the northern spotted owl, from insider Jamie Rappaport Clark?

Or John Turner’s vow to leave his job and return to Wyoming if the right thing wasn’t done about forest issues in the Northwest?

And what of the national conservation leader who assured the late John Gottschalk of his cooperation on captive breeding of the whooping crane... while his own staff was engineering a media campaign against the Fish and Wildlife Service’s effort?

You can find these and other inside stories on the forthcoming video “Thirty-Five Years of Conservation History: A Conversation with the Leaders of the U.S. Fish and Wildlife Service,” copies of which are being distributed to all Service field stations.

The 49-minute video, a production of the National Conservation Training Center and the Service’s Heritage Committee, is a distillation of a discussion among five agency directors whose careers span the last third of this century, from the Johnson through the Clinton administrations. The interview was videotaped at NCTC’s Shepherdstown campus in 1998, and included former directors Gottschalk, Spencer Smith, Lynn Greenwalt, and Turner, and current Director Clark. The video’s release is especially timely as it preserves what are likely some of the last public comments from Gottschalk, who died in August at age 86.

Gottschalk shared his advice to incoming Service employees during the taping of the video.

“...My advice would be [to] try to identify something to do that gives you a lot of satisfaction, establish a goal for yourself, and then bust your butt trying to accomplish it,” he said.

continued on page 20

Video Offers a Trip Back in Time (continued)

Segmented into four shorter discussions around the themes of history, controversy, leadership and advice for the future, the video is designed for casual viewing, as well as for use as teaching modules in NCTC courses in Shepherdstown and elsewhere. It is hosted by NCTC Director Rick Lemon and is close-captioned for the hearing-impaired.

“Thirty-Five Years of Conservation History” presents a candid, and at times moving, account of the political and scientific pressures to which only those who have served as Service Director can relate. The agency leaders review wolf reintroduction, efforts to ban the predator control compound 1080, and the early DDT studies at the Patuxent Wildlife Research Center, among others, as examples of politically-charged issues in latter-day natural resource management in the United States.

They also add their unique personal observations and perspectives that have seldom been caught before in the agency’s records—from Greenwalt’s childhood recollections of Ira Gabrielson and J. Clark Salyer sitting at his mother’s dinner table, to Jamie Clark’s earliest and most sought-after career goal—to become a GS-9 field biologist.

“What you do,” Greenwalt advises in a concluding “time-capsule” message to Service employees of the next century, “is built upon what has happened, for many decades before, and you have an obligation to make the most of what has been given you—(by) people who gave their careers, and in some cases their lives, to make it possible for you to do something now in this first third of the next century.”

Employees wishing to see the entire discussion among the five directors may obtain a complete two-hour, 25-minute version, available in limited quantities, from NCTC’s image library by calling 304/876 7675.

David Klinger, National Conservation Training Center, Shepherdstown, West Virginia

Pump it Out! Rhode Island Pioneers Clean Vessel Act Pennant Program



Test run. Bristol Harbor pumpout boat operator Rolland Rodericks during a demonstration of the new Clean Vessel Act pennant program in Rhode Island’s Narragansett Bay. FWS photo: Al Ortiz.

By raising a bright orange pennant, boaters on Narragansett Bay can now signal sewage pumpout boat operators in Bristol, Rhode Island, that they need to have their holding tank pumped. The community is the first in the nation to formally implement the free, simple-to-use system, which is supported in part through the Service’s Federal Aid in Sport Fish Restoration Program.

Use of the pennants eliminates the need for boaters to call or radio for pumpout service, leaving long messages on answering machines to explain the location and physical description of their boats,” explained Bob Sousa, assistant regional director for Federal Aid in the Northeast region.

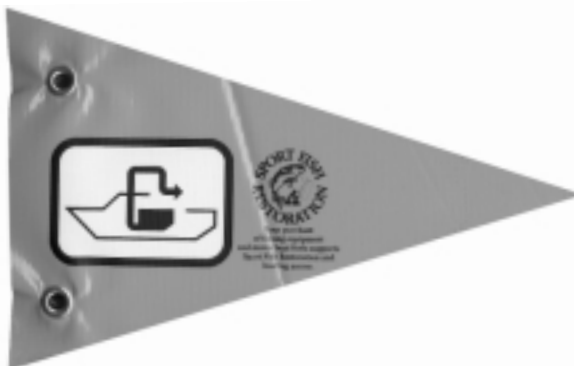
At a recent ceremony at the harbor in Bristol, Rhode Island Department of Environmental Management Director Jan Reitsma proclaimed, “Rhode Islanders care deeply about the quality of Narragansett Bay.”

As evidence of that concern, Reitsma said, last year Rhode Island became the first state in the nation to declare all of its marine waters off-limits to the dumping of sewage from boats.

Since 1992, the Clean Vessel Act has helped to reduce pollution from vessel sewage discharges. The act established a federal grant program that the Service’s Division of Federal Aid administers. About \$10 million per year of federal motor boat fuel taxes are available to states for the construction and installation of accessible and inexpensive-to-use pumpout and dump stations.

The Service has provided more than \$750,000 toward pumpout stations in Rhode Island. There are now a total of 50 stations, either shoreside facilities or pumpout boats, available to boaters along the state’s coast.

Terri Edwards, External Affairs, Hadley, Massachusetts



Smiles are the Catch of the Day

Mix a boatload of kids, parents, and professional anglers with the fish-rich clear green waters of the Florida Keys and you have a simple recipe for unrestrained fun.

That was what happened in mid-June when 15 physically challenged kids from Miami and other parts of Florida joined 20 students from the Keys area for a fishing trip on the *Gulf Lady*, a 65-foot party boat operating out of Bud and Mary's Marina in Islamorada. Sponsorship for the event came from the newly-formed United Fishing Foundation and its chairman, Vin Sparano, editor emeritus of *Outdoor Life* magazine and longtime advocate of youth fishing programs. The physically challenged children were selected by Parent-to-Parent of Miami, an organization that provides programs for young people with developmental disabilities and special needs.

This was the first time Sparano and the foundation had tried anything like this, but they hoped that this outing, and a similar event in New York, would inspire more efforts nationally to make fishing available to special-needs children who might not otherwise have such an opportunity. To help spread the word, Sparano arranged media coverage by the *Miami Herald* and local TV stations. In addition, Chevrolet produced a video documentary of the day's doings.

Before the event got underway, Sparano, other foundation officials, and several well-known professional anglers who had signed on to help teach the kids about fish and fishing, had to wait out a fast moving dark squall line coming in from the Atlantic and a late-arriving bus full of kids from Miami. Fortunately, the thunderheads narrowly sidestepped Islamorada just as the bus pulled into the parking lot.

The day immediately picked up momentum as the students from the Keys mingled with their new fishing buddies from Miami and boarded the *Gulf Lady*. Most of the Miami kids, whose disabilities included cerebral palsy and Down syndrome, had never been on a boat, much less gone fishing.



Reel fun. *Special needs kids got a treat during a day-long expedition in the Florida Keys fishing for such species as bar jack.*
FWS photo: Phil Million.

After a short run, the *Gulf Lady* anchored and the eager young anglers lined the rails, fishing rods in hand. Soon, a cheer went up as someone reeled in the first fish, a small yellowtail. Anxious to show his young visitors some of the larger species that call the inshore Keys waters home, marina owner Richard Stanczyk ordered the boat to move and soon expertly hooked a toothsome 15-pound barracuda that drew a loud chorus of "ooh's" and "aah's" before it was released. Stanczyk and boat captain Walter Mason also lured several 20-plus-pound bar jacks in close enough that a few of the kids could experience the thrill of a large fish on the line.

"This is just wonderful," said Parents-to-Parents Executive Director Isabel Garcia, who admitted this was her first fishing trip. "It's great seeing how the kids are reacting to the water and fish and everything. We weren't interested in a boat full of disabled people...we wanted a boat full of people!"

From the *Gulf Lady*'s pilot house where he watched Capt. Mason let some of the youngsters steer the boat toward the mainland, Sparano relaxed and said he considered the day a success.

"The beauty of something like this is nobody turns you down," he said as he listed a long string of corporate sponsors that had collaborated with UFF to make the event a reality. "What we hope to do is make this a template so others can put on their own events and I think we've made a good start.

"The goal of the UFF is simple," Sparano continued. "We plan to develop model fishing programs for children, both typical and physically challenged, that may not be otherwise available to them. We also plan to create special programs for senior citizens through a find-a-buddy network."

Once ashore, the proud young anglers were treated to...what else...a fish fry donated by a nearby Outback Steakhouse restaurant.

As the day came to a close, Sparano advised that UFF would be looking for future venues and cooperative arrangements to accomplish its goals. He suggested Service employees interested in learning more about the United Fishing Foundation contact Cynthia Ryan, 925 Westchester Avenue, White Plains, NY 10604, 914/328 3535.

*Phil Million, External Affairs,
Arlington, Virginia*

"...It Was Truly a Millennium Event"

Continuing its role as a meeting place for conservationists from far and wide, the National Conservation Training Center hosted a millennium gathering of more than 500 nature writers, activists and educators sponsored by the Orion Society, an environmental education organization and support network for grassroots environmental and community organizations across the country.

Titled "Fire and Grit—Working for Nature and Community," the conference was held June 20-24 and featured readings, lectures and performances by such conservation luminaries as Rick Bass, Peter Mathiessen and Terry Tempest Williams.

The goal of the conference was to highlight the importance of community-based conservation and the many common interests of diverse local and national groups, and to help chart a course for conservation in the twenty-first century.

The event included plenary talks, collegium sessions and discussions with some of America's most important conservationists. Evening programs were open to the NCTC and Shepherdstown communities and featured musical performances and literary readings. Representatives of more than 400 organizations attended, including a number of participants from the Service and the Interior Department.

The astounding list of speakers, readers and performers included Interior Secretary Bruce Babbitt, Wendell Berry, Barry Lopez, Bill McKibben, Susanne Mulcahy, Richard Nelson, William Kittredge and Ann Zwinger. In addition to these prominent voices, conservation leaders from across the country led collegium sessions and moderated forums on topics ranging from "Creating Community Dialogue" to "Cultivating Regional Economies."

Training Center Director Rick Lemon welcomed participants from around the world and invited them to enjoy the natural setting of the West Virginia campus, "a place where we learn with the wood thrush and indigo bunting as our background music."

Conference organizers hailed the meeting as a momentous occasion.

"Most of the great environment voices of our time will be on this campus in the next few days together, and that's unprecedented," Laurie Lane-Zucker, managing director of the 7,000-member Orion Society, said during the opening session.

"We who are conservationists, we who celebrate the natural world...believe that for the future of America it is critical for us to take care of this place and to treat the wild places of America as the treasures that they really are."

Richard Nelson

A major objective of the conference was to help bring together the various parts of the community in order to discuss a common vision of the future of conservation.

Author Richard Nelson's talk entitled "Patriotism and the American Land," went a long way towards that goal, defining conservation as a patriotic endeavor that would unify the entire conservation community.

"We who are conservationists, we who celebrate the natural world, are people who are saying that we love the American land and we believe that for the future of America it is critical for us to take care of this place and to treat the wild places of America as the treasures that they really are," Nelson said.

The future of conservation in the next millennium and the important role of community conservation was another major theme.

Greg Watson, executive director of the Dudley Street Initiative and a former regional director of The Nature Conservancy, discussed the future of cities and conservation's important role in shaping that future.

"Agrarian communities, urban communities, communities that...were never brought together before now have a chance to converge," he said, "and I believe with that convergence we're going to be able to find ideas that were not even on our radar before. And with that I think there is hope for humanity."

In his speech at the final plenary session, Secretary Babbitt addressed the conference theme of conservation into the next century.

"Restoration is about an act of imagination, which says, we can imagine what was, and what could be," he told more than 500 session participants. "We really are moving past and building on an age of preservation—in which we saw the natural world as out there, and us disconnected—to an age that we understand that has got to be whole. It is about taking command of our surroundings, making an investment in the natural world and in community, and in the future."

To many conference attendees, the opportunity to discuss natural resource issues with other conservation professionals was an energizing, once-in-a-lifetime experience. Many had reactions similar to that of Service employee Claudine Daniel.

Northeast Region Cements a Champion Deal

"It is difficult to articulate the depth of the effect the conference has had on us, and how meaningful the content has proven in our daily lives and work," Daniel wrote. "It illuminated our vision and practice of place-based education as a vital need for the future of wild things."

Participants from throughout the environmental community echoed this sentiment.

"Those four days were truly memorable for me — the energy exchange, the sense of togetherness that came about, sharing commitments with one another, all helped to give me a renewed sense of hope for success in the work we are doing," wrote Doug Christiansen of Ketchum, Idaho. "On the whole, the conference and the NCTC facilities were the best one could hope for... it was truly a millennium event."

Barry Lopez, author of a number of conservation books including *Of Wolves and Men* and *Arctic Dreams*, concluded the plenary sessions by explaining why he and many of his fellow writers came to the conference:

"The reason I am here, I can tell you this from every writer in here with whom I have spoken, is out of profound respect for what you do," he said. "This is your passion... It's your fire and grit that makes us want to come from Montana, and California, and Oregon, and Wyoming, to be here with you."

"To say thank you."

Steve Chase, National Conservation Training Center, Shepherdstown, West Virginia



In memory. *Illustrated signs interpret the rare spruce bog community for visitors to the Mollie Beattie Bog in Lewis, Vermont. Champion recently donated the 76-acre property to the Service. FWS photo.*

On July 22, the Service purchased 26,000 acres of forest and wetlands in northern Vermont from Champion International Corporation as part of what has been called the largest multi-state, private-public conservation acquisition in U.S. history.

In 1998, The Conservation Fund, a national nonprofit organization, created an innovative partnership among government agencies, conservation and philanthropic organizations, and private investors to purchase and protect nearly 300,000 acres of Champion's land holdings in the northern forests of New York, Vermont and New Hampshire.

The Service will manage the Vermont property as the Nulhegan Basin Division of the Silvio O. Conte National Fish and Wildlife Refuge. The Service identified the basin as a "special focus area" in the original plans for the Conte refuge, which was established to protect natural diversity throughout the 7.2-million-acre Connecticut River watershed in four New England states.

"Service ownership will protect important fish and wildlife habitat and will provide opportunities for various traditional wildlife-dependent recreational uses in the heart of Vermont's Northeast Kingdom," said Ronald E. Lambertson, the Service's Northeast Regional Director.

The new refuge unit is one square in an extensive quilt of protected, or soon-to-be-protected, land in northern Vermont. As part of the agreement reached with Champion, the State of Vermont will receive a gift of 22,000 acres adjacent to the refuge land. It will also purchase conservation and public access easements on an additional 85,000 acres when the land is sold to a private landowner as a working forest. Conservation organizations and agencies already protect 75,000 acres in the area.

"Natural resource protection and cooperative management at this scale give the Service an exciting opportunity to practice landscape-level ecosystem management," said Beth Goettel, acting refuge manager of the Conte refuge.

Champion also donated the 76-acre Mollie Beattie Bog in Lewis, Vermont, to the Service. The black spruce bog, which Champion designated as a "special place in the forest," is named for Beattie, the late Service director who lived and worked in Vermont. The bog will be managed as part of the Nulhegan Basin Division.

The biologically-rich Nulhegan Basin contains significant wetlands and extensive areas of uninterrupted forest. It is home to migratory birds; rare, threatened and endangered species protected by the state of Vermont; and resident wildlife such as deer, bear and moose. Pristine streams flowing through the basin support naturally reproducing native trout populations.

When the Service announced its decision to buy the property in May, it had \$2.5 million from the Land and Water Conservation Fund available for the purchase. The Migratory Bird Conservation Commission in June approved the remaining funds needed to complete the \$6.5 million deal.

Conte refuge will open an office in northern Vermont and the Service will hire an on-site manager in the near future.

Terri Edwards, External Affairs, Hadley, Massachusetts

Record Waterfowl Numbers Promise Good Fall Hunting

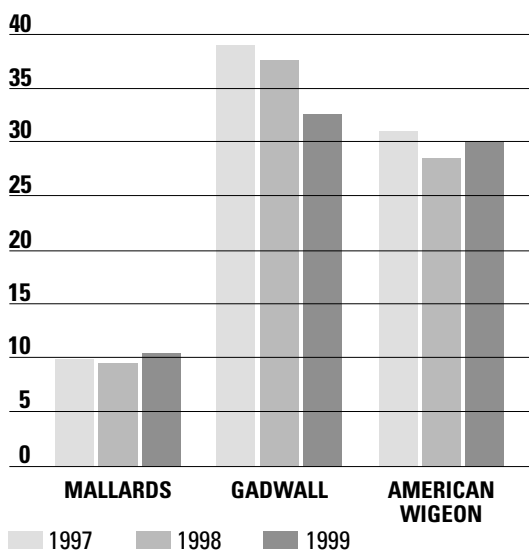
From the Canadian arctic to the potholes of the Midwestern prairies, abundant moisture has produced excellent breeding conditions for waterfowl. Given those conditions, it isn't surprising to find that the Service is predicting the largest fall flight ever recorded.

The total fall flight index is predicted to be 105 million birds, a substantial increase both from last year's 84 million birds and the 1997 record high of 90 million birds. The Service estimates a fall flight of 13.6 million mallards for 1999, 16 percent greater than last year's estimate.

These survey numbers are the latest evidence of North America's continuing waterfowl resurgence. After declining precipitously in the 1980s, duck populations have rebounded, with the Service recording significant increases in its breeding duck index in four out of the last five years.

Though some duck species continue to struggle, the overall population of breeding ducks rose by 11 percent to 43.4 million in the spring survey areas, a population level 32 percent higher than the average since the survey began in 1955.

Breeding Population Estimates in Traditional Survey Area



Note: All populations in millions



High numbers. Abundant moisture in waterfowl breeding areas has produced a bumper crop of birds. FWS photo: Wyman Meinzer.

"Many people wondered if we'd ever see these population levels again. The fact that recovery has been so successful can certainly be attributed in large part to the wet conditions prevailing in the birds' nesting areas. But the tireless efforts of conservation partners to preserve and enhance wetland habitat deserves a lot of credit as well," said acting Service Director John Rogers.

Based on the good news, the Service has proposed essentially to continue last year's waterfowl hunting frameworks, giving the Service time to evaluate their effect on waterfowl populations. The frameworks, set in consultation with state wildlife officials and input from the public, establish the permitted opening and closing dates, maximum season lengths, and bag limits for state waterfowl seasons. State wildlife agencies will then establish individual state waterfowl seasons within those guidelines.

The proposed frameworks should give states certainty for future planning efforts as the flyway councils work to find a biologically sound consensus for adjusting future frameworks. The Service proposes to continue these framework dates and season lengths through the 2002-2003 season in an attempt to stabilize frameworks so its Adaptive Harvest Management process can function properly to provide the greatest opportunity for all hunters.

Adaptive Harvest Management was instituted in 1995 to help managers better understand the effects of hunting while providing maximum harvest opportunities consistent with waterfowl populations. An essential feature of the process is a set of alternatives, including framework dates, season lengths, and bag limits, that balances hunting opportunities with efforts to achieve waterfowl populations identified in the North American Waterfowl Management Plan.

Chris Tollefson, Public Affairs,
Washington, DC

A Record Year Total Fall Flight

1999	105 million
1998	84 million
1997	90 million

A Picture Says a Thousand Words... So You Don't Have To

Some pictures don't need much explanation. If you have a great photo and a few words to say about it, send it to the *News*. Extended photo captions should be no more than 125 words. Be sure to include the names of both the author and the photographer.

Send photos and captions to:
Editor, *Fish & Wildlife News*
U.S. Fish & Wildlife Service
1849 C Street, NW, Room 3353
Washington, DC 20240

or e-mail your digital images and captions to the editor at rachel_levin@fws.gov.

And keep the following tips in mind when submitting any images to the *News*:

- Before you trip that shutter, consider a photograph's composition. When you can, take action shots and avoid shots of people shaking hands and smiling at ceremonies (so-called grip-and-grin shots) or of a speaker behind a podium.
- Make sure the photograph is clear enough, with enough lighting, to reproduce well. Watch out for shadows. A shadow from the bill of a cap can obscure a person's face, especially when the photograph is reproduced.

■ Prints or slides (color or black-and-white) are best.

■ If scanning photos or using a digital camera, photo resolution should be no less than 300 dpi (dots per inch) at the final size the photo is used in the newsletter. When you send in your photos you will not know what size they will be in the newsletter, but our designer advises that photos should have a resolution of 300 dpi when they're 30 picas (2 newsletter columns or about 5 1/4 inches) wide.

■ If you scan photos, do not adjust the size or otherwise try to touch them up. The designer will do that. Also, avoid sending images downloaded from the World Wide Web, as they are generally low resolution, poor quality, and will not reproduce well.

■ Send electronic photos as black and white images and in tiff file format. For images over 1 MB in file space, compress using a jpeg file format.

■ On the back of the photo or in an e-mail message, identify all the people in the photograph from left to right, including their titles and duty stations.

Hawaiian Bird Follows Boat to Alaska



Well-traveled. This red-footed booby hitched a ride on a boat to Alaska. Anchorage Daily News photo: Bill Roth.

A juvenile red-footed booby recuperated in Anchorage after its long trip this summer on a sailboat from Honolulu to Kodiak.

The boat's captain, Paul Edwards, reported that the booby followed the boat across the Pacific on its more than 2,000 mile trip until they encountered a fierce storm. When the bird was blown onto the deck of the boat, the captain and his passengers took it inside and kept it in a laundry basket filled with towels. Once they arrived in Kodiak, they turned it over to the Service.

According to Service biologist Karen Laing, it is not unusual for boobys to follow boats. "But I have to say, I can't recall a booby traveling such a long distance," she said. "This young bird lives in Hawaii and prefers tropical oceans. It absolutely could not survive in Alaska."

When the bird arrived in Anchorage, it suffered from hypothermia and was in poor condition. Service biologists turned it over to the Bird Treatment and Learning Center, where it recovered under heat lamps and dined on smelt, hooligan and vitamins.

According to Laing, the booby recovered fully and was returned to its native habitat by a University of Hawaii biologist who was returning to Hawaii from Anchorage.

Connie M.J. Barclay, External Affairs, Anchorage, Alaska

WOW!... Service and Disney Sign MOU on Outdoor Activities. Acting Director John Rogers shakes hands with Kym Murphy, corporate vice president for environmental policy for the Walt Disney Company, after signing a Memorandum of Understanding pledging Service participation in Wonderful Outdoor World (WOW), an environmental education endeavor designed to involve urban youth in learning outdoor skills. The Service joins five other federal land managers in supporting the WOW effort. Looking on are Derrick A. Crandall, president of the American Recreation Coalition, and Assistant Director for External Affairs Tom Melius. For additional information on the Service's WOW efforts, contact Phil Million, chief of the Division of Conservation Partnerships Liaison in the Washington Office. FWS photo: LaVonda Walton.



Delaware Biologists Help Out with International Effort to Study Shorebird Migration

Preserving one of the Delaware Bay estuary's precious natural resources took Greg Breese far afield last winter. Breese, the senior staff biologist in the Service's Delaware Bay Estuary Project office in Smyrna, Delaware, traveled to Brazil, on a shorebird banding expedition as part of an international effort to document important stopovers of redknots during spring migration. Conserving these shorebirds is a top resource priority of the Delaware Bay Estuary Project.

Though their efforts produced more questions than answers, biologists believe that this expedition will pave the way for future cooperative efforts to conserve this migratory bird.

Biologists had believed that redknots winter at the southern tip of South America and travel north in the springtime in short hops along the South American coast until they arrive at Lagoa do Piexe, Brazil, their last major feeding and staging area before heading toward the Delaware Bay on the east coast of the United States. After arriving exhausted at Delaware Bay, redknots typically feed for two weeks on horseshoe crab eggs, doubling their weight. The birds then fly to the Canadian Arctic to breed.

Delaware Bay estuary is home to the largest spawning population of horseshoe crabs in the world, Breese said, providing redknots plenty of sustenance before they resume their travels. However, a number of individuals and conservation organizations have become concerned about the apparent decline of horseshoe crabs and its potential effects on redknots and other shorebirds that rely on horseshoe crab eggs as a food source.



Intrigue. James Gorham bands a redknot. Biologists are still trying to unlock the mystery of the redknot's life and migratory patterns. NOAA photo: Christine Taylor.

"The work done on this expedition will help provide insight into the redknot population and threats to redknots," Breese said.

April 19 found Breese and Delaware Bay Estuary Project biologist James Gorham in Porto Alegre, Brazil, meeting fellow team members from Canada, the Netherlands, the United Kingdom, Argentina and Brazil. The team camped at the research station at Lagoa do Piexe, where for the next three weeks they inventoried habitat, surveyed wildlife, and caught and marked birds. They also monitored bird movements using radio telemetry and helped Brazilian researchers with nightly mist netting activities.

Their activities did not go unnoticed. "News reporters became intrigued with this international expedition, and we saw national media coverage in Brazilian newspapers and on television," Breese said.

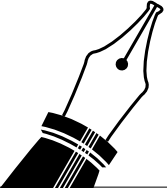
Breese, Gorham and the other biologists at Lagoa do Piexe found a lagoon surrounded by grassland and separated from the sea by the beach and sandbar. Sea water entered the lagoon during peak tides and storms. Conditions appeared to be highly variable, food resources were not dependable and the team could account for only a very small portion of the redknot flyway population — where the rest of the birds are remains a mystery.

After three weeks at Lagoa do Piexe, the team concluded that the area did not appear to be a singularly important feeding or staging area for redknots during their northbound journey.

"However, we were left with a number of questions," Breese said. "For instance, why have large numbers of birds been found here in the past? Are there important staging and stopover areas in South America on the northbound migration or do the birds move in a diffused pattern? Where are the birds we could not account for? Can birds that do not seem to have gained sufficient weight make it all the way to Delaware Bay?"

Breese and his colleagues in the Delaware Bay Estuary office, as well as the Service's international partners, surely will be among those biologists on the vanguard helping to solve these mysteries.

Exploring Our Past



D.C. Booth Historic National Fish Hatchery: Two Decades of Collecting Service History

It is a hatchery that does not hatch fish, yet it is proudly part of the National Fish Hatchery System. Serving to document the roots of the Fish & Wildlife Service and chronicle the agency's history, D.C. Booth Historic National Fish Hatchery spreads its message to approximately 165,000 visitors each year.

Preservation of fisheries history is a major part of the South Dakota hatchery's mission. A name change from Spearfish National Fish Hatchery to D.C. Booth Historic National Fish Hatchery honored its first superintendent, Dewitt Clinton Booth, and the site is listed on the National Register of Historic Places.

In cooperation with the city of Spearfish, the American Fisheries Society, the Booth Society, a non profit friends group, and South Dakota Game, Fish and Parks, visitors have a chance to learn a little more about how the Service safeguards the nation's natural resources.

The Service had been collecting historic fisheries items for more than 20 years, bouncing the material from storage spot to storage spot. In 1979 the collection found a permanent home at Spearfish National Fish Hatchery where it joined historic materials from the Spearfish hatchery. The museum opened three years later. Since then, staff have collected thousands of items.

Completed in 1995, the collection management facility at D.C. Booth provides secure, environmentally-controlled storage with a fire suppression system, conservation lab, work spaces and administrative offices. Other site facilities include underwater viewing windows to the fish display pond, a museum in the 1899 hatchery building, the 1905 superintendent's residence and a fish car replica.

Items tucked away in the storage areas at D.C. Booth include a fish car messenger badge, refuge badges, and a sink still in its shipping crate, never opened, shipped to the Bureau of Fisheries sometime before 1940. The seahorse weathervane from the Fairport Biological Lab, probably the nation's first mussel propagation research facility, is also there, along with a hatching jar patented in 1881, a wheelbarrow-like insecticide sprayer called the "Silver Prince," volumes of Fish Commission reports, and a lone pair of rubber hip boots.



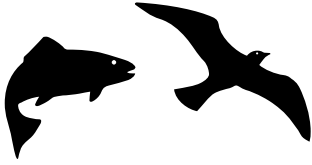
They used those? A 1963 Studebaker dump truck is one of many items on display at D.C. Booth Historic National Fish Hatchery. In the background is the original 1899 hatchery building, which now houses a museum. Pictured are Bob David (left) and Jim Hanson. FWS photo: Courtesy D.C. Booth collection.

A peek in the hatchery's stone garage reveals a 1963 Studebaker dump truck and a 1959 Chevy four-wheel drive pickup, both hatchery vehicles. The dump truck was driven from Alchesay-Williams Creek NFH in Arizona and has only 27,000 actual miles on the engine.

Who uses all of this? Everyone from tourists who happen upon the hatchery while visiting the area to school kids, historians, biologists, families of Service employees and anyone in between.

Randi Smith, D.C. Booth Historic National Fish Hatchery, Spearfish, South Dakota

Ecosystem Approach Initiatives



Guidelines for Ecosystem Team Operation Completed

Plenty has been said about the benefits of using a watershed-based approach to managing fish and wildlife resources, and now the Service's 53 ecosystem teams have a document to guide them as the agency faces the challenges of the next millennium.

The Service's Ecosystem Approach Implementation Team, otherwise known as the I-Team, recently took a major step toward effectively using the ecosystem approach when it completed "Guidelines for Ecosystem Teams." The document, which the team submitted to the Service Directorate in July, comes as a result of much discussion and significant input from all regions.

"These guidelines are not intended as a mandate to be followed to the letter but rather as an alert for ecosystem teams and geographical assistant regional directors for implementing the ecosystem approach, listing actions they may not already have discussed or implemented," said Service Deputy Director and I-Team leader John Rogers. "Even the most successful teams can use the guidelines to carefully evaluate their activities and plan for the future."

The guidelines include individual comments from ecosystem team members about the draft guidelines. Sprinkled throughout the document, these actual quotes from teams help highlight the importance of the actions discussed.

"Our team meetings are truly a team effort," wrote one group. "If a particular team leader does not possess all the necessary leadership skills, other team members help to keep the process and program moving in a positive direction. We help one another and share the burden of leadership."

The guidelines promote consistency by defining the purpose of an ecosystem team: "to identify and facilitate the implementation of collaborative projects based on landscape-level considerations across Service programs with partners and stakeholders to conserve fish, plant and wildlife resources."

The document also provides an overview of the role of ecosystem teams, including:

- Identify, prioritize and document ecosystem goals, objectives, and strategies with partners and stakeholders, specifying actions to achieve the team's priorities.
- Identify and facilitate collaborative projects across Service programs with partners and stakeholders, addressing team priorities to benefit fish, plant and wildlife resources.

The guidelines outline a basic model for an effective team, emphasizing that many of these elements will vary among teams:

- The **core team** is primarily field-based and is composed of cross-program Service employees, including a representative of each field station within an ecosystem. Some teams have enhanced their success by including non-Service members—such as representatives of state agencies and private conservation organizations—on the core team.

- **Subteams or subcommittees** may be the most effective way to identify and achieve the ecosystem priorities. They may be organized around specific issues, such as migratory birds or endangered species, or specific geographic areas involving stakeholders.

- **Executive committees** help to manage the workload for some ecosystem teams by breaking down complex issues into priority tasks.

- **Partners and stakeholders** are key to team success. Through the "three c's"—communication, coordination and collaboration—a partner may take on the role of a full team member, regular or occasional participant, subteam member, or subteam leader.

A cross-program, cross-regional team of Service leaders to address partnership development has been nominated, Rogers said.

The guidelines provide several attributes for the critical role of ecosystem team leaders, including:

- Provides leadership and guidance.
- Ensures the active participation of each member.

- Coordinates annual identification of the highest ecosystem priority needs such as natural resource, research, land acquisition, budget, funding, and personnel, based on team goals and objectives.

Several regions have established positions for **ecosystem coordinators** who serve a variety of roles:

- Advocate and provide administrative support for teams.
- Assist in developing and refining ecosystem team plans.
- Serve as a liaison to regional and Washington offices.
- Advance ecosystem-related budget initiatives.
- Develop regional and national coordination strategies, policies and guidance.

The guidelines recommend that each ecosystem team develop **team operating procedures** to document processes for managing projects. Operating procedures identify task priorities, maintain consistency and give form to vision. Key elements are team organization, meeting frequency, member responsibilities, outreach strategies and an ecosystem plan.

Geographic assistant regional director participation with ecosystem teams is an essential component of the ecosystem approach, as well, Rogers said. The guidelines discuss the importance of regional office participation through additional support to achieve ecosystem team goals and strategies.

The I-Team recognized and included in the guidelines the importance of **team development**. Achieving collaborative, on-the-ground conservation requires a specific approach to team development by evaluating and improving team activities.

The purpose of an ecosystem team is “to identify and facilitate... projects based on landscape-level considerations across Service programs with partners...to conserve fish, plant and wildlife resources.”

Recommended team development actions include:

- **Team coaching** by a qualified Service employee from outside the team who assists in clarifying team goals, appraising team development and achieving team vision. Ideally, a qualified GARD or program supervisor serves as a team coach.
- **Team training** is necessary for a team’s operation and development, instilling a sense of urgency and unity, factors that are critical for success. Several Service training courses provide these key resources.
- **Organizational development and team building** exercises make ecosystem teams more effective and productive at on-the-ground conservation. The National Conservation Training Center has expertise in organizational development that can assist teams.
- **Team projects** may play a key role in developing the true camaraderie and spirit within an ecosystem team that comes from working on a field project together.

Finally, the guidelines discuss how an ecosystem team’s effectiveness comes from the individual contributions of its members and the collective results of synergy.

“While a team leader is essential, leadership may be not concentrated within one person,” said Rogers. “Each team member brings a different form of leadership to team dynamics. Feedback between team members and between teams and coaches is essential to improve performance.”

The guidelines also offer several characteristics of **team member/leader roles**, including:

- Fosters a “hunger for performance” and a sense of urgency, characteristics that team-building exercises and training can encourage.
- Facilitates vision and a sense of purpose. Facilitation skills are key components in a team.
- Guides the team’s accountability, problem-solving and decision-making, expertly using the resources of the entire team and supporting its actions.
- Supports coaching, management and communication.
- Possesses superior interpersonal skills. Members communicate effectively within the team, to management support, and to outside stakeholders and partners.

Scott Johnston, Division of Endangered Species, Arlington, Virginia

Fish & Wildlife Honors...

Service Outreach Products Garner Awards

The Service received two major awards during the annual meeting of the Association for Conservation Information in July. A hunter safety public service announcement video featuring Olympic shotgunner Kim Rhode placed second in the PSA category. The segment was produced cooperatively by the Service's Office of Public Affairs in Washington, D.C., and the National Conservation Training Center in Shepherdstown, West Virginia.

In addition, the Region 1 outreach newsletter, "Out and About", received a first place in the internal communication category.

This year the Service again sponsored a special section for articles and other productions concerning the Sport Fish and Wildlife Restoration programs. Awards under this category went to the states of Alaska, Massachusetts, New Hampshire, New Mexico, South Carolina and Texas.

ACI members represent the information and education bureaus of state natural resource agencies, as well as some federal agencies and private conservation organizations.

Veteran Refuge Manager Honored

Howard Poitevint, project leader for the seven-unit Southeast Louisiana Refuge Complex, received a Conservation Leadership Award from The Conservation Fund at a recent ceremony in Washington, DC. Poitevint, who has been with the Service for nearly 30 years, was honored for his outstanding contributions to protecting our nation's natural resources.

The Southeast Louisiana Complex includes more than 160,000 acres of offshore barrier islands, marshes and bottomland hardwoods. As project leader, Poitevint was instrumental in establishing Bayou Sauvage NWR in New Orleans and the 20,000-acre Big Branch Marsh refuge on the north shore of Lake Pontchartrain.

John Turner, president of The Conservation Fund and former Service Director, praised Poitevint's dedication and ingenuity.

"...[Bayou Sauvage] refuge was the result of Howard's creative leadership in working with The Conservation Fund to overcome significant political challenges to create this 23,000-acre refuge within the city's corporate limits," Turner said.

Agent Flies Safely in Southwest Skies

Greg Stover, a Law Enforcement Special Agent and pilot in the Service's Southwest Region, received the Interior Department's Award of Honor for safe flying. Presented by Southwest Regional Director Nancy M. Kaufman, the award recognizes safe flying of at least 20 years or 7,500 hours. Stover joined the Service in 1977 and has had a spotless safety record since then.

However, it is not only his safety record that makes Stover's work so extraordinary.

"Low-level flights and law enforcement airborne operations are not the typical flight activity of most general aviation pilots," Kaufman said as she presented the award. "The hazardous nature of these enforcement operations makes Special Agent Stover's safe flying accomplishments truly exemplary. His conscientious attitude toward safety should be an example for every Service employee to emulate."

Biologist Receives Writing Awards

Region 2 fishery biologist Craig Springer received the highly coveted Bodie McDowell Scholarship at the annual Outdoor Writers Association of America conference last June. Springer, who is pursuing a master's degree in professional writing at the University of New Mexico, also recently received the Scott-McKenna Memorial Scholarship from Rocky Mountain Outdoor Writers and a professional writing award from the University of New Mexico. The awards will finance his 1999-2000 school year.

Springer applies his fisheries expertise to communicating Region 2 fisheries accomplishments in magazines and newspapers across the Southwest. As a freelance writer, he pens columns in four outdoor magazines and has published more than 100 articles and radio scripts on fish, fishing and conservation, as well as New Mexico history. Early last year he received his first book contract to write about the sunfish family.

Region 2 Co-op Student Wins Udall Scholarship

Luella Roberts, a co-op student and conservation plan assistant in the Southwest Region was honored in May 1999 as one of 75 scholars throughout the country to receive the prestigious Udall Scholarship. The scholarship of up to \$5,000 for a year recognizes promising students seeking careers in the environment, environmental policy and conflict resolution, and Native Americans and Alaskan Natives seeking careers in health care or Tribal policy. Roberts, who is a junior at the University of New Mexico majoring in conservation biology/environmental science, began her work with the Service as an AmeriCorps volunteer in 1996 and then as a conservation associate sponsored by the Student Conservation Association, during which time she worked in the Southwest Region's Endangered Species Outreach Program.

Fish & Wildlife... In Brief

Transitions

Palau Stamps Feature Conservationists

The tiny island nation of Palau issued a sheet of postage stamps featuring conservationists and former Service employees J.N. "Ding" Darling and Rachel Carson. The stamps are part of Palau's series saluting environmental heroes of the 20th century. Among others depicted on the 16-stamp sheet are Vice President Al Gore, *A Sand County Almanac* author Aldo Leopold, birder Roger Tory Peterson, and David Brower, founder of the Earth Island Institute and the League of Conservation Voters. The island of Palau is located in the North Pacific Ocean island group of Oceania.

Downpour Claims More than 200,000 Hatchery Fish

A cloudburst over the Mescalero Apache Indian Reservation in New Mexico July 16 sent a torrent of muddy water over raceways brimming with rainbow trout at the Mescalero National Fish Hatchery, killing about 230,000 fish ranging in size from 4 to 10 inches — this and next year's stockable production of the trout. It takes 16 months to grow rainbows to catchable size (10 inches and over) so the hatchery won't have rainbow trout to stock until May 2000. A population of 120,000 rainbow fingerlings survived in the hatchery tank room building used to hatch the fish. Also, several broodstock populations of endangered Gila trout were spared at the hatchery; the fish are held in separate buildings with an independent water supply that was not affected by the flood. The main water supply for the hatchery's outdoor rainbow trout raceways was compromised, however.

Service Proposes to Expand Western Refuge

The Service announced in August that it is proposing to purchase additional land for the Lower Klamath NWR in California and Oregon. The Service is soliciting public comments on its proposal to negotiate with willing sellers to purchase up to 1,080 acres in Klamath County, Oregon, and up to 5,873 acres and two groundwater wells in Siskiyou County, California. Following a 30-day public comment period, the Service will decide whether to approve any additions to the refuge. The refuge requires additional lands to meet the annual need for 12,000 to 16,000 acres of managed seasonal wetland habitat for migratory birds. The groundwater wells would partially address the need for a stable supply of high-quality water on the refuge.

Service Approves Grand Kankakee Marsh NWR

After nearly three years of planning and gathering public input, the Service in August approved the creation of the Grand Kankakee Marsh NWR in northwestern Indiana and northeastern Illinois. The approval was made in conjunction with completion of the agency's final environmental assessment, which evaluated potential environmental, economic, and social impacts of establishing a national wildlife refuge in the Kankakee River Basin. The refuge will someday encompass about 30,000 acres of wetlands, prairies, oak savannas, and other fish and wildlife habitat in scattered tracts throughout the basin. It will be managed to preserve, enhance, and restore natural areas within the basin to benefit migratory birds, native fish, endangered species, and diverse plant and animal communities.

Manager Selected for Arctic NWR

Richard W. Voss was recently selected as manager for the largest national wildlife refuge in the country, Arctic NWR. Voss served as refuge manager at Tetlin NWR, also in Alaska, for the last five years. Voss will manage a refuge that encompasses nearly 20 million acres, an area about the size of South Carolina. One of the largest undeveloped natural areas in the country, Arctic refuge is renowned for its wilderness values. Eight million acres are designated wilderness areas. The northernmost of all wildlife refuges, Arctic refuge offers a rich pageant of wildlife, including 180 species of birds, 36 land mammals, 36 fish and nine marine mammals.

Voss joined the Service in 1974 in Olympia, Washington, as a biologist with the River Basin Studies program. Since then, he has worked on thirteen refuges throughout the country, and he served as a technical advisor in China, Mongolia, Siberia and Nepal.

St. Vincent NWR Has New Manager

Terry Peacock, a 15-year Service veteran, has been appointed the new project leader at St. Vincent NWR in Apalachicola, Florida. She returns to St. Vincent after serving for seven years as deputy assistant manager at Mingo NWR in Puxico, Missouri, and after four years as assistant manager at Washita/Optima refuge in Butler, Oklahoma. Peacock was assistant manager at St. Vincent from 1986 to 1988. At Mingo NWR, Peacock spent several seasons reforesting former grazing lands of the 21,676-acre bottomland hardwood swamp refuge. She also served as team leader for the Service's Ozark Ecosystem Team for one year.

Cloud Steps in at Texas Field Office

Twenty-five year Service veteran Thomas J. Cloud, Jr., has been selected as the new field supervisor at the Ecological Services Office in Arlington, Texas. He will supervise a 10-person staff that manages federal wildlife conservation programs and partnerships throughout north and east Texas and the Texas Panhandle. Cloud will also supervise a satellite office in Lufkin. During his career, Cloud has worked as a senior staff biologist, environmental specialist and wildlife biologist, receiving numerous awards for his work.

A Front Yard Celebration

Have you seen what happens at our national wildlife refuges? At these remarkable places, the efforts of the entire Service family come alive...and you are a part of it! Whether you're a biologist, a law enforcement agent, a secretary or a computer specialist—whatever your job may be—celebrate your contribution to conservation by taking part in this year's National Wildlife Refuge Week, October 10-16.

As refuges throughout the country stage special events to commemorate this annual happening, I encourage all employees to join the celebration. Let's get out of the office and into the great outdoors. As director, I have visited many refuges, and I find few experiences as invigorating. To release black-footed ferrets at Charles M. Russell refuge in Montana or to stand among walrus at Cape Pierce in Togiak, Alaska... these are among the memories that fuel the passion in my heart for things natural, wild and free.

Refuges offer each of us the chance to reconnect with what first attracted us to a career in wildlife conservation. In the woods, the deserts, the fields, and the marshes live treasures that revive a sense of wonder in the scientist, hunter, angler, wildlife watcher and curious child.

It is vital that we do not lose that sense of wonder. This is especially relevant in the modern world, where more and more of us live in increasingly urban settings, where our connection to the earth is limited to a manicured lawn or completely obscured by

asphalt. For the Service, awakening this sense of wonder in others is crucial to our efforts to garner support for our conservation work. If we can motivate people to step through their front doors and into our front yard—the National Wildlife Refuge System—I have no doubt they will fall in love with the songs of birds, the fleeting glimpse of a deer, the brilliance of wildflowers or the spectacle of salmon leaping upriver.

In 1997, our refuges hosted more than 31 million visitors. This impressive figure continues a growing visitation trend, but we know we can do better. *Fulfilling the Promise*, our blueprint for the future of the refuge system, suggests steps we can take to transform our impressive land base from America's best kept secret to the most visible place to turn for a genuine wildlife experience. Following the outline of the National Wildlife Refuge System Improvement Act of 1997, *Fulfilling the Promise* highlights six priority public uses: hunting, fishing, wildlife watching, wildlife photography, environmental education and interpretation. These uses are the most compatible with the defining idea behind refuges: that they are places where wildlife comes first.

For refuges to host the premier visitor wildlife experience envisioned in *Fulfilling the Promise*, we are strengthening our refuges in the areas of visitor services, staffing, public use facilities, fee and concession management, law enforcement, public safety, community involvement, and public outreach.

I hope that employees make the time during this National Wildlife Refuge Week to partake in the celebration. I also expect us to serve as ambassadors for wildlife and invite our families and friends to a refuge. Take pride in what you do and show your loved ones what your job is all about.

There is something for everyone at our national wildlife refuges. Hunt turkeys and white tails at Noxubee in Mississippi or ducks at White River in Arkansas. Fish for king salmon at Kenai in Alaska or for salt-water species off the coast of Chincoteague in Virginia. Catch a glimpse of mountain lions at Wyoming's National Elk Refuge or manatees at Florida's Crystal River. Learn about the natural world around us at Rocky Mountain Arsenal in Colorado or at Minnesota Valley. Each refuge is an adventure just waiting to happen.



Jamie Rappaport Clark

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