



U.S. Fish & Wildlife Service

# Fish & Wildlife News

*Winter 2002–2003*

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## Air Force Presents Legion of Merit to Assistant Secretary Manson



**Highest honor.** Assistant Secretary Manson shows his Legion of Merit award with Brigadier General Dennis G. Lucas, Assistant Adjutant General for Air, California Air National Guard (left), Secretary Norton, and Major General Daniel J. Gibson, Commander, California Air National Guard (right). DOI photo: Tami Heilemann.

Last September, Assistant Secretary of the Interior for Fish and Wildlife and Parks, Craig Manson, received the Legion of Merit, the highest peacetime award given by the U.S. Air Force, in recognition of his distinguished service in the Air National Guard.

The Air Force commended Manson, an Air Force Academy graduate who holds the rank of colonel in the Air National Guard, for “exceptionally meritorious conduct in the performance of outstanding service to the United States,” for his contributions as staff judge advocate at the headquarters of the California Air National Guard in Sacramento from 1996 to 2002.

“During this period, the exemplary ability, diligence, and devotion to duty of Colonel Manson were instrumental in the resolution

of many complex legal issues in the Air National Guard and the United States Air Force,” the citation states.

In particular, the citation recognizes Manson’s role as liaison to the California Department of Water Resources, which was “instrumental in saving lives and property during the 1997 floods in California,” and his contributions to improving coordination between military and civilian authorities in response to fire disasters throughout the nation.

“Craig Manson is a patriot who has served his country both in the military and as a civilian,” Interior Secretary Gale Norton said. “I congratulate him on receiving the Legion of Merit. It is a well-deserved honor.”

*Hugh Vickery, Department of Interior, Washington, D.C.*

## NWR Featured on Centennial Duck Stamp

Wildlife artist Ron Louque proved that persistence counts when he finally won the Federal Duck Stamp Art Contest in October, after entering the contest every year since 1973.

Louque, from Charlottesville, Virginia, painted flying snow geese with a background depicting the lighthouse at Chincoteague National Wildlife Refuge.

“I wanted to use a refuge with a distinctive feature as background since next year is the National Wildlife Refuge System’s Centennial,” said Louque. “The lighthouse is such a majestic feature, plus my painting is based on the effect of light, so I called the manager at Chincoteague NWR and he sent me photos of the lighthouse. There was a flock of snow geese in the picture... It must have been a sign.”

Louque used two stuffed snow geese and photographs as reference. Louque has been an avid duck hunter and taxidermist since childhood.

“I wanted a painting that hit the heart, not the intellect,” said Louque. “The light source evoked an emotional response to the painting.”

“The staff at Chincoteague is honored that the winning Centennial Federal Duck Stamp depicts a scene from the refuge,” said Chincoteague NWR Manager John Schroer. “The use of snow geese was uncanny. This is the species for which the Chincoteague Refuge was established in 1943. The combination of the geese and the Assateague Lighthouse is a comforting sight seen by many visitors to the refuge each year.”

Second place in this year’s Federal Duck Stamp Contest went to Terry Doughty of Brookfield, Wisconsin, for an acrylic rendering of a male and female wood duck.

### On the cover.

Assistant Secretary Craig Manson congratulates Federal Duck Stamp contest winner Ron Louque. DOI photo: Tami Heilemann.



# IAFWA Names New Executive Vice President

Outgoing President Robert McDowell recently announced the selection of John G. Baughman as Executive Vice President of the International Association of Fish and Wildlife Agencies. He succeeds R. Max Peterson, who is retiring after serving almost 14 years in that position.

For the past six years, Baughman has served as director of the Wyoming Game and Fish Department in Cheyenne.

"I am very happy with IAFWA's selection," said Director Steve Williams. "I have known John for a long time. We served together on an international executive committee for three years. He is a very bright guy with a great deal of common sense."

Baughman has a bachelor of science in fisheries from Colorado State University and a master of science in zoology from the University of Wyoming.

"We selected John Baughman from among a number of well qualified applicants after a nationwide search," said McDowell. "He is a seasoned professional leader in fish and wildlife management who has earned the respect of his peers during more than 28

years in a variety of assignments, rising through the ranks to become the director of the agency."

Baughman has served in a number of positions with the IAFWA, including Vice President, Chair of the Executive Committee, Chair of the Threatened and Endangered Species Policy Committee and Chair of the Wildlife Damage Management Policy Committee. He has also been President and Vice President of the Western Association of Fish and Wildlife Agencies, Chair of the Colorado River Fish and Wildlife Council, Chair of the Interagency Grizzly Bear Committee, and Chair of the Greater Yellowstone Interagency Brucellosis Committee.

He is a long-time member of many wildlife related organizations such as the National Wild Turkey Federation, Trout Unlimited and the Wyoming Wildlife Federation, and is a Professional Member of the Boone and Crockett Club.

*Compiled by Nicholas Throckmorton, Public Affairs, Washington, D.C.*



**Flyers.** Service Director Steve Williams with Midwest Region pilot Brian Lubinski (left) and Keith Beseke of the Upper Mississippi River National Wildlife and Fish Refuge at Rochester, Minnesota airport in July. Director Williams toured portions of the Upper Mississippi River refuge by airplane during his stop in Minnesota to address the national convention of the Izaak Walton League. FWS photo.

## IAFWA's New Leadership

At its Centennial Business Meeting in September 2002, the International Association of Fish and Wildlife Agencies elected new Officers and Executive Committee members for 2002-2003.

### President

Brent Manning, Illinois

### Vice President

Tom Bennett, Kentucky

### Secretary/Treasurer

Corky Pugh, Alabama

### Past President

Robert McDowell, New Jersey

### Executive Committee Chair

Terry Crawford, Nevada

### Vice Chair

Ron Regan, Vermont

### Members

Rex Amack, Nevada

Larry Bell, New Mexico

Mike Budzik, Ohio

Cameron Mack, Ontario, ex officio Canada

Ira Palmer, District of Columbia

Ed Parker, Connecticut

Paul Sandifer, South Carolina

### Midwest President

Rex Amack, Nebraska

### Northeast President

Pete Colangelo, Pennsylvania

### Southeast President

Jimmy Jenkins, Louisiana

### Western President

Jeff Koenings, Washington

## Dedication of New Craig Brook National Fish Hatchery Building



**Secretarial glance.** Biological technician Peter Burke, a 27 year veteran of Craig Brook NFH, shows an Atlantic salmon to Secretary Norton while biological technician Daniel Tozier looks on. DOI photo: Tami Heilemann.

A new building at the Service's Craig Brook National Fish Hatchery in East Orland, Maine, was dedicated this fall. For 131 years, a hatchery at Craig Brook has produced fish for anglers; first Atlantic salmon, and over the years, 20 other species from brown trout to whitefish. A Federal national fish hatchery since 1889, Craig Brook has returned to hatching Atlantic salmon to replenish seven Maine rivers—a total of more than 2 million young salmon in the past year.

"This new state-of-the-art structure connotes the vital importance of the work we do," said Dr. Mamie A. Parker, regional director for the Service in the Northeast. "The Service's fishery program in Maine finally has the facility to do the job of recovering Atlantic salmon."

"People and organizations in Maine, together with people in our regional office in Massachusetts and our Washington office, deserve great credit for their long and hard work to make this dream a reality," Parker said. "Not least of all, the dedicated staff at Craig Brook patiently oversaw the hatchery

from the time it was housed in an inadequate building lacking space, water temperature control and disease protection, to the move into this modern building that we can all look to with pride."

The new hatchery building, along with renovation of the fish receiving building and the water treatment plant, was four years in the making. Seven separate holding and hatchery areas ensure the isolation and protect the health of seven distinct river-specific populations.

Genetic studies three years ago confirmed what fishery biologists had suspected—each river's salmon are distinct from each other. Salmon in six of the rivers—the Dennys, Machias, East Machias, Pleasant, Narraguagus and Sheepscot rivers—are protected by the Endangered Species Act. Salmon from the Penobscot River are also held and raised at Craig Brook to help rebuild that population to a self-sustaining level.

*Diana Weaver, External Affairs, Hadley, Massachusetts*

## New Invasive Fish In Lake Michigan

During a routine survey in Lake Michigan waters off Escanaba, Michigan, in late August, Service biologists captured and destroyed an adult Eurasian ruffe, marking the first confirmed finding of a ruffe in the lake.

The Eurasian ruffe is an exotic invasive species first discovered in the Duluth, Minnesota, harbor and St. Louis River estuary of Lake Superior in 1986. Since then, ruffe numbers in the Duluth harbor have increased to become the most common species found while sampling with trawls. Their range has expanded into the Wisconsin, Michigan and Ontario waters of western Lake Superior, and to one location in Michigan waters of Lake Huron. Control measures slowed their expansion since 1995, but this recent invasion in Lake Michigan indicates that ruffe are continuing to expand in the Great Lakes.

"Although the effects ruffe will have on native Great Lakes fish populations are difficult to predict, strong evidence suggests they compete with native fish for food and space," said Mark Dryer, project leader for the Service's Ashland Wisconsin Fishery Resources Office.

The ruffe is in the same family as native yellow perch, walleye and some darters. In the Duluth harbor where ruffe have become a dominant species, native species like yellow perch and some bait fish have declined. Unfortunately, unlike native perch species, ruffe have no known economic, recreational or environmental value.

Biologists are uncertain how the fish moved into Lake Michigan. It is possible that the fish naturally migrated from another location. It is more likely the fish was transported in the ballast water of a commercial ship, which was probably responsible for moving ruffe from their native habitat in Europe to the Duluth harbor. Since 1993, the Great Lakes maritime industry has undertaken voluntary measures to prevent ruffe from being spread in the ballast water of Great Lakes ships.

*Mark Dryer, Ashland Fisheries Resource Office, Ashland, Wisconsin*

*Chuck Traxler, Public Affairs, Minneapolis, Minnesota*

## Innovative Partnership Creates Refuge



The nation's newest wildlife refuge was dedicated August 26 by Interior Secretary Gale Norton in a ceremony highlighting the partnerships that made it possible. The Red River NWR in Louisiana owes its existence to Entergy Corporation, The Conservation Fund, the Service and other volunteers.

Secretary Norton, Senator Mary Landrieu and Representative Jim McCrery, whose district includes the refuge, addressed the success of this public-private partnership at the dedication ceremony attended by representatives of the partners.

"The dedication of Red River National Wildlife Refuge represents a triumph of cooperation and partnership in the service of conservation," said Secretary Norton. "Thanks to the contributions of Entergy and The Conservation Fund, the new refuge will provide habitat for fish and wildlife while offering the citizens of Louisiana recreational opportunities. At the same time, the restoration of the bottomland hardwood forest will remove 240 tons of carbon from the atmosphere each year, providing cleaner air. Together, we are restoring the rich biological diversity of the floodplain forest that once characterized the Red River Valley as a legacy for future generations of Americans to enjoy."

The Conservation Fund purchased 600 acres of non-productive agricultural acreage along the Red River with financial assistance from New Orleans-based Entergy Corporation. After reforestation, the corporation plans to donate the property, along with a management endowment, to the Service.

**Restoration begins.** Interior Secretary Gale Norton, Service Regional Director Sam D. Hamilton and Paul Dickson, Chairman, Friends of the Red River Refuges, look upon the sign that declares the first planted tree on Red River NWR is dedicated to the Secretary. FWS photo: Jim Rothschild.

This gift will become the first tract of land in the Red River NWR. This arrangement illustrates recent strides by businesses and environmentalists, who are increasingly forming strategic alliances for their mutual benefit.

Entergy, in partnership with Environmental Synergy, Inc., has already planted more than 180,000 native trees on the property. Over the next 70 years, the trees will trap 275,000 tons of atmospheric carbon dioxide, as well as provide important bottomland hardwood habitat benefiting migratory birds, turkey, white-tailed deer and other wildlife.

The Red River Valley represents a historic corridor for migratory birds funneling out of North America to the Gulf Coast. An important tributary of the Mississippi River, the Red River is one of the most degraded watersheds in Louisiana. Eventually, the refuge will encompass 50,000 acres. In addition to protecting wildlife habitat and enhancing air quality, the refuge offers public recreation opportunities such as hunting, fishing, hiking and educational outreach programs.

"The Red River NWR restores to the citizens of our region a face of the Red River that was hidden long ago," said Paul Dickson, chairman of the Friends of the Red River Refuges. "Thanks to this remarkable partnership, the future of the Red River, its people, and its wildlife is brighter than ever."

*Jim Rothschild, External Affairs  
Atlanta, Georgia*

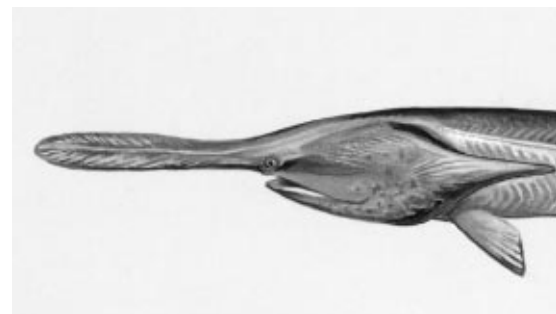
## Tennessee Fish Dealers Guilty of Federal Wildlife Violation

In May, a Tennessee couple doing business as Royaloff Caviar were found guilty of six felony violations of the Lacey Act and conspiracy to violate the Lacey Act. Charges included purchasing paddlefish caviar, which was harvested during closed Tennessee seasons and in closed waters, sale of caviar in interstate commerce which was taken in violation of state laws, purchasing fish without being licensed as a wholesale fish dealer by the State of Tennessee, and creating false documents to conceal the identities of fishermen and locations where the paddlefish eggs were taken. Special agents from the Service and wildlife investigators from the Tennessee Wildlife Resources Agency (TWRA) worked together to prepare the case against the defendants.

In addition, the couple's daughter was found guilty of conspiracy to violate the Lacey Act for her role in creating false documents and purchasing paddlefish caviar taken during closed seasons and from closed waters.

"There is a global market for our natural resources and without constant vigilance, we will lose the fish and wildlife populations which are a cornerstone of our quality of life," said Sam D. Hamilton, Southeast Regional Director. "I applaud our federal wildlife agents and state wildlife officers who stand shoulder-to-shoulder to combat commercial poachers who would rob Americans of our natural heritage."

"The paddlefish is an important component of Tennessee's wildlife diversity," said TWRA Executive Director Gary Myers. "We establish regulations designed to protect this resource for the enjoyment of future generations. When individuals violate those regulations, they diminish the quality of our aquatic resources. Hopefully, we have



FWS image: Duane Raver.

# First Turkey Hunt—Success at Patuxent Research Refuge

prevented any further losses through the coordinated efforts of TWRA and the U.S. Fish and Wildlife Service.”

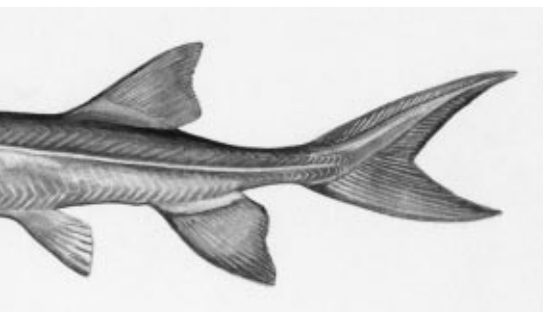
The Lacey Act is a federal statute which makes it unlawful to sell, receive, or purchase in interstate or foreign commerce, any wildlife taken, possessed, transported, or sold in violation of any law or regulation of any state.

A joint investigation by officers of the Tennessee Wildlife Resources Agency and special agents of the United States Fish and Wildlife Service determined that over 8,400 pounds of paddlefish caviar with an estimated black market value of \$483,000 (which is far lower than the ultimate retail value) were illegally taken and sold in interstate commerce by participants in the conspiracy. According to researchers, each female with eggs provides an average of 7 pounds of caviar and it is not uncommon for commercial fishermen to sacrifice a minimum of 4–5 males and females without eggs for each female with eggs. Therefore, it would take between 5–6,000 paddlefish taken from the wild to produce 8,400 pounds of caviar.

The United States, while a major consumer of fish and wildlife resources, is also a source of supply to meet the worldwide demand for many species such as the American paddlefish.

With the demise of the Soviet Union and the depletion of European and Asian sturgeon populations, American paddlefish are an attractive substitute to meet the demand for caviar. All species of sturgeon and paddlefish are protected under CITES.

*Christine Eustis, External Affairs,  
Atlanta, Georgia*



The first day of turkey hunting in the history of the Patuxent Research Refuge started early on the morning of April 13, 2002. The new program began with a limited hunt for youth and disabled individuals, selected by lottery. The very first youth hunter selected, 12-year-old 7th grader Taryn Stine, had a successful morning—one of those wonderful life experiences that will stay in her memory for a lifetime.

Taryn grew up with an older brother, Brooke, and her father, Alan, both avid deer hunters. She caught the bug and started deer hunting with them last year. Harvesting that first deer, however, has eluded her. She had tremendous luck on her first turkey hunt.

Guided by Tracy Ford, President of the local Full Strut Chapter of the National Wild Turkey Federation, and accompanied by her dad, it was over three hours before the hunting party saw their first bird. Five turkeys were heard gobbling way off in the distance in hunting unit Area I. With great patience and the skillful calling of long time turkey hunter Tracy, two of the five birds slowly began to come in closer. A little after 9:00 am the first birds were seen! The birds, of course, did not cooperate. They came around to the right within ten feet, but it was hard for a right-handed shooter to make that shot. It took another five to ten minutes to call the birds in to the left for a shot. This time was agonizing as the entire group had to freeze and not move a muscle to spook the birds. Taryn was shaking (mostly inside) but later said, “My Dad was more nervous than me!”

She selected the bird she wanted—the one that was strutting and most dominant. At 9:15 am, Taryn bagged her first wild gobbler, weighing in at 21.5 pounds with a 10.5 inch beard. Tracy said, “It was bigger than any bird I’ve ever bagged in my 25 years of turkey hunting! It was textbook perfect. Taryn never moved a muscle. She had more self control than many of the adults I’ve guided for. That’s what it takes for a successful hunt.” After the obligatory photos, Taryn said “I want to do it again!” She donated the magnificent bird she harvested to the Refuge, where it will be displayed.

As an additional bonus, Service Director Steve Williams, an avid turkey hunter himself, joined the Refuge’s hunting



**Camo with ammo.** Participants in Patuxent’s first wild turkey hunt are (from left to right) Joseph Ryan (youth hunter), Terry Ryan (father), Service Director Steve Williams, Tracy Ford (Meade Natural Heritage Association and National Wild Turkey Federation member), and Jason Morrow (National Wild Turkey Federation Headquarters). FWS photo: Brad Knudsen.

program and assisted another youth hunter, Joseph Ryan, on April 20. Unfortunately, the turkeys did not cooperate as well. Still, everyone in the party had a great time, which reinforced the credo that just being there is mostly what turkey hunting is all about—harvesting a bird is an added bonus.

Patuxent Research Refuge’s Spring Turkey Hunt started after many years of monitoring the growing turkey population. A band of National Wild Turkey Federation volunteers, headed by Tracy Ford, has surveyed the birds every spring since 1994. This year the refuge determined that enough mature gobblers existed for a harvest of eight.

Tracy said he was extremely pleased to see the hunt happen. He felt there was great cooperation between the Meade Natural Heritage Association, the Refuge’s cooperating hunting association, and the Fish and Wildlife Service in fledging this new hunting program. “Some hunters had a once in a lifetime experience,” he said. “I look forward to doing it again next year.” He’s not alone.

*Holliday H. Obrecht III, Refuge Biologist,  
Patuxent Research Refuge*

## California Gets First Safe Harbor Agreement

A Humboldt County, California, timberland owner has become the first private landowner in California to participate in the Service's Safe Harbor program, an innovative conservation partnership concept with its roots on the east coast. This Safe Harbor Agreement between the Service and Forster-Gill, Inc., covering 232 acres near Blue Lake, is also the first agreement of this type for the northern spotted owl anywhere in the nation.

"A Safe Harbor Agreement is part of the Service's continuing effort to work in partnership with private landowners on issues involving federally listed species," said Steve Thompson, Manager of the Service's California-Nevada Operations Office. "Because so much habitat for threatened and endangered species occurs on private land, we need the direct involvement and support of private landowners like Forster-Gill to assist in conservation and recovery efforts."

Safe Harbor Agreements encourage private and other non-federal landowners to implement conservation efforts for listed species by assuring landowners they will not be subjected to additional land use restrictions in the future. A special endangered species permit, called an enhancement of survival permit, is issued with each Safe Harbor Agreement. This permit provides Endangered Species Act regulatory assurances to landowners who voluntarily participate in listed species conservation. In this case, the Safe Harbor Agreement and permit will assist Forster-Gill in managing their Blue Lake properties under a State of California approved non-industrial timber management plan. While there are no northern spotted owls on this property at present, there are owl sites nearby. In the event that habitat created by the management of this property were to attract northern spotted owls, the timber company would not be subject to additional regulation beyond that specified in the agreement.



*Northern spotted owl. FWS photo: Karen and John Hollingsworth.*

The agreement establishes baseline conditions and anticipates the development of high-quality northern spotted owl habitat. Periodic timber inventories during the term of the agreement will demonstrate an increase in average tree diameter and overall timber volume, which equates to an increase in owl habitat quality. At the conclusion of the 80-year agreement, the landowner is allowed to return the habitat to the baseline condition. In the meantime, no habitat is lost, habitat quality is improved, and future owl nest sites are protected.

"This is an outstanding example of government and private owners working collaboratively for conservation," Thompson said. "As more landowners learn of the flexibility Safe Harbor Agreements provide, we expect to see more interest in these collaborative efforts."

*Ken Hoffman, Biologist,  
Arcata, California*

*Bruce Halstead, Project Leader,  
Arcata, California*

Tim Gill, president of Forster-Gill Inc., said, "Thanks to the great efforts of the Fish and Wildlife Service and National Marine Fisheries Service, as well as James L. Able Forestry Consultants, Inc., we will be able to achieve financial return from our Blue Lake property while promoting the development of the forest and increasing habitat for this threatened species."

## Company President Sentenced for Caviar Smuggling

Following an investigation by Service special agents, a Russian citizen was sentenced in November to 41 months in federal prison and two years of supervised release as the result of his involvement in a far-reaching wildlife smuggling conspiracy. The man paid couriers to bring suitcases filled with caviar into the United States after new international restrictions were announced in 1998 to protect sturgeon.

The man, president and owner of Beluga Caviar, Inc., located in North Miami Beach, Florida, was sentenced by U.S. District Court Judge Federico A. Moreno after pleading guilty to charges of conspiracy, smuggling and money laundering. The president also forfeited \$36,000 found in his possession upon his arrest at Miami International Airport.

He also admitted to using false documents to smuggle more Beluga caviar from Russia into the United States via Poland in 1999 than the entire Russian export quota for the year, according to a detailed factual statement filed in court.

"Smuggling and money laundering are serious crimes that will not be tolerated," said Marcos Daniel Jiménez, United States Attorney for the Southern District of Florida. "We will use all the legal tools at our command to deter those who place their own profit before environmental concerns and violate the laws intended to protect wildlife."

"Recent prosecutions have shown that the caviar trade is rife with corruption and this is having a devastating impact on the future of this species of pre-historic origin," said Tom Sansonetti, Assistant Attorney General for the Department's Environment and Natural Resources Division. "The Justice Department is dedicated to enforcing the laws designed to protect and preserve them from the threat of extinction."



## Brothers Relive Childhood Memories of Once Abundant Fish

The president orchestrated a conspiracy in which smugglers were paid approximately \$500 for each trip and were provided airline tickets, pre-packed luggage filled with black market caviar and apartment and hotel rooms in Europe and Miami, according to papers filed in court. He used bank accounts in Europe to launder the proceeds of the wildlife smuggling scheme. In pleading guilty, he also admitted that he encouraged an employee to lie to the grand jury.

According to papers filed in court, the investigation began after the president offered to sell sturgeon caviar with false labels stating that the contents were "Atlantic Lumpfish Roe"—an unprotected species. Special agents executed a search warrant at his business and seized more than \$500,000 worth of caviar along with the false labels.

This investigation was conducted by special agents with the Service's Division of Law Enforcement with assistance provided by the U.S. Customs Service and Food and Drug Administration. Caviar valuing approximately \$860,000 was seized and forfeited by the Service during the course of the investigation. The case was prosecuted by the U.S. Attorney's Office for the Southern District of Florida and the Department of Justice's Environment and Natural Resources Division.

This sentencing is the ninth case in Miami involving caviar smuggling over the past two years. In each case the individuals convicted have received jail sentences, with the exception of one man who was recently convicted after a jury trial and whose sentencing has been scheduled for 2003.

*Charles Miller, Public Affairs, Department of Justice, Washington, D.C.*

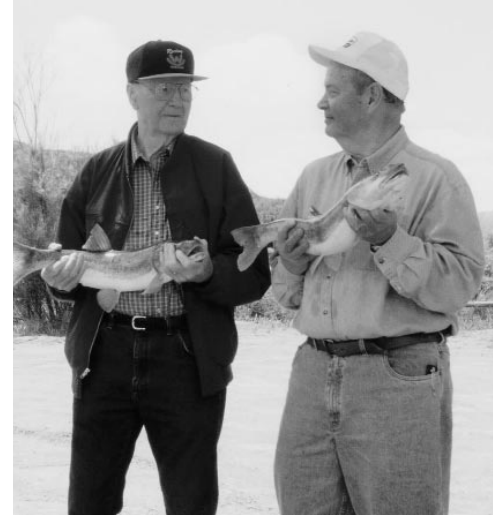


**Then.** *The Stewart brothers enjoyed fishing for Colorado pikeminnow (then called Colorado squawfish or whitefish) during the depression in the 1930s. Pictured with their catch from the Green River near Vernal, Utah, are Dale, 12 (left); Max, 4 (in the wagon); and Glen, 16.*

Nearly 70 years ago, brothers Dale and Max Stewart tied a strong piece of string to a flexible branch cut from a tree and cast into the Green River near Vernal, Utah, in search of enough large fish to feed their family and friends during the Depression. They baited their hooks with hellgrammites—a large aquatic insect found under rocks on the riverbank.

At the age of 8, Max caught a 25-pound Colorado pikeminnow (called squawfish or whitefish in those days) that was nearly as big as he was. Dale still holds the record in the small northwest Utah community for the largest Colorado pikeminnow caught in that area—26 pounds.

"When I'd get a good one, I'd have a shiver run up the back of my neck," Dale, now 81, said. "The whitefish is more fun to catch than a trout because they're bigger." The brothers recall that the fish were excellent to eat.



**Now.** *The Stewart brothers relived childhood memories of catching Colorado pikeminnow in June when they helped Fish and Wildlife Service biologists locate these now endangered fish. Dale, 81, (left) and Max, 73, said they hope that someday the species will no longer be endangered and others can have as much fun catching and eating them as they did when they were children.*

"In the summer, our family and friends would gather near the river for a fish fry," Max, 73, recalled. "We'd enjoy large quantities of fish accompanied by homemade bread, green beans from the garden and other good food. To me the Colorado pikeminnow tasted somewhere between salmon and halibut." The Stewarts' mother would can large quantities of fish to enjoy during the winter.

The largest minnow in North America, Colorado pikeminnow once grew to nearly six feet in length and were known to weigh nearly 80 pounds. Changes to the Colorado River system during the mid-1900s led to the decline of Colorado pikeminnow and three other species of fish that are now endangered - the humpback chub, bonytail and razorback sucker. Today, the Upper Colorado River Endangered Fish Recovery Program works to bring these species back from the brink of extinction.

**Continued on page 10.**

## Brothers Relive Childhood Memories (continued)

Biologists are beginning to see the return of the Colorado pikeminnow in areas where the Stewart brothers fished as children, offering hope that these once popular sportfish could again become abundant throughout the Colorado River system.

“We’ve seen some Colorado pikeminnow as large as 25 pounds during recent studies of the river,” said Frank Pfeifer, the project leader. “We’re beginning to see greater numbers of this fish in the river system, including areas popular with anglers, so it’s more important than ever that people learn to recognize them and to understand that they are endangered and must be released unharmed. At the same time, we want anglers to gain an appreciation for their value as fighting sportfish.”

In June, the Recovery Program took Max and Dale to the White River about 60 miles southeast of their hometown. There they had an opportunity to help Service biologists capture Colorado pikeminnow.

“We knew there was an effort taking place to restore this species,” Max said, “but we didn’t think we’d live long enough to ever see them again. It was a thrill to see them. We hope that someday people will have as much fun fishing for them as Dale and I have.”

*Debbie Felker, Colorado River Endangered Fish Recovery Program, Lakewood, Colorado*

## Young Rabbits Go Wild

The endangered riparian brush rabbit has taken the next hop onto the comeback trail.

Biologists from the Service and the Endangered Species Recovery Program at California State University, Stanislaus, released eight young rabbits bred in captivity in early August into restored habitat areas along the San Joaquin River west of Modesto, California.

The riparian brush rabbit, listed as endangered since early 2000, is the first federally protected mammal native to California to be bred in captivity for reintroduction. Biologists believe up to 44 young rabbits have been born and remain alive at the captive-breeding facility south of Sacramento. Ultimately, all will be released into the wild.

Historically, these elusive animals inhabited dense forests along major streams flowing down to the floor of the northern San Joaquin Valley. But more than 90 percent of forests along Central Valley rivers have been lost to urban, commercial, and agricultural development. Today, the only known populations of the riparian brush rabbit are confined to Caswell Memorial State Park on the Stanislaus River and along an overflow channel of the San Joaquin River.

The species was almost wiped out in the winters of 1997 and 1998, when floods inundated its habitat for prolonged periods. The Service hopes to establish new, self-sustaining populations at the San Joaquin River NWR and other publicly owned lands in the region.

The rabbits are released into 1-acre enclosures in the forested areas. The pens will acclimate the animals to their new surroundings and protect them from predators, and will eventually be removed. The riparian brush rabbit, with dark brown to gray overfur and white fur underneath, is a small cottontail, about a foot long and weighing no more than a pound.



**Last look.** *Kim Forrest, Manager, San Luis NWR, releases an endangered riparian brush rabbit. FWS photo: Heather Bell.*

The captive-breeding project is a joint-venture of the Service, the Endangered Species Recovery Program, and several other state and federal agencies, including the Bureau of Reclamation and the state departments of Parks and Recreation, Fish and Game, and Water Resources. Funding for habitat restoration has been coordinated through the CALFED Bay-Delta Program.

The San Joaquin River NWR is west of Modesto within the historic flood plains of the San Joaquin, Stanislaus and Tuolumne rivers. The refuge, part of the San Luis National Wildlife Refuge Complex, now covers some 6,642 acres and eventually could grow to more than 12,000 acres. The refuge also played a key role in the recovery and delisting in 2001 of the Aleutian Canada goose.

*Kim Forrest, Refuge Manager  
San Luis NWR Complex*

## Condors Fly to Baja

Six endangered California condors arrived at Tijuana's General Abelardo L. Rodriguez airport this summer, marking the first time a member of their species has been documented in Mexico since the late 1930s. The newly arrived condors did not fly to Tijuana on their own, but were instead transported by plane.

The condors are part of a recovery program for the species that is being implemented by the Service in cooperation with the Zoological Society of San Diego, the Los Angeles Zoo, the California Department of Fish and Game, and numerous Mexican partners, including the Instituto Nacional de Ecología, the Comisión Nacional de Áreas Naturales Protegidas, and the Centro de Investigación Científica y de Educación Superior de Ensenada.

Of the six, five are juveniles and are scheduled to be released this fall in the mountains of Baja California, Mexico, after several weeks in an acclimation pen. The sixth condor is an adult female that is accompanying the juveniles as a "mentor" bird. She will return to the Los Angeles Zoo following the release. All six were reared at the Los Angeles Zoo and were hatched at the zoo and the Peregrine Fund's World Center for Birds of Prey in Boise, Idaho.

The release area is located in the Sierra de San Pedro Martir National Park in northern Baja. The release project will include an outreach program that will work with local communities and ranches to educate and inform them about condor reintroduction efforts.

Mike Wallace, wildlife specialist with the Zoological Society of San Diego, is leading the field release program in Baja. He is working on the ground with Mexican biologists and has designed and constructed the release pen. He has been instrumental in planning California condor reintroduction efforts in Baja. "The Sierra San Pedro de Martir is a magnificent high altitude range covered in old growth pine and fir for roosts, and with extensive cliffs with caves for nesting," said Wallace. "With large populations of deer, bighorn and cattle, these birds should thrive there."



**California condor.** FWS photo: Scott Frier/  
Nikon.

Biologists hope the reintroduced condors may one-day unite with condors in California to form one population. The goal of the California Condor Recovery Program is to establish two geographically separate populations, one in California and the other in Arizona, each with 150 birds and at least 15 breeding pairs. There are 76 condors now living in the wild in California and Arizona, 16 in field pens ready for release, and 116 in captivity at the Los Angeles Zoo, San Diego Wild Animal Park and the Peregrine Fund's World Center for Birds of Prey in Boise, Idaho.

*Bruce Palmer, Ventura Ecological Services,  
Ventura, California,*

*Dario Bard, Public Affairs,  
Washington, D.C.*

## From Argali to Bighorn

"Stop the car!" cried Liu Chuguang through our interpreter Julia Su. The minibus slid to a halt on the rocky washboard road. As the dust cleared, we made out a thin, tawny figure picking its way around a field of boulders. Then, about 50 feet away, an adult female desert bighorn sheep, a yearling, and a lamb came into view. We were visiting the Hualapai Indian Reservation in northern Arizona at the base of the Grand Canyon—a special place for us and for our Chinese colleagues. Seeing a desert bighorn sheep in the wild was as exciting for them as seeing the endangered argali, a large Asian bighorn sheep, had been for us when we visited China last year.

The visit of five Chinese biologists was coordinated by the Service's International Affairs program, which implements the Nature Conservation Protocol Between the U.S. Department of the Interior and the State Forestry Administration of the People's Republic of China. At the request of the Chinese government, the Service sent biologists to China in 2001 to learn more about Chinese efforts in the conservation and management of argali sheep.

In return, we spent two weeks with the Chinese delegation, first in Arizona, home of the desert bighorn, and then in Montana, home of the Rocky Mountain bighorn. In both states, the delegation met with researchers, managers, and individuals who work together to manage these animals



**Grand Canyon National Park.** A view from the North Rim along Widforss Trail at 7900 feet. FWS photo: Michael Kreger.

## From Argali to Bighorn (continued)

at the federal, state, and tribal levels. Our goal was to show the Chinese that cooperation at many different levels and among many partners is key to a successful conservation program.

At their peak, the desert bighorn sheep in North America may have numbered more than two million animals, but competition with livestock in the 1800s reduced the population to approximately 20,000, of which 4,500 are found in Arizona.

Representatives from Arizona Game and Fish Department, the Phoenix Zoo, and the Hualapai Reservation introduced the delegation to Arizona wildlife, discussed methods of estimating population sizes, and provided information on predation, disease, and nutrition. The delegation also learned that, on occasion, when bighorn from the reservation cross into Grand Canyon National Park, and vice versa, the three governments coordinate material or technical assistance.

Rocky Mountain bighorn sheep populations in the contiguous United States also diminished by the early 1900s due to commercial exploitation, habitat loss, and competition and diseases from domestic livestock. Then in the 1940s and 1950s state wildlife management agencies began reintroducing bighorns to their historic range, using animals from the remaining stocks and herds from Canada. Now, the Rocky Mountain bighorn sheep are widely distributed throughout the Rocky Mountain states and south into New Mexico.



**Delegation.** Chinese biologists with translator *Julia Su* (left); *Brian Wakeling*, Arizona Game and Fish Department (middle); and *Mike Kreger*, Division Scientific Authority (right) visit the desert bighorn sheep exhibit at the Phoenix Zoo. *FWS photo.*

In Montana, our Chinese colleagues learned about these animals from University of Montana researchers, U.S.D.A. Forest Service and Fish and Wildlife Service biologists, and staff from the Montana Department of Fish, Wildlife and Parks, who described management tools such as prescribed fire. They learned about Montana's hunting laws such as regulations covering the sheep. In addition, they visited a taxidermist who instructed them in the science of preserving lifelike specimens. Of particular interest was a demonstration involving permanently marking legally hunted trophy heads to discourage poaching.

Our visitors saw spectacular wildlife and habitat, took copious notes, shot many rolls of film, and asked insightful questions. We welcomed the opportunity to work with China in a spirit of cooperation and friendship for the conservation of wildlife and wildlife habitat.

*Michael Kreger and Patricia L. Ford,  
International Affairs, Arlington, Virginia*

## Northeast Region Hosts Tribal NEPA Workshop

The Northeast Region hosted its first Tribal National Environmental Policy Act Workshop this year at the Regional Office in Hadley, Massachusetts. The region's Native American Liaison, D.J. Monette, and NEPA Coordinator Bill Archambault organized and planned the workshop in response to a request from the Narragansett Indian Tribe Natural Resources Director.

The workshop focused on topics such as Categorical Exclusions; Environmental Assessments; Environmental Impact Statements; Public Review Process; Common NEPA Mistakes; and Service Program Guidance. The Bureau of Indian Affairs also participated and provided NEPA information from their agency's perspective as well.

The Tribal NEPA workshop was attended by natural resource staff from the St. Regis Mohawk Tribe, the Narragansett Indian Tribe, the Mashantucket Pequot Tribe, the Wampanoag Tribe of Gay Head (Aquinnah), the Tuscarora Nation, and the Houlton Band of Maliseet Indians. The workshop was part of the Service's commitment to the Tribes to provide training opportunities as reflected in the Service's Native American Policy and the Region Implementation Plan.

Because of the enthusiastic interest and positive feedback from the participants, a similar workshop is anticipated for next year. For more information regarding the Tribal NEPA Workshop, contact Native American Liaison, D.J. Monette at 609/646 9310 or 413/253 8662.

*D.J. Monette, Native American Liaison,  
Hadley, Massachusetts*

## Service Emphasizes Heavy Equipment Operator Safety

Look for the orange hard hat for answers to safety questions when operating heavy equipment on national wildlife refuges. The orange hard hats identify the 27 people who were trained in June to be instructors for heavy equipment training. Over the next year, heavy equipment certification or recertification trainings will be conducted for operators throughout the Southeast Region. In addition, these instructors will be participating in station inspections to ensure both adequate equipment and operator safety.

“Wildlife has got to have habitat,” said Bobby Baker of Reelfoot National Wildlife Refuge in Union City, Tennessee. “The Fish and Wildlife Service is turning dirt, and heavy equipment operators are the ones doing it. We have a very important job.” Baker is heavy equipment operator training coordinator for the Southeast Region.

According to Baker, 350 workers in the Southeast Region currently need certification to operate equipment. In addition, recertification is needed every 5 years. Heavy equipment operator certification-recertification trainings will be held at Sandhill Crane, Wheeler, Chickasaw, Okefenokee, Alligator River, Felsenthal, Carolina Sandhills National Wildlife Refuges. Plans are to conduct two trainings a year at each of these sites. Since the instructor training, a class has already been conducted at Carolina Sandhills Refuge.

The 7-day, comprehensive Train the Trainer workshop initiated a nationwide Service effort to place more emphasis on heavy equipment operator safety. Of the 27 trainers who attended, seven were from the Northeast Region.

“The highlight of the course for me was hands on the equipment, working in small groups, and teaching on a personal basis,” said Donald Harris, Fire Control Officer for Alligator River Refuge. “It was also nice to practice new teaching techniques in a helpful atmosphere.”



**Heavy class load.** Student instructors Jeff Graves from Iroquois NWR, James Bates from Mississippi Sandhill Crane NWR and Charles Glock from Wallkill River NWR discuss proper bulldozer operation. FWS photo.

Some of the topics covered during the workshop included accident prevention and safety training; pre-operation equipment inspections; electrical and hydraulics; lubricants and coolants; rigging and lifting; safe operation of equipment types and instruction on how to conduct a class. The training was conducted by Vista Training of Burlington, Wisconsin and the National Conservation Training Center.

“For me the best part of the class was learning how to become an effective instructor and learning how to put together a class that makes sense to your students,” said Joe Bertrand, maintenance worker at Missisquoi Refuge in Stanton, Vermont. “I can’t say enough good things about the class, and I am looking forward to the chance to put my training to good use.”

“The hands-on instruction was a big plus,” agreed David McCaghren of Wheeler Refuge in Decatur, Alabama. “The networking between students and instructors was helpful. I learned more about the ways people comprehend things and how to do a well-rounded course.”

*Elsie Davis, External Affairs,  
Atlanta, Georgia*

## Va Honors Southeast Region

The Department of Veteran Affairs’ Vocational Rehabilitation and Employment Division (VR&E) recently gave its “Putting Veterans First Award” to the Southeast Region. The award is given to organizations that “demonstrate their commitment to recruiting and hiring from America’s greatest human resource—veterans.”

The Service was recognized for hiring vocational rehabilitation job-ready (Chapter 31) applicants and providing entry-level positions that can lead to career promotions. Jim Nee of Human Resources accepted the award on behalf of the Service.

“It is an honor to be recognized, but we see hiring disabled veterans as a win-win-win situation,” said Sam D. Hamilton, Southeast Regional Director. “We get highly motivated people with a fine work ethic. Vocational Rehabilitation has a willing employer, and the veterans have the opportunity to find meaningful careers.”

Since 1998, the mailroom of the Southeast Regional office has served as a springboard for VR&E alumni. Cuthbert Christophe and Lewis Brown were promoted from entry-level mailroom jobs to positions as Personnel Specialists in Human Resources that are similar to what both men did in the Army.

“What we bring to the table is dependability and know-how,” said Christophe.

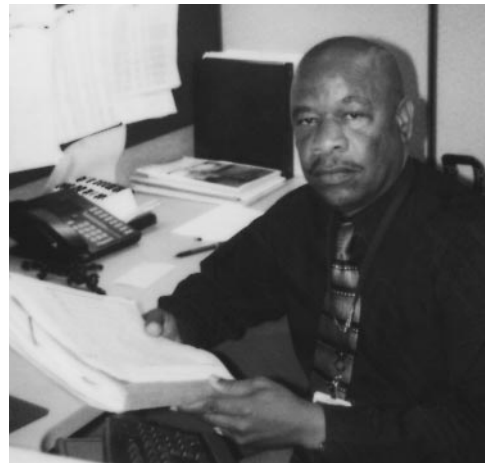
The mailroom opening next went to Lawrence “Mac” McCoy, a 20-year Air Force veteran who served an Operations Manager. He retired as a Sergeant and received a disability rating of 30 percent.

“Some people think that the title “disabled” would mean you’re hindered in some way,” said McCoy. “For us, it means we have greater tenacity. The military taught us to overcome obstacles.”

“Being a “disabled” vet just means we have a few more miles on our bones than someone else,” agreed Brown. “We can perform a job 100 percent.”

**Continued on page 14.**

## Va Honors Southeast Region (continued)



*Cuthbert Christophe.*

The three Service disabled veterans, Brown, McCoy, and Christophe, are featured in a videotape produced by VR&E and distributed to potential employers nationwide.

“Although we have an affirmative requirement to hire disabled vets, we need to have managers buy in to Vocational Rehabilitation,” said Jim Nee, a 24-year veteran of the Naval Reserve. “We’ve found that the more they see what the vets can do, the more interested they become in hiring them.”

*Jim Rothschild, External Affairs,  
Atlanta, Georgia*

## Sonoran Pronghorn Recovery Requires Emergency Actions Due to Drought

The Service, the Arizona Game and Fish Department, the U.S. Air Force, the U.S. Marine Corps, the Bureau of Land Management, and the National Park Service will implement emergency actions in southwestern Arizona in response to drought-related declines in endangered Sonoran pronghorn. In addition to other ongoing long-term recovery measures, the partners are stepping up immediate relief efforts to alter and reverse the recent declines in the U.S. population of the subspecies.

“This is a red alert situation,” said H. Dale Hall, Regional Director for the U.S. Fish and Wildlife Service’s Southwest Region. “The drought is posing a severe threat to a subspecies already low in numbers. But with our partners, we are committed to doing everything we must to keep this animal from extinction.”

Relentless drought has eliminated any chances for successful pronghorn reproduction in 2002, and killed off otherwise healthy adults who cannot find decent forage. The minimal forage available likely contains inadequate moisture for adults to maintain water balance and to suckle young. With five to six dry years in a row, pronghorn are challenged to find forage high

in nutrition and moisture. Growth of their preferred nutrient-and-moisture-rich forage coincides with the rainfall the animals would instinctively follow were it not for the barrage of obstacles surrounding their range.

Despite significant gains made in Sonoran pronghorn numbers in 2001 due to favorable weather and forage conditions, current conditions have severely compromised the subspecies. The U.S. population has taken a drastic turn for the worse according to biologists.

“With the exception of Organ Pipe Cactus National Monument, the rain we’ve gotten to date appears to be too little or not in the right location,” said Recovery Coordinator John Morgart.

Emergency actions scheduled to begin this fall include forage enhancement projects at Cabeza Prieta National Wildlife Refuge and on the U.S. Marine Corps and U.S. Air Force sides of the Barry M. Goldwater Range. These projects entail the development of localized water supplies and systems of delivering it to supplement preferred pronghorn forage plants such as annual forbs and grasses. To prepare for the possibility of another harsh year, recovery team partners

**Ice is a constant companion.** *The Service crew, studying Kittlitz’s murrelets during the summer of 2001, had to be vigilant in moving icebergs when the support vessel Auklet was at anchor in the fjords in Prince William Sound. The study targeted 17 fjords and bays where Kittlitz’s murrelets were found in the past or that had appropriate habitat. This meant going into ice-choked inner fjords that have only recently been well charted. Kittlitz’s murrelets also have many unique characteristics which have enabled them to survive global climate changes since the Pleistocene. Their association with glacially affected waters may make them one of the better barometers of climate change, and of the effects of these changes on life in our sub-arctic oceans. The Kittlitz’ murrelet is one of the rarest seabirds in North America. Most of the world’s population occurs in Alaska’s waters, migrating between winter offshore and summer inshore regions. Total population estimates range from 8,000 to 20,000 birds. Kittlitz’s murrelet is also one of the least known of seabirds. Only 25 nests have been found, and only one of those was observed through a complete season. Unlike most other seabirds, Kittlitz’s murrelets are solitary nesters that rely on camouflage and stealthy behavior to avoid predation. In fact, the bird’s association with ancient ice flows such as the Bering and Malaspina glaciers, has earned it the nickname, “Glacier Murrelet.” Kathy Kuletz, Nongame Bird Management Program, Anchorage, Alaska. FWS photo: Kathy Kuletz.*



# Rare White Mountains Plant Recovers



**Troubled.** *This year's drought has challenged pronghorn survival in Arizona. FWS photo: Claire Dobert.*

will also construct six emergency water sources for direct access by pronghorn this winter.

Other ongoing actions include extending public access road and campground closures on Organ Pipe Cactus National Monument; placement of small emergency water troughs and supplemental forage such as grass hay and pelleted wildlife feed; and drilling of test wells for potential forage enhancement development.

The Sonoran pronghorn is one of five subspecies within the unique Antilocapridae family. Of all its pronghorn cousins, Sonoran pronghorn suffer the most from habitat fragmentation. There are three isolated populations of the subspecies: two in Mexico; one in Arizona. All three contend with Interstate highways, border fencing, and railroads that confine the populations and prevent free movement beyond their current range. Much of their survival now depends on favorable weather, and the efforts of a bi-national recovery team dedicated to the recovery of the Sonoran pronghorn.

*Ben Ikenson, Public Affairs,  
Washington, D.C.*



*Robbins' cinquefoil. FWS photo.*

The Service has removed the Robbins' cinquefoil, a rare plant that was on the brink of extinction just a few years ago, from the federal list of endangered and threatened plants. The plant's recovery was aided by the conservation efforts of a partnership among the Fish and Wildlife Service, the USDA Forest Service, the Appalachian Mountain Club, and the New England Wild Flower Society.

A member of the rose family, Robbins' cinquefoil, also called the dwarf cinquefoil, occurs only in the alpine zone of the White Mountain National Forest in New Hampshire. Prior to receiving Endangered Species Act protection in 1980, the known main population of Robbins' cinquefoil numbered only 3,700 plants. Today the population totals more than 14,000 plants.

"The successful, dramatic recovery of Robbins' cinquefoil is an example of the power of federal/private partnerships to benefit imperiled plants, fish and wildlife," said Dr. Mamie A. Parker, regional director of the Service in the Northeast. "The White Mountain National Forest is committed to protecting this small plant's habitat, the Appalachian Mountain Club is committed to managing habitat and monitoring the population, and the New England Wild

Flower Society is committed to successfully propagating plants for reintroduction. All were vital to Robbins' cinquefoil recovery."

Robbins' cinquefoil is a small, almost stemless perennial that measures 2 to 4 centimeters in diameter and bears a yellow flower. Flowering generally begins in early June and lasts approximately three weeks.

Robbins' cinquefoil was threatened by plant collectors and disturbance from hikers along the Appalachian Trail. In 1983, the White Mountain National Forest and the Appalachian Mountain Club rerouted the trail away from the species' critical habitat and built an enclosure to protect the primary population.

To meet the objectives of the recovery plan for Robbins cinquefoil, the Appalachian Mountain Club undertook the tasks of trail relocation, public education, biological research, seed collection and overseeing transplant efforts in the field. With plants provided by the New England Wild Flower Society, biologists from all the partner agencies and organizations successfully reintroduced two additional populations to suitable habitat in the national forest.

**Continued on page 16.**

## Rare White Mountains Plant Recovers (continued)

“It’s not unusual for the Appalachian Mountain Club to participate in mountain rescues that involve lost or injured hikers,” said Dr. Kenneth Kimball, director of research for the 93,000-member Appalachian Mountain Club. “In this unusual case, AMC contributed 22 years of research and public education to help rescue this very rare alpine plant from human impacts—an effort that meshes perfectly with our mission of promoting the enjoyment, appreciation, and conservation of the mountain environment.”

“Although the New England Wild Flower Society has been propagating endangered plant species for decades, the collaboration between the organizations was the real key to the success of this project,” said Bill Brumback, director of conservation for the New England Wild Flower Society. “The techniques learned during the project will continue to be highly applicable for other alpine species.”

“Thanks to our partnership with the Appalachian Mountain Club, the Forest Service, and the New England Wild Flower Society, two new populations have successfully reproduced,” said Parker. “The species is no longer threatened with extinction.”

Although Endangered Species Act protection has been removed, Robbins’ cinquefoil will be protected in perpetuity thanks to an agreement between the Service and the White Mountain National Forest. The Service will also monitor the cinquefoil’s status for at least five years to ensure that any unexpected population declines can be addressed.

*Ron Rothschild, External Affairs,  
Hadley, Massachusetts*

## Biologists Study the Misunderstood Monster of the Columbia River

With a slimy, bland-colored body like an eel, and a round mouth full of jagged teeth, the Pacific lamprey will never be the “poster fish” for species recovery. Often confused with the invasive sea lamprey that has wreaked havoc in the Great Lakes since the 1940s, the Pacific lamprey is native to streams and rivers from Baja California, Mexico along the northern Pacific Rim to Hokkaido, Japan.

Tribes of the Pacific Northwest have harvested the lamprey for subsistence, ceremonial and medicinal purposes for many generations. They’ve been used for salmon and livestock feed, vitamin oil, anticoagulants, and educational purposes. Their spawned-out carcasses provide a source of nutrients to the streams in which they reproduce. Their young provide a source of food for juvenile salmonids and may alleviate predatory pressures on young salmon by in-stream predators such as the northern pike minnow, bass and walleye. Adult Pacific lamprey living in the ocean are actually the food of choice for marine mammals, which otherwise would consume adult salmon.

The State of Oregon listed Pacific lamprey as a sensitive species in 1993; it was given protected status in 1996. Pacific lamprey is not listed federally.

In 2000, the Columbia River Fisheries Program began evaluating the population dynamics and habitat use of Pacific lamprey in a small tributary of the Columbia River. Bonneville Power Administration currently funds the project through 2003, and is considering extension through 2007.

Though Pacific lamprey are anadromous, they spend most of their lives (4-6 years) as blind juveniles (ammocoetes) burrowed in fine silt or sandy substrates found in eddies and other slow water habitats. Unknown factors cue a major morphological and physiological transformation into a “smolt” stage called macrophthalmia, and the fish move out to sea. They spend 1-4 years in the ocean feeding on a variety of fish species and marine mammals. Adults return to freshwater to spawn.

Biologists are using a rotary screw trap year-round to monitor movement of juvenile lamprey. They learned that ammocoetes move throughout most of the year and their



**Mating lamprey.** Rarely seen and photographed, Service biologist hope to film the mating ritual of Pacific lamprey next summer. FWS photo: John Brunzell.



**It’s a... screw trap.** Downstream migrating juvenile Pacific lamprey enter the trap through the cone, which has a cork-screw fin in it that turns the cone when water hits it. As the cone spins, all fish are funneled into the live box, where they remain until the trap is checked. At the back of the live box is a perforated debris drum that removes floating debris from the box. FWS photo: Scott Barndt.

movements are mostly associated with increases in discharge and the onset of transformation, which occurs in late summer. Macrophthalmia move during late fall with high river flows and during early spring. Biologists also are conducting electrofishing surveys using equipment designed specifically to capture ammocoetes and this has helped them describe the abundance of juvenile lamprey throughout the drainage as well as their habitat use.

With federally listed salmonids in the drainage, extensive trapping efforts necessary to collect adult lamprey are prohibited. Biologists rely on an existing adult salmonid ladder to catch adult lamprey,



# Fishing Stimulates the Economy

but with limited success. In 2000, they constructed pot traps made of sewage pipe and beer funnels and these have been successfully used as a passive trapping technique, as they rely on the fish's desire to seek refuge. From the captures and subsequent recaptures, biologists generate population estimates and are able to describe the timing of movement for adult lamprey. They plan on using radio telemetry technology in the future.

These fish are difficult to capture and nearly impossible to see. Biologists conduct daily spawning ground surveys from April through August but adults are rarely seen. In 2002, biologists photographed two nests with spawning adults, showing the detailed and very specific spawning ritual of the Pacific lamprey.

Adult counts at Bonneville Dam, located 232 km upstream from the mouth of the Columbia River, regularly exceeded 100,000 fish in the 1960s. Yet in 2001, the numbers were down to 30,000 fish. This decline may be attributed to poor passage at mainstem hydroelectric projects, changes in the Columbia River hydrograph, or overall degradation of rearing and spawning habitat in mainstem and tributary waters.

While the main focus of fisheries research in the Columbia Basin is on the federally listed salmon, some dollars are finding their way to assist the lamprey. Funding for the four lamprey projects in the Basin comes from the Bonneville Power Administration. The BPA is mandated by the Pacific Northwest Electric Power Planning and Conservation Act to "protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of the Federal Columbia River Power System."

There is still much to learn about the Pacific lamprey. Their abundance upstream of the Columbia River dams is declining and their status below these dams is unknown. Like so many other unappealing, non-game species, the fight for research dollars is a challenge. Somehow, though, research must continue to better understand the role the Pacific lamprey plays in the Columbia River ecosystem.

*Jen Stone, Columbia River Fisheries Program Office, Vancouver, Washington*



**Sport fishing trophies.** Rio Grande cutthroat trout, like this one from northern New Mexico, can help bring money into local economies. In 1539, the Rio Grande cutthroat became the first trout ever documented in writing, 1539, by the Coronado Expedition. FWS photo: Craig Springer.

As any fishing aficionado knows, the rewards of fishing are many—and one of them is coin in the coffer.

Fishing is big business around the U.S., and the positive impact to the economy is measurably large, according to the Service's 2001 National Survey of Fishing, Hunting, and Wildlife- Associated Recreation. Nationwide, 34 million licensed anglers spent nearly \$36 billion last year; fish and wildlife-related recreation in total accounts for 1.1 percent of the Gross Domestic Product.

Detailed economic analyses in Arizona and in the Southeast U.S. show how far your dollars go.

The Lake Havasu Fisheries Improvement Partnership, led by the Bureau of Land Management, Arizona Game & Fish Department, the Service, and nonprofit Anglers United, sank 875 acres of fish habitat structures in Lake Havasu on the Arizona-California line. The improvements attracted fish and fishermen. Economist Dr. Bernard Andersen determined for the American Sportfishing Association, that the sport fishery associated with Lake Havasu created 650 jobs and generates \$2.4 million in business taxes and a total economic output of \$34 million per year.

Service economist Dr. Jim Caudill studied expenditures by trout anglers in the southeastern U.S., and their impact on the economy. Caudill's findings, compiled in the Service publication, *Economic Effects of Trout Production by National Fish Hatcheries in the Southeast*, reveal the impact is tremendous. Anglers spend over \$107 million a year directly on fishing for trout produced at six national fish hatcheries in the Southeast. That money in turn generates another \$212 million per year in related spending.

Money changing hands means jobs; Caudill reported that 2,800 jobs in the Southeast resulted from people fishing for trout, generating an annual payroll of \$56 million with attendant sales and income taxes. All of this economic activity comes from what is a comparatively paltry initial investment of \$2.1 million spent by the six national fish hatcheries to produce trout. According to Caudill, each dollar spent on growing trout stimulates \$140 in economic activity with \$7.85 in taxes.

It's clear that casting a plug sends ripples through the economy like concentric rings on glassy waters. When you cast your bait, you also cast your dollars into the economy.

*Craig Springer, Division of Fisheries, Albuquerque, New Mexico*

# The Invasive Plant Atlas of New England



**An exotic beauty.** *This pale swallowwort is one species that the New England Invasive Plant Group is after. FWS photo.*

Supported by grants from the National Fish and Wildlife Foundation, the Silvio O. Conte National Fish and Wildlife Refuge created a strategic plan for invasive plant control in New England. The refuge was instrumental in forming the multi-partner New England Invasive Plant Group to help implement the plan.

One of the plan's recommendations was to create an early warning and rapid response system to stop new invasions. Backed by a U.S. Department of Agriculture four-year grant, the University of Connecticut, New England Wild Flower Society and the refuge are now working together on such a system. An important part of the system is the Invasive Plant Atlas of New England, which seeks to document the historic spread and current distribution of invasive plants.

The atlas will use a multi-pronged approach to address invasive plant problems. Seventy-five volunteers will be recruited and trained in each state over the next three years to document existing populations and alert the partners to new invasions. Their data will be stored in an online atlas to track the

distribution and spread of known problem plants and document new invasions. When a new infestation is documented, the partners will assemble local volunteer rapid response teams to eradicate the weeds before they become entrenched and start to spread.

The atlas can't solve all the problems of invasive plants in New England. However, a coordinated, systematic effort to identify existing populations, control their spread and eradicate new infestations will limit the scope of environmental damage and buy researchers and land managers time to search for effective, environmentally sound control options. This is just the beginning of what the partners hope will be a long-term commitment to deal with one of the most serious threats facing New England wildlands.

For more information, contact Cynthia Boettner, Invasive Plant Control Program Coordinator, Silvio O. Conte National Fish and Wildlife Refuge (413.863.0209).

*Barry Parrish, Silvio O. Conte, Turner Falls, Massachusetts*

# Midway Atoll NWR—A True “Gooneyville” Lodge

Midway Atoll NWR is home to some of the longest-living birds in the world: the Laysan Albatross, the black-footed albatross, and the short-tailed albatross, all affectionately nicknamed “gooney birds.” They can live for 50 years or more.

But these fascinating species pose some interesting problems: How do we approach the study of long-lived birds, best detect changes in population size without a yearly census count, and best analyze this ever growing data base? A team of researchers from USGS Biological Resources Division at Patuxent Wildlife Research Center, the Service's Pacific Region Migratory Bird Program and the Pacific Remote Islands National Wildlife Refuge Complex is tackling these questions in the heart of albatross country at Midway Atoll NWR.

Midway Atoll NWR is an excellent setting for conducting research on albatross biology because of the large number of Laysan and black-footed albatrosses present much of the year, along with a handful of the endangered short-tailed albatross that arrive on Midway every year. At first, there is only one



**Mother.** *This black-footed albatross keeps a keen eye on her young. FWS photo.*

## Partnership Will Help Refuges Reach Millions During Centennial



**Parenting.** *The Laysan albatross may remain fertile and able to rear young at 40 years of age. FWS photo*

black-footed albatross sitting alone among the alien grasses and native brush. By November, the noise of a million dancing and calling birds fills the air over the three tiny islets of Midway Atoll. The breeding season is in full swing and busy adults look to find their mates, while newly matured albatrosses joust for lifetime partners. The atoll is bustling with activity, and humans must yield to all the clatter. Soon the egg-laying season begins and all the nests in the study plot areas must be marked and monitored.

For a few weeks in November and December, little else is done besides watching the new bird pairs for a precious egg. December also marks the month of the annual albatross census. Once the breeding pairs of albatrosses are counted, the banding process begins. Adults in the study areas are banded or re-banded if necessary. Eventually, the chicks are banded in the summer before they leave the nest for the call of the sea. Volunteers, staff, and guest researchers all participate in the mass banding during the summer in hopes that these chicks will also return, like their ancestors, to the safe haven of Midway.

In February 2002, when USGS-BRD's Dr. Chandler Robbins returned to Midway after a 35-year absence, he recaptured some of the birds he had banded in the 1950's and 1960's. Assisted by the rest of the team—Bill Kendall and Paul Doherty of BRD, Beth Flint, wildlife biologist for the Pacific Remote Islands refuges, and Maura Naughton, Tara Zimmerman and Brad Bortner of the Pacific Region Migratory Bird Program—Robbins captured 170 previously banded albatrosses on Midway.

The most recent additions to the bird banding data set from Midway Atoll were remarkable. Robbins found several Laysan and black-footed albatrosses he had banded 35 to 40 years ago that were still fertile and busy rearing chicks. On February 8, he found one Laysan albatross, sitting on a nest with a chick, that he had banded on his first trip to Midway in December 1956, when the bird was already an incubating adult. Since these birds do not begin to nest until 6 to 9 years of age, this individual was at least 51 years old when recaptured in 2002. It is even possible that a few of the albatrosses that survived the Battle of Midway in 1942 may still be returning there to nest.

Until this February, a Laysan albatross that was aged at 42 years and 5 months was the oldest recorded bird in the BBL records. A black-footed albatross came in a close second at 40 years and 7 months.

However, studies into albatross life are complicated by their life history. Once they fledge, these birds leave land and might not be seen again until they start nesting at an average age of 7 years. This poses problems for researchers who analyze the capture-recapture data since it then must reflect this temporary emigration, and the need for multiple band replacements. The saltwater environment degrades the aluminum bands severely, and these birds have to be re-banded several times over the course of their lifetime. The 1956 bird, now carrying its 5th successive band, had been re-banded by Dr. Robbins and other researchers in 1966, 1985, 1993, and 2002.

*Stephanie Miliena Lum-King Bennett, Ecological Services, Honolulu, Hawaii*

More than 65 million people visit Florida annually. They come from all over the world looking for warm weather, coastal breezes and outdoor experiences. And as Florida is the state where the national wildlife refuge system got its start, Florida's tourists seemed like a perfect way to reach a broad cross-section of Americans with the Centennial message.

How to get the word out? Well, it would take a professional operation to help with marketing, public relations, media contacts, mass mail-outs, large outreach festivals, and international and domestic promotions. And to do it right, it takes visitor demographic information and requires the ability to assess the effectiveness of the effort. But on a shoestring budget, how could refuges possibly do that?

This is exactly what VISIT FLORIDA now offers to Florida's national wildlife refuges. As part of their efforts to increase visibility of the refuge system during the Centennial year, 14 Florida refuges have become partners with VISIT FLORIDA, the official tourism marketing corporation for the State of Florida. Through a small partnership fee paid for by the J.N. "Ding" Darling Wildlife Society, Florida's most visited refuges, including the nation's first, will have access to professional services of VISIT FLORIDA.

VISIT FLORIDA promotes Florida as a travel destination through a variety of initiatives. The organization distributes materials through direct mail to travel consumers in the U.S. and abroad, works with major travel writers and broadcasters, produces print and broadcast promotions, represents the state at domestic and international travel trade shows and promotes the state to travel agents and tour operators all over the world. It also maintains offices in Tallahassee, New York, Washington, D.C., Chicago, and Dallas, as well as in London, Frankfurt, Paris, Sao Paulo, Tokyo and South Florida.

As a partner, Florida refuges will be featured on two websites: <[www.flausa.com](http://www.flausa.com)>, a website for tourists which receives more than 15,000 hits per day, and [www.visitflorida.org](http://www.visitflorida.org), a website used by the travel media. Partner refuges will receive

## Partnership Will Help Refuges Reach Millions (continued)



a weekly e-mail to let them know upcoming programs, opportunities and hot editorial leads. Florida refuges will also be featured stops on some of the regular “Fam”, or familiarization, tours for the media.

VISIT FLORIDA is also a great resource for refuges in outreach program planning and assessment. The organization compiles the state’s official visitor numbers, tracks tourism trends and conducts surveys to assess the effectiveness of advertising and marketing trends. The partnership provides Florida refuges with access to this information.

Refuges will also be able to stock their information at the state’s five highway welcome centers, which are visited by more than 27 million people annually. Refuge staff, Friends and volunteers will also hold a special weekend at the state visitor/welcome centers during the first two weeks in March, 2003. Travelers will continue their trip with the blue goose in tow—tattoos, stickers, posters and other Centennial items will be everywhere!

This progressive partnership will invaluablely help promote the messages of the U.S. Fish and Wildlife Service and the National Wildlife Refuge System as it approaches its 100th anniversary. Florida’s national wildlife refuges look forward to the partnership continuing to the Centennial and beyond, as visitors seek places to explore that represent the “wild” Florida.

*Kevin Godsea, Supervisory Refuge Ranger, JN “Ding” Darling NWR*

## Northern Ute Tribe Honors Elders With Fishing Pond

Members of the Northern Ute Indian Tribe gathered September 18 to honor their elders at the dedication of a newly constructed fishing pond next to its Senior Center on the Uintah and Ouray Indian Reservation in northeast Utah. The three-acre pond offers a range of recreational opportunities.

“We are delighted to have this pond for our tribal elders to enjoy,” said Irene Cuch, director, Northern Ute Indian Tribe Senior Citizen Center. “Many of our seniors can’t get out into the mountains to fish like they did when they were younger. Having this pond so close to our senior center will make it possible for our elders to walk down to the pond or just go for a stroll around it. We’re going to put in some tables and benches and make it accessible for those with disabilities. We have dreamed of having a pond for several years. We are so grateful to finally have our dreams come true.”

The U.S. Environmental Protection Agency funded pond construction. The pond is designed to improve the water quality of the flows out of Bottle Hollow Reservoir downstream into the Uinta River. The EPA also purchased water monitoring equipment and fish rearing tanks for aquaculture students at the Tribe’s Uintah River High School.

“The students have the opportunity to observe and monitor the connection between water quality and fish health,” said Ute Indian Tribe Fisheries Biologist Mike Montoya. “The pond is located within a few hundred yards of the school and provides students with a unique, hands-on opportunity to learn about fisheries management.”

Next spring, the Service and the Utah Division of Wildlife Resources will work with the Tribe to transfer nonnative sportfish from the Green, White and Duchesne rivers to the pond. The fish will be relocated to reduce their threat to the razorback sucker and Colorado pikeminnow.

To ensure that sportfish stocked in the pond do not escape into the river where they could interact with the endangered fish, the Recovery Program with the Tribe to install a \$35,000 fish screen and trap at the pond’s outlet. Uintah River High School students will gather scientific data from the fish captured at the screen for the Tribe and the Service.



**Ceremony.** Antonio “AJ” Kanip (center) and other members of the Red Spirit musical group perform a dedication song at the dedication of a newly constructed Elders Pond on the Uintah and Ouray Indian Reservation in northeast Utah. FWS photo: Debbie Felker.

“The Ute Tribe continues to play an important role with the Recovery Program’s success by providing access to tribal lands and waters and by helping to conduct important research about the endangered fish and their habitat needs,” said Bob McCue, ecological services supervisor, who represented the Recovery Program at the dedication.

The Ute Indian Tribe’s Water Settlement Program provided funds through its Fish and Wildlife Department to enhance recreation for the seniors. In addition to funding, several private businesses donated time and expertise.

“It is extremely rewarding to the Tribe to see so many people and agencies cooperating on this project,” said Tribal Councilman Roland McCook. “Working together, we’ve found a way to turn the dream of an Elders Pond into a reality. We’re simultaneously providing recreational opportunities to our elders, creating an outdoor classroom for our tribal youth and assisting with recovery of endangered species.”

*Debbie Felker, Information and Education Coordinator, Upper Colorado River Endangered Fish Recovery Program*

## Rebuilding Dunes



**If I had a hammer...** *Jamie Oslawski (left) and Mary Katherine Hancock put the finishing touches on a drift fence. FWS photo.*

Jerry Dunn reclines in the sand on the Fort Morgan Peninsula in Bon Secour, Alabama, watching a group of eleven volunteers build drift fences. The landscape of the Bon Secour National Wildlife Refuge, home to one of the last undeveloped coastal dunes systems left in Alabama, was nearly destroyed when hurricanes hit the area in 1998.

“It looked like someone had flattened this whole area with a truck,” says Dunn, the sole maintenance worker for the Refuge. Now it’s time to rebuild. For five years, he has been working with Auburn University on the drift-fencing project, which will ultimately be used as a comparison study to determine the most efficient and cost effective way to rebuild the dunes.

Offering his expertise to a group of volunteers, he asks, “Y’all doin’ all right here?”

A volunteer nods briefly as she carefully places a six-foot, unfinished wood fence post into a two-foot deep hole, trying to avoid letting the post slip so she doesn’t get splinters. Others compact the sand around the posts, beating the sand down with wooden sticks and the soles of their tennis shoes. Dunn kicks an already planted post to check its stability.

Satisfied, he approaches another group of volunteers who unroll pre-made fencing, composed of thin, one-inch wood slabs wound together with thin wire. The volunteers crudely measure the distance

between the wooden posts. Kicking open the wound-up fencing, they trim the fence with wire cutters.

Dunn points at a slight depression, where the flatness of the beach meets the raised sand dunes that stand about six feet high, alive with the beginnings of new vegetation. “Without the fences, the dunes can’t build up. This fence is going to speed up that process. It will also ensure less erosion to the remaining dunes that are still here in good shape. When another hurricane comes, it will suppress the water to some degree.”

When this fourth fencing project is complete, a five-mile stretch of sand will be ready to start rebuilding into dunes. “This will benefit the beach itself and the endangered species that lives here, the Alabama Beach Mouse,” Dunn says. Development has endangered the small, nocturnal mouse’s existence, along with the existence of other inhabitants of the refuge, which include two species of nesting sea turtles and migratory birds.

Although Dunn forgets to mention himself as a benefactor, it’s obvious from his aura of contentment that Bon Secour National Wildlife Refuge is not only a place to rebuild the dunes, but also a personal sanctuary. “I love my job,” Dunn says sincerely as his smile is replaced by seriousness. “I hope I die doing this.”

*Jamie Oslawski, Volunteer, Bon Secour NWR, Gulf Shores, Alabama*

## Climbing A Mountain

Ray Varney manages the 665,000-acre Kofa National Wildlife Refuge near Yuma, Arizona. Like the bighorn sheep on his refuge, Varney possesses an instinct to climb. But his instinct wasn’t awakened by the jagged mountains of the Sonoran desert. It was Varney’s first sight of the Grand Tetons in Wyoming in 1973. For nearly three decades, the mountains loomed in his mind until he finally made plans to climb them in July 2001.

But months before his scheduled climb, Varney, 52 at the time, discovered a more daunting obstacle before him.

In April 2001, I was diagnosed with prostate cancer,” he said. “I was overcome by so many emotions it is impossible to describe how I felt at that moment.”

The devastating diagnosis strengthened Varney’s resolve. His itch to climb was no fly-by-night whim spurred on by the popularity of “extreme” recreation. It was spurred by a deep-rooted reverence for nature’s magnificence, for him embodied by the awesome Grand Teton. As young newlyweds during the Nixon Administration, Varney and his wife traveled to Grand Teton National Park, where Varney vividly remembers, “we saw the Grand for the first time—the seed was planted.”

After 30 years of a life filled with by the challenge of career and raising children, Varney did not forget the Grand Teton. “I’ve never considered myself a particularly religious person, but in the presence of the Tetons, I felt a spirituality unlike anywhere else I’d ever been... as if the higher elevation brought me physically closer to God.” His desire to be closer to this feeling—to climb the Grand—grew until he finally decided in 2000 to plan for it.

The prostate cancer was not part of the plan. Faced with the diagnosis, Varney was not going to shy away from his dream of ascending the Grand Tetons.

Rising nearly 14,000 feet above sea level in a stretch of the Wyoming Rockies, the Tetons form a trilogy of stone towering over many lesser snow-capped pinnacles. A popular summit for mountaineers, the Grand Teton is the largest of three Teton peaks. The

**Continued on page 22.**

## Climbing A Mountain (continued)

mountain claims lives on occasion and presents special challenges to climbers. Many first-timers must prepare for the extra physical exertion required due to the high altitude.

Two months before his high-altitude rendezvous, Varney learned that he would be able to leave the cancer behind. Doctors successfully removed the malignancy.

Varney hit the gym two weeks before the climb, recruited a small group of friends, and crystallized plans to retain a mountain guide. Toward the end of July, the company gathered at Colter Bay in the shadows of Grand Teton.

On day one, after two days of technical training provided by the mountain guide company, they climbed 5,000 vertical feet of switchbacks and boulder-strewn trail, reaching the "Lower Saddle," a plateau that separates the Grand from Middle Teton.

The next day required climbing harnesses and tricky technical maneuvering to help the group rope themselves over steep rock faces one at a time.

"We climbed in harnesses, helmets, layered clothing, and sticky-soled approach shoes that helped grip the rock and prevent slips," said Varney. The climb was taxing and, at times, intimidating. "I had to avoid letting fear creep into my mind during the exposed portions of the climb," he said.

But at last, keeping fear at bay, Varney fulfilled his dream. At 8:20 a.m. on August 2, the crew reached the summit. Earth stretched before them, a frozen scroll of undulating hills contorted into wrinkled rock, rising from the depths into a blue sky and falling back again. Varney straddled his moment on top of the world.

*Ben Ikenson, Public Affairs,  
Washington, D.C.*

## Refuge's "Backbone" Workers Share Training Experience

The fact that they were one of the last categories of Fish and Wildlife Service employees to ever meet collectively may say more about their indispensability to their duty stations than to any oversight by their agency.

But the first group of Service bulldozer operators, carpenters, plumbers, and groundskeepers met at the National Conservation Training Center in July to do what refuge biologists, public information specialists, and administrative employees have done before them: meet as a group for professional development and networking.

"For years, one of my concerns has been the lack of any network or support among maintenance teams throughout the country," says Cal Henry, maintenance employee and law enforcement officer on Montana's Lee Metcalf National Wildlife Refuge. "Each refuge is left to invent its own solutions to problems when we could learn so much from each other."

The pilot "Maintenance Workshop for Fish and Wildlife Service Wage Grade Professionals" drew 31 employees from all regions to NCTC for a week of presentations about agency history, budget planning, refuge operations, and computer applications. The refuge and fish hatchery employees ranged in experience from four who have had less than 5 years in the agency to one who has a tenure of more than four decades.

One accomplishment of the week occurred in NCTC's computer lab, where some who had never even switched on a computer got their first introduction to electronic communications.

"Wage grade employees represent the backbone of the Fish and Wildlife Service, a vital yet occasionally overlooked body of talent in the agency without which the wheels would quickly grind to a halt," says NCTC course leader Liz Fritsch, who organized the session after informal surveys identified the need for improved training opportunities for this group of field employees.

A eight-member committee worked with Fritsch to develop course content, which introduced attendees to the basic mission and traditions of the Fish and Wildlife Service and devoted much of the week to specialized course work largely unattainable in their daily jobs. Joining Henry on the panel were refuge employee Tom Downs of Malheur and fish hatchery employee John Reier of Entiat in Region 1; and refuge employees Bill Lanahan, formerly at Lower Rio Grande NWR; Dale Pittman from Illinois River NWR; Bruce Creef from Alligator River NWR; Steve Flanders of Montezuma NWR; and Bob Schulmeister, now at Alaska Maritime NWR.

"Our objective was to allow wage-grade personnel to meet with others," says Creef, Alligator River's maintenance supervisor. "Very seldom do they get to travel and to meet with people from places like the Washington Office. I think we helped open their eyes and understand the goals and mission of the Service, seeing the broad picture and how program areas work together."

The next session is scheduled for February 2003 at NCTC.

*David Klinger, Senior Writer/Editor,  
Shepherdstown, West Virginia*

# Zoo Pups Find a New Home in the Wild



**New batch.** *These two infant red wolves, shown here after birth at the North Carolina Zoological Park, are now growing up at Alligator River NWR. FWS photo: Barron Crawford.*

Spring brought the arrival of red wolf puppies. The Red Wolf Recovery Program confirmed 9 red wolf litters and over 40 new red wolf pups in 2002. In addition to the wild litters born in northeastern North Carolina, the program made its first attempt to foster captive-born pups with a wild female mother.

On May 5th, the North Carolina Zoological Park in Ashboro, NC donated two pups, a male and a female, from a litter of six born at the zoo. The pups were implanted with microchips for future identification and were transported to Alligator River National Wildlife Refuge. This was an exciting day for the zoo and rumor has it that the zoo officials were forced to draw straws to decide who would have the honor of driving the pups to the refuge.

Upon arrival, the pups were checked for signs of stress due to their long morning ride and both appeared to be doing fine. We then placed them in a wild wolf den with two wild-born pups of identical age. Last year, the six year old mom, known as wolf 978F, raised six pups and the recovery program felt she could easily handle a litter of four this year. Frequent monitoring of the den site using radio telemetry has shown that the female has accepted the two new pups as her own and is attending the den regularly. So far all appear to be doing quite well.

Red wolves are highly social animals and have very strong parental instincts. Placements of this kind, known as fostering, have been successful among captive red wolf populations, but this marks the first time zoo-born animals have been introduced into the wild at an extremely young age. Before this, all the animals released into the wild had been adult wolves, often coming from the island propagation sites in South Carolina and Florida. Fostering pups at a very young age allows the pups to be raised by a wild mother, increasing their chance for survival.

If successful, the ability to foster captive-born red wolves holds many positive implications for the recovery of the most endangered wolves in North America. The fostering method allows the Service an exciting way to release captive born wolves back into the wild, as well as the ability to enhance the genetic diversity of the wild red wolf population and overall survival of the red wolf.

For now the red wolf field team will continue to monitor the den activity via radio telemetry. No future den visits are planned as further disturbance by humans could decrease their chance of survival. In the Fall of this year, efforts will be made to recapture the pups. At that time the pups will be large enough to be fitted with a radio collar. In the meantime, we wish them well as they begin a new life in the wild.

*Shauna Baron, Service Wolf Recovery Manteo, North Carolina*



# Exploring Our Past



## A Prologue to Pelican Island—Part III A Home to Many Birds

*Pelican Island, 45 miles south of Cape Canaveral, lies in the south flowing lagoon called Rio d'Ais by the Spanish, but renamed Indian River by the English in the 1760s. The island's northern reach rests a bit south of the main navigation channel as it flows into "the narrows," a well-known stretch of this popular waterway along the western shore of South Florida's barrier island.*

The island had a distinctly triangular shape according to J.O. Fries' July 1902 survey for the Committee on Bird Protection of the American Ornithologist's Union (AOU), with each side measuring roughly 700 feet. A General Land Office survey in 1903 calculated its area at 5.5 acres. Nineteenth Century visitors, often escaping rigorous northern winters, described it as "draped in white, its trees seemingly covered with snow..." (The downy young pelicans and other white birds perched atop whitewashed nests and mangroves).

Dr. Henry Bryant of Boston "discovered" the island's ornithological wonders during trips in 1854-1858. Bryant's description is informative: "I found (brown pelicans) breeding in larger and larger numbers as I went north (from Key West), until I arrived at Indian River, where I found the most extensive breeding-place that I visited; this was a small island, called Pelican



**Pelican Island.** FWS photo.

Island, about 20 miles north of Fort Capron. The nests here were placed in the tops of mangrove-trees, which were about the size and shape of large apple-trees. Breeding in company with the Pelican were thousands of... (herons and egrets)...and Roseate Spoonbills; and immense numbers of Man-of-War Birds and White Ibises were congregated upon the island, and probably bred there at a later period than my visit."

Given the numbers of birds present and the array of species, it is apparent that this was an ancient rookery, occupied for centuries, if not millennia. Given the growing feather markets to the north, and the universal feeling that all of America's natural resources were first for food and any other use that benefited man, the island's avian inhabitants were already feeling gunning pressure. Bryant noted the roseate spoonbills were so numerous that one man killed 60 in a day, shipping the wings to St. Augustine to be made into readily sold decorative fans.

Following Bryant, other reports appeared in the major periodicals of the day. In 1871, Mr. S. C. Clarke reported in the *American Naturalist*, "A party of hunters visited (Pelican Island) this year in March, and found it covered with eggs and young birds, which were being fed by the old ones with fish. Some of these were shot, and most of

the others driven away, when suddenly the island was invaded by multitudes of the Fish Crow, *Corvus ossifragus*, which began to devour both the eggs and the callow young... The hunters then turned their guns upon the crows and slaughtered them in heaps, before they would abandon their prey."

Dr. James Henshall, a physician who took patients to Florida for its climate and the recuperative powers of outdoor recreation, published *Camping and Cruising in Florida*, in 1884. Under Pelican Island—Slaughter of the Innocents he wrote, "As we passed we saw a party of northern tourists at the island, shooting down the harmless birds by the scores through mere wantonness. As volley after volley came booming over the water, we felt quite disgusted at the useless slaughter, and bore away as soon as possible and entered the narrows."

Scientists and naturalists regularly visited the island for specimens, usually attempting to take a "series" of plumages (meaning as many as 18 or more pelicans for each collector), and "sets" of eggs. One oologist admitted to taking 125 sets, after halting, and presumably discarding, his guide's collection, made by filling pails with eggs indiscriminately, without reference to sets.

More published reports exist, but the unrecorded attrition caused by casual passengers and crews of the regular steamboats likely diminished the birds even more. Often, as the steamboats entered or exited the narrows, whistles were blown. Alarmed, birds immediately took to the air and circled outward from the island. This placed them within range where tourists and crew blasted away, merely for the "fun of killing."

When ornithologist Frank Chapman visited Pelican Island in 1898 the thousands of herons, egrets, roseate spoonbills, man-o-war birds, and white ibises were gone, and the pelicans were severely reduced. Chapman's studies, and keen interest in the island and the pelicans, prevented the extirpation of birds on that tiny, but obviously significant, habitat for native birds. His desire to purchase the island and to assure protection of the bird colony focused the attention of William Dutcher on the matter in 1900.

*By William C. Reffalt. Reffalt, now retired, was chief of Refuges from 1980-1982.*



# Fish & Wildlife Honors



*Jim McKoy.*

**Jim McKoy**, manager of the Service's Business and Economic Development Program, has been named as one of 50 influential minorities in business by the Minority Business and Professional Network, Inc. Other award winners include numerous private industry presidents, vice-presidents and other executives. A North Carolina native, McKoy has previously received the Department of the Interior's Appreciation Award for his efforts to include small, small disadvantaged and women-owned businesses in the Service's procurement program.

Service biologist **Fred Johnson** was recently presented with a 2002 Legends Award by the American Recreation Coalition. Johnson works in Gainesville, Florida as part of a multi-agency effort to develop adaptive-management concepts and tools for application to a variety of wildlife conservation problems. As a biologist at Patuxent Wildlife Research Center, Johnson coordinated the development of an adaptive-management program for the regulation of waterfowl harvests.

**Greg Neudecker** was recently honored as the 2002 Trout Unlimited Professional Conservationist of the Year. Neudecker, a biologist who serves as the Assistant State Coordinator for the Montana Partners for Fish and Wildlife Program, led a coalition of private landowners, agencies and conservation organizations in a comprehensive watershed project in the Blackfoot Valley. The award recognized his dedication to enhancing wild trout resources, migratory birds, and threatened and endangered species while maintaining traditional rural lifestyles.

#### Four Environmental Achievement Awards

The Service racked up four DOI Environmental Achievement Awards during a ceremony in Washington, DC, in October. The awards recognize DOI bureaus, offices, employees, and contractors for exceptional achievements or contributions that demonstrate exceptional commitment to conservation.

Mountain-Prairie Regional Environmental Compliance Coordinator **James Behrman** was awarded for "Greening Region 6" by emphasizing the relationship between sustainable practices and the mission and objectives of the Fish and Wildlife Service. An example of his work includes encouraging the use of re-refined lubricating oil in passenger vehicles which supports used oil recycling businesses and promotes appropriate care of this auto waste.

**Gary Melvin** was awarded for his efforts in establishing a community recycling program on a remote refuge in King Salmon, Alaska. The maintenance worker took his cue from a "Greening the Government" training session and returned to the Alaska Peninsula/Bercharof National Wildlife Refuge with some good ideas. One was to arrange for recyclable materials to be transported off the refuge by outfitters at no cost. This was no small feat considering all shipments, in or out, must be either flown by aircraft or shipped by barge.

Work at another remote refuge, in a contrasting climate, was also acknowledged. Staff of **Buenos Aires National Wildlife Refuge** in southern Arizona was awarded for innovation in managing waste and recycling. Because of the remoteness of the refuge, recyclables must be stored until it is practical for them to be hauled 70 miles into Tucson. Volunteers were enlisted to construct two storage building to accommodate the materials. Last year, materials recycled from the refuge included 700 pounds of aluminum cans, 80 pounds of plastic bottles, 30 tires, 50 bicycles, and 22,380 pounds of scrap metal illegally dumped throughout the refuge.

Also, the staff of **Chattahoochee National Fish Hatchery**, in Georgia, was awarded for pollution-preventing innovation. After personnel inventoried more than 200 distinct hazardous substances throughout the operation, ranging from common cleansers to toxic chemicals, they revised maintenance processes, modified hatchery operations, and aggressively executed pollution prevention techniques. Most significantly, the station eliminated the use of the chemical Formalin (a carcinogenic formaldehyde-containing compound) by redesigning egg-hatching equipment.

The Service was also the co-sponsor of other fish-related work that was acknowledged with a 2002 DOI Environmental Achievement Award. The **Confederated Tribes of Warm Springs Reservation of Oregon**, "Wild Fish through Cooperative Management" was acknowledged for its innovative approach to salmon restoration in the Pacific Northwest.

The Washington State chapter of the American Planning Association has selected the Service and **EDAW**, a landscape architecture and environmental planning firm, to receive its Honor Award in the partnering category. The award recognizes the combined efforts of the two organizations to host EDAW's Summer Student Program on the Ridgefield NWR in 2000. The Summer Student Program attracted 19 college students from all over the world for an intensive 2-week workshop that

# Transitions...

## Who's Coming and Going

addressed environmental, cultural, and recreational issues at the refuge in anticipation of the thousands of tourists expected during the Lewis and Clark Bicentennial commemoration during 2003–2006. The students collaborated with refuge staff, the Chinook Tribe, Portland State University and the local community to identify opportunities for interpretation, habitat restoration, and education. They produced a concept plan for the refuge which is now in the design stage.

**George Franklin, Jr.** recently received the High Cotton Award for the Mid-South Region. A long-time participant in the Service's Partners for Fish and Wildlife Program, Franklin, 76, of Rayville, Louisiana, bought about 4.5 miles of river frontage along the Ouachita River in Louisiana almost ten years ago. He noticed a lot of soil erosion from the clay soils. Since then, he has planted hundreds of acres of filter strips and riparian zones to reduce soil erosion, improve water quality, and create corridors for wildlife travel. On January 11, 2002 in Atlanta, Georgia, the Delta Farm Press presented the award in recognition of his lifetime contributions to farming and conservation. Franklin, who started his conservation ethic in the 1940s, upon returning from the War, stated: "I feel that a farmer should be a conservationist and a steward of the land. I want my land to be much better than when I found it."

**Steve Spangle** is the new Field Supervisor of the Arizona Ecological Services Field Office. He previously served as the Supervisor of the Endangered Species Sub-office in Flagstaff where he guided the implementation of the National Fire Plan statewide. Spangle has also been the Southwest Region's Listing Coordinator and the regional liaison to the Mexican Spotted Owl recovery team.

**Kevin Kilcullen** is the new Branch Chief of Visitor Services in the National Wildlife Refuge System Headquarters. Kilcullen has served extensive periods as acting branch chief for every branch in the headquarters. Kilcullen previously served as a Visitor Services Specialist specializing in historic and cultural resources.

**James B. Willis** has been selected as deputy director of the National Conservation Training Center in Shepherdstown, West Virginia, filling a vacancy left by the retirement of Mona Womack. Willis most recently served as acting deputy associate undersecretary for organizational development for the Transportation Security Administration. Before that, he had a long career in the U.S. Coast Guard. Willis held a variety of positions with the Coast Guard, including executive officer at the U.S. Coast Guard Training Center in Petaluma, California, a Federal training facility similar to NCTC.

### In Memoriam

**Allan T. Studholme**, 89, died in early October in Northern Virginia. Studholme, a graduate of the University of Wisconsin at Madison and Aldo Leopold's student, was chief of the Division of Law Enforcement from 1962–67 and was an expert on the Migratory Bird Treaty Act who wrote the regulations extending protection to members of the raven family implementing the Migratory Bird Treaty with Mexico.

**Morton M. Smith**, former migratory bird Branch of Operations chief, died in September from complications related to his long-running fight with Parkinson's Disease. Smith joined the Service as a wildlife biologist in the Branch of Management and Enforcement in Atlanta, Georgia. Then in Washington, D.C., Smith then served as the chief of the Branch of Surveys in the Office of Migratory Bird Management and Acting Atlantic Flyway Representative. During his career, Smith logged more than 7,000 hours as a pilot for the Service. Vern Stotts, retired waterfowl biologist for the Maryland DNR, recalls Smith saying, "we can get this 206 off the water in less than one minute when everyone is down to their high school weight."

**Dr. Ken Wolf** died November 1, in a Winchester, Virginia, nursing home. His research career began in 1954 at the Service's Eastern Fish Disease Laboratory in Leetown, West Virginia. He retired from there in 1986 as Senior Research Scientist. During his tenure, he discovered how to continuously cultivate fish cell cultures and the unrecognized life stage of the parasite that causes whirling diseases in trout and salmon. He has more than 170 publications to his name. Wolf received the Interior's Meritorious Service Award and the Distinguished Service Award, the American Fisheries Society S.F. Snieszko Distinguished Service Award, Trout Unlimited's Distinguished Service Award and the American Institute of Fishery Research Biologists' Outstanding Achievement Award.

**Jay Hair**, conservationist and former professor who helped build the National Wildlife Federation, died last November at age 56.

# Fish & Wildlife... In Brief

## Service Finalizes Recovery Goals for Endangered Fish

The Service recently announced the availability of recovery goals that supplement and amend recovery plans for four species of endangered fish of the Colorado River Basin. The recovery goals provide objective, measurable recovery criteria required to consider removing the humpback chub, bonytail, Colorado pikeminnow and razorback sucker from Endangered Species Act protection.

## Florida Man Indicted For Importing Rare Brazilian Bird Feathers

A federal grand jury in Gainesville returned a 16 count indictment charging a man with the unlawful importation of endangered wildlife into the United States. The man, a resident of Gainesville, Florida, owned and operated "Rain Forest Crafts" and "Tribal

Arts," which were businesses that specialized in selling Amazonian tribal artifacts from Brazil to customers in the United States and elsewhere. He sold tribal artifacts such as Head Dresses and Masks which were comprised of endangered wildlife feathers and animal teeth. The protected species included feathers from blue and yellow macaws, red and green macaws, and scarlet macaws.

## Premiere of Air Quality Video

A new video, "Clearing the Air: Air Quality Management in the National Wildlife Refuge System," is now available from the Air Quality Branch. The 21-minute presentation discusses air quality threats and management on national wildlife refuge lands. It describes how the Service protects air quality by monitoring, identifying air pollution-sensitive resources, conducting

special studies on air pollution effects, and participating in policy development. It also describes how the Service, in partnership with other Federal organizations, States, tribes, environmental groups, and the public, works to protect refuges and the resources on them from air pollution. Portions of the video were shot at Okefenokee National Wildlife Refuge and feature Project Leader Skippy Reeves, Refuge Manager Jim Burkhart and Refuge Biologist Sara Aicher. The video also includes footage from Chassahowitzka, Moosehorn, and other refuges. To receive a copy of the video or for more information, contact Ellen Porter at 303/969 2617.

## Letter to the Editor.

I read the spring 2002 edition of the News. As you can imagine, I enjoyed it, with some regret.

Over the years, I had the pleasure of visiting a majority of the hatcheries and other fishery field stations and laboratories. In addition to their purposes, they were generally located in interesting places and offered an opportunity to see parts of the country that otherwise would have been outside of the usual itineraries. The people who worked at these places were friendly, hardworking and dedicated to the resources they served.

I feel some regret that there was no mention of the contributions made by Fishery Research. As with Wildlife, Fisheries had researchers with strong international as well as national reputations. Leaders like John Halver, Stanislaus Snieszko, Robert Rucker, Abraham Tunnison, Robert Lennon, Joseph Kutchin and Kermit Sneed, to mention a few. I am aware of the reason that Research was not included. I found it to be appropriate, but highly ironic, that when the Department elevated Biological Services it chose to take all of the Service's research capability. The planners

for the new BS obviously recognized that research was an integral part of any meaningful effort to serve a biological resource base. The irony is that when BS was in the Service, the leaders of BS considered all in-house research capabilities to be inadequate, incapable, non-scientific, poorly directed and not worthy of being considered for contracts to study biological problems.

Last year I attended the dedication of the Biological Services Research Center in Seattle. This started as the old Western Fish Disease Laboratory directed by the late Dr. Robert Rucker. The lab is dedicated to studying a variety of problems related to fish. I was pleased that at the dedication Dr. Rucker was honored with a memorial acknowledging his contributions to the health and welfare of fish and for providing a solid scientific foundation for the new BS research unit.

I enjoyed the publication and extend my congratulations to you and the staff.

Tom Parisot  
Retiree

# Law Enforcement Realigns

From my years working with State wildlife agencies, I know how important law enforcement is to resource conservation. One of the first documents to cross my desk as Director was the Office of Inspector General's (OIG) recommendations for improving law enforcement activities throughout the Interior Department. I was pleased to learn that our Office of Law Enforcement (OLE) and National Wildlife Refuge System were already addressing a number of the issues raised in that report.

I share Secretary Norton's commitment to "develop[ing] and maintain[ing] the most modern, professional, and effective law enforcement capability possible" and welcome the opportunity to work with both the Refuge System and OLE to meet that goal. The reforms we're implementing to support all of our enforcement officers bode well for the future.

One of those reforms has already introduced a significant change. On October 1, our special agents, wildlife inspectors, enforcement support staff, and their managers in the field began reporting to the Chief, Office of Law Enforcement.

This new alignment mirrors that of other Federal law enforcement agencies. It meets OIG's objective of making independent oversight of criminal investigations the rule throughout the Department. More importantly, however, it will facilitate nationally coordinated efforts to address Service conservation goals; provide greater consistency in enforcement policy, priorities, and procedures; and improve our ability to analyze threats, mobilize officers, and respond effectively when crises occur.

Line authority is a new way of working for our law enforcement staff—one that breaks with decades of tradition. But, ironically, most of us in the Service and in the communities we serve will probably never notice the change. And that's the way it ought to be.

OLE staff across the country will continue to work closely with Service regional staff and other colleagues to address local and regional conservation issues—issues that range from protecting endangered manatees in Florida and wolves, grizzlies, and condors in the West to dealing with paddlefish poaching in the heartland and regulating subsistence take of marine mammals in Alaska. Similar coordination with headquarters program managers will support such Service goals as protecting migratory birds and global species. Partnerships with other Federal inspection agencies at airports and border crossings will remain intact, as will cooperative enforcement efforts with State and tribal counterparts.

National management will build on and expand successful regional initiatives, while better positioning OLE to take on new responsibilities. Areas of concern run the gamut from injurious species and pesticide misuse to drug trafficking and homeland security.

OLE's core enforcement work will clearly remain a key part of our efforts to hold the line for wildlife. Line authority may take law enforcement off of regional organizational charts, but it won't take enforcement support away from Service regions or Service programs. OLE will continue to be part of our management team and part of our integrated approach to managing wildlife resources at every level—from local to global.

The reforms mandated by Secretary Norton will help OLE uphold the Nation's wildlife laws and treaties just as they will help our refuge officers protect resources, refuges, and the public. We'll look more closely at the changes ahead for refuge law enforcement in a future issue.

Change, of course, always brings challenges. But the changes planned for our enforcement programs can help us all work more effectively to protect the Nation's "wild things" and "wild places."

*Steve Williams*



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