



Fish & Wildlife *News*



SPOTLIGHT CITES: Celebrating 40 Years 12

Winter in the Extreme at Kanuti NWR 18

California Solar Projects Shed Light 20

Departments

- From the Director / 1**
- News / 2**
- Around the Service / 28**
- Our People / 37**

Features



SPOTLIGHT
CITES: Promoting the Sustainable Use of Wild Plants and Animals / 12

Snow Leopard

CITES International Endangered

USFWS

“A world without CITES is inconceivable.” —MARSHALL JONES



Winter in the Extreme / 24
Life at Kanuti National Wildlife Refuge

by BILL O'BRIAN



Shedding Light / 26
California Solar Projects Will Provide Clean Energy and Restore Habitats for Wildlife

by SCOTT FLAHERTY




CITES Success Shows Us the Way for Global Conservation Efforts

Many folks in the Northeast United States are still putting their lives and land back together after Hurricane Sandy crashed into the area in October. It was a truly devastating event, and unfortunately weather like this is becoming more common.

Extreme weather events are striking across the world more and more frequently. In 2012 alone, we saw hurricanes, deadly flooding in Australia, Bangladesh and China, a warm winter in the United States but a cold snap in Europe, drought and wildfires throughout the United States and Brazil, the vicious derecho storm in the United States.

Let's be clear: A rapidly changing climate is not the sole cause for these events. But most scientists agree it is making many of these events worse and climate models suggest such violent weather outbursts will become more common.

NASA's James Hansen put it more bluntly in an op-ed in *The Washington Post* this summer: "For the extreme hot weather of the recent past, there is virtually no explanation other than climate change."

For the U.S. Fish and Wildlife Service, dedicated to the well-being of the nation's fish, plants and animals, climate change means many things.

We recognize that a changing climate system will affect all ecosystems and organisms, at some level. Our understanding of climate change, its effects on fish and wildlife, and our commitment to address those effects will need to match its breadth and scale.

We must help find solutions to the causative factors of climate change and lead by example: using less energy, reducing travel, improving fleet management, designing smarter facilities, restoring habitats that sequester carbon, becoming carbon neutral. These actions reflect good government, sensible management and strong leadership.

And we must take a broader leadership role helping the wildlife and habitats adapt to a changing climate. This means increasing our scientific capacity, knowledge and understanding so we can respond to current and future climate change impacts such as

changing species distributions and migration patterns, the spread of wildlife diseases and invasive species, the inundation of coastal habitats with rising sea levels, and changes in freshwater availability with shifting precipitation and habitat types.

We are planning to release a National Fish, Wildlife and Plants Climate Adaptation Strategy that will help guide these actions. But that strategy is just for the United States, and climate change is a global problem that the world must confront together.

It sure won't be easy, but we have done it before—on wildlife trade.

Back in the 1960s, growing concern about international trade in wildlife and plants led to drafting the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1973.

Currently 177 countries, including the United States, implement CITES, the only treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.

Under CITES, any trade in plant and animal species must be biologically sustainable, based on sound scientific principles and analysis. Traded specimens must also be legally sourced.

And the world can show plenty of CITES successes, like crocodilians and the vicuña, which were being driven to extinction by demand for their skins and wool, respectively, but which are now on the road to recovery and trade is occurring at well-managed and controlled levels.

The United States was the first country to ratify the Convention, and the Service carries out CITES functions on behalf of the United States.

CITES is observing its 40th anniversary this year, and we are celebrating with this edition of *Fish & Wildlife News*.

Just like wildlife trade, climate change is a global issue, and we need to find global solutions. And with CITES as an example, I know we will.

Sky Dogs, Bird Chick and Odd Bird Land in Midwest

Sky Dogs, Bird Chick and Odd Bird flew into Minnesota Valley National Wildlife Refuge in early October for a birding convention aimed at increasing birding among non-traditional audiences.

The “Focus on Diversity: Changing the Face of American Birding” conference was spearheaded by Dave Magpiong, president of the New Jersey nonprofit corporation, Fledging Birders Institute. Magpiong is one in the group of birders who have donned the monikers Sky Dogs, Bird Chick and Odd Bird.

The convention attracted a large flock of 75 birding enthusiasts from New York, Washington, DC, and across the nation. Others tuned in on the web.

“We’re excited to be part of this conference,” Minnesota Valley NWR Refuge Manager Charlie Blair told the crowd. “We know

that we will get information today that will help us move our program forward.”

The conference focused on the nation’s demographic shift and the increasing need for concentrated outreach to non-traditional audiences. Also discussed were barriers to birding and call-to-action strategies.

The diverse crowd at Minnesota Valley NWR looked like America. “Who are American birders?” Magpiong asked. “This does not look like any other birding event that I’ve ever been to,” he said, looking out at the crowd. While the American populace is estimated to be 65 percent white and 35 percent non-white, the birding community is estimated to be 92 percent white. “We share this love—beautiful birds. Minnesota Valley National Wildlife Refuge was no accident,” he said, referring to the venue. “It is perfect.”

Magpiong’s Fledging Birders Institute has a dual mission: “enhancing the healthy development of our youth with the profound benefits of bird watching and promoting public awareness of avian diversity and factors that threaten it thereby fostering a societal bird conservation ethic.”

Speakers at the conference indicated that socioeconomic factors, perspective and relevancy play a huge role when making attempts to reach non-traditional audiences. In his presentation, Clemson University Professor of Wildlife Ecology Dr. Drew Lanham discussed a popular birding corridor in an impoverished South Carolina community where the people have no water to drink. Attempts to rectify the situation were met with concerns from environmental communities about how it was going to impact bird habitat. This, he said, “while people have no water to drink.” Lanham also referenced a population density map of people of color in the nation and invited the audience to overlay it with a bird conservation map. “Do we ever think about land conservation regions and think about the layers of humanity underneath? It’s a critical thing,” he said. “If you are not talking to the people on that landscape, then you are not addressing the issues of conservation.”

Magpiong invited the audience to submit their call-to-action ideas before announcing that the next conference will be in the Rio Grande Valley.

Notable speakers at the conference in addition to Lanham included wildlife photographer and author Dudley Edmondson, bird guide author Kenn Kaufman, birding enthusiast Paul J. Baicich, birdchick.com blogger Sharon Stiteler, Texas Parks and Wildlife ranger Roy Rodriguez, and birding enthusiasts Doug Gray, Marta DelCampo and Derek Washington.

Washington answers to Duck and Odd Bird, and Stiteler to Bird Chick. Edmondson, Gray, Lanham, Magpiong, Baicich and Rodriguez have dubbed themselves the Sky Dogs.

Also on the speaking agenda were the Service’s own Dr. Mamie Parker, Judy Geck and Tom Worthington. □

VALERIE ROSE REDMOND, External Affairs, Midwest Region



Birding enthusiast Dan R. Kunkle (left), one of the Sky Dogs, and Clemson University Professor of Wildlife Ecology Dr. Drew Lanham take a break from the conference.

Related Information

 For more information on this and other diversity birding events, visit fledgingbirders.org/about.html.

To view a livestream of the conference visit: www.livestream.com/usfwsmidwest.



The Chesapeake Bay app, available at the App Store <bit.ly/QTS53B>, allows users to document their refuge sightings and contribute to a global network of fellow explorers.

Free App is a Virtual Butterfly Net for 11 National Wildlife Refuges

With iPhones in hand, visitors to national wildlife refuges in the Chesapeake Bay region can now take photographs and share sightings with a worldwide community of wildlife watchers. The free National Wildlife Refuges Chesapeake Bay app, a tool for exploring the outdoors, is available for download from Apple's App Store.

App users can post photos of the plants and animals they find on refuges and tap into a global network of experts for information about the species. As the postings accumulate, scientists and refuge managers will be able to see where and when species inhabit specific locations.

The app was developed through a partnership between the Chesapeake Conservancy and National Geographic Society with support from the U.S. Fish and Wildlife Service. It incorporates the popular Project Noah wildlife photo-sharing service.

Project Noah allows users to create "missions" to pursue, and the app includes a mission for each of the 11 national wildlife refuges in the Chesapeake Bay region, the largest estuary in the U.S. The app also features locations, maps, operating hours and guides for these refuges. Users who visit the refuges and post photos of their missions can earn virtual "patches."

"Our goal was to produce a fun and innovative app that allows people to explore the Chesapeake region's national wildlife refuges, so everyone can better understand and appreciate the extraordinary value of these protected areas and our wildlife in the Bay and along our great rivers," said Joel Dunn, executive director of the Chesapeake Conservancy, which developed the idea.

"The app provides a new interactive experience by encouraging refuge visitors to become modern explorers. By using their smartphones like digital butterfly nets to capture photos of the animals

and plants they discover, they chronicle and share their experiences at the refuges, adding their photos to a growing global database used by citizen scientists across the globe," said Charles Regan, senior vice president for National Geographic Maps.

"The Chesapeake refuge app is a free resource for everyone seeking to learn about the Chesapeake Bay and its national wildlife refuges, but it's more than a great educational tool," said Service Director Dan Ashe. "It enables wildlife enthusiasts to share photos and information with biologists and experts from the Fish and Wildlife Service and across the globe, enabling citizen scientists to help us learn more about the kinds and distribution of plants and animals that inhabit refuges in one of the nation's most imperiled watersheds."

"I can't think of a better way to get a whole new generation fired up about wildlife than putting this app in a million hands." □



App users can collect patches for completing discovery missions in one of the 11 Chesapeake Bay wildlife refuges.

Reaching Young Adults

Using communications expertise from the Missouri School of Journalism to engage young adults in Service volunteer opportunities

Students from the University of Missouri School of Journalism worked alongside U.S. Fish and Wildlife Service staff this fall to develop a comprehensive communications campaign that encourages natural resource stewardship and volunteerism among tech-savvy, highly diverse and highly influential young adults between the ages of 18 and 24.

"This age range holds a significant stake in the current and future health of our nation's natural resources," said Charles Traxler, the Service's Assistant Regional Director of External Affairs in the Midwest Region. "That's why it is so important for our agency to grasp their language and know how to communicate with them effectively."

The Service is partnering with Mojo-Ad, the School of Journalism's professional-services, student-staffed communications agency. The agency is made up of seniors and graduate students competitively selected to work with clients seeking strategic communications campaigns to reach the young adult market.

"Mojo-Ad staff are all part of the demographic they are working to target. That's the difference we

provide," said Stephanie Padgett, Mojo-Ad's Director of Media and Research. "We offer a fresh perspective on how to communicate to 18- to 24-year-olds, straight from the horses' mouth."

Mojo-Ad annually produces a comprehensive State of the YAYA Report with market insights, behaviors, attitudes and interests. This report helps inform the development of communications campaigns targeting young adults.

"By utilizing highly specialized communications specialists to inform how we talk with the youth and young adult market, we are positioning our agency to reach this emerging and important constituency," said Traxler.

As part of the group's primary research, Mojo-Ad staff members spent time with Service field staff representing National Wildlife Refuges, Fisheries, Ecological Services and External Affairs.

Jestin Clark, wildlife biologist with Big Muddy National Fish and Wildlife Refuge, and Ashley Spratt with External Affairs, took more than 30 Mojo-Ad staffers on a three-mile hike through the refuge's Overland Bottoms unit, showcasing ongoing projects by volunteers including educational kiosks, invasive species removal, tree plantings and trail construction.

Columbia Fish and Wildlife Conservation Office staff led an outing for Mojo-Ad staffers on the Missouri River, giving hands-on



A Missouri School of Journalism student scoops a fish from the electrofishing boat.

demonstrations of volunteer opportunities with fisheries biologists. Students assisted in trammel netting, push trawling and electrofishing.

"Many of the students had never been on the Missouri River before," said Anna Clark, outreach coordinator at the Columbia office. "Being on a boat, holding a juvenile shovelnose sturgeon, and dodging jumping silver carp were all first-time experiences. At the end of the day, they really understood why conserving fisheries matters."

Several Mojo-Ad staff members also participated in National Public Lands Day, volunteering alongside Service staff and other conservation partners to plant trees and prairie cordgrass in a conservation area near St. Louis.

Mojo-Ad staff used this hands-on experience, in addition to secondary research about Service volunteer programs, to build a strategic communications campaign. The agency aims to identify what values or activities related to natural resource conservation resonate with the target market; determine how the

Service can generate goodwill, support or advocacy for natural resources issues; and encourage volunteer participation through Service programs.

"This partnership with Mojo-Ad can lead us in the right direction to educate and inform young adults about the mission of our agency and why our work matters," Traxler said. "They can help us engage young adults in the conservation conversation, and guide our efforts to utilize social media and other communications tools to encourage a call to action through volunteerism."

Mojo-Ad presented research findings and recommended communication strategies to representatives from across the Service in November. □

ASHLEY SPRATT, External Affairs, Midwest Region

Connecting Children to Nature through Nature Explore Classrooms

The Children's Tree House Learning Center at the U.S. Fish and Wildlife Service's National Conservation Training Center (NCTC) in West Virginia provides care for preschool children of Service staff, personnel in training and the local community, and its Nature Explore outdoor classroom seeks to inspire a lifelong sense of wonder about the natural world through learning, playing and creating.

The Nature Explore classroom directly meets one of the Service's six priorities, Connecting People with Nature, and through this project, NCTC has exceeded expectations by engaging, educating and employing youth. Harpers Ferry Job Corps youth installed materials and worked on walkways, while students from Youth Conservation Corps installed native plants. During the ribbon cutting ceremony in mid-June 2012, NCTC Director Jay Slack said, "Through this project, we are bridging the gap between young people's discovery of nature and their desire to have a career in the outdoors."

The Service's three Nature Explore classrooms—at NCTC, Nisqually National Wildlife Refuge in Washington and Creston Fish Hatchery in Montana—provide gateways for children, youth and families to connect with nature. Slack sees these classrooms as valuable models for others to gather ideas.



Children play in the NCTC Nature Explore classroom.

Nature Explore is a collaborative program of the Arbor Day Foundation and Dimensions Educational Research Foundation with the goal of helping nature become an integral, comfortable part of children's daily learning. Nature Explore landscape architects and educators work with stakeholders at each site, including staff members, volunteers, youth and youth leaders to create site-specific concept plans for the outdoor classrooms. A training workshop provides the sites with research-based principles behind the design and multiple use of the space, including family engagement opportunities.

Landscape designers plan classrooms to fit the space, needs and budget of each site. NCTC began with an open grassland area with one sycamore tree; Creston transformed a forest of trees into an area shaped like a fish; and

Nisqually turned an orchard into a classroom. The resources used in Nature Explore classrooms are developed from a decade of research and field-testing with educators and children.

The sizes and shapes of each classroom are different, and so are the resources. At NCTC's classroom children play with round pieces of cut Eastern Red Cedar trees, called tree cookies, to build objects of their imagination. They can paint on a clear plastic art easel—inspired by looking up toward the eagles' nest or gazing down to the river. The messy area provides a great setting for any day, but especially for International Mud Day in June. They can also play with a water feature or in the sandbox build castles, skyscrapers and caves. Then there is the 15-key marimba, a xylophone-like musical instrument, that even adults can't resist playing.

"Building a Nature Explore classroom at NCTC has been a great learning experience. NCTC hosts many visitors—not just from the U.S. Fish and Wildlife Service, but also from the Forest Service, the National Park Service, the Bureau of Land Management and many non-governmental organizations. We're going to show them how they can set up this kind of classroom at their refuge, park or forest in order to bring this kind of resource to their home communities," said Slack.

Nickie Weller, the Director of the Children's Tree House, sees the children growing in confidence, independence and creativity. "Children are learning through play. Part of the Children's Tree House mission is connecting children to nature so they will love and care for it in the future. We instill in the children to dig for answers, cultivate learning and harvest new ideas." □

KATHY SHOLL, Division of Education Outreach, NCTC

More information



View a video on the NCTC Nature Explore classroom at youtu.be/F4Xv_SNvalY

For more information about the Nature Explore classroom, visit www.natureexplore.org.

Multiagency Rescue Effort Saves Fish Threatened by Wildfires

A team of U.S. Fish and Wildlife Service employees and dedicated partners rescued threatened and endangered fish in June in the Southwest as a lightning-caused wildfire bore down on them.

The Baldy Wildfire, ignited May 9 within the Gila Wilderness Area in New Mexico, and the Whitewater Wildfire, which began May 16, merged into one on May 24, burning nearly 300,000 acres in less than a month.

In early June, about the middle of the fire's life, biologists from the Service's New Mexico Fish and Wildlife Conservation Office conducted an aerial survey to see threats posed by the wildfire to native and highly threatened fish species caught within its perimeter.

Threatened Gila trout were surrounded by the fire. Populations of the endangered spikedace and loach minnow were immediately downstream and vulnerable to ash flows that were certain to come as the summer monsoon storms began. Gila and headwater chubs occupied streams that were also directly threatened by ash flow.

A multiagency rescue effort soon followed that brought high priority at-risk populations of these species into captivity or moved them from streams in totally destroyed watersheds to streams that escaped the wildfire.

On June 14, a team of FWS and Forest Service biologists entered the Gila National Forest burn zone, carrying equipment and supplies on horses and mules. A helicopter waited outside the

wilderness boundaries until contacted. It arrived carrying a tank that had been specially constructed by the Service's Fisheries staff, complete with oxygen bottles that would provide the appropriate amount of dissolved oxygen the fish would need to survive. The tank was lowered to the ground at the end of a 150-foot cable, the fish were loaded, the tank was raised and carried out of the wilderness to waiting trucks.

The crews successfully caught Gial trout in Langstroth Creek, Whiskey Creek and other spots.

Biologists also rescued spikedace and loach minnow from the Forks area of the Gila River before the monsoons. They got to the San Francisco River in time to capture loach minnow and then reached Turkey Creek to retrieve Gila chub.

Two major facilities, the Mora National Fish Hatchery and the Dexter National Fish Hatchery, both of which are managed solely

The team enters the Gila National Forest burn zone, carrying equipment and supplies on horses and mules.

for the recovery of aquatic species, scrambled to get transport vehicles on the road to receive captured fish, and started up emergency refugium systems that could house the wild fish, yet isolate them from the populations already cared for at the hatcheries.

The Gila trout went to the Mora National Fish Hatchery and the Service's New Mexico Fish and Wildlife Conservation Office. Dexter National Fish Hatchery took the spikedace, loach and Gila chub.

"We are proud of the work we have done here and are happy to see the fish taking so well to their new environment. I would especially like to stress the fact that these tanks are specially designed to mimic nature, allowing this to be a naturalistic approach unique to Mora," said Mora Hatchery Manager Jeff Powell.

After their stop at Mora National Fish Hatchery, some Gila trout were moved to intact habitats outside the reach of the wildfire. For instance, Spruce Creek Gila

trout were transferred to Ash Creek in the Coronado National Forest in southeastern Arizona. These fish made the last leg of their journey in 5-gallon buckets attached to the backpacks of volunteers from the Service's Arizona Fish and Wildlife Conservation Office, the Coronado National Forest and Youth Conservation Corps enrollees on the Coronado.

Thirty-five engines, 27 water tenders, four dozers, 10 helicopters and 900 people fought the Whitewater Baldy Wildfire Complex, putting it out by late June. The fish rescue was accomplished by three distribution trucks, one helicopter, one chain saw, dedicated people from the Forest Service, the FWS, the state game and fish agencies from both Arizona and New Mexico and volunteers, and 12 mules and horses.

Thanks to their quick and cooperative efforts, a total of 438 Gila trout were brought to safety, along with 167 loach minnow, 267 spikedace and 323 chubs. □

NICOLE HASKETT OSBORN, External Affairs, Southwest Region

USFWS





SEA LIFE SCHEVENINGEN

A Kemp's Ridley Sea Turtle's 5,000 Mile Travel Odyssey

She should have zigged when she zagged.

Flip, a Kemp's Ridley sea turtle, started her life in the Gulf of Mexico a few years ago and ended up on a beach in the Netherlands in December 2011 near The Hague. She was very close to death when a man walking his dog on the beach found her injured, starving and cold-shocked.

Normally, Kemp's Ridley turtles, born along the Gulf Coast, stay in the warm Gulf among clumps of floating seaweed, riding the ocean currents. Sometimes they get caught up in the Atlantic currents, with a few making it up to the coast of Massachusetts in the summer, then returning to the Gulf. How Flip got all the way across the Atlantic and onto the coast of Holland remains a mystery. There has only been one other known documented case of a Kemp's Ridley surviving a trip like that—one was found along the Irish coast two years ago.

Animal rescuers nicknamed the turtle Flip and brought her to SEA LIFE Scheveningen, the aquarium where her long rehabilitation

began. At first she wouldn't eat. She weighed just about 4 pounds and measured less than 14 inches. After much TLC she began eating crabs, a favored food, and swimming in her holding tank. When it came time for her to fly back to Texas this past November, she weighed nearly 7½ pounds and had grown to well over 14 inches.

It cost between \$10,000 and \$20,000 to nurse Flip back to health, but a staffer at SEA LIFE Aquarium Grapevine in Texas, told E&E News it was worth it. "This one turtle has the potential over her lifetime to really contribute to the recovery of the species," Karen Rifenbury told E&E News. "Even if 50 percent of her offspring survive, it would be huge for the species' recovery."

The staff at SEA LIFE Scheveningen wanted Flip to go home to her native waters in the Gulf, so they contacted Fish and Wildlife Service biologist Tom Shearer in the Southwest Region's Corpus Christi Endangered Species field office. Shearer is the Region's sea turtle recovery expert and is heavily involved in the recovery of Kemp's Ridley sea turtles. He contacted the folks in the Division of Management Authority and started the ball rolling on a CITES permit to allow for the transport and import of Flip.



NPS

(Left): Staff at SEA LIFE Scheveningen clean up Flip, who found her way to Holland from her native waters of the Gulf of Mexico. (Right): "The Turtle Team" at SEA LIFE Grapevine Aquarium watches as Flip re-enters the Gulf.

Once all of the permits were in place, and Flip was ready for the trip, KLM Royal Dutch Airlines flew her direct from Amsterdam to Houston on November 1. Flip, along a staffer from SEA LIFE Scheveningen were met by Dr. Donna Shaver, Chief of the Division of Sea Turtle Science and Recovery, National Park Service, Padre Island National Seashore in Texas, and staff from SEA LIFE Aquarium Grapevine. They transported her to the Port Aransas Animal Rehabilitation Keep (ARK) for acclimation and evaluation before release.

Tony Amos at the ARK took care of Flip while she acclimated to the Texas climate, and he determined that she would be OK for release on November 9. The "turtle team," numerous media and members

of the public, gathered on the 9th at Padre Island National Seashore. Flip, with her new Argos satellite transmitter, 3½-inches long and weighing just 3½ ounces attached to her shell, was ready for a swim. The transmitter has switches that let it know when the water surface has been broken so it can transmit to satellites. These transmissions get translated into locations and posted on <seaturtle.org/tracking>.

With only the slightest hesitation Flip crawled into the surf. Home again!

The success of this effort is a result of international cooperation among SEA LIFE Scheveningen, SEA LIFE Grapevine, KLM Royal Dutch Airlines, the University of Texas Marine Science Institute-Animal Rehabilitation Keep, the U.S. National Park Service, the government of Holland, NOAA Fisheries, and the Service. □

TOM BUCKLEY, External Affairs, Southwest Region



Find links to video of her departure and her tracking at <www.fws.gov/southwest>.

Getting Back the Competitive Advantage

Recruiting and hiring students and recent grads



The federal government is changing the way it promotes employment opportunities for students and recent graduates in the federal workforce. The new Federal Pathways Program consists of three developmental programs:

The first is the **Internship Program**, which replaces the former student programs (SCEP & STEP). The flexible nature of the Internship Program accommodates the need to hire students to complete temporary work, perform labor-intensive tasks not requiring subject-matter expertise or fill summer jobs. Students who successfully complete the program may be eligible for conversion to a permanent job in the civil service.

The second is the modified **Presidential Management Fellows Program (PMF)**. This program is the government's premier leadership development program for graduate and professional degree candidates. Changes include better alignment

with academic calendars and allowing those who have received a qualifying advanced degree within the preceding two years to participate. After successful completion of the two-year excepted service appointment, Fellows may be converted to a permanent position in the competitive service.

The third track is the **Recent Graduates Program**, which provides developmental opportunities for applicants who have completed a qualifying education program within the preceding two years. Individuals are placed in a dynamic, developmental program with the potential to lead to a career in the civil service. The program lasts one year unless the position warrants a longer and more structured training program.

Pathways opportunities are publicly posted on USAJobs <www.usajobs.gov/studentsandgrads>. Students can apply and compete for Pathways jobs through this website, with access through social media like Facebook and Twitter. □

Reserve Through the Storm

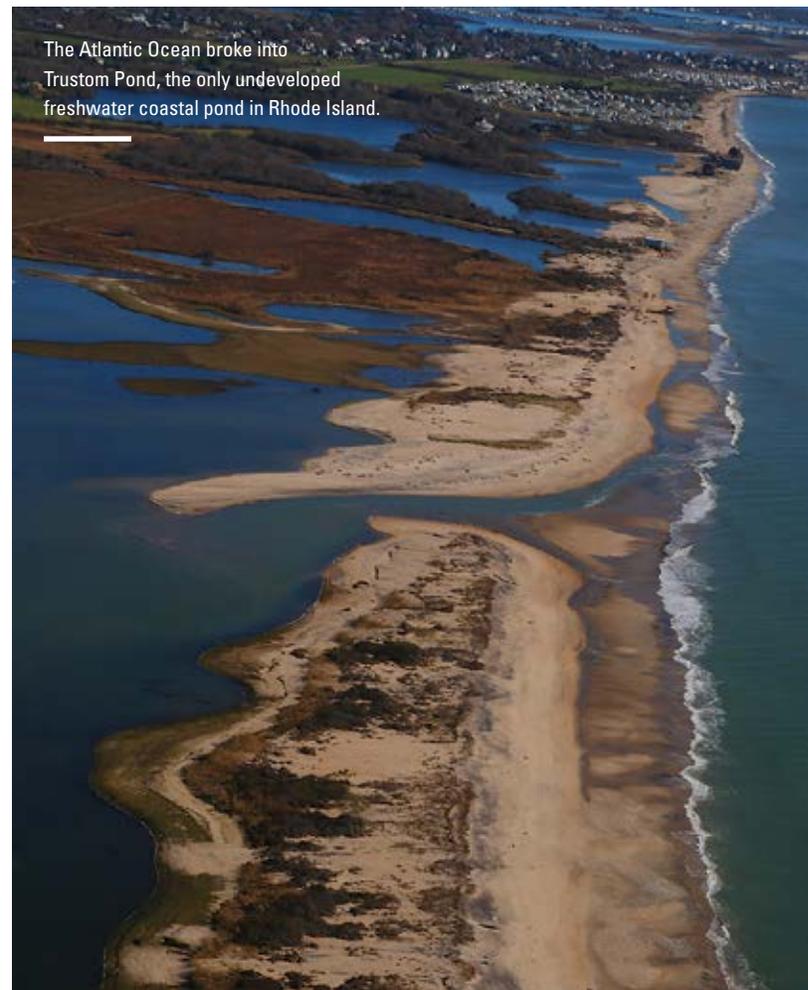
Refuges across the East Coast were battered by gale force winds, flooding, structural damage and power outages from Superstorm Sandy.

The longer-term ecological impacts of Sandy remain unknown, but a united U.S. Fish and Wildlife Service has been helping communities and national wildlife refuges throughout the Mid-Atlantic and Northeast after Sandy struck October 29.

One of the strongest hurricanes to hit the East Coast, Sandy left structural damage, downed trees, power outages, washed-out roads and flooded communities.

Coastal refuges like Chincoteague National Wildlife Refuge in Virginia, Prime Hook in Delaware, E.B. Forsythe in New Jersey and the Long Island refuge complex in New York were among the public lands most affected by the storm surge, gale force winds and related flooding.

Even before the storm hit, Service employees from neighboring states stood ready to help, and within days of the storm, Service biologists, pilots, maintenance workers and emergency specialists journeyed to the coast to support cleanup efforts. Many spent nights in sleeping bags in refuge quarters without reliable power or electricity.



The Atlantic Ocean broke into Trustum Pond, the only undeveloped freshwater coastal pond in Rhode Island.



"This is more snow than I've seen in my entire life!" said Greg Titus while on assignment in West Virginia. Titus, a division fire management officer from St. Marks NWR in Florida, was one of several Southeast Region employees deployed to snowbound West Virginia through the Federal Emergency Management Agency. Titus and others worked to help clear roads blocked by fallen trees and to work at National Guard airports in Martinsburg and Charleston, where tractor trailers brought food, water and generators for storm victims.

Seven days after Sandy's landfall, Michelle Potter, refuge manager of the Long Island NWR complex in New York, said: "With power resources and gas resources dwindling, it's been a little bit of a dire week for us. We have a crew of 17 people here from Massachusetts and Maine and we are thrilled to have them here. They've been working like crazy cutting trees, repairing roofs and assisting with general refuge cleanup. We're continuing to forge ahead."

Sandy knocked the observation deck at Target Rock, part of the Long Island NWR complex, from its foundation. Extensive sections of the popular wildlife drive at E.B. Forsythe NWR in New Jersey, frequented by more than 250,000 visitors a year, were washed out and severely eroded. And roadways leading to

Assateague Island, world famous for its Assateague ponies, from Chincoteague NWR in Virginia eroded and became impassible. As crews began clearing roads and making repairs to refuge visitor centers, headquarters and other structures, additional Service responders took to the air by helicopter to document damages.

Potter surveyed damage of the Long Island NWR complex as part of a series of aerial damage assessments made possible by the Service's Southeast Region helicopter crew. "We noticed a lot more debris washed up in storm wreck than we thought we had. Numerous kayaks, boats, a refrigerator, a lot of garbage, and a lot of trees were blown down [on refuge property]," Potter said. "Thankfully our beach nesting habitat for plovers and least terns appears intact."

At the Rhode Island NWR complex, storm surge broke the barrier between Trustom Pond, a 160-acre freshwater coastal sanctuary, the only undeveloped freshwater coastal pond in Rhode Island, and the Atlantic Ocean, resulting in a surge of saltwater intrusion.

"Pockets of our freshwater pond are completely dry. It was like you unplugged a bathtub and drained out all the water," said Janis Nepshinsky, outdoor recreation planner for the Rhode Island refuge complex.

Trustom Pond NWR is known for supporting a high diversity of wildlife, especially waterfowl and freshwater fish including bass and perch. Saltwater from the storm surge flushed out freshwater fish species and dramatically lowered water levels when it receded.

"We have a long way to go," said Charlie Vandemoer, refuge manager of Rhode Island NWR complex. "But before, during and after Sandy, our Service family stepped up the plate, from the support of extra law enforcement officers to keep visitors safe, to the team of sawyers who cleared downed trees from trails and mounds of debris on our shorelines brought in by the high surf."

With the continued support of neighboring Service resources in the days, weeks and months after Hurricane Sandy, field and regional staff will continue to assess and address the superstorm's short- and long-term impacts.

Caleb Spiegel, wildlife biologist with the Migratory Bird Program, said his program has been using satellite telemetry to document annual migration and winter movement patterns of seabirds like the red-throated loon, Northern gannet and surf scoter. Such satellite tracking information is providing valuable data for assessing how migrating birds respond to hurricanes.

Spiegel found evidence that a Northern gannet migrating

(Left): The Target Rock overlook at Long Island NWR complex sustained the refuge's worst structural damage. (Right): Division Supervisor Greg Titus (left) briefs Tony Wilder, Incident Commander of the Southern Area Type 1 Red Incident Management Team on saw crew work in West Virginia. Titus is a Division Forest Management Officer based at St. Marks National Wildlife Refuge and Wilder is a fire management officer at Mississippi Sandhill Crane National Wildlife Refuge.

down the coast of New Jersey encountered the storm during peak intensity and turned back north to wait it out where the effects were less intense. "This is an important time for birds migrating down the U.S. Atlantic coast," said Spiegel. "We are able to track bird locations in real time to determine if the hurricane may have altered migration movements."

Charlie Vandemoer said he speaks on behalf of Service staff across the coast who have received an outpouring of support from neighboring communities. "It is heartening to know that so many members of our Service family stood ready and willing to help us, a safety net cast when we most needed it." □

ASHLEY SPRATT, External Affairs, Midwest Region

CATHERINE J. HIBBARD, External Affairs, National Wildlife Refuge System, Northeast Region

'New Jersey's Katrina' Resonates with Service's Southern Firefighters

New Jersey Gov. Chris Christie refers to Superstorm Sandy as "New Jersey's Katrina," and members of the federal Southern Area Type 1 Incident Management Red Team knew just what he meant.

The Red Team is an interagency group of federal, state and local incident management professionals mostly from the South, and many Red Team members had suffered personal losses from hurricanes such as Katrina.

Members of the Red Team, including U.S. Fish and Wildlife Service employees Tony Wilder, Catherine Hibbard and Greg Titus, took on a Federal Emergency Management Agency mission requested by New Jersey State Fire Marshal William Kramer to assess the condition of buildings, equipment and personnel at the hardest-hit small fire departments.

Kramer was concerned that departments on New Jersey barrier islands and coastal areas could not sustain operations. Many citizen firefighters had responded to more calls within 96 hours of Sandy's landfall than they normally do in a year. He feared that firefighters would continue to serve beyond their breaking points.

Red Team Incident Commander Wilder, a zone fire management officer at Mississippi Sandhill Crane National Wildlife Refuge, lost everything to Katrina. His visit to Ship Bottom Fire Department in New Jersey brought it all back.

"You just get worn out, so worn out. There's no getting back to normal," he told 75 firefighters gathered at Tom's River Fire Academy for a Sandy response meeting, "because normal no longer exists."

The Red Team is mostly from the South, but team member Hibbard is a public information officer from the Northeast Regional Office in Massachusetts. She thanked the crowd at Tom's River "for extending your northern hospitality to this southern team."

The Red Team deployed two-person teams to collect information over four days from 81 fire departments. Titus, a district fire management officer

at St. Marks NWR in Florida, got a taste of that "northern hospitality."

"People recognized the Fish and Wildlife emblem on my coat and asked me if I knew so-and-so," said Titus. "When I said I was from Florida, they said 'Whatta ya doin' here?'"

The team's report to Fire Marshal Kramer featured 32 recommendations, ranging from how to find and request personal and financial disaster assistance to improving agency coordination for future incidents. "I look forward to using this document and sharing this with the local fire departments," Kramer said. "You certainly got their attention." He also planned to forward the report to Christie to improve the state's disaster response.

CATHERINE J. HIBBARD, External Affairs, National Wildlife Refuge System, Northeast Region

“You just get worn out, so worn out. There’s no getting back to normal, because normal no longer exists.”

TONY WILDER,
Red Team Incident Commander

Sand and debris line the street near Bay Head Fire Department.



MICHAEL COOK/USFS



JUSEWS

The Wisdom of Fish

Salmon and steelhead return to the upper White Salmon River, bringing lessons on the cultural and biological importance of river restoration

For the first time in nearly a century, migrating fish are swimming upstream in the White Salmon River in southwest Washington, thanks to 700 pounds of dynamite and collaboration powered by just as much force. The removal of Condit Dam in October 2011, one of the largest in history, brought the unobstructed flow of the wild White Salmon and the return of federally protected steelhead and Tule fall Chinook salmon, direct descendants of the fish that spawned there a century ago.

Such a strong genetic connection to their pre-dam descendants makes these fish “very unique,” said U.S. Fish and Wildlife Service biologist Rod Engle. “Genetically, hatchery and wild fall Chinook spawning in the White Salmon are almost indistinguishable,” Engle said. “Having a hatchery produce fish endemic to an area for over a hundred years is very rare.”

Engle often works with Spring Creek National Fish Hatchery, which has raised the Tule fall Chinook since 1901 and is one of very few hatcheries that started with fish native to the area and still has them. The Service, which operates the hatchery, is playing a key role in monitoring the way salmon and steelhead respond to their new opportunities for spawning in the White Salmon River.

Their DNA isn't the only thing that makes these fish special. The short time it took for both the Chinook and steelhead to spawn in their new habitat came as a surprise. Chinook gained six miles of habitat in the White Salmon while steelhead gained 33. “We didn't quite expect that the fish would choose to spawn in this habitat a year after dam removal,” said Engle. “That they deem it usable habitat is extremely positive and a massive success in such a short time frame.”

Beginning in 2006, representatives from PacifiCorp, the State of Washington, Yakima Nation, U.S. Forest Service, U.S. Geological Survey, National Marine Fisheries Service and the Service began extensive planning on managing the species of concern in the river both before and after the dam was removed.

Some of the pre-dam removal work involved heavy lifting. Last summer and fall, Engle and others from the Service and

Yakima Nation colleagues moved 679 Tule fall Chinook salmon from below the dam to preserved spawning grounds upstream to protect the fish and their offspring from the sediment resulting from the dam breach.

“None of this work could have happened without the unique welding together of these partners,” Engle said. He explains that the partnering agencies decided to monitor the fish and to see what would happen naturally as the river was restored.

They didn't have to wait long. Ten months after the dam's removal, fish were returning to spawn in the White Salmon.

The mood at September's White Salmon River Homecoming was festive as local and tribal communities gathered to celebrate the return of the wild river and its imperiled fish.

“On the tribal side, in some cases there were three generations

there,” said Emily Washines, outreach coordinator for the Yakima Nation, who brought her own daughter along to experience a piece of her family's past. “The children now will be able to see the river of their great grandparents and grandparents.”

The return of the White Salmon River and its endemic fish offers a lesson in environmental stewardship, Washines said, adding that nature should guide the restoration.

“The dam was removed, the river flows, and the salmon and steelhead are now spawning,” she said. “The fish are showing us the wisdom.”

AMANDA FORTIN, External Affairs, Pacific Region

(Below): A Yakima child overlooks Husum Falls on the White Salmon River. (Above): The Service's Nadia Jones holds a Tule fall Chinook salmon.



YAKIMA NATION

spotlight

CITES 101 / 14

Understanding Appendices,
CoPs and Permits

by CLAIRE HOOD

CITES Manages Freshwater Turtle Trade / 17

by THOMAS LEUTERITZ *and* BRUCE WEISSGOLD

CITES CoP16 / 18

What Will Make the Headlines?

by CLAIRE HOOD

Partnering to Conserve Native Species / 20

by PATRICIA DE ANGELIS
and ANNE ST. JOHN

40 Years of CITES Around the World / 22

Venus' flytrap plants and
bottlenose dolphins are
protected by CITES.

40 YEARS

Promoting
the sustainable use
and conservation
of wild plants
and animals



This year marks the 40th anniversary of the signing of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, or CITES. This international treaty on wildlife trade helps ensure that trade does not threaten species' survival in the wild. The 177 member nations of CITES (called Parties) work together to protect almost 35,000 species of plants and animals. To help celebrate, the U.S. Fish and Wildlife Service's Claire Cassel spoke to two figures immersed in CITES history. The following are excerpts from the interviews with Marshall Jones and Lee Talbot.



MARSHALL JONES: A WORLD WITHOUT CITES IS INCONCEIVABLE

Marshall Jones is a Senior Conservation Adviser at the Smithsonian Conservation Biology Institute (SCBI), a 3,200-acre conservation and research facility in Front Royal, Virginia. Before going to SCBI, Jones worked for 32 years for the Fish and Wildlife Service, starting in 1975 as a wildlife biologist and technical writer with the Office of Endangered Species. During his career, Jones served on the U.S. delegation to the first meeting of the Conference of the Parties (CoP1) to CITES. He served as a member of U.S. delegations to 10 CoPs, holding several leadership positions. Jones also served as the first Assistant Director of the Service's International Affairs programs and Deputy Director and Acting Director for the Service.

CoP1: Setting the stage

I started working for the Service in April 1975 as the editor of the *Endangered Species Technical Bulletin* (now known as the *Endangered Species Bulletin*). After less than a year, I was asked to serve as a consultant for zoological issues to the U.S. delegation for CoP1. At that time, the Fish and Wildlife Service did not have a Scientific Authority office.

As the depositary government for the Convention, Switzerland paid for and hosted CoP1 in November 1976 in Bern, Switzerland. Bern was a good choice; it was a small city without the distractions of a tourist destination such as Geneva.

CoP1 set a pattern of English, French and Spanish as the working languages for the Convention. That meant that simultaneous

Continued on page 15 »

LEE TALBOT: FOUNDING FATHER OF CITES

Lee Merriam Talbot Ph.D. is an ecologist and geographer; specialist in international environmental affairs, ecology, environmental policies and institutions, conservation biology and natural resource management, with more than 60 years of professional experience, approximately half spent working on environmental issues in 134 countries outside the United States. Talbot is currently senior professor of environmental science, international affairs and public policy, Department of Environmental Science and Policy at George Mason University. Past positions include Assistant to the Chairman for the President's Council on Environmental Quality; Director General, World Conservation Union—IUCN; and Visiting Fellow, World Resources Institute.

What was your involvement in the drafting of CITES?

While attending a conference in Arusha in northern Tanzania in 1961, I pulled together wildlife officials from a number of African countries to discuss the issue of endangered species and poaching and what could be done about it. Poaching was a big problem—things like zebra hides, elephant ivory, rhino horn, crocodile and leopard skins. Of course, poaching is still a big issue today.

The consensus from that meeting was that the problem stemmed from the demand end of things, specifically Europe and the United States. The supply countries lacked the dollars and the manpower to protect the species from highly organized poaching operations. In response, I proposed a convention on trade to get at the issue of demand.

Continued on page 16 »



CITES 101

Understanding Appendices, CoPs and Permits

Until the early 1960s, trade in wild animals and plants focused on consumer demand with little regard for its impact on the long-term survival of species. But, as international discussions turned to this unregulated trade and the threat it posed to wildlife, CITES was born.

In 1963, a resolution adopted at a meeting of the International Union for the Conservation of Nature (IUCN) in Nairobi, Kenya, led to the drafting of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Ten years later, the text of the Convention was approved in Washington, DC, at a meeting of representatives from 80 countries. On July 1, 1975, CITES took effect.

Today, the 177 member nations of CITES (called Parties) work together to protect almost 35,000 species of plants and animals by ensuring that international trade is legal and does not threaten their survival in the wild.

How CITES Protects Species

International trade in plants and animals, whether taken from the wild or bred in captivity, can pose serious risks to wildlife species. Without regulation, international trade can deplete wild populations, leading to extinction. The goal of CITES is to facilitate legal, biologically sustainable trade, whenever possible. But, in some cases, no level of commercial trade can be supported.

Species are listed in one of three appendices:

- Appendix I comprises species threatened with extinction and provides the greatest level of protection. International trade for primarily commercial purposes is essentially prohibited. Examples include gorillas, sea turtles and giant pandas.

- Appendix II is composed of species that, although currently not threatened with extinction, may become so without trade controls. Most CITES species are listed in this appendix, including American ginseng, paddlefish, lions and many corals.

- Appendix III comprises species for which a range country, based on their own legal protections for a species, has asked other Parties to help control international trade. Examples include map turtles, walrus and Cape stag beetles.

The CITES Structure

CITES is administered by a Secretariat, located in Geneva, Switzerland. Three permanent committees (Standing, Animals and Plants) provide technical and scientific support to the Parties. Each Party designates Management and Scientific Authorities to issue permits, make legal and scientific findings, and monitor trade. In the United States, the U.S. Fish and Wildlife Service's International Affairs Program carries out these functions.

The CITES Parties, collectively referred to as the Conference of the Parties (CoP), meet approximately every three years to review CITES implementation and assess the status of species in trade. During this meeting, Parties review and vote on proposals to improve the effectiveness of the treaty and make amendments to Appendices I and II. Through the adoption of resolutions and species proposals, the CoP develops practical solutions to complex wildlife trade problems. Attendees include Party delegations, representatives of the CITES



Bobcat skins with U.S. Fish & Wildlife Service CITES tags.

Secretariat and approved observers, including conservation and industry organizations.

Permits: More Than Paperwork

The backbone of CITES is the permit system that facilitates international cooperation in conservation and trade monitoring of CITES-listed species. Permits are issued only if a country's Management and Scientific Authorities determine that trade is legal and does not threaten the species' survival. The use of standardized permit forms allows officials at points of export and import to verify that specimens are properly documented. They also allow for collection of species-specific trade data to determine trends in trade, identifying increases or decreases in trade levels that may indicate a need to reassess a species listing in the CITES Appendices.

Over the last several decades, CITES has helped ensure the global conservation of species. Increased commitment by Parties to effectively implement the treaty, including stronger legislation and enforcement at the national level, has helped control worldwide over-exploitation of wildlife.

CLAIRE HOOD, International Affairs, Headquarters

Jones interview, continued from page 13

interpreters were provided for these three languages, and those countries speaking other languages were required to provide and pay for their own translators.

What were the main goals of CoP1?

The first and biggest goal of CoP1 was to fix some oversight in the list of species that were adopted in 1973. For example, the African elephant was not included in the initial list of species, in either Appendix I or II, while the Asian elephant was in Appendix I. To rectify this, the United Kingdom submitted a proposal to put the African elephant in Appendix I. Switzerland proposed placement in Appendix II. The U.S. supported the Swiss proposal; the terrible poaching of elephants, which led to the U.S. support of the 1989 Appendix-I listing, had not yet commenced.

The second major goal was to establish ground rules for operating the Convention. The U.S. went into the Convention with the notion of a precautionary principle. That is, if there's doubt then lean toward protection of a species.

What were the successes of CoP1?

Rules, regulations and procedures were the biggest successes of CoP1. The most critical of these was a rule—advocated by the U.S. and adopted by the Parties—that required the same documents and permits of non-Parties as from Parties. The message was clear: you need a permit, and you need a process to meet CITES requirements. This requirement put pressure on countries to join the treaty.

Another success was the adoption of requirements for Parties that take reservations to species listings in Appendix I or II. Although a Party can decide not to recognize a species listing, it still must issue a permit that meets CITES requirements before it can export the species. There are no free passes, and taking a reservation actually puts a country at a disadvantage. For example, South African Parties took reservations to



DIRECK BYLER/USFWS

(Right): A Service wildlife inspector checks out and identifies an iguana. (Above): The Service's Wildlife Without Borders program has a multi-year cooperative agreement with the Garoua Wildlife College in Cameroon aimed at enhancing wildlife conservation in Central and West Africa.

the 1989 Appendix I listing of the African elephant. Later, they realized that it was not to their advantage to be treated as non-Parties and removed the reservations.

These two principles are so important and contributed greatly to the success of CITES.

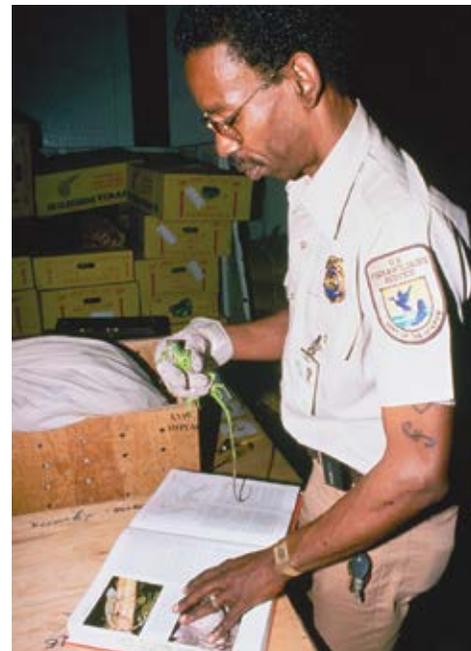
What are the challenges in implementing CITES?

CITES is only as strong as the Party countries' own enforcement. There are lots of developing and developed countries who don't care—or who don't have the resources to implement their laws. There's corruption and huge money involved that's fueling the poaching.

What does the future of CITES look like?

We need to address supply as well as demand. We need to put more money toward supporting rangers on the ground so that we can prevent animals from dying and keep them out of trade. Illegal wildlife trade has become the training ground for organized crime. To be effective in fighting it, we need to enforce laws and use the best techniques available. We need to bring strong sanctions against countries that are issuing corrupt and bad permits.

We need to modernize CITES, make it known among people who care about wildlife and constantly improve its profile. We need to engage electronic media and



USFWS

No CITES, no ESA?

“Those who were involved in negotiating CITES in 1973 were also involved in developing the Endangered Species Act. The law that was in effect at the time—the Endangered Species Conservation Act—was very weak with minimal regulatory effect. A new ESA was needed to both implement CITES and address domestic issues. John Dingle in the House of Representatives was key to that effort. He pushed for CITES, the ESA—and funding. There were people in Congress, government and academia all thinking about how to develop a treaty and a U.S. law to put teeth into the treaty and address domestic issues.

I'm convinced that without the U.S. we would not have CITES. And without CITES there would not be an ESA—or at the very least there would be a weakened ESA.”

develop apps so that government officials can identify wildlife parts or products on the fly. We need social media to get people to take action. We need to get non-government organizations more involved.

A world without CITES is inconceivable. □

Talbot interview, continued from page 13

In 1963, I brought the proposal to the International Union for Conservation of Nature (IUCN) General Assembly in Nairobi, Kenya, where it was presented as a resolution and passed unanimously. Subsequently, it went through three or four iterations as the result of review by IUCN member governments and non-government organizations.

By 1969 the IUCN had a pretty good draft of an international wildlife trade convention. At that time I was with the Smithsonian but was also an adviser to the Joint Senate/House Environment Committee. One of the issues that came up was the redrafting of the Endangered Species Act, and we actually got a line in the 1969 version of the ESA authorizing the government to hold an international conference to develop an international convention to control trade.

In 1970, I went to work for the newly created President's Council on Environmental Quality (CEQ) as Assistant to Chairman Russell Train. One of the things I had on my agenda was to try to get the convention enacted, and Russ was strongly supportive. Shortly after that, we began preparations for the 1972 U.N. Conference on the Human Environment in Stockholm. We developed the draft a bit further and also got agreement from the State Department and the Department of the Interior for the U.S. to host a plenipotentiary conference to negotiate it. As co-chairs of a U.N. preparatory committee for the Stockholm conference, Assistant Secretary of the Interior Nat Reed and I prepared the conservation

Talbot says CITES cut trade in rhino horn until recently.



Kenya, Uganda, Tanganyika (now part of Tanzania), Northern Rhodesia (now Zambia) and Southern Rhodesia (now



In 2007, Lee Talbot with his wife, Martha Walcott Hayne, journeyed to a previously unexplored part of the Annamite Mountains of Laos and are shown holding the Explorers Club flag. The Explorers Club flag is given to outstandingly significant expeditions.

components of the Stockholm agenda and, of course, we included the official U.S. proposal on the agenda. I also traveled on behalf of the White House to Africa, Europe and other regions to explain the convention and seek support for it. The U.S. proposal as well as a proposal for a plenipotentiary conference was presented at Stockholm and accepted with nearly unanimous support.

Early in 1973, we held the plenipotentiary conference in the State Department in Washington D.C. with some 80 countries represented. IUCN served as staff for the conference, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora was negotiated, signed and since ratified, well and truly.

What countries were particularly active in promoting the convention?

Kenya wanted a stronger convention than the one that was agreed to. From my point of view, that was fine. England was supportive, but somewhat hesitant due to concerns about the difficulty in using untrained customs officials to identify the difference, for example, between an African spotted cat and a leopard. The U.S. Fish and Wildlife Service was starting to develop identification manuals. These were helpful in terms of implementing the convention, but were also helpful at the time of negotiating it.

Zimbabwe), Malawi, South Africa, Egypt, Sudan and Iran were among the developing countries that helped promote the convention. Germany, France, England and the United States were among the developed countries.

As you look back over its implementation, what are CITES' major successes?

CITES' successes are a kind of roller coaster. Elephants were a major success, particularly in southern Africa, when CITES first closed the door on legal trade. Trade of rhino horn was another southern Africa success story until this year. Other major successes include trade in leopard hide and other skins intended for clothing or trophies and some plants, such as desert plants and even orchids.

Where the end result is display, CITES has been exceedingly effective. There is a direct relationship between the objective for the poaching and the success of CITES. Where demand is driven by the desire for display, the controls have been good. But, when demand is driven by less visible uses, such as traditional home remedies, then control is less successful.

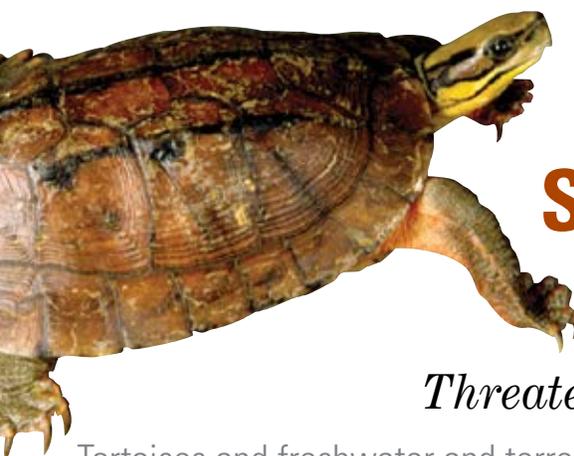
CITES has also been successful in raising consciousness in Africa, Asia and Latin America as well as other regions of the world about the consequences of illegal wildlife trade.

What are CITES' major challenges?

We need stronger enforcement of the laws that are in place in member countries. For example, some major consumer countries in Asia have reasonable laws but don't enforce their laws. We also need education as well as more surveillance within the supply countries.

What does the future CITES look like?

We need to find more and better ways to get at the demand side of illegal wildlife trade. We also need more funding to build capacity to do research for better ways to identify the products and interdict the trade. Some of the non-government organizations are doing this work now, namely DNA identification of ivory and whale meat. □



Shell-Shocked

Trade in Turtles Threatens Species

Tortoises and freshwater and terrestrial turtles are the world's most endangered vertebrates. The Service has been involved in CITES efforts to better monitor and regulate their international trade.

Global commerce in turtles in the last 20-plus years has followed a well-known pattern of boom and bust in international wildlife trade: Once a species is depleted or regulated, trade shifts to species not as threatened or less regulated.

International trade in turtles is most common in Asia, with supply countries feeding well-established legal and illegal trade networks supplying markets in China and other consumer countries in East Asia. Buyers in Asia primarily use turtles as food or in traditional medicine. But a growing pet trade across the region impacts a number of threatened species. Many freshwater turtles also come from the United States—mostly from turtle farms.

Because of their life-history traits—including adult longevity, late maturity, limited annual reproductive output, and high juvenile and egg mortality—turtles are vulnerable to the effects of over-harvest. Their long lifespan creates a high probability that some hatchlings will survive to maturity, but this strategy may be overwhelmed by the impacts of human exploitation. Harvest of adults leads to too few eggs being laid and thus fewer hatchlings to survive to maturity. Human exploitation of eggs also leads to fewer hatching and fewer hatchlings surviving to maturity. In this way over-harvest often leads to population collapse.

Along with other countries—including China, Germany, Indonesia and Vietnam—the United States has spearheaded efforts not only to list species in the CITES

Appendices but also to bring countries together to strengthen implementation and enforcement of CITES. This international cooperation is vital to conserving tortoise and turtle species. Consider the plight of Asian box turtles.

Asian *Cuora* box turtles—about 10 to 12 species—have a history of local and international exploitation for food, traditional medicine and the pet trade. Originally, several of the species were only known from specimens found in Asian food markets.

The locations of wild populations, if any existed, were unknown. As discoveries were made regarding their ranges in the wild, many of these box turtle populations were found to have fewer than 100 individuals, and in some cases only a handful. Even today, the status of Zhou's box turtle in the wild, with approximately 100 known living specimens in captivity, is a mystery.

The golden coin turtle, also known as the three-striped box turtle, has long been used in China, primarily for traditional medicines. Live turtles are kept for good luck or as a financial investment, and turtle populations tolerated low-level collection for these uses for centuries. However, in the last three decades, demand has been fueled by the false belief that jellies and abstracts from this species cure cancer. High demand coupled with habitat loss has pushed this species to the edge of extinction. Despite farming of golden coin turtles by the thousands,

demand for wild-caught males still exists because captive breeding seems to produce only females, and high demand encourages the construction of additional farms that require wild animals as breeding stock.

To help conserve the golden coin turtle, Zhou's box turtle and seven other *Cuora* box turtle species, the United States and China have joined together to strengthen CITES protections by proposing to eliminate trade in wild-caught animals. A joint CoP16 proposal includes a zero quota on exports of wild-caught specimens for commercial purposes.

The United States has also partnered with Vietnam on a proposal to transfer the big-headed turtle from Appendix II to Appendix I, which would prohibit commercial trade in the species.

These two proposals, along with six other turtle proposals submitted by the United States, will ensure that turtles are a focus of discussion at CoP16, even though these species may not “make the headlines.” □

THOMAS LEUTERITZ, PhD and BRUCE WEISSGOLD, International Affairs, Headquarters

Turtle proposals submitted by the United States

Transfer **Burmese star** tortoise to Appendix I from Appendix II.

Add 15 **Asian pond and river** turtles to Appendix II and establish zero quotas for 15 currently listed species (Co-sponsored by China).

Add eight **Asian softshell** turtles to Appendix II and two to Appendix I (Co-sponsored by China).

Transfer **Roti Island snake-necked** turtle to Appendix I from Appendix II.

Add **Blanding's** turtle to Appendix II.

Add **Diamondback** terrapin to Appendix II.

Add **Spotted** turtle to Appendix II.

Transfer **Big-headed** turtle from Appendix II to Appendix I (Co-sponsored by Vietnam)



CITES CoP16

What Will Make the Headlines?

In March, delegates from around the globe will converge on the Queen Sirikit National Convention Center in Bangkok, Thailand, for the world's most influential meeting on international wildlife trade—a meeting of the Conference of the Parties (CoP) to CITES. At this 16th meeting of the CoP, the most anticipated and potentially controversial proposals center on African elephants, white rhinos, polar bears and sharks.

African Elephant Proposal

Burkina Faso and Kenya have submitted a proposal contending that any legal trade in ivory poses a very serious threat to elephant populations. If passed, CITES would not accept proposals to allow trade in elephant ivory from populations in Appendix II for nine years from the last ivory sale in 2008. This proposal, according to proponents, reflects the intention of a 2007 agreement among the elephant range states and ensures that African elephants are not put under threat from legalized ivory sales.

White Rhinoceros Proposal

Kenya believes the export of white rhino trophies should not be allowed, citing evidence that suggests that hunting trophies offer a legal pathway for criminal networks to obtain horns, which are then illegally sold for medicinal and ornamental purposes. Range states have witnessed unprecedented poaching in recent years, with South Africa losing 668 rhinos in 2012 alone. Kenya's proposal also contends that the continued legal trophy hunting of rhino may be stimulating demand.

Shark and Manta Ray Proposals

Shark species, especially those with low reproductive rates, are vulnerable to over-exploitation from the international fin trade and bycatch, or unintentional catch in nets meant for something else. Shark fins are particularly in demand as a food item and are highly valued in international trade, with a wholesale value up to \$39 per pound. Proposals have been put forth to include several species of sharks—oceanic whitetip, porbeagle and three species of hammerhead—and all manta rays in CITES Appendix II, to control trade at biologically sustainable levels. Adding commercially exploited marine species to the CITES Appendices has been controversial. Some countries argue that Regional Fisheries Management Organizations (RFMOs) are the only appropriate bodies for dealing with international fisheries issues. The United States firmly believes CITES action can be complementary to measures taken for sharks and other marine species by RFMOs.

Polar Bear Proposal

From 2001 through 2010, an average of 3,200 items made from polar bears were exported or re-exported annually from range states. This represents about 400 to 500 polar bears per year. The United States has submitted a proposal to transfer the polar bear from CITES Appendix II to Appendix I, which would prohibit international trade for primarily commercial purposes. Over time, trade in polar bear skins has increased. The current level of trade may hurt the species because trade, particularly commercial trade, compounds the threat to the species posed by habitat loss. Inclusion of the polar bear in Appendix I would not affect the subsistence harvest of this species by Alaskan natives or other indigenous peoples or the creation of handicrafts using polar bear parts.

When deciding its position on these proposals, the United States will consider a variety of information between now and CoP16, including the proposal itself, its own supplemental research, public comments received during a 60-day comment period, reviews by IUCN Specialist Groups and other consultations. The Service will update U.S. positions as they become available on its CoP16 webpage at <www.fws.gov/international/cites/CoP16>. □

CLAIRE HOOD, International Affairs, Headquarters



White rhinos in Nakuru National Park in Kenya.

The most anticipated and potentially controversial proposals center on African elephants, white rhinos, polar bears and sharks.



The oceanic whitetip shark spans every ocean in tropical and subtropical waters, but populations have declined markedly.



A U.S. proposal would put the polar bear in Appendix I of CITES, which provides the most protection for species.



Elephants in Tanzania, Africa.

ELEPHANTS: GARY M. STOLZ/USFWS; SHARK: NOAA; RHINOS: KARL STROMAYER/USFWS; POLAR BEAR: MIKE DUNN, NC STATE MUSEUM OF NATURAL SCIENCES VIA NOAA

Partnering to Conserve Native Species

The Claret cup cactus is one of many cacti in CITES Appendix II.

From paddlefish and peregrine falcons to Atlantic bottlenose dolphins and orchids, CITES protects more than 700 animals and almost 500 plants native to the United States and its territories.

These CITES-protected species may be highly localized—like the Venus’ flytrap, native only to North and South Carolina—or cross borders into other countries, such as the 450 native CITES-listed species the United States shares with Mexico. Ensuring their conservation and sustainable use in international trade requires collaboration with a vast network of species experts and resource managers across the country and around the world.

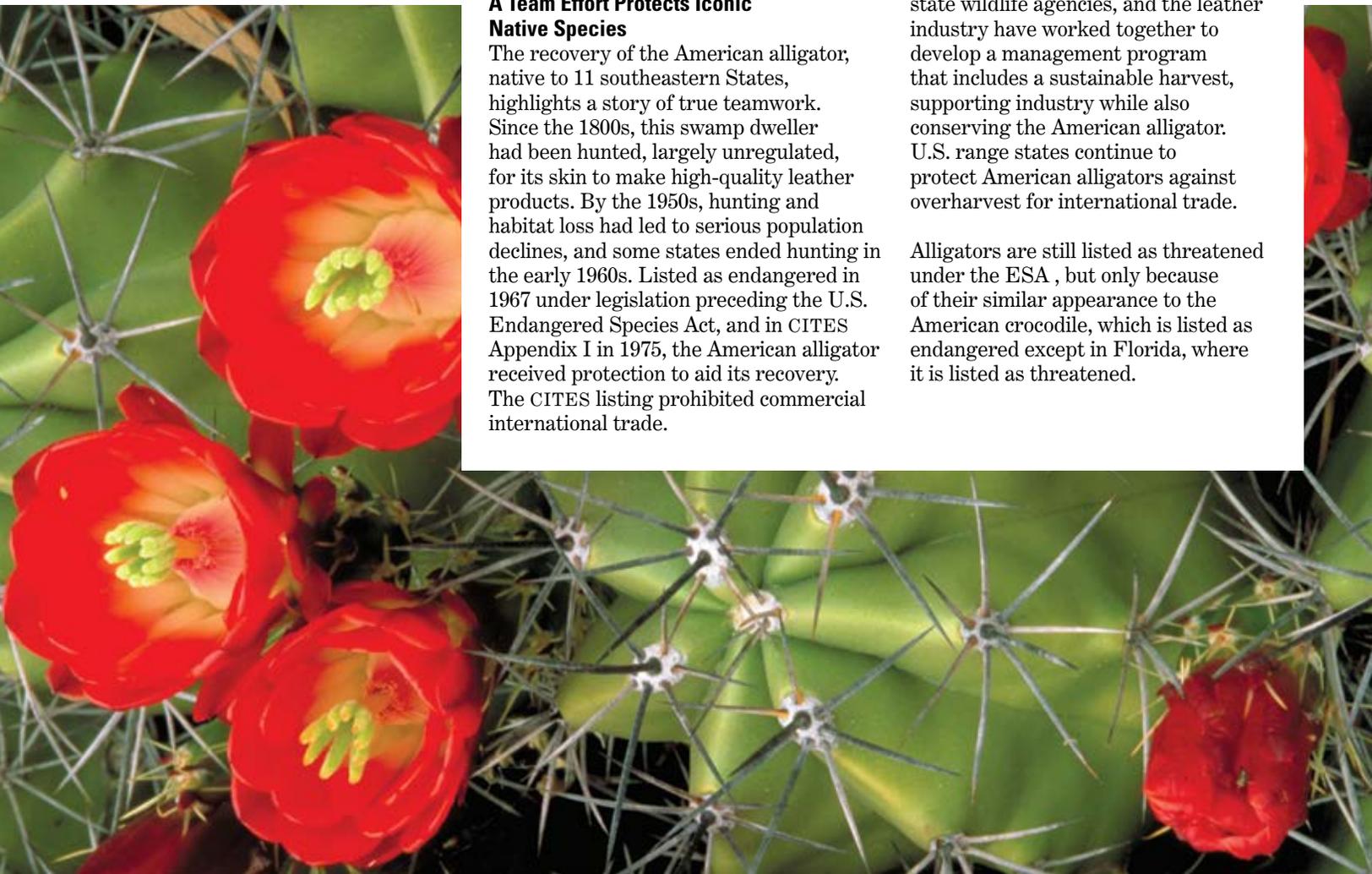
Recovery for the alligator meant monitoring, protection, reintroduction, ranching and captive breeding. In 1979, the American alligator was transferred to CITES Appendix II, allowing the resumption of commercial international trade under a special rule; by 1987, the U.S. Fish and Wildlife Service declared this reptile as fully recovered under the ESA.

Today, the federal government, state wildlife agencies, and the leather industry have worked together to develop a management program that includes a sustainable harvest, supporting industry while also conserving the American alligator. U.S. range states continue to protect American alligators against overharvest for international trade.

Alligators are still listed as threatened under the ESA, but only because of their similar appearance to the American crocodile, which is listed as endangered except in Florida, where it is listed as threatened.

A Team Effort Protects Iconic Native Species

The recovery of the American alligator, native to 11 southeastern States, highlights a story of true teamwork. Since the 1800s, this swamp dweller had been hunted, largely unregulated, for its skin to make high-quality leather products. By the 1950s, hunting and habitat loss had led to serious population declines, and some states ended hunting in the early 1960s. Listed as endangered in 1967 under legislation preceding the U.S. Endangered Species Act, and in CITES Appendix I in 1975, the American alligator received protection to aid its recovery. The CITES listing prohibited commercial international trade.





In 2011, the United States exported more than 400,000 U.S. alligator specimens, including skins, jewelry, leather products and scientific specimens. The recovery of the American alligator, together with the transformation of U.S. industry practices, demonstrates that conservation and sustainable use can go hand-in-hand.

“The recovery of the American alligator and the continued sustainability of the industry demonstrate the power of collaboration between the USFWS, the states and commercial interests through CITES,” said Curtis Taylor of the West Virginia Department of Natural Resources, adding that it “is a model of how conservation should work.”

Partnerships Benefit Native Plants

Nearly all of the world’s approximately 1,500 species of cacti occur in the Americas, from extreme southern South America to some parts of Canada. Cacti vary in shape and size, and for hundreds of years, they have been sought by collectors around the world. With the exception of three genera, all species of cacti are included in the CITES Appendices, with the overwhelming majority in Appendix II, which regulates international trade.

The southwestern United States shares much of its desert ecosystem, and the plant diversity therein, with Mexico. But even if you can easily buy a cactus in Mexico, you will need permits from the Mexican authorities, including CITES permits, to bring the plant into the United States. These permits ensure that the cacti were legally acquired and that the trade is not detrimental to the survival of these species.

The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (USDA-APHIS) has inspection personnel at ports of entry along the nearly 2,000-mile U.S.-Mexico border, including three CITES-designated ports of Nogales, Arizona; San Diego, California; and Brownsville, Texas.

When these inspection personnel discover a cactus in a car at a border crossing, and the person does not possess the required CITES permits, the authorities seize the plant because this trade may jeopardize the species’ survival in Mexico. The question then becomes what to do with these seized specimens, which may weigh more than 100 pounds and be decades old. This is when the Service’s partnership with U.S. zoos, botanic gardens and research institutions, through the U.S. Plant Rescue Center Program (PRC Program), comes into play.

The recovery of the American alligator is a CITES success story.

The 83 institutions that participate on a voluntary basis in the PRC Program provide permanent homes for live CITES-listed plants that have been seized at U.S. ports of entry and exit and include them in their collections. Many of these institutions use these rare and unusual plants to educate the public on CITES and the conservation of threatened plants and their ecosystems. They may also propagate the plants and share their progeny with other institutions or private growers, thus making them available for further propagation and research and, potentially for rare species, reintroduction into the wild.

While many of these specimens will never be returned to their wild habitats, the partnership with PRC institutions provides an opportunity to make the public aware of the rules regarding wildlife trade and to show the impact this trade can have on wild populations.

PATRICIA DE ANGELIS and ANNE ST. JOHN,
International Affairs, Headquarters



40 Years AT-A-G

1987

CoP6 is held in **Ottawa, Canada**. The Technical Committee, established in 1981, evolves to form the Animals, Plants and Nomenclature committees. The Animals and Plants committees are a major part of CITES today. Several species of fruit bats are listed in Appendix II.

2007

CoP14 is held in **The Hague, Netherlands**. Marine species proposals are prominent at this CoP, with proposals to list spiny dogfish, **porbeagle shark**, European eel, red and pink corals, sawfishes, and several other marine species in the CITES Appendices. Despite this increased marine focus, only proposals to list European eel and sawfishes are adopted.

1994

CoP9 is held in **Fort Lauderdale, Florida**. It marks the first time students participated in a CITES conference. At a student mock conference a week before the meeting, about 550 students from area schools develop and discuss resolutions similar to those considered at CoP9. They present those that passed by a two-thirds vote to the 1,600 delegates to the CITES Convention. At CoP9, the Parties add several species of aloe to Appendix I.

1973

Eighty countries attend the plenipotentiary conference in **Washington, DC**. After three weeks of debate, the delegates agree to the final text of the Convention, containing the preamble and the first 25 articles. Twenty-one countries sign the Treaty.

CITES takes effect July 1, 1975, after the 10th Party to the Convention, Canada, ratifies the treaty.

1979

CoP2 is held in **San Jose, Costa Rica**. The Parties establish a permanent Standing Committee, which to this day steers the work of the treaty between CoPs. The American alligator is transferred to Appendix II from Appendix I because of successful conservation efforts in the United States.

2002

CoP12 is held in **Santiago, Chile**. Populations of **vicuna** in three South American countries are transferred to Appendix II from Appendix I as a result of successfully implementing sustainable harvesting.

1985

CoP5 is held in **Buenos Aires, Argentina**. The Parties establish procedures for listing species in a new appendix, Appendix III, which consists of species for which a range country has asked other Parties to help control international trade. One of the first species included in Appendix III is the giant pangolin, listed by Ghana.

1983

CoP4 is held in **Gaborone, Botswana**. All species of **musk deer** are added to Appendix I and II, depending on their location.



BARBARA BEGGS



MOAA



RVE/WIKIMEDIA COMMONS



KLOBUG/WIKIMEDIA COMMONS



NICHOLAS BARBE/WIKIMEDIA COMMONS

of CITES LANCE

For 40 years, delegates from countries all over the world have met approximately every three years for the Conference of the Parties (CoP).

1989

CoP7 is held in **Lausanne, Switzerland**. Amid declining wild elephant numbers, the Parties transfer the African elephant to Appendix I, effectively banning commercial international trade in elephant ivory.

2010

CoP15 is held in **Doha, Qatar**. The number of observers present hits 350 non-governmental organizations and other observers. NGO participation in CITES negotiations has consistently grown over time from only eight NGOs present at CoP1 in 1976.



DAVID VOGEL/USFWS

1981

CoP3 is held in **New Delhi, India**. The Technical Committee is established to assess species worldwide. **Sea turtles** are transferred to Appendix I from Appendix II as a result of declining populations.

1992

CoP8 is held in **Kyoto, Japan**. The Parties recommend the development of criteria to amend Appendices I and II. These recommendations are adopted at CoP9. The **American black bear** is added to Appendix II.



WAVERLEY TRAYLOR/USFWS

1976

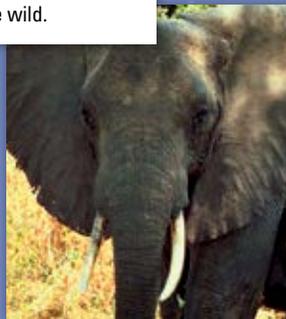
The first meeting of the Conference of the Parties to CITES (CoP1) is held in **Bern, Switzerland**. The Parties lay the important foundation of the treaty by establishing the criteria for amending Appendix-I and -II listings. Several species of primate, including **lemurs**, are added to Appendix I.

2004

CoP13 is held in **Bangkok, Thailand**. Parties increase protection for several large marine species by listing species of dolphin, shark and other fish in Appendices I and II.

2000

CoP11 is held in **Gigiri, Kenya**. This CoP focuses mainly on species-specific issues, with the African **elephant** taking center stage. The monitoring systems recommended during CoP10 are cemented during this conference. These systems, MIKE and ETIS, are still used today and provide invaluable data on elephant trade and poaching of elephants in the wild.



GARY M. STOLZ/USFWS

1997

CoP10 is held in **Harare, Zimbabwe**. The Parties vote to move several populations of African elephant to Appendix II as they successfully rebounded in the 1990s due to increased protections. In addition, the Parties pass a resolution to develop a monitoring system for African and Asian elephant populations.

2013

CoP16 will be held in **Bangkok, Thailand** on March 3-14. The United States has submitted a proposal to transfer the polar bear to Appendix I, thereby providing the highest level of protection available and prohibiting commercial trade in the species. Additionally, the United States has submitted or co-sponsored proposals to protect numerous species of turtles and sharks.



Kristin Reakoff watches the first sunrise since December 5, 2010 on January 9, 2011

WINTER IN THE EXTREME AT KANUTI NATIONAL WILDLIFE REFUGE

by BILL O'BRIAN PHOTOS by JACK and KRISTIN REAKOFF

If, with winter and its short days upon us in the Northern Hemisphere, you are inclined to complain about the harshness of the season, please get in line — behind Kristin Reakoff.

Reakoff, an interpretive park ranger at Kanuti National Wildlife Refuge, has spent the past seven winters working at the U.S. Fish and Wildlife Service field office in Coldfoot, Alaska.

“Coldfoot is not a village or town,” says Reakoff. “It is a service area halfway between Fairbanks and the top of the state—the oil fields and the Arctic Ocean.”

Coldfoot is seven hours north of Fairbanks by a mostly gravel road—the Dalton Highway. Coldfoot consists of a gas station, a tire shop, a state transportation office, a cafe, a small hotel, a few outbuildings and the Arctic Interagency Visitor Center. The center represents Kanuti, Yukon Flats and Arctic National Wildlife Refuges; the National Park Service; and the Bureau of Land Management.

Coldfoot’s winter population is around 20. The average low temperature in January is 27 below zero; the average *high* is 10 below. It gets about 110 inches of snow annually. In the dead of winter, it’s perpetually dark except for a few hours of “civil twilight” each day.

“In the beginning of December, the sun sets below the horizon and does not rise above the horizon again until a month later,” says Reakoff, who grew up in Astoria, Oregon.

“The first winter I was here, I raced through the winter season of darkness, pretending it wasn’t really happening. It was incredibly difficult. I wasn’t expecting the immensity of darkness that settled over the land, and over me. Nor did I realize it would last so long. I was surprised how slowed down my thinking became. It made me feel exhausted,” she says. “After surviving that first winter, I gave in the next winter. I stopped fighting the darkness. I explored what it was like to live in sync with nature’s seasons.”

Now she appreciates that in winter “the sound of human chatter stops, and I can hear the wind once again, a moose chewing on willows near the house or office, a raven’s clear melodic voice talking in flight, and the subtle sounds like snow falling on spruce needles and on the backs of redpolls sitting in the trees, and hares loping softly through the forest.”

Her commute goes through that forest, too. Reakoff and her husband, Jack, live in

his home village, Wiseman, which makes Coldfoot seem like Manhattan. Wiseman has no services. “No dumps, no electricity, no gasoline, no banks, no stores,” she says.

In winter, driving 17 miles, one way, to work would be an ordeal for most. For Reakoff, it’s routine. She plugs her car into a generator for four hours so it will be warm enough to start. She always takes emergency gear: “I never, ever leave home for any reason without the proper clothes and boots for the cold, a lighter and birch bark in my pocket to make a fire, a bright headlamp, duct tape and a pocket knife.”



She carries a satellite phone because there is no cell phone coverage. “It truly could be a life-and-death situation to go out in Arctic winter without being prepared for the elements,” she says, “and so I never do.”

Once at the office in winter, she helps prepare for summer on Kanuti National Wildlife Refuge.

She helps create interpretive programs, coordinate outreach, recruit and select summer volunteers and interns, prepare for the annual science camp. Power to the office “tends to go on and off, so I always have to have my headlamp on my person,” she says. “The floor of my office is permanently frozen in the winter. If I put my water bottle on the floor and leave it there, it freezes. I have a piece of blue Styrofoam insulation under my desk that

I put my feet on, and I always wear my mukluks to work, along with down pants or my snowsuit. Sitting at my desk, the snowsuit keeps me warm.”

But there’s more. Kristin and Jack recently had their first child, a girl. With her daughter’s arrival, does she expect to remain in Coldfoot/Wiseman?

“Absolutely,” she says. “I expect to spend the rest of my life here.” □

BILL O’BRIAN, National Wildlife Refuge System Branch of Communications, Headquarters

The field station at Coldfoot, Alaska, at noontime in late November. “The floor of my office is permanently frozen in the winter,” says Reakoff. “If I put my water bottle on the floor and leave it there, it freezes.”



Even at 40 below zero, Kanuti National Wildlife Refuge interpretive park ranger Kristin Reakoff goes outdoors every day during winter. Despite the ice crystals forming in her hair, Reakoff says getting outside helps her stay healthy, happy and connected to the land.

California Solar Projects
Will Provide Clean
Energy and Restore
Habitats for Wildlife

SHEDDING LIGHT

by SCOTT FLAHERTY

Less than a two hours' drive north from Los Angeles is a special place where California's history, protected wildlife and clean energy future converge.



California's Carrizo Plain is roughly 15 miles wide and stretches 50 miles along the base of the Temblor Mountains.

JEFF ZINPOLI

Roughly 15 miles wide and stretching 50 miles along the base of the Temblor Mountains, California's Carrizo Plain is home to the 250,000 acre Carrizo Plain National Monument, and where 2,000-year-old Native American pictographs documenting early human settlement can be found. The plain's immense grasslands, woodlands and vernal pools are home to an amazing diversity of wildlife, including more than a dozen rare plants, animals and birds protected by state and federal laws. It is also a place blessed with abundant sunshine, averaging 315 cloud-free days a year, making this expansive home for wildlife an ideal location to develop clean solar power.

In 2011, developers broke ground on two large-scale solar power projects on the Carrizo Plain: the Topaz Solar Farm (First Solar) and the California Valley Solar Ranch (Sun Power). The projects occupy 5,000 acres in San Luis Obispo County and can produce 800 megawatts of electricity, enough to power more than 400,000 homes. The California Valley Solar Ranch began generating power in September, and will be fully operational this year. The Topaz Solar Farm is scheduled to be completed in 2014 and will be the largest photovoltaic power plant in the world.

"The development of renewable energy is important for the future of the country and the health of our environment," said Service Director Dan Ashe. "But we need

to site and design them properly to avoid significant negative impacts on fish and wildlife and their habitats."

The Carrizo Plain is a unique natural area alive with a stunning diversity of rare and protected wildlife. The San Joaquin kit fox and the giant kangaroo rat, both protected by the California and federal Endangered Species Acts, live here. Federally protected vernal pool and longhorn fairy shrimp swim in the seasonal vernal pools speckled throughout the plain. The golden eagle, mountain plover, long-billed curlew, and loggerhead shrike fly above the plain and are protected by the federal Migratory Bird Treaty and Bald and Golden Eagle Protection acts. The plain is also dwelling place for the American badger, pronghorn antelope and tule elk.

Through its field offices in Sacramento, Ventura, Carlsbad and a new office in Palm Springs, California, the Pacific Southwest Region provides environmental review for projects to ensure protection of rare species, bald and golden eagles and other wildlife in California.

Shedding light on the Topaz Solar Farm and the California Valley Solar Ranch projects' potential impacts to threatened and endangered species, biologists with the Sacramento Field Office worked with project managers and biological consultants to ensure the solar facilities are built with attention to wildlife conservation. Of primary concern was the loss of habitat for the San Joaquin

“The development of renewable energy is important for the future of the country and the health of our environment.”

— DAN ASHE, Service Director

The Service and conservation partners were concerned by loss of habitat for the San Joaquin kit fox and protection of the fox's dispersal corridor.

kit fox and protection of the fox's dispersal corridor. Other concerns included the loss of habitat for the giant kangaroo rat and the golden eagle.

Over two years of discussions, Service biologists and project partners identified appropriate measures to avoid, minimize and mitigate harmful impacts to species during construction and operation of the solar facilities. Both First Solar and SunPower committed to a high standard for conservation. In consultation with the Service, the companies designed a comprehensive conservation plan that will restore and protect more than 19,000 acres of lands in the Carrizo Plain managed solely for conserving the San Joaquin kit fox, giant kangaroo rat and golden eagle. The restored land will bring along a whole host of other plants and animals that inhabit the area, helping to keep the natural communities intact.

"Our consultations with the project developers resulted in a conservation success story showing how the Endangered Species Act can add conservation value to development of large-scale energy projects," said Susan Moore, field supervisor with the Sacramento Fish and Wildlife Office.

The lands will be protected with a conservation easement or turned over to the California Department of Fish and Game in fee title. The companies protected an additional 8,000 acres of land to satisfy local and regional concerns.

In addition, the companies are funding and implementing a cutting-edge research and monitoring program to better understand the effects of solar development and identify methods to conserve species that will guide future development. The companies also agreed to restore the projects' sites back to their natural condition in 35 years after the projects have served their useful life.

Pacific Gas and Electric Company will buy the electricity generated from both projects under a 25-year power purchase agreements.

SCOTT FLAHERTY, External Affairs, Pacific Southwest Region



The burrow of a giant kangaroo rat at the California Valley Solar Ranch.

THOMAS S. LEEMAN/USFWS

Biologists in the Pacific Southwest Logging Consulting Hours for Renewable Energy Projects

The Topaz Solar Farm and the California Valley Solar Ranch in California are among dozens of projects in a growing renewable energy portfolio for biologists in the Service's Pacific Southwest Region. The Region provides environmental review for projects to ensure protection of rare species, bald and golden eagles and other wildlife in California.

The Region has been involved in renewable energy consultations since 2009, when the State of California and Department of the Interior signed agreements to work cooperatively on renewable energy development. Since then, the Region has been at the forefront of the Department of the Interior's efforts to develop renewable energy project in California and Nevada. Over the past two years, the Region's biologists have consulted or are currently consulting on 31 solar and wind energy projects that when completed, could produce more than 8 billion watts (8.246 gig watts) of electricity; enough to power more than 16 million homes in California and Nevada.

"Our biologists are working to ensure that solar, wind and geothermal energy projects are environmentally sound and that needs

of wildlife are considered over the life of a project," said Service Director Dan Ashe. "The work that's being done in California demonstrates the important role of the Service in fulfilling the nation's goals for clean energy future."

Project planning and permitting can take two years, and involve multiple agencies and stakeholders. Service biologists work with experts from industry and other state and federal agencies to develop, collect, process and interpret geographic, biological, land use and other data that will assist developers to build sound conservation strategies that provide for a project's operation while avoiding or minimizing impacts to wildlife.

As a key member of the multi-agency Renewable Energy Action Team (REAT) and Renewable Energy Policy Group, (REPG) the Region has been party to an unprecedented level of state and federal coordination to advance renewable energy and protect a wide range of wildlife. The Region has worked with the Bureau of Land Management, California Department of Fish and Game, and the California Energy Commission to streamline permit processes for projects on federal and non-federal lands. In Nevada, the Region was part of an interagency effort to approve the first commercial solar project on tribal trust land of the Moapa Band of Paiute Indians near Las Vegas.

pacific



Ko'ko' for Cocos: Restoring a Missing Piece of Guam's Culture

Thanks to the extensive restoration efforts of the "Ko'ko' for Cocos Project," the Guam rail, or ko'ko, is now breeding on Guam's Cocos Island, an 83-acre island about 1.5 miles southwest of Guam.

The ko'ko' is a flightless species endemic to Guam. With no closely related species in Micronesia, this brown and black bird has both cultural and environmental significance. In the late 1960s and early 1970s, the population of ko'ko' was estimated between 60,000 and 80,000 birds.

"People reminisce about seeing many ko'ko' in their gardens and bathing in puddles on the roadside," said Diane Vice, Ko'ko' for Cocos project leader with the Guam Department of Agriculture's Division of Aquatic and Wildlife

Resources (DAWR). However, in the 1980s, with the increasing spread of the invasive brown treesnake to northern Guam, came the extirpation of the ko'ko'. The last remaining ko'ko' were collected from the wild to establish a captive breeding program

Cocos Island supports several native species that have been extirpated from Guam by brown treesnakes and other invasive species. "Cocos Island lacks brown treesnakes and feral cats," said Vice. "This makes it an amenable place for establishing a breeding population of ko'ko'," which is the goal of the project.

Launched in 2006, the Ko'ko' for Cocos Project entailed many complex steps. The first of these steps was the development of a Safe Harbor Agreement between the U.S. Fish and Wildlife Service and three other partners: Cocos Island Resort, DAWR, and Guam Department of Parks and Recreation.

"Safe harbor agreements are meant to encourage private landowners to have endangered species on their property," said Earl Campbell, Ecological Services Assistant Field Supervisor in the Service's Pacific Islands Fish and Wildlife Office. "I really have to acknowledge Cocos Island [Resort] for their support in this and for being such a cooperative partner."

“Safe harbor agreements are meant to encourage private landowners to have endangered species on their property.”

—EARL CAMPBELL, Assistant Field Supervisor

After the Safe Harbor Agreement was in place, the partners established a biosecurity system to protect Cocos Island's native species from invasive species. Next they implemented a marketing campaign to create pride in Guam's native species.

Under the umbrella "Go Native" campaign, the Ko'ko' for Cocos Project implemented an awareness campaign aimed at protecting the native species on Cocos Island from cats, rats and snakes. Che'lu, which means brotherhood in Chamorro, is a ko'ko' bird and the mascot for the entire campaign.

"Che'lu educated the public about how they could help bring back the ko'ko' by asking 'What would Che'lu do?'" said Ann Gawel, a student working in the Service's Pacific Islands office who lived on Guam. "People recognized him and he taught them measures they could take like reporting invasive species, not littering and being aware of snakes as stowaways."

With the social media marketing campaign underway and biosecurity measures in place, the USDA Wildlife Services and DAWR successfully tackled the eradication of rodents from Cocos Island. In addition, efforts to reduce the monitor lizards, the main threat to the survival of the rails on Cocos Island, and forest enhancement activities began.

On November 16, 2010, more than six years after planning for the project began, ko'ko' birds were released on Cocos Island. Sixteen birds, eight of each sex, were released and tracked until their radio transmitters stopped functioning more than a year later. Tracking revealed 11 nesting attempts and eight chicks were seen or heard.

"There were major milestones along the way," said Vice. "We established trust with landowners, carried out biosecurity and eradication plans, and, most importantly, gave the kids a chance to see a missing part of their culture." □

AMANDA FORTIN, External Affairs, Pacific Region



Ko'ko' chick

CHEN ANDERSON, GUAM DEPARTMENT OF AGRICULTURE



southwest 

Service Firefighters Survive Killer Bee Attack on Refuge

What started as a routine day for a fire crew at South Texas Refuges Complex in October turned into an unexpected race against swarming Africanized Honey Bees, sometimes called killer bees.

While scouting out a fireline in advance of conducting a prescribed fire, the crew stirred up a hive of the bees living in an old tire hidden under the grass.

Fire Management Officer Thad Herzberger, who was driving an opened-cab Rologon, took the brunt of the attack, suffering more than 200 bee stings.

The other four firefighters were stung an average of 25 times each, as they outran the swarm. Some of them escaped into a nearby enclosed bulldozer.

“They chased us about a half mile through the marsh,” said Herzberger, “I’d heard about swarms like this, but this is my first time to experience it.”

Almost all of the stings occurred around the face and head. After a visit to the emergency room, all of the firefighters recovered and were back on the job the next week.

As is routine with any fire-related emergency incident, the refuge conducted an After Action Review of the attack. They identified best practices for avoiding the bees and response strategies for unexpected encounters.

After the attack, refuge staff smothered the hive with foam, typically used to protect structures during wildfires. Africanized Honey Bee populations have also invaded refuges in Arizona and New Mexico. □

Youth Breathe New Life into Rio Grande Silvery Minnow Sanctuary

What happens when you take urban youth and introduce them to an urban fish sanctuary in need of some hard work and attention? In the case of the Rio Grande Silvery Minnow Sanctuary, it was a match made in fishy heaven!

It all started in October 2011, when 10 freshmen students from Amy Beihl Charter High School in Albuquerque, New Mexico, made their first visit to the sanctuary. The students spent the afternoon learning about and removing invasive non-native vegetation. It was hard work, but a connection developed between the students and this natural place not-so-far from home.

The sanctuary is along the Rio Grande Bosque, just a few miles from downtown Albuquerque. It is a refugia, which means that it is designed to mimic natural conditions for the Rio Grande Silvery Minnow, a federal and state listed endangered species. So, rather than raise the fish in a pond or in tanks, these Silvery minnows live as closely as possible to how they do in the wild, making the transition from sanctuary living to life in the Rio Grande a smooth one.

After that first visit, the students spent time each month at the sanctuary doing site volunteer work such as removing non-native species and sedimentation, designing and planting a pollinator garden, creating cotton wood tree protection against beavers, and designing and constructing trails. Throughout the year, Amy Beihl students worked alongside New Mexico Fish and Wildlife

Conservation Office staff and other partners in developing the Rio Grande Silvery Minnow Sanctuary Environmental Education Center.

Staff from the New Mexico Fish and Wildlife Conservation Office, along with the help of other dedicated Service staff and many partners have made a huge effort to involve students in the life of the sanctuary. This effort has clearly paid off as the sanctuary’s incredible connection to local youth didn’t end with the 10 students.

ACE Leadership High School, also in Albuquerque, began a student project, with the Service and EDI Architecture, to design and build bridges and kiosks at the sanctuary. ACE is a charter school that focuses on creating young leaders in the construction profession. >>

(Right): The endangered silvery minnow. (Below): Students build and install bridges and kiosks at the Rio Grande Silvery Minnow Sanctuary.



Continued from page 29

This collaborative project was aimed at working with local students for the benefit of the community and schools to share the importance of ecosystems and endangered species with the public, as well as to connect youth with nature.

In September, more than 25 ACE high school students began construction and installation of the visitor viewing bridges and informational kiosks that they had designed. For two weeks, the students worked two hours at the sanctuary as part of this hands-on educational project. Each student held an important job on site, with titles such as head architect and foreman.

Few things are more important than introducing youth to the natural world and showing them their connection to it, all while helping them learn practical skills. The Rio Grande Silvery Minnow Sanctuary has become an excellent example of how this type of youth partnership can benefit the students, as well as the fish who call the sanctuary home.

And because of the hard work and dedication of the students of today, students of tomorrow will be able to enjoy the trails, kiosks and bridges. □

NICOLE HASKETT OSBORN, External Affairs, Southwest Region

Two National Wildlife Refuges Established in New Mexico

In late September, Secretary of the Interior Ken Salazar announced two new national wildlife refuges in New Mexico—an urban refuge in Albuquerque and the Rio Mora National Wildlife Refuge in Watrous.

As an urban refuge, the 570-acre Valle de Oro National Wildlife Refuge will have increased emphasis on recreation and education for urban youth, with convenient access. This community-supported refuge will serve as a gateway to other outdoor venues in the area as well as other refuges in the state. It also has the distinction of being the first urban refuge in the Southwest.

The Valle de Oro National Wildlife Refuge is five miles south of downtown Albuquerque, near one of the longest rivers in North America, the scenic Rio Grande.

The Rio Mora National Wildlife Refuge also came on line in September. This nearly 5,000-acre refuge and Conservation Area is a watershed-level partnership effort in conjunction with an established Environmental Education Center. The Service established the refuge through the acceptance of a donation of the 4,600-acre Wind River Ranch from the Thaw Charitable Trust.



BILL O'BRIAN/USFWS



RICK JONES / USFWS

The refuge is located in south-central Mora County approximately five miles west of the town of Watrous, New Mexico. Offering spectacular vistas, the majority of the land sits at elevations of 6,500-6,900 feet between the Great Plains and the Southern Rocky Mountains. In addition, five miles of the Mora River flows through a 300-foot-deep canyon in the center of the refuge. □

(Top): Rocky Mountain Sandhill cranes were spotted about a year ago on the land that became Valle de Oro National Wildlife Refuge. (Bottom): The Rio Mora National Wildlife Refuge was established through acceptance of the donation of the 4,600-acre Wind River Ranch from the Thaw Charitable Trust.

midwest 

Conservation Collaborations Continue with Canada

Collaborations with Detroit River International Wildlife Refuge conservation partners in Canada took a major step forward in September when Canadian officials announced the Western Lake Erie Watersheds Priority Natural Area partnership on Fighting Island, near LaSalle, Ontario, Canada.

U.S. Fish and Wildlife Service Midwest Regional Director Tom Melius joined U.S. Rep. John Dingell of Michigan, Detroit River International Wildlife Refuge staff and Canadian dignitaries along the waters of Detroit River as the Essex Region Conservation Authority, in partnership with Environment Canada, the Canada Department of Fisheries and Oceans, the Ontario Ministry of Natural Resources, the Nature Conservancy of Canada and Ducks Unlimited Canada, announced a collaborative agreement that identifies the Detroit

River and Lake Erie Watersheds of the Essex Region as the Western Lake Erie Watersheds Priority Natural Area. This formal agreement will facilitate collaboration on the refuge across international boundaries and the addition of refuge land.

“The Service is honored to work in partnership with our Canadian federal, provincial and local partners,” Melius said.

“I would like to especially thank Congressmen Dingell and his Canadian colleagues in Parliament for their vision. Today we celebrate a collaborative approach that moves past international borders and I look forward to watching this partnership grow,” Melius added.

This announcement continues the strong international partnership that was born from the “Conservation Vision for the Lower Detroit River Ecosystem” in 2001. This binational conservation vision called for an international wildlife refuge and has achieved remarkable success for the region. □



USFWS

Horicon National Wildlife Refuge Holds Hunts for People with Disabilities

Horicon National Wildlife Refuge gave hunters with disabilities in Wisconsin an extra opportunity to harvest a deer in warmer weather because the state Department of Natural Resources sets aside nine days in early October for gun hunters. Landowners simply have to sign up as a sponsor.

The refuge has an 880-acre area with 10 blinds, but the hunters are not restricted to the blinds. They can set up their own portable blind or hunt from their vehicle. This year, 20 hunters participated, harvesting one doe and one 9-point buck.

Jeff Voss shot a yearling doe from this blind during the crossbow hunt.

Besides the gun hunt in October, the refuge offers a bow hunt for deer, available to disabled hunters within the same area. This special hunt for crossbow users is still fairly new, with interest building each year. The hunt is in its third year. Another gun hunt is offered during the regular nine-day deer gun season in Wisconsin at the end of November. This hunt has been offered to hunters with disabilities since 1994. □

DIANE M. KITCHEN, Horicon National Wildlife Refuge, Midwest Region



CREDIT: WIKIMEDIA COMMONS

Detroit River International Wildlife Refuge

southeast

Strategic Habitat Conservation Through the Eyes of a Clumper

Chuck Hunter has been clumping species and habitats together for at least two decades. It's his way of seeing the world.

Now a division chief for the National Wildlife Refuge System in the Southeast Region, Hunter's love of long lists and Excel spreadsheets to organize broadly defined habitats and their associated species began when he was a field biologist in Arizona.

"I started realizing you really need to focus on species that showed stress and strain when you work toward restoration," Hunter said. "That challenged the notion that if you benefit habitats for some species, you harm others. One way you deal with that is to work in a larger area, across a landscape."

After moving to Atlanta in 1989 to work in the U.S. Fish and Wildlife Service's Endangered Species Program for the Southeast Region, he read the encyclopedia of Southeastern ecosystems, titled *Biodiversity of the Southeastern United States*. For Hunter, it was seminal literature. Published in three parts in 1993, the books spell out the specific functional processes of lowland terrestrial, upland terrestrial and aquatic communities, examining the plants and animals that dominate each community and how they interact.



“ I started realizing you really need to focus on species that showed stress and strain when you work toward restoration.”

The books got him thinking about how individual endangered species and high priority migratory birds fit into their ecosystems and how they define and are defined by their habitat needs. Hunter does not remember who recommended the books, but nine years later they remain, dog-eared, at the top of one of the many piles of reports, studies and journals covering nearly every surface in his office.

Hunter's thinking further evolved through long discussions with people like Ronnie Haynes, the Southeast coordinator for the Partners for Fish and Wildlife,

and the team behind the Lower Mississippi Valley Joint Venture, including the late Charles Baxter, Seth Mott, Randy Wilson, Chuck Loesch and Bill Uihlein, now the Assistant Regional Director for Science Applications in the Southeast. Service Director Dan Ashe, then Science Advisor to the Director, was "part of the discussions from Day One," Hunter said. They asked each other questions like "If we do a better job for forest birds, not just water birds, what would that entail?"

Trying to figure out how much conserved habitat was needed, and where, "started with birds," Hunter said. "Then other species were considered, to better understand the desired conditions within the habitat. . . We wanted to know 'how do bears, bats, reptiles and amphibians fit in?'"

The discussions helped shape the Southeast Region's commitment to biological sequestration in the Lower Mississippi Valley. Starting in the late 1990s, the Service began working with partners including The Conservation Fund and energy companies to replant native bottomland hardwoods on

former farmland. Areas chosen for restoration were those expected to provide the highest values for wildlife.

Hunter's broadly defined habitats and lists of associated species got a full airing at the Southeast Region's Biologist Conference in 2009. For many, Hunter's way of organizing landscapes is an obvious way to engage in Strategic Habitat Conservation, adopted by the Service in 2006 as its conservation model. The model starts with biological planning, which requires knowing how much conservation is needed for which species and where.

Hunter sees the surrogate species approach as not far from where his thinking has evolved. The Service recently adopted the approach as the best way to engage in Strategic Habitat Conservation: by selecting species to represent many others, the Service will be able to most efficiently and effectively design functional, natural landscapes capable of sustaining abundant fish, wildlife and plant species.

Still, Hunter has questions. Such as, how do we know we're choosing the right species?

"The assumption is that surrogate species will pull along other species," Hunter said. "That's an assumption that we need to continually test."

That's true with more than just surrogate species. Strategic Habitat Conservation can only work when assumptions are tested, and biological plans modified to reflect new information. □

STACY SHELTON, External Affairs, Southeast Region

northeast

'A Day in the Life' of the Carmans River at Wertheim National Wildlife Refuge

Three high school groups and one elementary school group came to Wertheim National Wildlife Refuge in New York in late September to collect data and sample fish at two spots on the refuge.

They were part of five high schools and one elementary school in the Central Pine Barrens that were exploring and collecting data from 12 locations along the New York State-designated wild and scenic Carmans River.

Sampling from the headwaters to the mouth, the main goals were to connect Long Islanders to nature and help prepare students to become stewards of the river's quality and natural resources. Students used hands-on field techniques to describe their sites, caught fish in nets, collected water and invertebrate samples, and examined water chemistry parameters. Beyond just a field trip, "A Day in the Life" allowed students to collect firsthand information about their communities' natural resources and explore how their piece of the river fits into the larger ecosystem. □

TODD WESTON, Long Island National Wildlife Refuge Complex, Northeast Region



Students proud of the work they're doing!

Urban Youth Help Wallkill River National Wildlife Refuge Fight Invasives

Wallkill River National Wildlife Refuge in New Jersey has been working with Groundwork, USA (Hudson Valley) to introduce and expose urban youth to environmental careers through visits to the refuge.

A recent trip introduced the refuge to newly recruited students from Riverside and Saunders high schools in Yonkers, New York. None of the students had ever visited a refuge, and several had never been to a "nature park."

Despite being so "green" to nature, the students enthusiastically dove into invasive species control and helped to clear a significant amount of autumn olive from a refuge field. Refuge staff Marilyn Kitchell and Ken Witkowski worked alongside them and followed their cutting

with stump spraying to prevent regrowth. Among the sophomore and junior participants, at least one eagerly asked about job opportunities for the summer.

"That was an awesome day, guys," program leader Curt Collier told refuge staffers. "Personal connections mean all the world at that age and you certainly impressed some youth. When we returned to Yonkers, I heard one of the youth loudly lament, 'Well...we're not at the refuge any longer.'"

The refuge has benefitted tremendously from this partnership. It has been a fantastic opportunity to connect with youth and embrace the Service's Urban Refuge initiative, despite being located in a rural community. □

MARILYN KITCHELL, Wallkill River National Wildlife Refuge, Northeast Region

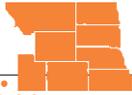


Fourth graders from Nathaniel Woodhull Elementary School learn about the Carmans River from the Service's Todd Weston.

USFWS

USFWS

mountain-prairie



Historic Donation Fuels Sangre de Cristo Conservation Area

The U.S. Fish and Wildlife Service established the Sangre de Cristo Conservation Area in southern Colorado in mid-September, thanks to a large easement donation in the Sangre de Cristo Mountains by conservationist Louis Bacon.

Bacon, a proponent of landscape and wildlife conservation, donated an easement on nearly 77,000 acres of his 81,400-acre Trinchera Ranch. He previously announced his intention to donate an easement on 90,000-acre Blanca Ranch, bringing the total amount of perpetually protected land to nearly 170,000 acres. The two easements are the largest easement donation ever to the Service.

“We are too quickly losing important landscapes in this country to development—and I worry that if we do not act to protect them now, future generations will grow up in a profoundly different world. This motivates me and is why I am proud to place Trinchera Ranch, Blanca’s adjoining ranch, into a conservation easement,” said Bacon.

These ranches feature breathtaking vistas of high desert shrubs and mountain grasslands combined with alpine forest and alpine tundra. The area stretches to the top of one of the highest peaks in Colorado, the stunning Blanca Peak at 14,345 feet above sea level. It falls in the center of the Sangre de Cristo mountain range, the longest mountain chain in the U.S. and borders the Great Sand Dunes National Park and Preserve.

Among the species that benefit from the new conservation area are Rio Grande cutthroat trout, a candidate for listing under the Endangered Species Act, and the threatened Canada lynx. □

alaska



Alaska Fish-Friendly Culverts Hold Tight Through 100-Year Flood

South-central Alaska, including the Mat-Su Valley, experienced heavy rains, strong winds and widespread flooding in September that sent flood waters over many roads with undersized culverts or near rivers, resulting in road closures, erosion of road material and culvert damage. At least five culverts/bridges becoming overwhelmed and flushed downstream.

In contrast, the 81 road culverts that had been fitted with larger, channel-spanning structures over the past decade survived the 100-year flood with flying colors. These enhancements are the result of investments and leveraging of U.S. Fish and Wildlife Service funding and staff time into partnerships and projects aimed at improving fish passage and ultimately salmon production.

Fish-friendly culverts have water depths, velocities and channel characteristics that mimic the natural stream.

Preliminary post-flood field evaluations indicate that the roads with the fish-friendly culverts would have been over-topped or potentially compromised had the original, smaller culverts still been in place.

This recent flood showed that road-stream crossing structures designed to let juvenile salmon move unimpeded among important rearing habitats are also immensely valuable from a road maintenance and public safety perspective. “The fish passage culverts definitely lowered the potential for failure on many roads during these last floods,” said Jim Jenson, the Mat-Su Borough’s director of operations and maintenance.

Approximately 65 percent of inventoried culverts in the Mat-Su Valley still present partial or total barriers for fish seeking upstream and/or downstream passage. But replacement with fish-friendly culverts will help keep fish habitat and communities connected, no matter what the weather.

Learn more about USFWS’s Fish Passage Program at work in Alaska: alaska.fws.gov/fisheries/restoration/passage.htm. □



Service Director Dan Ashe talks about conservationist Louis Bacon’s donation at an event in June.



The Mat-Su Borough and the Service upgraded a small culvert on Colter Creek with this fish-friendly 14-foot arch after floods in 2006, and it survived the recent flood fine.

Snow Drifts and Polar Bear Dens: Melding Biology and Education

Polar bears need big snow drifts for dens. On flat tundra, such large drifts are rare, and it turns out, their locations are predictable. So the Arctic Landscape Conservation Cooperative (LCC) supported a project that helps agencies and industry improve the efficiency and effectiveness of conservation measures aimed at protecting maternal polar bear dens. In addition, project staff developed a series of vibrant polar bear education materials to engage children in learning while increasing their knowledge of polar bear ecology.

Snow modeler Dr. Glen Liston developed the denning habitat model, which mimics the physical interactions of snow, wind, terrain and ground cover. The denning habitat model determines the locations of “drift traps,” which are capable of developing snow drifts large enough and deep enough to accommodate pregnant polar bears that den on land. Liston worked with Craig Perham of the U.S. Fish and Wildlife Service’s Alaska Region Marine Mammals Management program and Dick Shideler of the Alaska Department of Fish and Game to field test the model. April Chevront, a teacher from North Carolina supported by Avery County Schools in North Carolina, worked in the field with the scientists to develop the ground-work for an interactive computer-based curriculum. Teachers anywhere can now use this curriculum for polar bear and



A female polar bear emerges from a maternal den near the Spy Island Development operated by Eni Petroleum on Alaska’s North Slope. Photo courtesy of Eni Petroleum.

arctic snow science education. The project was funded jointly by the Arctic LCC and the National Fish and Wildlife Foundation.

By being better able to predict sites likely to produce drifts that can accommodate polar bear dens, biologists and industry can reduce impacts to denning bears and increase knowledge of these iconic animals. And by providing teachers with interesting and informational education materials, this program will help to inspire future generations, whose support and understanding will likely be key to the survival of the arctic bears.

For more information about this project or to learn more about its education materials, please visit <arcticlcc.org>. □

LISA MATLOCK, Science Applications, Alaska Region

pacific southwest

Innovative Deal on Dirt Saves Taxpayers Money

An innovative arrangement to acquire uncontaminated dirt for an ongoing wetland restoration project on Bair Island, a part of the Don Edwards San Francisco Bay National Wildlife Refuge near Redwood City, California, is saving taxpayers more than \$5 million.

When the project broke ground in 2006, the total cost was expected to be \$12 million. Close to half that amount was the projected cost of acquiring 1.5 million cubic yards of dirt to reverse decades of erosion and subsidence of the land — a result of its historical use for agriculture. It turns out though, that area construction firms have limited options for disposing of dirt from their own projects, and they’re willing to pay the contractor on the Bair Island project, Pacific States, to take it.

While securing a supply of free dirt has lengthened the project’s timeline somewhat, it is ultimately lowering the cost of the total project to \$6.9 million.



CRANKYIMM/FELICKR

Currently, up to 500 dump trucks of dirt head to Bair Island each day from construction sites in the Bay Area. The goal is to raise the elevation of the restoration area two feet.

It’s not simply a matter of trucking in the surplus dirt, however. First, the soil must be inspected by professionals hired by Pacific States to ensure it does not exceed required standards for levels of contaminants.

The six-year, 1500-acre restoration of Bair Island is now nearing completion. The restored site will bring back thriving wetland habitat for a wide range of birds, fish and marine mammals. It will also feature a number of public access amenities. □

DOUG CORDELL, External Affairs, Pacific Southwest

Each day, up to 500 dump trucks of dirt arrive at the wetland restoration site on Bair Island.



ARIC GRABBE/BAY AREA NEWS GROUP

headquarters

Fish and Wildlife Service Partners with Smithsonian Institution and George Mason University to Foster Conservation Leadership

The U.S. Fish and Wildlife Service, the Smithsonian Conservation Biology Institute (SCBI) and George Mason University are working together to ensure a new generation of natural resource conservation professionals are prepared for the challenges of the 21st century.

Service Director Dan Ashe, SCBI Director Steve Monfort, and Mason Provost Peter Stearns formalized the partnership in October with the signing of a Memorandum of Understanding at Mason's Arlington, Virginia, campus.

The partnership will take advantage of the shared capacities and expertise of the three organizations to provide hands-on training and rigorous instruction for future conservation professionals.

"The global resource challenges we face demand a new approach—one that uses the most advanced science to deliver effective, landscape-scale conservation," Ashe said. "This partnership offers us an unparalleled opportunity to provide training and education that will strengthen and develop these skills."

SCBI and Mason have formed the Smithsonian-Mason School of Conservation in Front Royal, Virginia. This residential, hands-on, inter-disciplinary collaboration supports education opportunities in conservation science to shape a global network of conservation leaders.

The MOU identifies a variety of mutually beneficial training, human resources and communications endeavors.

Denise Sheehan, the Service's Assistant Director of Budget, Planning & Human Capital, and Jay Slack, Director of the Service's National Conservation Training Center, were among the guests attending the MOU signing ceremony.

Also attending were Virginia Congressmen Jim Moran and Gerry Connolly, who have both provided enthusiastic support and encouragement for the partnership's shared vision for the future of conservation biology. □



From left: Steve Monfort, Director, Smithsonian Conservation Biology Institute; Dan Ashe, Director, U.S. Fish and Wildlife Service; Peter Stearns, Provost, George Mason University. At right is Marshall Jones, former Acting Director of the Service and now Senior Conservation Adviser at the SCBI.

LAYONDA WALTON/USFWS

Nose for Conservation



Border Collie Frehley was one of two conservation canines the Service and many partners brought to New Mexico's Jemez Mountains last summer to help track down Jemez salamanders. The salamanders are succumbing to warmer temperatures and drought conditions. By mapping the salamanders, scientists will be able to create a management plan that will help salamanders as well as the forests we all depend on. The Center for Conservation Biology trained the dogs using salamander scat.

MARK L. WATSON, NEW MEXICO DEPARTMENT OF FISH AND GAME

transitions

Headquarters

Steve Guertin Appointed New Deputy Director



MARLA TROLLAN / USFWS

Steve Guertin, previously the Regional Director for the Mountain-Prairie Region since 2007, assumed new duties as the U.S. Fish and Wildlife Service's Deputy Director for Policy in mid-November. During his tenure as Regional Director, Guertin played a key leadership role in the Service's efforts to help fish, wildlife and plants adapt to the effects of landscape-scale challenges including climate change, energy development, water scarcity, fire and invasive species. He has led and/or supported the development of six Landscape Conservation Cooperatives designed to bring state and federal agencies, conservation organizations and other partners together to establish conservation priorities at a landscape scale.

Guertin serves on the Service Regulations Committee, which works with state wildlife agencies and Flyway Councils to set the annual framework for migratory bird harvest. In addition, he has developed strong working relationships with the states while serving on the Joint Federal/State ESA Task Force and the Joint Federal/State Policy Task Force, both of which are critical to the Service's efforts to improve coordination of state and federal conservation efforts. Guertin is the current chair of the Prairie Pothole Joint Venture and the Upper Colorado River Recovery Implementation Committee, and is the former Chair and a current member of the Interagency Grizzly Bear Committee and the Missouri River Basin Interagency Roundtable, among others.

Under the America's Great Outdoors Initiative, Guertin has pursued landscape scale conservation by forging working landscape partnerships. This includes formally establishing the 2 million acre Dakota Grasslands Conservation Area; the 1.1 million acre Flint Hills Legacy Conservation area; and, in Montana's Crown of the Continent, doubling the size of the Rocky Mountain Front Conservation Area and the Blackfoot Valley Conservation Area, and creating the Swan Valley Conservation Area. He also worked to establish the Sangre de Cristo Conservation Area in Colorado.

Before becoming Regional Director, Guertin served as chief of the Service's Division of Budget for eight years, where he led national level efforts to prepare, justify and execute the Service's \$2.3 billion annual budget. He also completed operations assignments in several Service programs and the Alaska Region.

Before coming to the Service, Guertin spent nine years working in the Department of the Interior, where he recommended funding and policy options for the Service and the Bureau of Land Management.

A Marine Corps Veteran, Guertin served for eight years in Hawaii, California, Virginia and overseas.

Guertin earned a bachelor's degree from Norwich University in Vermont, a Master's of Public and International Affairs from the University of Pittsburgh, and was a Senior Executive Fellow at the Harvard Kennedy School. He and his wife, Irene, have two young children. □

Southwest



Tom Cloud, Project Leader of the Arlington, Texas Ecological Services Field Office, retired on December 30 after more than 38 years in the U.S. Fish and Wildlife Service. Tom began his career with the Service in June 1974 as a fishery biologist with the Bureau of Sport Fisheries and Wildlife, Division of River Basin Studies, in Fort Worth, Texas. Before coming to the Service, he worked as a teacher and coach in the Texas Public School System and as a biological consultant with Law Engineering in Georgia, after earning his bachelor's and master's degrees from Midwestern State University and the University of North Texas, respectively.

Tom worked on several challenging conservation activities in the Southwest Region, including numerous Texas water resource development and habitat restoration projects as well as surface coal mining operations in Texas and Oklahoma as part of the Office of Biological Services Program. In addition, Tom was in the first endangered species consultation training class conducted in the Region following transition of endangered species program responsibilities from the Regional Office to field stations.

In July 1993, Tom worked with other partners to author and submit a justification to the International RAMSAR Convention headquartered in Switzerland to designate Caddo Lake in east Texas as a Wetland of International Importance. As a result of this work, Caddo

our people

Lake was designated as the 13th Wetland of International Importance in the United States, and is currently the Southwest Region's only designated site. Most of this wetland site is now recognized and incorporated into Caddo Lake National Wildlife Refuge and Texas' Caddo Lake State Park and Wildlife Management Area.

In June 1999, Tom was appointed Field Supervisor of the Arlington Ecological Services Field Office, becoming only the fourth supervisor of the field office since its inception in the early 1950s. Tom is leaving the Service with the hope of enjoying the natural resources that he worked so long to protect and conserve. Tom and his wife, Betty, plan on remaining in the Dallas/Fort Worth area following his retirement. □

Mountain-Prairie Region

Noreen Walsh Named Regional Director

Noreen Walsh, a 22-year veteran of the Service, has been named the new Regional Director for the Mountain-Prairie Region. She served as Deputy Regional Director for the Region since December 2008.

Walsh replaces Steve Guertin, who recently took over as the Service's Deputy Director for Policy.

She will oversee Service activities for the eight states in the Region—Colorado, Utah, Wyoming, Montana, North Dakota, South Dakota, Nebraska and Kansas—one of the largest geographic jurisdictions in the Service. She will also oversee the protection and conservation of some of the last intact habitat for native species in the Region such as grizzly bears, wolves, sage-grouse, ferrets and millions of migratory birds who journey through and breed in the Region's Prairie Pothole landscape every year.



As Deputy Regional Director, Walsh served as the chief operating officer for the Mountain-Prairie Region. Her responsibilities included overseeing the streamlining of business processes, furthering a culture of strategic habitat conservation, and planning for the future workforce needs of the agency. She leads the Service's role in a west-wide conservation initiative focused on greater sage-grouse and its sagebrush habitat, and

has supported the "working landscape" conservation model under the America's Great Outdoors Initiative.

Before her time as Deputy Regional Director, Walsh served as the Assistant Regional Director for Ecological Services in the Southeast Region. She also was a biologist at the Service's Headquarters Office, worked in the Oklahoma Ecological Services Field Office and spent the first five years of her Service career as a research biologist working out of Fairbanks, Alaska.

Walsh holds a bachelor's degree in Fisheries and Wildlife Biology from Michigan State University and a master's degree in Wildlife Biology from Colorado State University. She and husband Mark Willms reside in the Denver area with their two daughters, Claire and Leah.

Succeeding Walsh as Deputy Regional Director for the Mountain-Prairie Region is **Matt Hogan**. Hogan rejoined the Service in 2010 as the Assistant Regional Director for Migratory Birds and State Programs for the Mountain-Prairie Region. In 2012, he served as the Assistant Regional Director for Refuges in the Mountain-Prairie Region before transitioning to Deputy Regional Director. His previous experience included executive leadership roles both in the Service as well as the Department of the Interior. He also served as Executive Director of the Association of Fish and Wildlife Agencies. □

honors

Northeast



Andrew French, Project Leader at Silvio O Conte National Fish and Wildlife Refuge, has been named the 2012 **Take Pride in America Federal Land Manager of the Year** in recognition of his leadership, determination and creativity.

Since arriving at the refuge in December 2002, French, through close collaborations with Regional Office staff and partners, has added about 1,000 acres per year to the refuge. His work has helped create a strong, productive and cohesive partnership with the Friends of Silvio O. Conte, along with numerous other partnerships.

He has considerable experience working with volunteers, and refuge staff often join in with Friends, partners and volunteers to form work parties in celebration of Earth Day, National Trails Day and the annual Connecticut River "Source to the Sea" Clean-up along the Connecticut River.

Volunteers are a vital part of the refuge and the value of their participation includes conservation, education, recreation, programming, outreach, research, monitoring and maintenance activities.

French worked with the Friends of Silvio O. Conte to develop the Connecticut River Watershed Blueway-Actions and Stewardship proposal, which attracted national attention. The Connecticut River was prominently showcased in Interior Secretary Salazar's 50-state initiative outlining 101 priority projects as some of the country's most promising ways to reconnect Americans with the natural world and outdoor recreation as part of the America's Great Outdoors Initiative. On May 24, the Secretary of Interior created the National Blueway System and designated the Connecticut River and its watershed as the first National Blueway in the nation.

Charged with landscape-wide mandates and the need to be relevant to an ever-changing human demographic, the refuge developed and deployed the Watershed on Wheels Express to connect with the people in the watershed, wherever they may live, throughout the 396 communities. French spearheaded the effort to design and create a mobile immersion experience that allows the refuge to take the "show on the road" to rural and urban destinations throughout the Connecticut River watershed. The WoW Express goes to schools, fairs, summer

camp and special events in the Connecticut River Valley promoting outreach, education and relevancy to the American public. □

Service Ranks High in Interior Department's 2012 Green/Sustainability Awards

Of the 10 winners in 2012's **DOI Environmental Achievement Awards**, six were Service projects. Each year the DOI awards convey high-level recognition to Interior employees and partners for "green" projects. Many of the Service's "green" efforts got at least some of their funding from the American Recovery and Reinvestment Act of 2009. The Service received \$280 million in ARRA funds, and improving energy efficiency was an important goal behind some of the funded projects. A brief summary of each of the Service's award-winning projects:

The Greening of the Refuge: Kenai National Wildlife Refuge, Alaska—Kenai National Wildlife Refuge was recognized for outstanding organizational achievement in building and fleet energy efficiency. The staff instituted significant measurable changes in the areas of energy efficiency, decreased petroleum fuel consumption, ultimately reducing greenhouse gas emissions.

Headquarters Office Renovation, San Francisco Bay National Wildlife Refuge Complex, California —The headquarters at San Francisco Bay National Wildlife Refuge Complex was transformed into a model of sustainability, consuming 52 percent less energy than the previous building and saving 104 megawatt-hours of energy annually, offsetting 72 metric tons of carbon dioxide equivalent.

New Egg Incubation Water Reuse—Chiller System, Kooskia National Fish Hatchery, Idaho—The hatchery constructed a new egg incubation system that saves energy and reduces well water use.

Rocky Mountain Arsenal National Wildlife Refuge Visitor Center, Colorado—The land that is now Rocky Mountain Arsenal



The San Francisco Bay National Wildlife Refuge Complex headquarters office.

Hybrid Solar Photovoltaic and Wind Energy System, Benton Lake National Wildlife Refuge, Montana—The 25.4 kW hybrid solar photovoltaic and wind energy system at Benton Lake National Wildlife Refuge, located on the western edge of the northern Great Plains in Montana, is the first of its kind in the Mountain-Prairie Region.

National Wildlife Refuge was once occupied by the U.S. Army where chemical weapons were manufactured to support World War II. After a \$2 billion cleanup, the land was turned over to the Service and more than 330 species of wildlife inhabit the refuge. The new visitor center is a showcase for sustainability and demonstrates good stewardship of the land.

our people

Turnbull National Wildlife Refuge Maintenance Shop Energy Retrofit, Washington—An integrated design team guided the collaborative planning and design process for the 6,000 square-foot, high-performance, heavy equipment maintenance building renovation at Turnbull National Wildlife Refuge. The renovation methods specified are simple and will be transferable to similar project. In addition, ongoing operations and maintenance are easy and low-cost.

HONORABLE MENTIONS

Office and Visitor Center, Morris Wetland Management District, Morris, Minnesota.

Warm Springs Regional Fisheries Center Environmental Leadership Projects, Warm Springs, Georgia.

Sonny Bono Salton Sea National Wildlife Refuge Environmental Improvements, Calipatria, California. □



Warm Springs Regional Fisheries Center built a state-of-the-art technology system for treating the hatchery water supply, cutting costs and improving human health and safety.

Northeast

Ortiz Receives Professional Service Award

The Northeast Region's Al Ortiz received the Professional Service Award from the States Organization for Boating Access (SOBA) at the group's national meeting in September. SOBA President James Adams nominated Ortiz, who was recognized for his continued efforts to provide technical assistance, guidance and direction to state boating programs at both the region and national level. Ortiz is the Northeast Region's coordinator for the Clean Vessel Act and Boating Infrastructure Grant programs and has worked for the Service since 1994. Since 2000, he has administered in excess of \$80 million in grant funds to more than 250 state agency projects. As a result of his stewardship and willingness to assist state agency project personnel with the challenges that frequently result from development projects, Al's efforts have resulted in the construction, renovation, maintenance and operation of quality boat tie-up facilities and sewage pumpout stations for boating enthusiasts throughout the northeastern United States. □

Southwest

Winship Master Pilot Award

John Winship, a veteran Service pilot/biologist, now retired after a career spanning 33 years, joined an elite fraternity of pilots as he was presented the Federal Aviation Administration's Wright Brothers Master Pilot Award and his name was added to their national honor roll recognizing the achievement. This major honor is reserved for pilots who have conducted 50 or more consecutive years of safe flight operations with no disqualifying mishaps or enforcement actions on their record.

While no small feat in the complex world of pilots and aviation, it's even more impressive when one considers the hazardous, low and slow types of flying done by pilot/biologists. Of Winship's total 27,200 hours logged in the air, he estimates more than a third were at altitudes of under 200 feet—in extremely remote locations, often in rough terrain, at speeds of roughly 100 mph — while conducting waterfowl surveys, inventories, nest counts, mapping habitat, and any number of similar tasks.

And the list of wildlife conservation efforts Winship has played a part in reads like a who's who of major landmark wildlife management projects, including the reintroduction of eagles (and subsequent recovery), wolf monitoring and inventory, conducting the first aerial photography associated with the National Wetlands Inventory, survey documentation associated with construction of the Alaska pipeline, and the list just goes on. Of his 33 years, he spent 22 in the Midwest Region and the remainder based in the Albuquerque Regional Office.

Joy Nicholopoulos, Southwest Regional Deputy Director, says "When I first started with the Service in 1992, one of the first things I heard were some great stories about John and his legendary flying career. The Southwest Region is extremely proud of John and pleased his exemplary professionalism is being recognized by the FAA."

Winship says he's always been a biologist first and kind of just "fell into" the piloting support function, more or less out of necessity. Winship retired from the Service in 1994, resides in Albuquerque, and remains active in aviation and the Service's retirees association.

in memoriam

Service mourns loss of biologist
Luke T. Montoya



Luke T. Montoya, a valued member of the U.S. Fish and Wildlife Service's New Mexico Ecological Services Field Office, died on August 21, 2012, at the age of 35 after being hit by a car while crossing the street. Luke is remembered for his love of nature, commitment to science, and dedication to people and culture.

Luke first joined the Service in August 2002, as an Environmental Specialist working on water-quality assessment of Rio Grande silvery minnow habitats in the Middle Rio Grande, New Mexico. As Luke gained expertise he provided training in water-quality sampling techniques and measurement/collection of various types of hydrologic

and biologic data. He was also active in Rio Grande silvery minnow rescue and egg salvage activities.

In August 2003, Luke left the Service to work as a Biologist/Environmental Protection Specialist for the U.S. Bureau of Indian Affairs in New Mexico. He returned to the Service in November 2010, assisting with multiple projects related to habitat conservation and Natural Resource Damage Assessment and Restoration Program. In April 2011, Luke began working as a Senior Environmental Contaminants Specialist where his work focused on several natural resource injury assessments involving hardrock and uranium mining operations. Luke also served as the Field Office Collateral Duty Safety Officer and as the Oil and Hazardous Substance responder. He was on the Burned Area Emergency Response Team and served two details on the Deepwater Horizon oil spill NRDA response.

Luke held a bachelor's degree from New Mexico State University, majoring in Wildlife and Fisheries Science, with a minor in Conservation Biology. During and after college, Luke worked on hazardous waste issues for the All Indian Pueblo Council and developed guidance for the U.S. Environmental Protection Agency, incorporating Pueblo cultural values into Superfund site cleanup decisions.

Luke was a member of the Sandia Pueblo Native American Tribe, growing up on the Sandia Pueblo. He was a Native American drummer and very devoted to his cultural traditions and practices, regularly participating in tribal cultural events. Luke generously shared his culture and experiences with his friends and co-workers, inviting Service staff and their families to participate in Sandia Pueblo Feast Day celebrations.

At the time of his death, Luke served as a board member of the Manzano Day School, his favored charity. Luke was pragmatic, approachable, and had an engaging sense of humor. He was a respected co-worker, but more importantly, a friend to many in the Service. Ever the optimist, Luke spread joy and enthusiasm wherever he worked. Son, clan/tribal member, brother, husband, father, friend, co-worker, biologist, scientist, Luke will be deeply missed. □

TOM BUCKLEY, External Affairs,
Southwest Region

Office of Communications
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive
Room 330
Arlington, VA 22203

STANDARD PRESORT
POSTAGE AND FEES
PAID
U.S. DEPARTMENT OF THE
INTERIOR
PERMIT G-77

parting shot

Robert Steiner, an artist from San Francisco, Calif., won the 2012 Federal Duck Stamp Art Contest with this acrylic painting of a common goldeneye. The 2013–2014 Federal Duck Stamp will go on sale in late June.



Fish & Wildlife News

Editor: Matthew Trott

Editorial adviser: Craig Rieben, Chief,
Internal Communications

Art director: Jane Pellicciotto, Allegro Design

Submit articles and photographs to:

U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, MS 332-A
Arlington, VA 22203
703/358-2512
Fax: 703/358 1930
E-mail: matthew_trott@fws.gov

Submission deadline:

Spring 2013: by March 21