



Fish & Wildlife *News*

JOIN US ONLINE

The next issue will be our last in print. Get the *Fish & Wildlife News* online at fws.gov/home/fwn

SPOTLIGHT

The Fight Against Wildlife Trafficking 10

A Trout to Tout 28

Pearls in the Wild 38



Departments

From the Director / 1

News / 2

Field Journal / 36

Curator's Corner / 40

Our People / 41

Features

SPOTLIGHT



Fighting for the Future of Biodiversity | by MATT TROTT

As this issue of the *News* goes to press, Supervisory Wildlife Inspector Leilani Sanchez (pictured on p. 26) is fighting another foe, cancer. We'd like to dedicate this issue to her, for all her hard work to stop wildlife trafficking.



Hope in History / 12

Lessons of the feather trade can help Service combat wildlife trafficking

by KERI PARKER



CITES On Tap / 14

The United States will work to protect pangolins, African grey parrots and chambered nautilus, fight wildlife trafficking and more

by DANIELLE KESSLER



Real Consequences

/ 24
Wildlife traffickers finding that U.S. laws have bite

by AMY JONACH

ALSO IN THIS ISSUE

A Trout to Tout / 28

Monster Lahontan cutthroat trout swimming one step closer to native spawning home

by DAN HOTTLE

100 Years of Protecting Birds / 32

Celebrate the Centennial of the Migratory Bird Treaty

by RACHEL FISK LEVIN

Daniel M. Ashe



Putting an End to Wildlife Trafficking

Aldo Leopold described the passenger pigeon as a “biological storm” that would shake the forest like a “living wind” that “roared up, down and across the continent.” The bird went from 3.5 million to extinct in less than one human generation. You and I and our children and grandchildren are impoverished because we will never know this great “feathered tempest.”

Now, imagine handing our children a world without wild elephants, tigers, rhinos and great apes. I think history would judge us harshly because the warning signs are everywhere—we can see it happening, like a slow motion train wreck.

An elephant every 15 minutes, for the sake of human vanity.

This war on wildlife trafficking is one whose toll is also measured in human terms. Over the past decade, poachers have murdered hundreds of game wardens and other local leaders, threatening security and stability in an enormous swath of Africa.

We are leading the fight against wildlife trafficking, and we're succeeding.

But this is not an African problem. It is global. The United States plays a big role in this trafficking crisis. Arrests throughout our country document the involvement of our citizens as both consumers and conspirators.

As long as demand exists, criminals and greedy people will try to satisfy it. There will never be enough ivory tusks, rhino horns, tiger bones or countless other animal products in the world to satisfy such selfish demand.

We must lead the fight against wildlife trafficking, and we must win.

That's why the President's National Strategy for Combating Wildlife Trafficking includes as a priority the reduction in demand for illegally traded wildlife. In this issue of *Fish & Wildlife News*, you'll read about our latest effort to raise awareness about the harm wildlife trafficking does. We crushed more than 7 tons of elephant ivory—seized in the course of multiple wildlife trafficking investigations—in 2013 and 2015. With partners, we then asked the public for ideas about how to use the crushed ivory as a way to help people understand the role of consumer demand in driving the current crisis. The winning designs are quite moving.

You'll also read about how we are fulfilling the strategy's other two objectives: strengthening law enforcement and expanding international cooperation. Our Law Enforcement agents are putting traffickers behind bars. We are supporting community-based efforts in foreign countries to help local residents find alternatives to poaching and selling wildlife and improving the capacity of range countries to protect their wildlife. We are working with nations across the globe to ensure that legal trade in wildlife and plants is sustainable and provides revenue to support long-term conservation and traditional ways of life.

From Blackwater National Wildlife Refuge to Boise to Botswana and back, the sun never sets on the work of this amazing organization. We are leading the fight against wildlife trafficking, and we're succeeding.

And the work continues: In July, the Service instituted a near-total ban on the domestic commercial trade of African elephant ivory. You can find stories about it on our website <fws.gov> and across the Internet.

For decades, criminals have used the legal ivory trade—here in the United States and globally—to launder blood ivory, fueling the unimaginable carnage in Africa.

This rule will help end that practice.

I wish there were a magic button I could press to stop poaching and the illegal wildlife trade. But there's not. Instead, we all must roll up our sleeves and get to work. I know we'll succeed. □

WILDLIFE TRAFFICKING

World Rangers Visit Service's National Wildlife Property Repository

Wearing a digital pattern camouflage jacket with the WWF logo where soldiers usually wear rank, former Hong Kong police officer turned World Wildlife Fund Enforcement Adviser Crispin Barlow looked more like a college professor than a career police officer. That scholarly impression quickly vanished as he pointed to a rhinoceros horn and told those sitting around him that in Southeast Asia they are using rhino horn as a hangover cure and that now the whole horn is needed because the black market is full of fake powder. He then quickly pointed to a tiger skin and told how in China tiger skins are a status symbol for many businesses and said that despite being illegal, having a skin in your office lobby tells others you are a "guy who can get stuff done."

Barlow's casual but frank explanations of what happens to the world's endangered species is not a new story but one that will hopefully have a happy ending.

In an effort to write that happy ending, approximately 30 park and wildlife rangers from across the globe visited the Service's National Wildlife Property Repository in May as part of a field trip with the International Ranger Federation's 2016 World Ranger Congress, a triennial event that brings together rangers from all over the world and provides them the oppor-



STEVE SEGIN/USFWS

tunity to learn new skills, share knowledge and create partnerships.

"This particular group [visiting the repository] was unique in that so many natural resource law enforcement organizations from around the world were represented," says Steve Oberholtzer, special agent in charge in the Service's Mountain-Prairie Region.

Adding distinction, many of the visiting rangers are on the front lines fighting poaching and working to stop the illegal wildlife trade.

"Particularly interesting were our discussions about wildlife exploitation problems in their home countries and how evidence of that unlawful exploitation ended up at the repository," Oberholtzer says.

After a brief discussion about what they were going to see, Repository Supervisor Coleen "Cole" Schaefer led the rangers into the warehouse. There was little chatter as the group entered the 16,000-square foot space packed with animals and animal products from every corner of the world. Included in this warehouse are 1.5 million illegal and seized wildlife items.

"Many of these things may be new to you, and others you may have in your country," said Schaefer as the group crowded around the display of ivory and elephant-foot stools.

National Wildlife Property Repository Supervisor Coleen "Cole" Schaefer shows the rangers a Tibetan antelope scarf.

The rangers quickly fanned out across the warehouse and examined everything from shark teeth and ivory to traditional Chinese medicines and turtle oil lotion. A ranger from Zimbabwe talked about elephant poaching with a ranger from Australia, while rangers from land-locked Mongolia examined the various species of sea turtles and marine mammals.

"It was inspiring to meet some of the delegates of wildlife rangers who are actively protecting the world's wildlife resources from ever-increasing threats of poaching," says Schaefer.

After a few hours learning about the repository and what the Service does to combat the illegal wildlife trade, the rangers boarded the bus to return to the conference. There were many different faces and languages during that visit, but there was one common expression: overwhelming sadness at the impact that the illegal wildlife trade is having on the world's plants and animals. □

STEVE SEGIN, External Affairs, Mountain-Prairie Region

Designs to Help Reduce Elephant Poaching

Kelly Lance of Monterey, California, and Jacqueline Nott of Auburn, California, will see their design ideas transformed into reality as the winners of the Ivory Crush Design Challenge, which invited entrants to propose powerful visual concepts for public displays of crushed ivory from the Service's two Ivory Crushes. The pieces will augment the Service's public awareness and education campaign to help reduce demand for elephant ivory and other illegal wildlife parts and products.

"These designs provide a compelling message to the American public about the need to protect African elephants by reducing our demand for ivory," says Service Director Dan Ashe.

The Service will work with the Association of Zoos and Aquariums to build and display the designs.

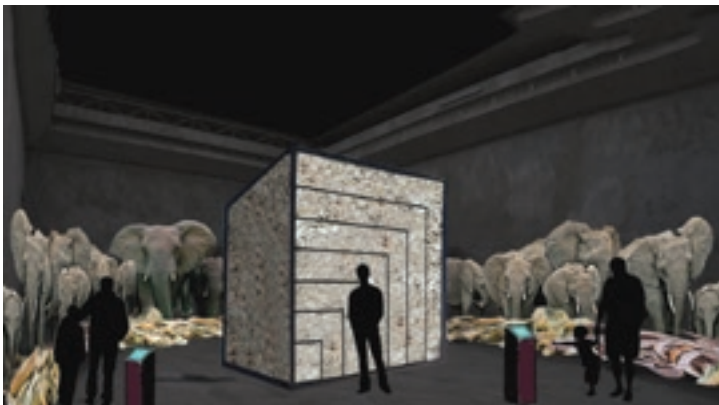
The Service has crushed more than seven tons of elephant ivory confiscated during the past 25 years.

Lance, a commercial sculptor and science illustrator, proposed a massive cube-shaped acrylic container that will be filled with crushed ivory, emphasizing the sheer volume and scale of the poaching crisis. It will be augmented with projections of elephants and the ivory trade on the walls around the display and on the faces of the cube itself. After it is built, the single exhibit is expected to travel to a variety of locations around the country where it will be available for public viewing and interaction.

Nott, an artist and product designer, proposed an interactive standing display that will be replicated for use at multiple locations. The display features an hourglass-type mechanism on a rotating wheel that can be turned by the viewer allowing crushed ivory to flow from top chamber to bottom chamber, demonstrating how time is running out for African elephants unless we take action against the traffickers. The display also will contain spent ammunition.

Both displays will feature interactive educational information that builds on the Service's large-scale efforts to reduce consumer demand for African elephant ivory and educate the public about the plight of African elephants. Elephant poaching is at its highest level in decades and continues to rise. Approximately 100,000 elephants were killed between 2010 and 2012 for the illegal ivory trade, and scores of park rangers who work to protect them have also been killed. □

Lance's design (top) and Nott's design. Renderings by Joe Rohde.



Service Partners with Zoo, YMCAs in South San Diego

San Diego National Wildlife Refuge Complex, in partnership with the San Diego Zoo Global, is providing an entertaining and unique environmental education program for YMCA Day Camps in the California cities of Chula Vista, National City and San Ysidro.

About 600 children have so far engaged in field trips and hands-on restoration projects at Sweetwater Marsh, thanks to the cooperation among local YMCAs, San Diego Zoo Global and San Diego Bay National Wildlife Refuge, and more than 800 have taken part in assemblies focused on environmental issues.

Following a 2014 Memorandum of Understanding between the Department of the Interior and YMCA USA, the Service and south San Diego County YMCAs launched a pilot project last summer. Its success has enabled the program to continue this year.

The Day Camp programs start with an assembly featuring Dr. Zoolittle and Zoo Animal Ambassadors. The campers participate in fun activities to test their "Refuge Ranger" skills and dress up as "wildlife culprits" to learn how to protect the environment. The zany ways of Dr. Zoolittle and the assistance of live zoo animals capitalize on the natural curiosity of the children. The program also supports the YMCA goals of nurturing the potential of children, helping people live healthier lives and supporting their neighborhoods.

In June and July 2015, San Diego



USA.COX/USFWS

Day campers lend a hand at San Diego National Wildlife Refuge.

Zoo Global held 14 assemblies, reaching 840 children enrolled in the YMCA Day Camp programs. Perhaps not surprisingly, "when the skink pooped" was the big hit at one of the assemblies, — at least 11 children noting this event in their post-test responses.

The assembly is the stepping-stone to the field trip to San Diego Bay Refuge for campers in third through fifth grades. The refuge and San Diego Zoo Global supported 24 field trips in June and July 2015. Campers explored Sweetwater Marsh, looking for native birds and bugs, and restored wildlife habitat by planting butterfly- and pollinator-friendly plants and pulling weeds. A stand-out experience was catching crabs, apparently on the must-do list of every third-grade student in San Diego.

The YMCA Day Camp programs, along with San Diego Zoo Global, help the Service reach children from diverse urban communities of San Diego and connect them with nature. The partnerships that developed as a result of this project demonstrate the value of national wildlife refuges as community assets. The direct connection between refuge staff and campers made them feel safe and welcome, and encouraged them to return to the San Diego Bay Refuge with their families in the future. □

Friends of the Wyoming Toad Have a Ribbiting Good Time Near Laramie, Wyoming

In the continuing efforts to recover one of America's most endangered amphibians, 900 adult Wyoming toads were released at three sites in the Laramie River basin on June 1.

After spending the last year growing into adulthood at Saratoga National Fish Hatchery in Saratoga, Wyoming, the toads, which naturally occur only in Albany County, Wyoming, were released onto three properties along the Little Laramie River—Mortenson Lake National Wildlife Refuge and two private ranches. The release marked the first time adults have been reintroduced into the wild—releases in the past involved young toads—and the largest toad release ever.

"This release was the product of a number of partnerships, among the Service, the state and county, and private landowners," says Greg Gerlich, Assistant Regional Director for Fish and Aquatic

Conservation with the Service's Mountain-Prairie Region.

The release is part of the 2015 recovery plan, which set the delisting recovery goal as having at least five self-sustaining populations.

One strategy to allow for better toad survival is the practice of "soft releases," where captive-bred adults and tadpoles are released initially into enclosures to give them a better chance of survival as the toads have time to adapt to their new environments.

Fred Lindzey, who owns a ranch on the Little Laramie River where some of the toads were released, is an active partner in helping recover the toad, with a Safe Harbor Agreement to support it.

"I have always been a conservationist, and it feels really good to release these toads," says



Lizzy Mack (center) briefs the toad team.

Lindzey. "If it works out, it'll feel even better."

Toads in the wild and in captivity are susceptible to an infectious disease known as chytrid mycosis, or chytrid, a fungus that threatens amphibians around the world.

Release crews took every precaution, from wearing gloves to disinfecting boots, to not spread the disease

"Chytrid fungus is basically the No. 1 threat to the toads, and we've got to keep them safe," says Lizzy Mack, Wyoming toad manager at the Wyoming Ecological Services Office.

Over the next few months Mack and her team will monitor the new populations for chytrid as well as how well the toads adapt to their new homes.

The Wyoming toad was plentiful until the 1970s, when its population took a sudden and swift decline. It was protected under the Endangered Species Act in 1984 and considered extinct shortly thereafter until its rediscovery at Mortenson Lake southwest of Laramie in 1987. Some of the last known individuals were taken into captivity in 1989.

Captive breeding of the Wyoming toad has been ongoing since 1995 and now occurs at eight zoos around the country as well as the University of Wyoming's Red Buttes Biological Laboratory and Saratoga Hatchery. □

STEVE SEGIN, External Affairs, Mountain-Prairie Region



ROB MANSHIEH/USFWS

The Wyoming toad only lives in Albany County, Wyoming, and was released into three properties along the Little Laramie River.

Invasive Species Super-highways

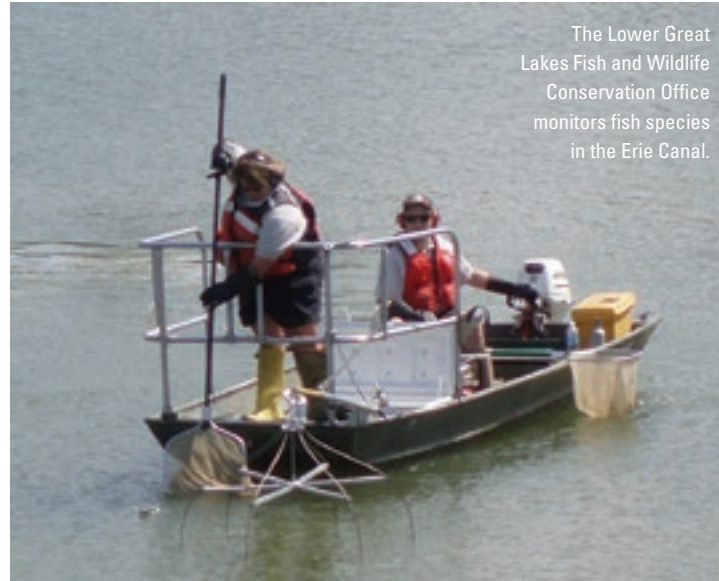
Most canal systems of the world were designed to increase the flow of goods across countries and continents, which helped fuel national and global economies. The Panama Canal, the Suez Canal and the Erie Canal are some of the most well-known.

But an unintended consequence is that they can also act as super-highways for invasive species, facilitating their spread to areas that otherwise would have been protected by natural geographic barriers.

For example, the most recent glacial retreat 12,000 years ago left Lake Ontario separated from Lake Erie by Niagara Falls. But in the 1800s and early 1900s, canals were built, bypassing the falls—and allowing species such as the sea lamprey to migrate from Lake Ontario to the other Great Lakes, which contributed to the decimation of native lake trout in the Great Lakes.

The invasive round goby has also caused impacts to the economy and ecology of the Great Lakes since its arrival in the 1990s. In addition to eating lake trout eggs, the invader out-competes native fish such as darters and sculpins, essential food for larger sport fish. The round goby is using the Erie Canal to spread eastward to the Finger Lakes and the Hudson River.

Non-native aquatic plants such as hydrilla, water hyacinth and water chestnut also have the potential to spread across New York through the Erie Canal. These aquatic plants crowd out



The Lower Great Lakes Fish and Wildlife Conservation Office monitors fish species in the Erie Canal.

native plants, damaging habitat for fish, amphibians and birds.

Not only can invasive aquatic species harm native species by destroying habitat or eliminating food supplies, they can also be vectors of viruses and other diseases to which native species have no resistance.

However, biologists have learned that with early detection they are better able to eliminate and control the spread of these harmful species.

A team of biologists from the Lower Great Lakes Fish and Wildlife Conservation Office in New York is diligently working to detect and prevent the spread of aquatic invasive species in the Erie Canal, and Lake Erie and Lake Ontario drainage basins.

They monitor invasive fish and plant species at several connection points along the Erie Canal, such as where it meets the Genesee River and its intersection with the Seneca Cayuga Canal.

“Early detection at these critical junctions can help us respond rapidly to prevent invasive species from spreading to a new water body,” says Sandra Keppner, the Northeast Region’s aquatic invasive species coordinator. “While we observed the round goby near Utica, New York—over half way from Lake Erie to the Hudson River—the good news is that we haven’t seen any new invasive species.”

Biologists are helping control hydrilla, one of the most rapidly spreading invasive plants threatening recreational fishing and boating. Hydrilla chokes valuable fish habitat, which can reduce oxygen levels and cause fish kills.

The team found hydrilla at the western end of the Erie Canal in 2012. Heavy recreational boat traffic cuts the plants into fragments, which flow along the canal and establish new colonies. The U.S. Army Corps of Engineers has led a collaborative effort over the last two years with the New York State Canal Corporation, the

Service and the New York Department of Environmental Conservation to remove hydrilla in a 15-mile section of the canal, from the Niagara River east to Lockport, NY, which greatly reduced the mass of hydrilla in this area.

Another successful effort in the battle against invasives in the Erie Canal is the control of water chestnut in the western end of the canal before it enters the upper Niagara River. “Back in 2010, we were mechanically removing this plant by the cubic yard, with amounts weighing 100,000 lbs. Local residents would say they saw ‘squirrels running on the water’ when the water chestnut was so dense. Today, we are removing 200–400 plants in an entire summer, using just our hands, which allows us to remove the root along with floating leaves,” says Mike Goehle, deputy manager of the Lower Great Lakes office.

Canal systems are likely here to stay, and will continue to act as super-highways for aquatic species. Because humans, either directly or indirectly, contribute to the arrival of every invasive species into their “new” worlds, outreach and education to create awareness of the problems and how to prevent the spread of invasive species can help make the positive changes needed to protect the health of aquatic landscapes. □

CATHERINE GATENBY and HEIDI HIMES, Fish and Aquatic Conservation, Northeast Region

First Captive-Bred Florida Grasshopper Sparrow Chicks Hatched



RSCF/WWW.RARESPECIES.ORG

The first captive-bred Florida grasshopper sparrow chicks hatched at the Rare Species Conservatory Foundation (RSCF) on May 9 in Loxahatchee, Florida—a huge milestone for one of North America’s most endangered birds.

“This bird is teetering on the brink of extinction. There are probably fewer than 150 left,” says Larry Williams, the Service’s Florida Ecological Services supervisor.

“We’re working with our partners—including the Florida Fish and Wildlife Conservation Commission (FWC)—to save it,” he adds. “This is a huge milestone in those ongoing efforts.”

Dr. Erin Ragheb, FWC’s research scientist, who coordinates and leads all of the field work, calls it “one of many important steps for the recovery of the Florida grasshopper sparrow.”

Florida grasshopper sparrow and chicks.

A grant in 2013 allowed the Service’s South Florida Ecological Services Office to fund preliminary work necessary to initiate a captive-propagation program for this critically endangered sparrow. In 2015, this species was brought into captivity for the first time. Five nestlings from two different clutches and two independent juvenile birds were collected from the wild and taken to RSCF.

“We had two situations where a monitored nest was predicted to fail [one from flooding and one from the loss of the brooding female]. Both of those clutches were collected and brought to RSCF, where they were successfully hand-reared to independence,” says Mary Peterson, one of the Service’s lead biologists on this recovery effort. “Because we believed that hand-reared birds would benefit from a ‘tutor’ bird, we also

brought in two independent parent-reared, juvenile birds.”

Pairs were established in April 2016 when birds began exhibiting breeding behaviors.

Although the first nest attempt by one of the females was unsuccessful, a second brooding female began hatching a clutch of four eggs on May 9.

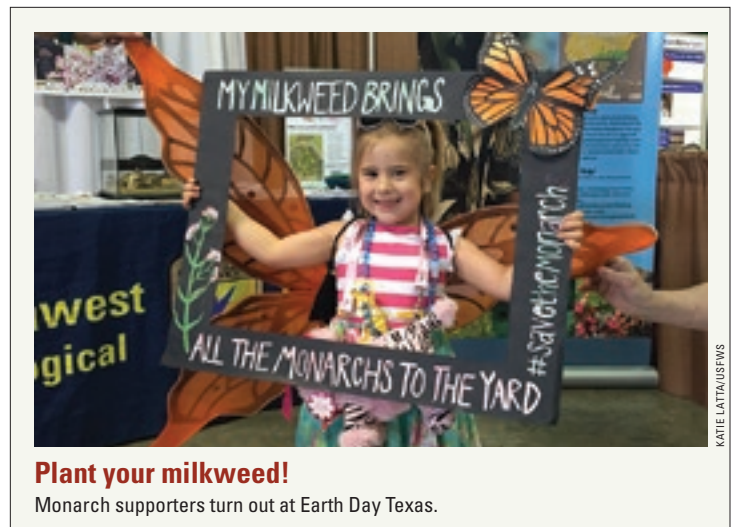
Williams acknowledges that the Service and its partners implemented captive breeding because this is an extremely urgent situation. “This captive-breeding program might buy us time to unravel the compounding factors causing the sparrows to decline so rapidly. We seem to have good habitat that’s not being used. That makes us think the population levels may have dropped so low that they’ve lost the power to recover,” he says. “Below certain population thresholds there can be combinations of predation, disease, genetic inbreeding and gaps in social behaviors that

make it difficult for a species to rebound.”

This promising news in the captive-breeding efforts is welcome, particularly considering preliminary numbers for the 2016 season are looking very bleak. Biologists are expecting a steep decline from the previous two years somewhat stable counts.

“This breakthrough is great news because the Florida grasshopper sparrow couldn’t be more vulnerable,” says Sandra Sneckenberger, the Service’s other lead biologist on this recovery effort. “Unfortunately, storms [in early May] flooded most of the wild birds’ first nest attempts of the season. That brought the need for this captive-breeding program into even sharper focus. The four hatchlings are hopeful signs that bode well for producing options for recovery.” □

KEN WARREN, External Affairs, Southeast Region



KATIE LATTA/USFWS

Plant your milkweed!

Monarch supporters turn out at Earth Day Texas.

New Population of Rare Miami Blue Butterfly Found

Until recently, one of the rarest butterflies in the world was found on the sandy beach berm habitats of only a handful of offshore islands within Key West National Wildlife Refuge in Florida. But Florida Keys National Wildlife Refuge Complex biology staff and partners from the University of Florida and North Carolina State University discovered adult Miami blue butterflies on neighboring Great White Heron National Wildlife Refuge in April, the first time that this butterfly species has been detected within refuge.

The endangered Miami blue butterfly, historically distributed all along the coastline of Florida, is now struggling to avoid extinction. Like other butterfly

species, the Miami blue is dependent on specific host-plants to produce young. This species most often lays eggs on blackbead or gray nickerbean in the lower Keys. Hatched caterpillars will feed on the new growth of the plant, before transitioning into adulthood. Miami blue butterflies depend on new growth of their host-plant to reproduce, and rainfall events allowing for growth have shown to be closely linked to the abundance of these butterflies.

This species has declined drastically over the last 100 years, primarily due to habitat loss along the coastlines of Florida, as well as the application of broad-spectrum insecticides for mosquito control. The Miami blue was even thought to be extinct

A Miami blue butterfly at Great White Heron National Wildlife Refuge.

until a small population was discovered at Bahia Honda State Park in 1999. In November 2006, this species was discovered by Service biologists on Boca Grande Key, 12 miles west of the City of Key West within Key West Refuge. The population at Bahia Honda State Park has since disappeared, but the Key West Refuge population remains.

The two adult Miami blue butterflies detected at Great White Heron Refuge were fluttering on host-plants, one of them laying eggs as it was spotted. Eggs were also found on host-plants along the beach berm of several additional islands within Great White Heron Refuge. This discovery occurred while the adult densities of Miami blues were at their highest levels on their core islands within Key West Refuge.

Although this species has likely been present in low densities on Great White Heron Refuge for many years, previous monitoring efforts on these islands had not detected this species. This exciting discovery may expand the range of the Miami Blue beyond the few isolated islands west of Key West, and will likely renew the search efforts for this species across the Florida Keys and select areas of South Florida.

Identifying these islands as habitats that are capable of supporting the Miami blue butterfly allows biologists to better understand its connectivity along the Keys. Recovery efforts aim toward restoring a network of these small and potentially connected populations, as a way of increasing their resilience in the face of future habitat losses due to sea-level rise and major storm events.

A successful partnership between Florida Keys National Wildlife Refuge Complex and the University of Florida has increased monitoring of this rare population and learning about the ecology of this species. Efforts to research, breed and establish populations of imperiled butterfly species are currently underway. □

KATE WATTS, Lead Wildlife Biologist, Florida Keys National Wildlife Refuge Complex, Southeast Region



SARAH STEELE CABRERA, BUTTERFLY TECHNICIAN, UNIVERSITY OF FLORIDA

At the Edge of North America, Workshops Offer a New Model for Climate Adaptation



U.S. GEOLOGICAL SURVEY

Throughout Alaska, many communities are struggling to address the threats from climate change. Residents in remote coastal communities are experiencing significant impacts, including damage to homes and other infrastructure. In addition, changes in fish and wildlife abundance, distribution, migration patterns and environmental conditions have impacted how and when people can hunt and gather the foods upon which they depend.

Resource managers are challenged to accomplish their missions under these increasingly dynamic conditions and can benefit from the first-hand experiences and knowledge of those living in this changing environment. The shared challenges united a diverse group of a dozen agencies and

16 Alaska Native tribes in May as they met in Nome to come up with adaption strategies. The Aleutian and Bering Sea Islands, Arctic and Western Alaska Landscape Conservation Cooperatives (LCCs), the Aleutian Pribilof Islands Association and other local partners hosted the first of four workshops to share knowledge, and build local and regional coastal resilience and adaptation strategies.

More workshops are planned for this year, and the results of the conversations will be available to participants, coastal communities and resource managers. The results will also be used to gain attention and support at state and national levels for addressing the realities of climate change in coastal Alaska.

Late freeze, early melts and reduced sea-ice extent disrupt traditional harvest of walrus and other marine mammals. Wildlife distributions change, and travel becomes less predictable and more dangerous for hunters.

While successful climate adaptation will require long-term efforts, the workshop is already having an impact in one community's preparations.

"I have thoroughly enjoyed this rich, in-depth, well-thought-out, informative coastal resilience workshop. There are several topics that were discussed in the two-day event that I will incorporate into our tribe's EPA-Tribal Environmental Plan," says John Henry, Indian Environmental General Assistance Program (IGAP) Coordinator for the Native Village of Unalakleet. □

Great Horned Owls Weathering the Storm



COURTNEY CELLEY/USFWS

One of two owlets in a great horned owl nest in Minneapolis, Minnesota.

As with most species, great horned owl parents will continue to care for their young on the ground, feeding them and protecting them as well as they can. Normally, the best thing you can do if you find baby birds on the ground is to not interfere with Mother Nature; she will take care of them. But because this nest was in a busy park filled with people and domestic animals, staff at the University of Minnesota Raptor Center decided to assist.

The first step to protecting these young owls was to create a sturdy nest structure that could withstand strong storms. The nest also had to be big enough

to provide enough room for the quickly growing owlets. Volunteers trained in nest creation assisted by building a new, reinforced platform. Next, the platform was placed high in a large white pine to protect the owls from the potential dangers of living in such a high traffic area. The tree provides cover, allowing people passing by to view the owls from a safe and respectable distance.

The owlets successfully fledged, so thanks to the Raptor Center for making the nest a success. □

TINA SHAW and COURTNEY CELLEY, External Affairs, Midwest Region

Great horned owls are quite common across nearly all of North America and much of South America. These owls can be found in remote forests, but they can also thrive in urban areas and city parks, even building a nest in a busy park in Minneapolis, Minnesota.

In early March, a storm knocked down the nest and chicks were discovered on the ground. This is a common occurrence for great horned owls because they reuse nests built by other birds and don't make any improvements before moving in.



USFWS

Cleared

Wildlife inspector Art Enriquez checks permits for a Pacific green sea turtle that was on its way to Sea World San Diego from Vancouver Aquarium in Canada, where it rehabbed after being caught in winter storms. From Sea World the turtle was to be released to its home waters in the Pacific Ocean.

Hope in History / 12

Lessons of the feather trade
by KERI PARKER

CITES On Tap / 14

The U.S. will fight for species
popular in commerce
by DANIELLE KESSLER

**EAGLE Spreads
Its Wings / 18**

Bravery and commitment
across Africa
by HEIDI RUFFLER

In Your Face(book) / 20

Social media campaign
in Peru
by LEVI NOVEY

Real Consequences / 24

Wildlife traffickers finding
that U.S. laws have bite
by AMY JONACH

The Fight Against Wildlife Trafficking

*Service continues to
work against activities
threatening the future of
biodiversity*

by MATT TROTT



Wildlife trafficking—the illegal taking and trade in protected species and their parts—continues to grow, with expected and sometimes unexpected consequences.

It threatens the future of many species of wildlife, from some of the most treasured, such as elephants and tigers, to mostly unknown species such as pangolins, the most heavily trafficked mammal in the world, and cone-producing cycad plants, often called “living fossils” because of how long they have been around.

Once a small-scale crime of opportunity, wildlife trafficking has now been taken over by criminal syndicates with plenty of guns and a deadly, organized structure, threatening the security and stability of places such as Central Africa.

The United States plays a key role in wildlife trafficking, as both consumer and transit country and a source of organized criminal networks. Species such as ginseng are also poached right here in the United States.

But it is also in the vanguard of efforts to end wildlife trafficking. The Service takes a leadership role combating wildlife trafficking both here and abroad. Read on to find out how. »

MATT TROTT, External Affairs, Headquarters

Rhino populations have been decimated by poaching.

Demand for their showy plumes drove some egrets to the brink of extinction.



Photographed and Prepared by
J. GURNEY & SON,
106 Ave. des. 10th St. New York.

Hope in History

Lessons of the feather trade can help Service combat wildlife trafficking

by KERI PARKER

Elephants are being killed for their tusks.
(Above) A hat with egret feathers.



For Asia's fashionable rising middle class, few things project wealth and status like "white gold"—elephant ivory. Those who buy ivory, considered a symbol of status and good luck, are often unaware that ivory comes from elephants. If they do know, many don't realize an elephant must be killed before its tusks can be extracted and carved into chess pieces, bracelets and sculptures. They may have been told that elephants shed ivory naturally and it's scavenged from the ground, causing no harm to the elephants themselves.

This lie sounds all too familiar. In the late 1800s, unscrupulous members of the millinery (hat making) industry told fashionable women that the feathers decorating their elaborate hats were shed plumes found on the ground. In reality, few feathers were gathered from molts. Birds were mostly shot to supply the fashion.

The lucrative feather trade drove many North American birds to the brink of extinction as they were killed by the millions for their showy breeding plumage to meet international demand from New York to London to Paris. Feather hunters targeted heron and egret rookeries during the breeding season, leaving behind the skinned carcasses of adults, while chicks were left to die of starvation. And it wasn't just feathers—whole carcasses of songbirds and seabirds decorated the hats of women from all walks of life who were eager to join in the fashion of the day. The volume of the harvest was astonishing—one 1902 record from a London auction house showed sales of 48,240 ounces of heron plumes, which would have required the feathers of nearly 200,000 herons, not counting the chicks and eggs destroyed. Countless millions of birds were killed.

The pictures and stories of modern day wildlife trafficking are similarly grim: Tens of thousands of dead pangolins, seized en route to China. Tons of elephant tusks, mingled with illegal drugs and guns. Rhino carcasses scattered across the African savannas. A wild tiger—one of the few remaining in the world—found dead in

the trunk of a smuggler's car. The images are powerful, and with the stakes so high, the crisis seems hopeless. The truth is, if you scratch the surface of American history, you'll see similar events across our own landscape not long ago.

Turn the clock back just 100 years and you'll find shocking stories of wildlife decimated for commercial profit here in the United States, in an era known as the "Age of Extermination" that was littered with the carcasses of migratory birds. And if you look closely at the steps conservationists took to turn that crisis around, you'll see that the path forged to the modern-day system of conservation laws and ethics tells us that a hopeful future is possible for wildlife imperiled by trafficking. Today, whenever you see an egret in North America, it's a reminder that there is hope for elephants.

The President's National Strategy for Combating Wildlife Trafficking is founded on three priorities: reducing demand, strengthening enforcement and expanding international cooperation. The Service and partners have embraced these principles as solutions to reverse the steep downward trend of elephants and other species threatened by wildlife trafficking. But, is there hope these priorities will work? The lessons of the feather trade provide evidence of success, especially when it comes to demand reduction.

When women learned the truth behind the plume trade, they organized among themselves to stop the killing of wild birds for fashion in what was perhaps the world's first wildlife demand reduction campaign. In the United States, influential Bostonians Harriet Hemenway and her cousin Minna Hall hosted tea parties for society women, encouraging their peers to boycott the fashion of feathered hats in favor of ribbons. Their efforts ultimately led to the formation of one of the first Audubon societies. Groups like theirs organized fundraisers, orchestrated lecture tours on conservation and even audited the millinery industry.

The determination of early Audubon societies and others influenced the passage of the Lacey Act in 1900, which prohibited interstate movement of protected species taken in violation of state laws. The trend of elaborate feathered hats subsided by World War I, thanks in no small part to their efforts. This year the nation celebrates the one hundredth anniversary of the 1916 Migratory Bird Treaty with Great Britain (on behalf of Canada). With the passage of the Migratory Bird Treaty Act two years later in 1918, the United States affirmed that the true value of plumes is in the thriving wild populations of egrets and other migratory birds that grace national wildlife refuges today.

The Service and its partners are following in the footsteps of Hemenway and Hall by working to drive down desire for ivory. Through outreach efforts that include two nationally profiled Ivory Crushes, the Service is raising awareness that when you buy ivory, you have no way of telling whether it came from a legal or illegal source and as a result, could be the product of violent and destructive poaching. As awareness grows, so does the understanding that ivory is not white gold—it is an elephant's tusk that society should not value unless it's attached to an elephant.

During the centennial of the Migratory Bird Treaty, the nation can remember that conservation success grew from the ashes of the Age of Extermination. Expanding international cooperation, reducing demand for illegally traded wildlife and strengthening enforcement transformed the story of migratory birds from one of extinction and loss into a proud conservation legacy—a network of protected areas and a system of laws, scientific monitoring and international cooperation that is the gold standard for wildlife conservation across the globe. The global effort to conserve elephants, rhinos, tigers, pangolins and all wildlife imperiled by trafficking can end the same way.

KERI PARKER, International Affairs, Headquarters

CITES On Tap

The United States will work to protect pangolins, African grey parrots and chambered nautilus, fight wildlife trafficking and more

by DANIELLE KESSLER

The chambered nautilus is a slow-growing, long-lived animal that can take up to 15 years before being able to reproduce.





This fall, delegates from around the globe will meet at the world's leading forum to debate and discuss issues related to international wildlife trade. The 17th meeting of the Conference of the Parties (CoP17) to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, or CITES (pronounced site-eez), will convene in Johannesburg, South Africa, from September 24 to October 5.

Nearly two years ago, the United States began the public process to gather and evaluate information related to species involved in international trade. Two years of hard work culminated in the submission of 11 proposals and the co-sponsorship of several others to be considered by CITES member countries at the meeting. Here is an overview of the conservation actions that the United States will be working toward at CoP17.

Pangolins hold the unfortunate title of most heavily trafficked mammal in the world, with more than 1 million poached from the wild in the last decade alone. The silver, or perhaps scaly, lining is that countries where pangolins can be found are leading the charge to protect their native species. Thanks to the combined efforts of Vietnam, India and the Philippines, all four Asian pangolin species will be considered for inclusion in Appendix I (An explanation of the CITES Appendices is on p. 17). Similarly, Nigeria and Senegal, along with other African countries, have proposed to include all four African pangolin species in Appendix I. If adopted, these proposals would halt commercial trade in these species. The United States has co-sponsored all of these proposals and will work hand-in-hand with these countries to gain support for these proposals, a critical step in stopping the illegal trade in pangolins. >>

Stay Up-to-date

To get the latest news on CoP17, bookmark the International Affairs webpage at <fws.gov/international/cites/cop17>, like USFWS International Affairs on Facebook, or follow @USFWSIntl on Twitter.

The African grey parrot—a highly intelligent bird that is popular as a pet—has experienced significant population declines in the wild. In Ghana, where African greys were once common and widespread, populations have declined by 90 to 99 percent since the early 1990s. Over the past 25 years, exports of more than 1.5 million wild African grey parrots from 18 range states have been reported, making them one of the most traded of all CITES-listed parrots. Gabon, a range country, has submitted a proposal to move the African grey parrot from Appendix II to Appendix I, placing stricter controls on imports and exports and effectively eliminating commercial trade. The United States is proud to offer its support and co-sponsorship to achieve this goal.

CITES FAQ

Not sure what CITES is or how it works? Visit the International Affairs website at <fws.gov/international/cites/how-cites-works.html>

protections for three native turtle species and 44 species of Asian freshwater turtles by working in collaboration with China and Vietnam. Following on these successes, the United States will co-sponsor, along with several African range states, a proposal submitted by Togo to include six species of African and Middle Eastern softshell turtles in Appendix II to limit illegal and unsustainable trade in these species. These species are traded mainly for consumption in East Asia. Evidence shows that when protections for freshwater turtles are strengthened in one region, demand in other regions for unprotected species may increase. The United States supports a strategic, global approach to freshwater turtle conservation to stay ahead of this trend and curb this boom-and-bust cycle. Chameleons, in demand for the pet trade, are also susceptible to a boom-and-bust pattern, and the United States has put forward a proposal to include 21 species of African pygmy chameleons in Appendix II. If successful, this proposal will bring all chameleons under CITES protection.

The chambered nautilus, with its beautifully intricate shell and exquisite coloring, is traded in large quantities, mostly as jewelry and shell products. The United States has long been concerned about the impact that this trade may have on the six species in the nautilus family. Nautiluses are slow to reproduce, leaving them particularly vulnerable to overfishing. The United States, Fiji, India and Palau have put forward a proposal to include the nautilus family in Appendix II to ensure its survival in the wild. Another marine species—the devil ray—is in demand for its gill plates, which are thought to have medicinal properties. The United States has co-sponsored a proposal submitted by Fiji to include devil rays in Appendix II.

Of the more than 35,000 species protected under CITES, nearly 30,000 are plants. The United States has put forward a proposal to transfer three species of fishhook cacti, collected for the horticulture trade, to Appendix I from Appendix II. The United States also submitted proposals to increase the protection of agarwood and holy wood.

In addition to the animal and plant proposals, the United States, along with South Africa, has put forward a document to encourage youth participation in CITES. Youth engagement is a powerful tool to generate new and innovative ideas while educating and connecting the next generation of conservation leaders. The Service is a partner on the Youth Forum for People and Wildlife, which will take place immediately before CoP17. The Youth Forum is an online community and in-person conference for young leaders to learn, share and connect with conservationists around the globe.

Aligning with the President's Executive Order on Combating Wildlife Trafficking, the United States has submitted a document on global efforts to combat wildlife trafficking, including a recommendation that CITES member countries close their domestic ivory markets. The United States and China have agreed to take significant and timely



steps to halt the domestic commercial trade of ivory and it's now time for the rest of the international community to join that effort. In a similar vein, the United States submitted a document focused on reducing demand for illegal wildlife products with a draft resolution that, if adopted, would urge countries to implement campaigns that would raise consumer awareness of the impact of illegal wildlife trade on wild populations and influence purchasing decisions.

While these species and issues are among the U.S. priorities, this is only a sampling of what will be discussed at the meeting. A record 175 documents were submitted for consideration at CoP17, and the United States will engage the public as it formulates positions on this extensive agenda. Elephants, rhinos, lions, sharks and rosewood are just a few of the other animal and plant species expected to make headlines. □

DANIELLE KESSLER, International Affairs, Headquarters



TIKKI IRWOOD TRUST

(Left) Pangolins, or scaly anteaters, are covered with overlapping scales made of keratin, the same protein that forms human hair and finger nails. (Below) Wild African grey parrots in a shipping crate.



TERESE HART/CREATIVE COMMONS

CITES Appendices

Species covered by CITES are listed in three appendices according to the degree of protection they need.

Appendix I includes species threatened with extinction and provides the greatest level of protection, including restrictions on commercial trade.

Appendix II includes species not necessarily currently threatened with extinction, but for which trade must be controlled in order to avoid overutilization that may threaten them with extinction.

Appendix III contains species that are protected in at least one country, which has asked other CITES countries for assistance in controlling the trade in that species.



Four men, including a police officer (second from left) were arrested with two live pangolins.

EAGLE Spreads Its Wings

Bravery and commitment make a dent in criminal trafficking networks across Africa



The white-bellied pangolin is one of three species of pangolin that can be found in Uganda.

by HEIDI RUFFLER | Large-scale poaching and trafficking of wildlife and wildlife products is threatening the very existence of elephants, rhinos, great apes, pangolins and other imperiled species across large parts of Africa. Everywhere these animals occur, laws and treaties are in place to protect them. In reality, however, enforcement is often weak and provides few deterrents to those engaged in wildlife crimes.

In 2003, the Last Great Ape Organization (LAGA) was launched in Cameroon, with support from the Service, to use innovative methods to fight wildlife crime. Within less than a year, LAGA's founder, Ofir Drori, and a growing in-country team helped Cameroon shift from a baseline of zero wildlife prosecutions to the arrest and prosecution of one major wildlife dealer per week—a rate that has been sustained ever since. LAGA's model encompasses investigations, arrest operations, legal follow-up and media activities—all in close collaboration with relevant government agencies. This model has proved so successful that it is now being replicated, as part of the EAGLE (Eco Activists for Governance and Law Enforcement) Network with support from the Service and a growing number of partners, in nine countries across Central and West Africa. In each of these countries, member organizations of the EAGLE Network collaborate with government agencies and others to improve law enforcement and cross-border collaboration in the fight against transnational wildlife crime. To date, more than 1,000 significant wildlife traffickers have been jailed through these efforts.

In early 2016, one of the EAGLE Network's member organizations stood out—not just for its effectiveness in

cracking down on wildlife crime, but also for the bravery and commitment of its founder, Vincent Opyene, and his dedicated team of activists.

In two months, the Natural Resource Conservation Network, the executing organization of EAGLE in Uganda, achieved impressive results, including the arrests of:

- Three people involved in alleged cross-border trafficking of elephant ivory from Tanzania to Uganda, including one soldier attached to Uganda's Special Forces Command. The case also resulted in the confiscation of \$40,000 in counterfeit \$100 bills;
- Two people, one a military officer attached to the state house, with 12 elephant tusks;
- Two people with 120 protected chameleons;
- A man with almost 90 pounds of hippopotamus ivory;
- A Congolese man carrying four elephant tusks and a fake Ugandan identification card to facilitate cross-border activities;
- Four people, including one police officer, with two live giant pangolins. The search continues for pangolin scales they had allegedly tried to sell.

These types of achievements put a significant dent in the operations of criminal trafficking networks and send a loud message to poachers, traffickers and consumers alike. The EAGLE Network's reach continues to grow and strengthen, providing inspiration and hope that the poaching and wildlife trafficking crisis in Africa can be stopped once and for all. □

HEIDI RUFFLER, International Affairs, Headquarters

MENTOR Grad Fights for Wildlife

Vincent Opyene is a Ugandan lawyer who started his career as a state prosecutor with the Director of Public Prosecution in 1999 and as an attorney and specialized wildlife crime prosecutor with the Uganda Wildlife Authority in 2006. In 2008 and 2009, he formed part of the Service's first MENTOR (Mentoring for ENvironmental Training in Outreach and Resource conservation) Program, focused on bushmeat in East Africa. MENTOR programs bring together teams of future African conservation leaders to act upon major threats facing wildlife populations by providing academic and field-based training, mentoring, experiential learning, and project design and implementation. After completing the MENTOR fellowship program, Opyene and his cohort founded the Bushmeat-free East Africa Network (BEAN), and he formed his own law firm in Uganda. In 2011, the Service provided funding for Opyene to travel to Cameroon to learn about LAGA's approach to wildlife law enforcement. With support from the Service, Opyene founded the Natural Resource Conservation Network in 2014, which has since become part of the EAGLE Network.



“Pets are the principal cause of wildlife trafficking in Peru.” (Right) Peru’s endemic and critically endangered yellow-tailed woolly monkey.



In Your Face(book)

Using social media to pilot an anti-wildlife trafficking campaign in Peru | by LEVI NOVEY

Peru is a country on the rise. In addition to a growing economy and increased influence in South America, in recent years Peru has become better known as a culinary powerhouse and a tourist destination. Featuring a variety of fascinating cities, cultures, delicious foods and such well-known archaeological sites as Machu Picchu, Peru has much to recommend itself. It is also a biodiversity hotspot, with coastal, mountain and Amazon Rainforest ecosystems that are home to a vast diversity and number of plant and animal species. But many are under threat.

While the plight of elephants and rhinos has been the focus of many anti-wildlife trafficking campaigns and awareness-raising efforts, many species in the Western Hemisphere are also imperiled by illegal trade. Some of them are songbirds and parrots, such as the scarlet macaw. Others include ocean animals such as sea cucumbers and seahorses. In Peru, the endemic and critically endangered yellow-tailed woolly monkey is among the numerous species that could soon be lost because of the country's rampant wildlife trade.

The good news is that the Service has been working with partners in Peru to develop a national strategy to combat wildlife trafficking and protect its species. In recent years the Service has supported the Wildlife Conservation Society (WCS) in Peru as a leader of these efforts.

WCS began its work by collecting more data about wildlife trafficking in Peru. The goal was to know how many species were traded, identify markets, understand trade routes and learn about public perceptions toward the trade. >>

Working with more than 10 years of government data and new research, WCS identified at least 335 species of animals that are being traded. This number includes 188 bird, 90 mammal, 41 reptile and 10 invertebrate species. The group determined that Peru had at least 41 major wildlife markets in 10 cities. Lima, Peru's capital city, alone was documented to have 18 markets.

But WCS also wanted to talk to the Peruvian people and learn more about how they viewed their own involvement in the trade, as well as how they understood its impact, so it conducted two surveys.

While WCS was able to speak with only 65 people in six communities who had some involvement in the supply-side of the trade, a couple of key findings stood out in the first survey: 73 percent of the respondents said they would stop taking animals from the wild if they had access to other, more profitable economic activities, and 60 percent said they were not familiar with laws that restricted the take of wildlife.

For the second survey, 554 people in four major Peruvian cities were surveyed. Among the findings: 70 percent of respondents had kept wildlife as pets, 50 percent of respondents were not aware of laws relating to wildlife, and 85 percent disagreed with the sale of wild animals in markets.

While there are a lot of potential take-aways from this limited data, it is overwhelmingly clear that most Peruvians love wildlife, but also lack knowledge about the extent of the wildlife trade problem and its threat to Peru's species. There is also a general lack of awareness about the laws in place to protect animals.

Working with partners at Peru's National Forestry and Wildlife Service (SERFOR), WCS understood that as part of the national strategy to combat wildlife trafficking, it was critical to have a public engagement campaign to help Peruvians become better informed of the problem, and their role in protecting Peru's wildlife.



(Above) "It's illegal to sell wild animals in markets."
(Left) "They kill the moms, so they can sell their young."



an image of a bird with the text, "2000 birds can be sold illegally in Peru...in just one day"; and an image of a baby monkey with text that said "They kill the moms, so they can sell their young."

When combined, 247,634 people saw at least one of the Facebook posts looking at WCS's data alone (SERFOR's data are not included in this total). Peru has a population estimated at 31 million, so it's hoped that an expanded campaign could make a deeper and important impact.

"In general I was surprised by people's interest and response," says Diego Coll, communications coordinator for WCS in Peru.

"Now it's more evident to us the things that we have to do. The topic of trafficking has a lot of potential to be tackled from a communications perspective, in part because it's easy to generate empathy

To get some initial data of what might work, they designed a pilot campaign that took place on Facebook over five weeks in November and December of last year. Graphics were designed with simple messages aimed to inform and provoke interest among Peruvians on the topic of illegal wildlife trade. Fourteen graphics in total were shared by WCS and SERFOR, showcasing charismatic Peruvian species with key facts. Some examples include a graphic with text that said, "45 thousand live animals were confiscated between 2000-2012" with an image of Peru's well-known but threatened Humboldt penguin;

with animals and also because in a campaign related to the trafficking of animals, we can say without fear of being wrong that the solution to the problem is people—and that we all can be part of the solution,” he says. “Going from there it’s much easier to generate more appreciation and engagement. It’s clear if we attack and diminish the demand for wild pets, we will be closer to ending the problem. If there’s no demand, there’s no supply.”

Statistically speaking, the message about killing moms of animals to get their young had the highest impact and alone reached 43,000 people and was shared more than 340 times.

“It was an excellent combination between a strong message—something concrete, emotional—and a high-impact image,” Coll says. “The thing that we are always trying to do is make sure is that the messages have substance, but also are based in real data. Finding the balance between the emotional and the data is definitely a challenge.”

In December, WCS celebrated an important milestone: After years of work, 24 government and nongovernmental institutions endorsed Peru’s new national strategy to combat wildlife trafficking. They signed an “act of commitment” to help implement it over the next five years. The plan incorporated WCS’ research and coalition building to initiate a comprehensive strategy that would streamline collaboration, law enforcement, data collection and public engagement. Thanks to WCS, Peruvian law enforcement agencies for the first time have knowledge of major land and water trafficking routes, markets, and a centralized database to store information.

Through a grant from the Service, WCS is working to strengthen the capacities of Peruvian government agencies to implement multi-agency cooperative law enforcement protocols and use consistent procedures for controlling wildlife trafficking in Peru and in the Ecuadorian border area. A related goal is to generate a model for reducing wildlife trafficking

on a more regional scale. These factors, including the recently added presence of a Service Law Enforcement attaché based in Peru, have led to results. In January, for the first time in Peru, following an investigation and response from SERFOR, two men who were caught selling an ocelot in Lima were immediately charged and sentenced for the crime.

It’s a good start to some long work ahead for WCS, SERFOR, the Service and many

other partners. Combating the illegal wildlife trade in Peru will help protect the country’s beloved and treasured species. It appears that many Peruvians are ready to help be a part of the solution, but first they must be informed of the realities of the challenge to do so. □

LEVI NOVEY, International Affairs, Headquarters

Service launches partnership with JetBlue to combat wildlife trafficking



CHRISTINA MORRIS/USFWS

In March, the Service and JetBlue (staffs shown above after their meeting on World Wildlife Day, March 3) announced a new partnership designed to get more people to understand the stakes in the wildlife trafficking crisis, and more importantly, how they can help. A significant portion of JetBlue’s 32 million annual passengers are headed to Caribbean destinations, where protecting the magic of a delightful island, sun and beach experience also means protecting the region’s biodiversity.

The Caribbean is full of endemic species—approximately 6,500 plants, 150 birds, 470 reptiles, 40 mammals, 170 amphibians and 65 fish are found nowhere else in the world. The growth of illegal wildlife trade for pets, food, clothing, décor and souvenirs has put many species at risk, and makes education and demand reduction critical.

The Service is working with JetBlue to produce a short on-board film to serve as the backbone of an educational campaign for JetBlue customers. The goal is to make an upbeat film that features several conservation projects in the Caribbean, where local leaders serve as ambassadors for important Service messages. They will talk about why protecting their nation’s treasured wildlife is so important, and how residents and tourists can enjoy their trip while also ensuring that they do not buy wildlife or wildlife products that are illegally sourced. The film will feature projects involving charismatic wildlife, including sea turtles, coral reefs and blue and gold macaws.

Look for the film to debut on flights and online in the fall.



Real

*Wildlife traffickers finding that
U.S. laws have bite*

by AMY JONACH

Consequences



For the Service, law enforcement is another means of conservation, with special agents, wildlife inspectors and forensic scientists working to combat wildlife trafficking internationally and domestically.

“Stopping wildlife trafficking continues to be a huge conservation priority,” says Service Deputy Chief of the Office of Law Enforcement Edward Grace. “It takes all of us to protect endangered species, here and around the world. Service wildlife inspectors, special agents and the support staff work tirelessly to stop criminals who financially thrive at the expense of the world’s natural resources.”

Service special agent attachés are stationed in U.S. embassies around the world in countries that are both abundant in wildlife and in wildlife crime. They build capacity in their host country by coordinating investigations, providing training, and sharing resources needed to result in successful arrests and prosecutions.

Here at home, Service special agents investigate wildlife crimes and refer criminals for prosecution; wildlife inspectors ensure wildlife shipments comply with U.S. and international wildlife protection laws; intelligence analysts work with Interpol and other agencies, providing leads and gathering data in support of criminal investigations; forensic scientists analyze wildlife specimens for species identification, cause of death and other factors to assist investigations, in the only lab in the world dedicated to crimes against wildlife; and digital forensic special agents and examiners analyze electronic devices and apply advanced

surveillance techniques to support field officers with complex investigations.

Service wildlife inspectors are the nation’s front-line defense against the illegal wildlife trade. Working at major ports across the nation, inspectors use their technical expertise in wildlife identification, document fraud and smuggling techniques to detect and deter illegal wildlife moving in cargo, international mail or transported with passengers. The inspection program has expanded to include seven wildlife detector dogs to “sniff out” illegal wildlife. These dogs, with their wildlife inspector canine handlers, have exponentially increased the number of shipments that can be inspected in a day and have found illegal wildlife that may not have been discovered without their highly trained sense of smell. While inspectors have always worked cooperatively with other agencies, the need to focus even more resources on illegal trade has led to the deployment of nationwide coordinated inspection “blitz” operations that have cracked down on the illegal shipping of reptiles, ivory and seafood.

Across the country, Service special agents have succeeded in putting wildlife traffickers behind bars. The following operations, led by the Service and often worked jointly with other federal, state, local, tribal and international law enforcement partners, are just a few examples of the work to combat wildlife trafficking.

Operation Crash is a long-term, undercover investigation created in response to the international poaching and smuggling syndicates. This complex investigation continues to capture and prosecute criminals who engage in rhino horn and elephant ivory trafficking, and since the initial “take-down” in February 2012, it has resulted in 41 arrests, 30 convictions and the seizure of smuggled tusks and horns with a street value in excess of \$75 million. Prison sentences have totaled more than 32 years; total fines, restitution and forfeitures have resulted in almost \$7.5 million; and agents

have seized rhino horns, elephant ivory and millions of dollars in cash, cars, gold and jewels. In addition to crimes against wildlife, the defendants also have been charged with money laundering, tax evasion, falsifying documents, mail fraud and bribery.

Operation Pongo in the Service’s Pacific Region began when a Service wildlife inspector discovered a mandible of a protected helmeted hornbill in an international mail package. The investigation discovered that since 2004, two Malaysian nationals had smuggled \$95,000 worth of orangutan skulls bear claws, helmeted hornbill skulls and more. The subjects were convicted and each sentenced to six months in prison, one year of supervised release and 240 hours of community service. They were also fined \$25,000 in total for smuggling endangered wildlife into the United States.

Operation Freebird in the Service’s Southwest Region was a domestic and international covert investigation that focused on the illegal selling of migratory bird species. On several occasions, undercover agents purchased great horned owls, sharp-shinned hawks and a red-tailed hawk, both alive and dead. All four subjects pleaded guilty, admitted to the unlawful selling of migratory birds and were sentenced to a total of seven years of probation. They also paid \$7,000 in restitution to a San Antonio, Texas, wildlife rehabilitation facility.

Operation Crouching Dragon in the Service’s Midwest Region was a four-year investigation that led to a Minnesota university professor, also the owner of an online antiques business, being sentenced to three years of probation, 150 hours of community service and 12 days in prison. He was also ordered to pay \$500,000 to the Lacey Act Reward Fund, which the Service uses to reward those who provide information about wildlife crimes and to pay the costs incurred in caring for fish, wildlife or plants that are being held as evidence in ongoing investigations. The investigation started after a Service >>

(Above left) Pathologist Rebecca Kagan at the U.S. Fish and Wildlife Service Forensics Laboratory. (Left) Evidence seized by Service special agents during searches in Operation Crash. Items shown include rhino horns and parts.



Supervisory Wildlife Inspector Leilani Sanchez holds a mask that was used to conceal ivory.

CATHERINE J. HIBBARD/USFWS

wildlife inspector discovered an outbound shipment of undeclared and mislabeled elephant ivory. Special agents discovered an extensive smuggling scheme in which the professor would purchase elephant ivory and rhinoceros horns, beads and ceremonial libation cups in the United States, and then smuggle the items to his parents in Shanghai, China. His parents would sell the items at Chinese auction houses and wire the proceeds back to the professor to make additional purchases. The value of the illegal wildlife products smuggled and sold was between \$1.2 million and \$1.5 million.

Operation Herpsaspetz in the Service's Southeast Region was a two-year, multi-jurisdictional, international, undercover operation that involved the illegal take, sale and smuggling of North American wood turtles from the United States through the U.S. Postal Service. Service special agents targeted a conspiracy to smuggle \$345,000 worth of illegally caught turtles from Pennsylvania, through Louisiana and California, and ultimately to Hong Kong. Over the course of the investigation, special agents executed 10 search warrants, seized \$134,000 in cash and indicted seven subjects (two co-conspirators were arrested during a controlled delivery by Hong Kong customs). Two of the seven subjects still await sentencing, while the extradition process has begun for the alleged kingpin. So far, the co-conspirators have been sentenced to a total of 6.5 years of prison and 15 years of probation. They were also ordered to pay \$44,000 in fines and restitution.

Operation Nanook in the Service's Northeast Region uncovered 250 narwhal tusks that were smuggled into the United States and illegally sold to customers in several states. A New Jersey man was convicted on six counts including conspiracy, smuggling and money-laundering violations associated with buying and illegally importing narwhal tusks into the United States. He had purchased approximately 33 narwhal tusks over a six-year span from a Canadian trafficker who concealed the

tusks under a truck or trailer to smuggle them across the border and then shipped the illegal tusks as part of the trafficking scheme. The New Jersey man was sentenced to 33 months in prison; fined \$7,500; and ordered to forfeit \$85,089, six narwhal tusks and one narwhal skull. Two additional U.S. defendants, who were part of the conspiracy, have pleaded guilty and await sentencing. The Canadian trafficker was extradited to the United States and is pending trial for money laundering. The market value of the smuggled tusks was more than \$2 million.

Operation Brown Down in the Service's Mountain-Prairie Region was an investigation of five individuals who poached almost 100 deer in Kansas, including on Quivira National Wildlife Refuge. Most of the deer were trophy class bucks that were unlawfully shot at night with the aid of spotlights. One of the men stole a 20-foot trailer and two farm tractors with implements, which were recovered by Service special agents. The "ringleader" pleaded guilty to transportation of stolen vehicles and conspiracy to violate the Lacey Act. He was sentenced to four years of probation and ordered to pay \$11,894 in fines and restitution.

Operation Syndicate in the Service's Alaska Region was a complex investigation that resulted in nine federal convictions, 16 months of prison, 28 years of probation, \$208,250 in fines, \$62,500 in restitution to the Noatak National Preserve and seizures of more than \$200,000 worth of items, including 28 illegally killed wildlife trophies and a private aircraft. The investigation discovered that the host of the cable television hunting show, *Syndicate Hunting*, and the other individuals, illegally guided and hunted in the preserve, where they killed dozens of big game animals including grizzly bear, moose, caribou and Dall sheep.

Operation River Wonders in the Service's Pacific Southwest Region involved a four-year manhunt for a fugitive who kept changing his appearance and took other steps to avoid detection and arrest as he

NADINE SIAK/USFWS

traveled throughout Europe, to Israel and finally to Mexico where he was arrested and extradited to the United States. In 2009, the subject was indicted and subsequently arrested on felony wildlife trafficking, predominantly involving *Arapaima gigas*, a protected fish, as well as smuggling and trafficking in piranha and freshwater stingrays. While the subject was free on bond, Service special agents discovered that he continued to smuggle protected species. A superceding indictment was filed, and

the subject fled the country. In 2015, he was arrested by the Mexican Federal Police near Metepec, Mexico, extradited to the United States, and sentenced in U.S. federal court to one year in prison and required to terminate his company's corporate status in California.

Criminals who commit crimes against wildlife and plants continue to create new ways to evade law enforcement and ultimately prosecution. The Service's Office of Law Enforcement works with

domestic and international law enforcement and judicial partners to stay one step ahead of these criminals. These arrests, extraditions and sentences prove to traffickers that breaking wildlife law has real consequences. □

AMY JONACH, Office of Law Enforcement, Headquarters



A wildlife detector dog trains, with its wildlife inspector canine handler, to "sniff out" illegal wildlife.

Grace and Operation Crash Honored

Law Enforcement Deputy Chief Edward Grace and his Operation Crash team have been named a finalist in the "Oscars" of government service. They were nominated in the Homeland Security and Law Enforcement category of the Samuel J. Heyman Service to America Medals, which highlight the best work of the country's dedicated public servants.

Recognizing early on the growing dangers of wildlife trafficking, both to biodiversity in general and to the future of some of the world's most celebrated animals, Grace began planning Operation Crash, named after the collective term for a group of rhinoceroses.

So far, the ongoing nationwide criminal investigation, led by Grace and the Service's Office of Law Enforcement, has resulted in 41 arrests and 30 convictions. The investigation, involving agents from multiple regions and supporting federal agencies, have also seized more than \$75 million in rhino horn and tusks of elephants.

"For a long time, wildlife crime wasn't treated as serious, even though it had become a lucrative business tied to organized crime," Grace says. "We are now bringing these traffickers to justice."

"It's an honor to do this work that I'm passionate about, and I believe it's making a difference," he adds. "If 20 years from now these species are surviving, I'll know that the U.S. Fish and Wildlife Service helped make that happen."

The winners will be named in September.

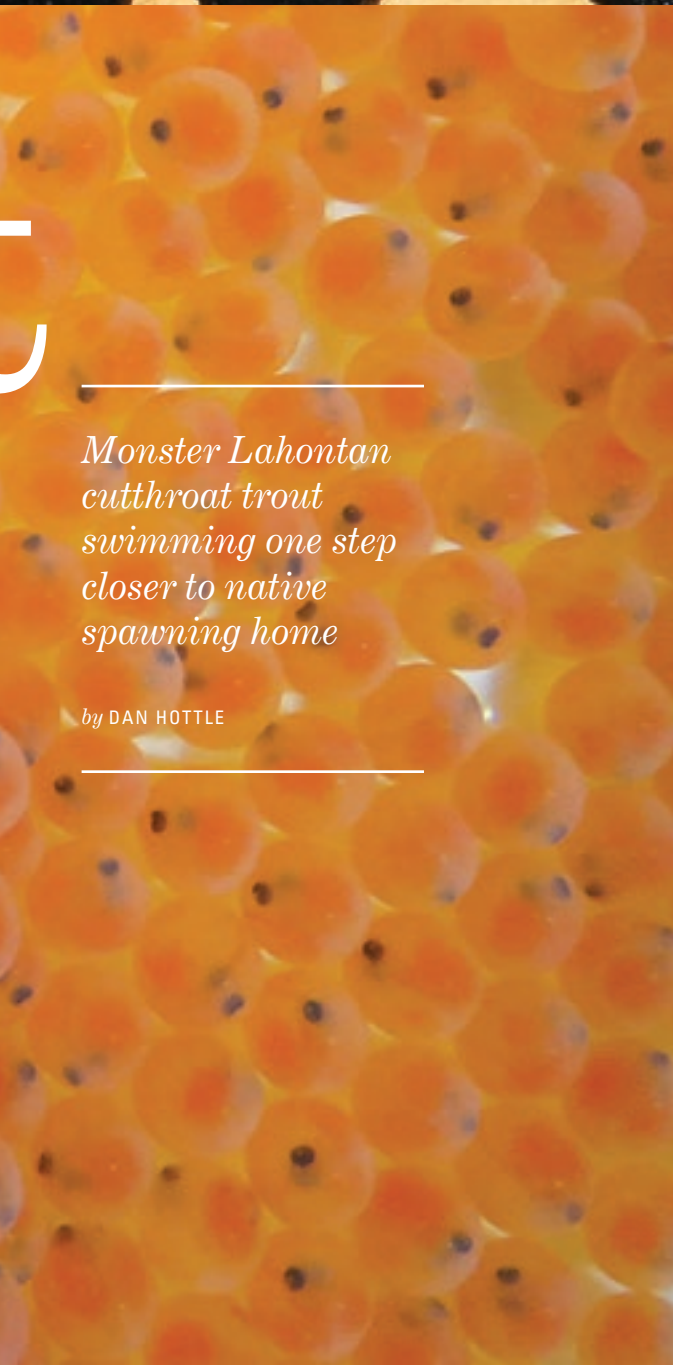


A juvenile Pilot Peak Lahontan cutthroat trout at just a few months old. (Below) Eggs from the Pilot Peak strain of Lahontan cutthroat trout at 14 days.

a Trout *to* TouT



USFWS



USFWS

*Monster Lahontan
cutthroat trout
swimming one step
closer to native
spawning home*

by DAN HOTTLE

A welcome increase in precipitation throughout the drought-weary Sierra Nevada range this spring, combined with a growing understanding of the reproductive habits of one of the most unique species of inland trout to ever be brought back from the brink of extinction, has both anglers and biologists alike very enthusiastic.

Improved water flows in Nevada’s Truckee River between Lake Tahoe and Pyramid Lake are enabling the migrating Pilot Peak strain of Lahontan cutthroat trout to travel farther upstream to spawn in their native habitat than the fish have been able to do on their own in nearly a century.

For more than 20 years, biologists from the Service’s Lahontan National Fish Hatchery Complex and partnering Pyramid Lake Paiute Tribe have worked to restore these fish to Pyramid Lake and the Truckee Basin. This season’s river conditions are providing valuable research opportunities for hatchery staff to study the species’ behavior in an improved, in-stream spawning habitat and better focus their collective management of this newly established reproductive population.

“From the outset of the program, our goal has been to link the health and connectivity of the Truckee River watershed with the wild native population of Pilot Peak Lahontan cutthroat trout in Pyramid Lake,” said Lisa Heki, the project leader at the hatchery complex. “Helping the species migrate the full length of their historic range more than 120 miles from Pyramid to Lake Tahoe is our ultimate goal, and would be the culmination of more than 20 years of restoration work.” >>



Maintenance worker Dan Boone rinses Lahontan cutthroat trout eggs during spawning operations at the Lahontan National Fish Hatchery Complex in Gardnerville, Nevada (Right) Fisheries biologist Erik Horgen holds a spawning-age Pilot Peak Lahontan cutthroat trout at the Lahontan National Fish Hatchery Complex's Marble Bluff Fish Passage Facility near Pyramid Lake.



Since 1995 the complex has reared a wild broodstock of Pilot Peak Lahontan cutthroat trout at the Gardnerville, Nevada, hatchery with a focus on preserving the species' genetics to enhance conservation and recreational opportunities in Pyramid Lake, Lake Tahoe and Walker Lake. Working alongside the tribe, Service biologists began stocking the strain back into Pyramid Lake in 2006.

After several seasons of tagging, tracking and monitoring efforts, spawning-age fish were observed following their historic natural migration route into the lower Truckee from Pyramid Lake for the first time in more than 80 years in 2014. Their first attempt brought them nearly three miles upstream to the complex's Marble Bluff Fish Passage Facility, where biologists were able to conclusively document natural reproduction even in the midst of a taxing five-year drought.

“Because of these fish returning in abundance, we now have revenues of over \$1 million coming into the tribe...”

Albert John, director of the Pyramid Lake Paiute Tribal Fisheries

This year the migrating Pilot Peak trout, along with endangered Pyramid Lake cui-ui (a large sucker fish endemic to the lake), are being allowed to progress through the Marble Bluff facility another seven miles upstream to Numana Dam within the reservation boundaries of the Pyramid Lake Paiute Tribe. As the fish pass through, biologists are collecting the trout and implanting internal acoustic transmitters that will relay additional migratory information back to hatchery staff.

If optimal water conditions continue to facilitate natural reproduction in this stretch of river, the staff will evaluate the data they collect and determine how much farther up the Truckee River they can help the fish swim next year.

The hope is that the Pilot Peak trout will soon begin to spawn in the same

historic waters as they did as far back as the end of the last ice age, more than 10,000 years ago.

“This is an extremely important fish to the Pyramid people. Relying on the native cui-ui and the trout is how they used to live, and because of this restoration program we can give the fish back to our people,” says Albert John, director of the Pyramid Lake Paiute Tribal Fisheries. “Because of these fish returning in abundance, we now have revenues of over \$1 million coming into the tribe, and that goes to our social programs, our police and to everyone the tribe supports.”

Stories of monster “salmon trout” weighing up to 60 pounds in the Truckee date back as far as early settlers of the Gold Rush in the mid-1800s, who documented a voracious predator that was as clever as it was abundant. But commercial development of Lake Tahoe at the turn of the century and the demand for the Truckee's resources for nearby Nevada agriculture took its toll on the fish's riverine habitat. By 1938 the species had vanished from both Pyramid Lake and the river.

Lahontan cutthroat trout as a whole were listed by the Service as endangered in 1970 and reclassified as threatened in 1975 and 2008 due to predation by non-native salmonids (brook and lake trout), hybridization with rainbow trout, water diversion and the declining health of its Truckee River habitat.

In the late 1970s, fish biologist Robert Behnke discovered a population in a remote stream in the Pilot Mountains bordering Nevada and Utah. He believed they were Pyramid Lake Lahontan cutthroats based on the species' morphology. When advanced DNA analysis methods were developed in the early 1990s, the hatchery complex initiated a number of genetic investigations to determine the potential of the Pilot Peak strain origin and began developing a broodstock of this strain. By 2002, Mary Peacock, a conservation geneticist from the University of Nevada-Reno, was able to extract micro-satellite DNA samples from museum mounts of the original lake populations in both Lake Tahoe and Pyramid Lake. Her analysis showed that the DNA from the museum mounts matched the DNA from the Pilot Peak strain and that the broodstock on station was related to the same fabled trout that once roamed the waters of prehistoric

Lake Lahontan and was believed to be long extinct.

Ensuing support for the Lahontan cutthroat trout restoration effort began with Nevada Senator Harry Reid's backing of the Pyramid Lake/Truckee/Carson Water Rights Settlement Act in 1990, which included, among many other valuable lake and Truckee Basin conservation measures, provisions to enhance the ecosystem flows of the river and to expedite recovery plans for both Lahontan cutthroat trout and Pyramid Lake's cui-ui.

Since Behnke's discovery, the Service's goal for this species has been threefold: conservation, recreation and sustainability. From an early stage in the recovery process, Heki's team knew that before they could start reintroducing Pilot Peak fry back into Pyramid Lake, an overhaul of the Truckee River basin ecosystem would be necessary.

The primary task was restoring key areas of the Truckee River back to the same natural hydrologic characteristics that existed when the trout ran the full span of the river unencumbered by man. Reversing 80 years of development meant not only managing critical water flows—especially during long drought periods—but restoring the overall ecological health of the riparian “forest” of cottonwoods and other native vegetation that help maintain optimal river depth and temperature fluctuations and provide critical shelter and food.

Heki says that from day one, her team was convinced that the key to restoring the storied Pilot Peak Lahontan cutthroats to Pyramid Lake lay in preserving the genetic legacy that helped them thrive and dominate the lake as the top predator for thousands of years, shaped a rich heritage for the Paiute people and spawned more than a few wild fish stories.

“We will continue to keep them wild in anticipation that one day they'll be able to return year after year to their historic native waters, to not only preserve their [place in the area's] cultural history, but to also bring back one of the most valuable and prolific sport fisheries in America,” she says. □

DAN HOTTLE, External Affairs, Pacific Southwest Region

A close-up photograph of a green-winged teal duck splashing in blue water. The duck's wings are spread, showing intricate feather patterns. The background is a soft-focus view of other ducks in a pond.

100 Years of Protecting Birds

*Celebrate the Centennial of
the Migratory Bird Treaty*

by RACHEL FISK LEVIN

A century after the signing of the first Migratory Bird Treaty, hundreds of policies, initiatives and partnerships have been adopted to further protect birds. For example the North American Waterfowl Management Plan, brings together partners in the United States, Canada and Mexico to conserve waterfowl such as green-winged teal.



Migratory birds connect people to nature in a way that no other wild creature can, adding beauty, sound and color to the world and providing ecological, economic and recreational benefits to humans and the natural environment.

This year, the Service and partners are celebrating the centennial of the most important document to aid in the protection of migratory birds in North America. The Convention between the United States and Great Britain (for Canada) for the Protection of Migratory Birds—also called the Migratory Bird Treaty—was signed August 16, 1916, codifying the United States' and Canada's commitment to protecting our shared bird resources.

The Service is proud of the successful conservation of the country's wild birds, especially through the treaty with Canada; the three that followed, with Mexico, Japan and Russia; and 1918's Migratory Bird Treaty Act, which implemented the 1916 treaty and established federal regulations making it illegal, without a permit, to hunt, harass, kill, sell, buy or transport any migratory bird covered under the treaty. There is perhaps no better example of international conservation collaboration than these treaties, which not only work to support healthy and sustainable migratory bird populations beyond each country's borders but also set the stage for many other international wildlife conservation initiatives of the past century.

The treaties connect the Service with federal, state, tribal and nongovernment partners—domestic and international—who share a long, successful history of conserving, protecting and managing migratory bird populations and their habitats.

Migratory birds contribute important environmental benefits, including pollination, insect and rodent control, carrion disposal, and seed dispersal. Birds have been estimated to consume 98 percent of certain insect pests, enhancing agricultural production and

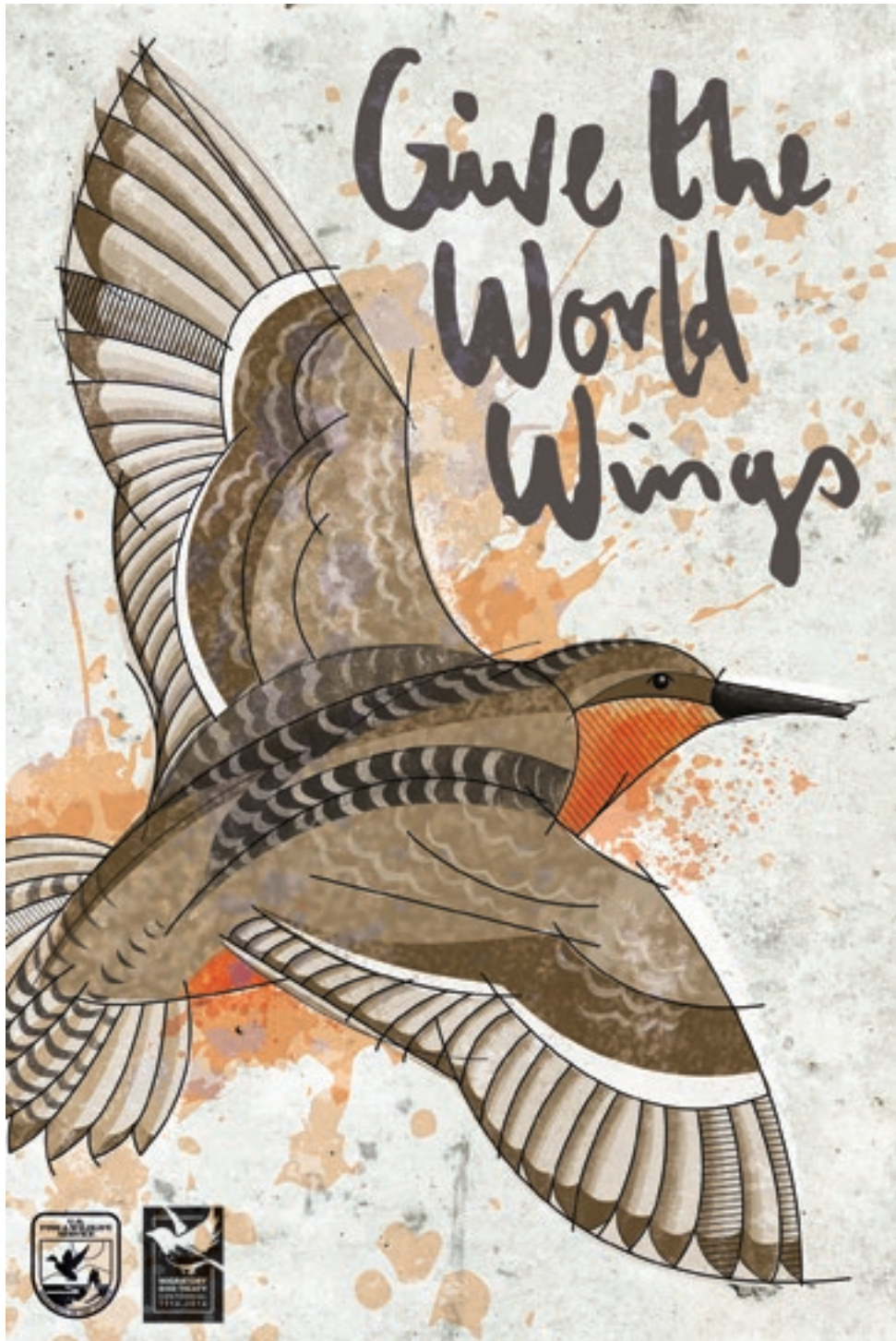
reducing the need for toxic pesticides. Birds also pollinate many plant species, particularly flowers.

Despite these key contributions, migratory birds face challenges. Migration is a perilous journey that involves a wide range of threats, many of which are caused by humans. Habitat loss due to urban >> development, agriculture and other human activities is the main threat. Migrating birds need suitable breeding and wintering grounds as well as stopover sites along their flyways where they can rest and feed. The loss of any of these areas can have a dramatic impact on the birds' chances of survival. >>



CHRIS WARREN/CREATIVE COMMONS

Hats that incorporated wild bird feathers were in vogue with fashionable women during the late 1800s. Led by a pair of Boston socialites, Harriet Lawrence Hemenway and Minna B. Hall, in the early 1900s, many of these same women began calling for an end to feathered hats and for protections for birds. This early grassroots environmental activism led to government action such as the Migratory Bird Treaty.



A poster supports the centennial.

The Migratory Bird Treaty Centennial is more than just a celebration. It is an opportunity to create awareness, promote key actions, increase support and expand opportunities for engagement by citizens in the conservation of migratory birds. And it is an occasion to reflect on a century of successful bird and habitat conservation, which have often served as the foundation for many of the Service's most successful and enduring conservation efforts.

The National Wildlife Refuge System, for example, was born at the turn of the 20th century from citizens' newfound desire to conserve migratory bird resources. The nation had witnessed the near extinction of the bison, increasing devastation of wading bird populations by plume hunters in Florida and severe reductions in the populations of other once abundant wildlife such as the passenger pigeon (which went extinct shortly afterward). Public support increased for more vigorous actions on the part of the government to reverse this trend.

This public concern, embraced by conservation-minded President Theodore Roosevelt, resulted in the government setting aside three-acre Pelican Island for the brown pelican as a Federal Bird Reservation in 1903. The first warden employed by the government at Pelican Island, Paul Kroegel, was an Audubon warden whose salary was \$1 a month.

Many other islands and parcels of land and water were quickly set aside for the protection of colonial nesting birds that

were being destroyed for their plumes and other feathers. As the system continued to expand and scientists learned more about bird migration patterns, refuges were established along the four migratory flyways that span North America to provide crucial feeding, breeding and nesting “rest stops” for migrating birds.

The Service’s efforts to combat international wildlife trafficking have drawn inspiration from early domestic efforts by citizens to stop the killing of wild birds for the fashion trade and restaurant menus that led to the signing of the Migratory Bird Treaty (p. 12).

In the United States and Canada, the treaty laid the foundation for myriad partnerships among federal, state, provincial, tribal and local governments, nongovernment organizations, universities, corporations and private citizens that have been instrumental in acquiring, protecting and restoring millions of acres of habitat. Partners in particular have also played a crucial role in passing and renewing legislation supporting habitat conservation efforts such as the Land and Water Conservation Fund, the North American Wetlands Conservation Act, the Migratory Bird Hunting and Conservation Stamp Act (a.k.a. the Duck Stamp), and the Neotropical Migratory Bird Conservation Act.

From these important programs have grown successful partnerships such as the North American Waterfowl Management Plan and its 24 Joint Ventures spanning from northern Mexico to Canada (inspiration for the Service’s vibrant network of Landscape Conservation Cooperatives); Partners in Flight; the Western Hemisphere Shorebird Reserve Network; the North American Bird Conservation Initiative; and many others.

While these initiatives focus on bird habitat conservation, the reality is that healthy habitat for birds supports hundreds of other species for which the Service has trust responsibility. Wetlands in particular are vital habitat for hundreds

Birds bring color, sound and beauty to our world. They also contribute important economic and environmental benefits, such as pollinating plant species.



STEVE BRAND/CREATIVE COMMONS

of species of mammals, fish, reptiles, insects and plants. Well-known imperiled species such as the Florida panther, American alligator and Wyoming toad have habitats in wetlands.

And indeed, habitats that birds need are also valuable to people, the nation’s economy and regional ways of life. Healthy habitats for birds improve water quality, contribute to flood control, buffer coastal erosion, recharge ground water and help in the fight against global climate change. By conserving birds and taking simple steps such as buying Duck Stamps that support habitat conservation, American landscapes and the economies and ways of life that depend on them are aided. From farmers and ranchers to outdoor recreationists to children, everyone benefits when birds thrive. □

RACHEL FISK LEVIN, Migratory Bird Program,
Headquarters

Get Involved

So, how can you be a part of this tremendous occasion for conservation? There are events and celebrations all year. Find out more at <www.fws.gov/birds/MBTreaty100/index.php>

Sparking a Connection

Giving area youth an opportunity to engage with the natural world

by PAM STEINHAUS

I'm bored. Oh my, how often do we hear that from today's youth. I learned early in my childhood never to say, I'm bored. I said it to my mom one Saturday morning and then spent the entire day cleaning out the refrigerator with all the scientific experiments growing in the back. How did we ever survive without cellphones, computers, TV with more than 250 channels, DVD players in the car and a GPS that tells you where to go?

Whether it was 10 below zero or 100 degrees, we were outside playing various sports, climbing trees, exploring the woods and the marsh that were in the back forty. Playing outside allowed us to develop our imagination and creativity, and connect with the natural world.

Many of today's youth, and even the previous generations, have lost their connection with the natural world. Is technology to blame for this atrocity? Depending on your age and your ability to use technology, you will answer that question differently. I love technology and all the cool tools that I can "plug into" and connect more to nature. Being able to pull out an iPod to play a bird call, take a digital photo to help me identify that little bird and maybe mark a location in my GPS so I can find it again are ways I use gadgets that I never had growing up.

The question is, how do we inspire the love of the natural world that was instilled in us in our youth of today? Who will care for this awesome natural resource in the future?

Together with the Stewards of the Upper Mississippi River Refuge, the local Friends organization, Upper Mississippi River National Wildlife and Fish Refuge / Savanna District in Thomson, Illinois, is working on an answer.

Together we began a year-long adventure for area youth ages 9-14+ in 2012. Our mission: to inspire the youth and their families, and engage them in the natural world. Research shows that spending time outdoors with children can help shape their long-term environmental ethic. Our goals for the program are to awaken and stimulate a curiosity about nature, strengthen their observation and investigation skills and their imaginations, and ultimately create a new generation of natural resource stewards.

The Junior Stewards meet once a month all year long, learning about various topics such as birds, mussels, reptiles and amphibians, nature photography and snow adventures to name a few. More than 40 youth have gone through the program since it began. Twenty youth, from various communities around the area, are taking part in this year's adventures.

Response from the youngsters and their parents has been positive.

"It's one of my favorite things to do," says seventh-grader Ethan. "I wish we did it more than once a month. Because of Junior Stewards, I am now a birder and love to catch and identify dragonflies. I'm going to be a Junior Steward for as long as I can."

Fourth-grader Stephen adds, "I like being a Junior Steward because it's fun, and it's a fun way to learn about wildlife and photography, and it is a good way to get into nature."

"Being Junior Stewards makes the kids aware of nature around them and the importance of preserving the unique flora and fauna in their immediate area," says parent Beth Wollam. "The Junior Stewards program highlights places in our area that are important for local wildlife diversity, and I think these are values that these kids will carry with them as they become adults. Like ripples in a pond, it spreads outward as they share these values and things they've learned with siblings, friends, neighbors, etc. They become passionate about conservation! The kids and parents have a great time and learn a lot about local preserves and sanctuaries, why they are ecologically significant and the importance of preserving these areas."

Solutions to connect children to nature are pretty simple. Turn off the TV, unplug the video games and spend at least an hour outside every day. Free play in nature increases physical fitness and reduces anxiety. Go fishing, take a hike or just go for a walk and look at the clouds. Spend time with your kids outdoors.

As Rachel Carson noted: "If a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in."

If you are interested in learning more about the Junior Stewards program, contact Visitor Services manager Pam Steinhau at <pam_steinhau@fws.gov>. □

PAM STEINHAUS, Upper Mississippi River National Wildlife and Fish Refuge, Midwest Region



(Top) Birds are just one study topic for the Junior Stewards. (Left) Junior Stewards search a riverbed. (Below) A Junior Steward works on a journal entry. (Bottom right) The 2016 Junior Stewards of Upper Mississippi River National Wildlife and Fish Refuge.



Pearls in the Wild

Zeta Phi Beta Sorority, Service encourage young people to get outdoors.

by DR. MARY BREAUX WRIGHT



Zeta Krysta Jones with Refuges mascot Puddles and Service Director Dan Ashe at the Service's 2015 Holiday Breakfast at Headquarters in Falls Church, Virginia.



As the International President of Zeta Phi Beta Sorority, Inc., I am honored to lead our organization during this historic partnership with the U. S. Fish and Wildlife Service. Zeta Phi Beta Sorority is the first minority women's organization to partner with the Service, and for many of our members, outdoor recreation is out of their comfort zone.

Specifically, the partnership challenges our members to enjoy the outdoors and engage in STEM (Science, Technology, Engineering and Math) learning. Every year we lead more than 1,000 youth, primarily girls, to make educated, informed decisions about their education and community involvement. This partnership will aid us in broadening their concept of community involvement to include interaction with wildlife and nature. Additionally, as our members engage in healthier lifestyles through our Zetas Have Heart health challenge program, the Service's national wildlife refuges are an ideal environment to hike, bike, run or walk.

Several chapters have explored refuges in the local communities and enjoyed their visits. Here are a few highlights:

Anahuac National Wildlife Refuge / Anahuac, Texas

I had the pleasure of joining my chapter, Lambda Zeta in Houston, Texas, at Anahuac Refuge. It had been a while since I rode a school bus—but I do not lead where I cannot follow, even on a semi-air conditioned school bus. My husband and I took our two grandsons and son, Dr. Randall Wright, M.D. We enjoyed the hiking trails, activities on how storms in the Gulf affect wildlife, and catching insects with dipping nets. The youth and parents viewed a video about the refuge in the theater and had lunch in the building. My chapter has already hosted a second tour, for a different group of people to Brazoria National Wildlife Refuge in Angleton, Texas.

Black Bayou Lake National Wildlife Refuge / Hammond, Louisiana

The Hammond chapter youth group enjoyed making bird houses with their sponsors, parents and grandparents.

Bombay Hook National Wildlife Refuge / Dover, Delaware



Delaware State Director Martha Sims-Wilson attended the launch of the Delaware quarter from the America the Beautiful Quarters Program at Bombay Hook. Members of the local chapter in Dover also took youth on a hike and tour at the refuge. They thought they would tire easily, but they wanted to keep going!

Brazoria National Wildlife Refuge / Angleton, Texas

Nearly 40 Houston area youth, advisers and parents experienced nature at Brazoria Refuge, bringing these city youth closer to nature. The visit began with a 30-minute auto tour that covered a small portion of the 45,000-acre refuge. The girls witnessed several birds, such as white ibis and purple gallinules, in their natural habitat. This experience helped them discover the fields of entomology and herpetology.

Cat Island National Wildlife Refuge / Saint Francisville, Louisiana



ZETA PHI BETA

Members of Zeta Phi Beta Sorority and Phi Beta Sigma Fraternity led their youth affiliates on a journey to Cat Island. Kent Osment, wildlife refuge specialist, provided a wealth of educational and recreational information to the participants about the refuge, the Mississippi River, local plants and animals, hunting, fishing, ATV riding and the National Champion bald cypress tree, the largest tree of any species east of the Sierra Nevada mountain range. The tree is 96 feet high, with a diameter of 17 feet and a circumference of 56 feet.

Candice Northern, a wetlands biologist and member of Zeta Phi Beta Sorority, has spearheaded the Pearls in the Wild initiative locally in Louisiana. She sees the lack of diversity in the field of environmental science and has encouraged our youth involvement because they are not typically exposed to the forest, swamp and marsh lands in an educational or recreational setting.

John Heinz National Wildlife Refuge at Tinicum / Philadelphia, Pennsylvania

The sorority participated in the Service announcement of a \$1 million annual investment in the Heinz Refuge. “If we want to ensure that conservation is relevant to future generations, we have to put more energy into reaching people where they live, which is becoming more and more in urban centers,” said Service Director Ashe at the ceremony. Sorority members learned more about eagles during a presentation for youth at the ceremony.

Minnesota Valley National Wildlife Refuge / Bloomington, Minnesota

Zetas in Minnesota participated in activities through the volunteer program. Youth and adults collected seeds. Zetas also attended an event with Service Director Ashe and Minnesota Senator Amy Klobuchar, where they tagged monarch butterflies.

Occoquan Bay National Wildlife Refuge / Woodbridge, Virginia

A visit to Occoquan Bay Refuge was a great opportunity to enjoy the outdoors while exercising and chatting among friends. While one of the Zeta members lived close, she did not know the refuge was there and plans to take her daughter to learn more about the refuge. Another member was not accustomed to being outdoors, and the visit dispelled some of her hesitations about refuges.

Patuxent Research Refuge / Laurel, Maryland

At Patuxent Refuge, youth enjoyed the tour inside the facility that highlighted the importance of wildlife preservation. They also identified poison ivy, learned about different types of trees and leaves, and learned about frogs.

Wheeler National Wildlife Refuge / Decatur, Alabama

The Madison, Alabama, chapter ended the 2015 Founders’ Day weekend by visiting Wheeler Refuge and learned about the different types of cranes on the property.

I am always excited when I learn about new visits to refuges and see the pictures of the youth with reptiles, birds and plants. This partnership is so important to me personally because I believe it is my responsibility to ensure our membership and our youth grow as individuals and have exposure to new activities. These experiences are sure to make them better stewards of our communities and the environment for years to come.

Dr. Mary Breaux Wright has served as the International President of Zeta Phi Beta Sorority, Inc., since 2012. The Sorority was founded in 1920 by five co-ed students at Howard University who envisioned an organization that would promote the highest standard of scholastic achievement and Finer Womanhood. Headquartered in Washington, DC, Zeta Phi Beta Sorority, Inc., has a diverse membership of more than 120,000 college-educated women with more than 800 chapters in North America, Europe, Asia, the Caribbean, Africa and the Middle East. □

MUSEUM OBJECTS COME TO LIFE

This is a series of curiosities of the Service's history from the U.S. Fish and Wildlife Service Museum and Archives. As the first and only curator of the museum, Jeanne M. Harold says the history surrounding the objects in the museum give them life.



Clam Up!

Under one of our cabinets in the museum here at NCTC is one of the largest clam shells you will ever see. A woman bought it for \$50 at a flea market in Beijing, China, and brought it back to the United States. The shell weighs at least 150 pounds, and I am told that it would have weighed 250 pounds when the clam was alive and well in the shell. We confiscated it because these bivalves are protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the woman imported it without the required permit. All I can say is, WOW! That would have been the absolute WORST carry-on luggage in the history of flying!

Now You See Me, Now You Don't



On a trip out West to pick up some museum objects, my intern and I were staying overnight at a hotel along the highway. When we were checking out in the morning, a lady and her son were very excited to see our

vehicle, which had the Service logo on the door panel. "Wow!" they said. "I wonder if the Invisible Man is inside the car." What the heck!? Turns out, the Invisible Man worked for us, or a similarly named agency (the federal Department of Fish and Game) in a television series back in 2000. Just think; we could really catch a lot of poachers if he was one of our refuge officers!

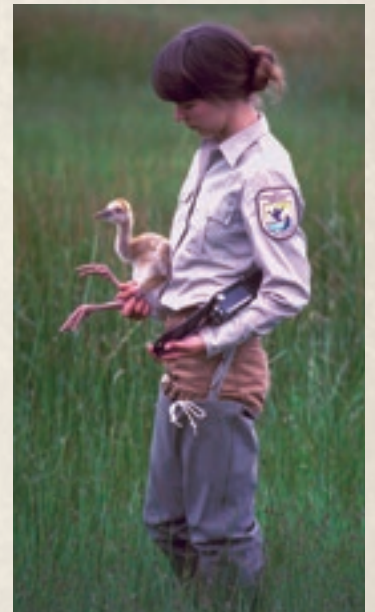
Ducks in a Row

We have a great collection of duck and goose decoys that were made by one of our awesome retirees many years ago when he was working for the Service. This retiree, Charles "Ki" Faulkner, had worked for many years in Animal Damage Control. He invented these decoys, which he made from the cork insulation found inside older refrigerators. Genius! They were easy to carve and floated like a charm. Not only that, you can bring in the waterfowl with them, and then, afterward, keep the game fresh in a refrigerator! That insulation works from the cradle to the grave.



Call for photos!

In 2017 we will be changing our main exhibits at the U.S. Fish and Wildlife Museum at NCTC. The exhibits will include two large walls of TV screens with photographs of Service personnel, past and present. We would love to include you in these walls of honor! Please submit a high dpi (300 to 600) photograph of yourself, hopefully in uniform or doing work for the Service. Include your name, station and the date of the photo (and what you are doing if applicable). They can be color or black and white. You can be a current, former or retired employee. The number of photographs we can put up is infinite! Please email the photo to <mark_madison@fws.gov>. Thanks!



transitions

Pacific Southwest



Paul Souza will be the Service's new Regional Director for the Pacific Southwest Region

beginning in August. Souza, a 19-year career Service employee, will lead staff, programs and field stations in the region, which consists of California, Nevada and the Klamath Basin of Oregon. Souza has served as the Service's Assistant Director for Science Applications for nearly two years. In that role, he has overseen the nationwide network of partnership-driven Landscape Conservation Cooperatives; guided efforts to implement an integrated, strategic landscape-scale approach to adaptive wildlife management; and built the agency's capacity to develop and apply science-based solutions to real world conservation problems.

"Paul Souza is one of the Fish and Wildlife Service's true visionary leaders, helping guide efforts with our partners to deliver conservation that has a greater impact on wildlife and habitat across the American landscape. At the same time, he has proven himself as a field supervisor and project leader, developing strong relationships with local communities and leaders," says Director Dan Ashe. "Paul will bring those skills and abilities to the

Service's work in California and Nevada, helping us meet current and future challenges in one of the nation's most dynamic, complex and diverse regions."

In August, Souza will replace outgoing Pacific Southwest Regional Director Ren Lohofener, who will retire at the end of the year with more than 30 years with the Fish & Wildlife Service and National Marine Fisheries Service. Until the end of the year, Lohofener has agreed to assist the agency as an adviser on California water issues to the new Regional Director.

"I want to thank Ren for decades of outstanding service to the nation—and for agreeing to continue to lend his expertise to us at a time when water issues in California have never been more challenging," says Ashe. "He played a key role in the birth of the Pacific Southwest Region as a separate region in 2007, and has worked tirelessly ever since to build a solid foundation for our conservation work in the region."

Before serving in headquarters in Washington, DC, Souza was field supervisor for the South Florida Ecological Services Office. He helped lead the effort to restore America's Everglades with partners, implementing projects to improve the health of the environment for species such as the Florida panther, wood stork and snail kite.

Souza joined the Service in 1997 as a Presidential Management Fellow. He has a bachelor's degree in environmental studies from the University of California at Santa Barbara and a master's

degree in urban and regional planning from Florida State University. □

Alaska



Geoff Haskett retired as the Service's Alaska Regional Director on April 1. He had been

Regional Director since 2008. Haskett brought a wide range of experience to jobs in Alaska and the Lower 48 states. Before heading to Alaska as Regional Director, he served in Washington, DC, as Chief of the National Wildlife Refuge System.

Haskett served in four of the eight Service regions and Headquarters. Besides Alaska, he served in the Southwest Region as Deputy Regional Director, in the Southeast Region as the Assistant Regional Director for Refuges and Wildlife and as Geographic Assistant Regional Director for the Region's Southeastern ecosystems, and got his start with the Service in 1979 in the Pacific Region. Besides Refuge System Chief, he served in Headquarters as the Chief of Realty and as Secretary to the Department of the Interior's Migratory Bird Commission.

Haskett received the Department of the Interior's Meritorious Service Honor Award in 2003.

Haskett had a Presidential Commission from both Presidents Obama and Bush as the U.S. commissioner on the U.S./Russia Polar Bear

Commission. He was head of the delegation to the Polar Bear Range States group with Russia, Canada, Greenland and Norway; and head of the delegation for the Porcupine Caribou Working Group with Canada.

During his time in Alaska, Haskett made it a priority to protect and conserve species and their habitat while working closely with Alaska Native people to continue their traditions and culture. □



Greg Siekaniec was named the Service's Regional Director for Alaska in May.

The announcement marks Siekaniec's return to the agency he served for more than two decades. He follows Geoff Haskett, who retired in April.

Siekaniec served as the Service's Deputy Director for Policy before leaving the Service in 2012 to assume the leadership of Ducks Unlimited Canada, one of Canada's most prominent conservation organizations.

As Regional Director, Siekaniec will oversee the direction and day-to-day operations of the Alaska Region, the only Service region to manage a single state. The region's national wildlife refuges are massive, accounting for more than 50 percent of all refuge land managed by the agency.

"Greg Siekaniec has been an outstanding conservation leader throughout his long career in the Fish and Wildlife Service, »

and we're fortunate to have him returning to the agency to lead our Alaska Region. Greg spent much of his career as a refuge employee and manager in Alaska, and he's intimately familiar with the region's outstanding employees and incredible conservation work," says Service Director Dan Ashe.

Siekaniec started his career at J. Clark Salyer National Wildlife Refuge as a refuge clerk and moved up into management positions in Montana, North Dakota and Wyoming, in addition to Alaska.

Just before taking the helm of the Refuge System in 2009, Siekaniec spent eight years as the refuge manager of Alaska Maritime National Wildlife Refuge, which encompasses more than 2,500 islands and nearly 5 million acres. As refuge manager, he led partnership-driven efforts to restore island biodiversity and rid islands of destructive invasive species—foxes and rats—that had nearly eradicated native seabirds and other wildlife.

As Chief of the National Wildlife Refuge System from 2009 to 2011, he led efforts to meet the challenges of the 21st century, efforts that are now being implemented and built upon today.

Siekaniec earned a bachelor's degree in wildlife biology from the University of Montana. He and wife Janelle relish their time outdoors and look forward to returning to the wilds of Alaska. □

Mountain-Prairie



The Service's Grizzly Bear Recovery Coordinator **Dr. Chris Servheen** (pictured with Mary Erickson, chair of the Yellowstone Ecosystem Subcommittee of the Interagency Grizzly Bear Committee) was honored by the Interagency Grizzly Bear Committee at an April meeting after announcing his retirement. Chris retired at the end of April, after a distinguished career of 40 years devoted to the conservation of grizzly bears. He was the Service's recovery coordinator for the grizzly bear for the past 35 years. His career in the Service started in 1981, but he has worked on grizzly bear research and management since 1975, and has worked on the recovery of populations and current proposed delisting in the Yellowstone ecosystem. The inscription on the plaque reads: "Your leadership and expertise have guided grizzly bear recovery and set the foundation for success. We are deeply grateful for your determination and the legacy you leave for those that follow. Thank you Chris for a job well done!"

Chris told *The Great Falls Tribune* that he is retiring so he can go hiking with his two sons, both Eagle Scouts, and see grizzly

bears in the backcountry. "Summer's coming. The backcountry is opening up and it's calling to me, and that's where I want to be." He also told the *Tribune*: "The idea of recovery is important to me. If [the Yellowstone Ecosystem and Northern Continental Divide grizzly populations] weren't recovered...I would be concerned about leaving." □

Headquarters



Larry Bright retired as the Chief of the Branch of Conservation Planning Assistance in Headquarters

after 40 years of service protecting and conserving natural resources.

He began his career as an Ohio state parks naturalist in 1975, and went on to work for the U.S. Forest Service, National Park Service and the U.S. Air Force before joining the Service 24 years ago in the Ecological Services Program in Fairbanks, Alaska.

He was promoted to Assistant Field Supervisor in Fairbanks in 1992 and joined the Headquarters Office in 2009. During his tenure at headquarters, Larry was a champion for the Conservation Planning Assistance Program and the conservation benefits that can be gained by working in partnership with others to implement the full suite of the Service's authorities. □

honors

Headquarters



Earl Possardt, the Service's international marine turtle coordinator, has received the International

Sea Turtle Society's Lifetime Achievement Award, one of the most prestigious awards in the sea turtle community. The annual award honors individuals who have had a "significant impact on sea turtle biology and conservation through the course of their career." Earl's "sea-turtle career" began in the late 1980s as the Service's southeast sea turtle coordinator. The introductory remarks at the award presentation say, "Earl's crowning achievement during his tenure in the southeast U.S. was his vision of a new national wildlife refuge for sea turtles, along the high density nesting beaches of the central east coast of Florida." The vision became reality with the 1991 establishment of Archie Carr National Wildlife Refuge, which has significantly contributed to the protection of vital nesting habitat for growing populations of three species of sea turtles. After he moved to the international world, the speech goes on, he worked on the Marine Turtle Conservation Act, and through the act, "Earl cooperatively worked on sea turtle conservation activities on every continent where sea turtles nest, forage or migrate."

Finally, the award remarks quote a colleague of Earl's from Sierra Leone who said: "Earl is a person that helps people achieve their sincere and genuine dreams. He has passion for people with big dreams but who lack the means of venturing into realizing them. His love for nature is infectious and his desire to help people initiate their genuine desire in saving the world's biodiversity is invaluable. I am a testimony of Earl's effort in helping people achieve their life time dreams. My conservation dream came to reality when I met Earl."

Ann Marie Lauritsen, the current southeast sea turtle coordinator, says of Earl: "His unwavering dedication to the conservation of sea turtles has been a true inspiration, in addition to the great many individuals he has inspired and motivated outside the agency. We are incredibly proud of his many contributions and receiving this prestigious award."



Richard Easterbrook, the National Inventory and Monitoring team leader for geographic information

systems (GIS) in Fort Collins, Colorado, won a Beacon Award for innovative use of technology. The American Recreation Coalition selects the award winners. Although he sits in Colorado, he is assigned to Headquarters.

Richard helped develop an accurate way for the public to find the locations of educational kiosks, visitor centers and contact stations on cellphone and computer location services. □

Southwest



Gwen J. Kolb, fish and wildlife biologist in the New Mexico Ecological Services Field Office, was

awarded a Lifetime Achievement Award from Pheasants Forever-Illinois. The plaque she received reads, "In recognition and appreciation for your exemplary leadership and dedicated service to Pheasants Forever." In 2002, Gwen was with the Service's Partners for Fish and Wildlife Program in Illinois, and she worked together with Pheasants Forever and numerous private landowners to improve habitat on the Illinois landscape. From this partnership, thousands of acres of grasslands and working wetlands were restored and created to benefit both species and people. Since that time, Gwen moved into a position in the New Mexico Ecological Services Field Office as the state coordinator of the Partners Program where she hopes to continue working cooperatively with private landowners to further the mission of the Service and the Partners Program. □



Laurie Gonzales, a wildlife biologist at Trinity River National Wildlife Refuge in

Texas has won a 2016 Legends Award from the American Recreation Coalition, honoring outstanding work to improve outdoor recreation opportunities. Honorees come from the federal agencies that play central roles in providing public recreation opportunities.

Laurie was recognized for her work on a 38.5-mile hiking, biking and paddling project, "From Crosswalks to Boardwalks," that connects the refuge to neighboring Liberty, Texas. In 2010 Laurie recognized that the refuge and Liberty could partner on an outdoor recreational network to connect the public with nature. The goal was to bring together 29 miles of hiking trails, 4.5 miles of paddling trails and 5 miles of bicycle routes that the public could use. Most recently, the Friends of Trinity River Refuge partnered with the AFL-CIO Union Sportsmen's Alliance to build a boardwalk across 500 feet of wetlands to link the city and the refuge. □

Pacific



Federal Wildlife Officer **Gabriel Cruz** (shown between Secretary of the Interior Sally Jewell and Deputy Secretary of the Interior Mike Connor) received the Department of the Interior Valor Award in May in recognition of his highly courageous action involving great personal risk that resulted in the rescue of two swimmers.

"The quick thinking and heroic action of Officer Cruz prevented that day from ending in tragedy," says Pacific Regional Director Robyn Thorson. "Officer Cruz is a credit to the Service and the National Wildlife Refuge System Division of Law Enforcement."

On January 18, 2015, two U.S. military personnel tried to swim in the ocean waters on Guam National Wildlife Refuge. The area, known to many as Ritidian Beach, is exceptionally beautiful. However, the ocean there has claimed several lives because of the treacherous waters and extreme ocean currents that lie just beyond the edge of the reef.

Officer Cruz was on duty near the beach when he saw the two men sitting in water near the reef's edge with snorkel gear. Because of his experience working these waters, he knew they were potentially in danger of being pushed into the »

hazardous waters beyond the reef. He tried to alert them to the danger by using a flashlight and whistle while standing on the shore, about 500 feet away. Before they could heed his warning, a wave pushed the men into the water beyond the reef.

Officer Cruz immediately contacted local fire rescue units and paramedics. The first man made it back to the shallow shoreline of the beach and onto shore on his own. But the second man was still drifting in the open ocean, calling for help.

At great personal risk, Officer Cruz swam into the high surf and fast ocean currents to reach the swimmer stuck beyond the reef. Officer Cruz was able to help the man return to shallow water and the shore.

Both swimmers were conscious but exhausted, and one complained of breathing problems. Once medical units arrived, both men were treated at the scene and later transported to a local hospital where they remained under observation for a short time before being released.

"Without Officer Cruz's quick thinking, decisive and heroic actions, one of the two men almost certainly would have perished in the rough ocean waters," says Service Zone Officer Charlie Quitugua. □

in memoriam

Headquarters



Retired biologist **Charlie W. "Charlie"**

Dane died January 25 at the age of 81 of kidney

failure. Charlie enjoyed a long career with the Service in both waterfowl research and international wildlife conservation.

Charlie was born and raised in Washington, DC. But growing up, he often traveled with his father, a fuels geologist at the U.S. Geological Survey. On geological field trips, they camped throughout the western United States. These experiences stimulated an early interest in science and nature.

Drawn to birds at an early age, Charlie engaged with the Service while in high school and spent a summer as a volunteer trainee at Lower Souris National Wildlife Refuge in North Dakota. Before starting college, he had already identified 270 species of birds in the field and was an active member of the National Audubon Society. Charlie attended Cornell University, completing a bachelor of science degree in 1956. He remained at Cornell to complete his MS degree in 1957.

After completing his MS, Charlie served three years with the Air Force and then obtained his Ph.D. from Purdue University.

He began full time with the Service in 1964 at the Northern Prairie Wildlife Research Center (NPWRC) near Jamestown, North Dakota. He was one of the first research biologists hired at the new facility, where he worked as an avian physiologist conducting further research on, among other things, age determination of redheads and mallards. In 1976, Charlie was appointed as the staff specialist for Migratory Birds in the Division of Wildlife Research at Headquarters. He provided nationwide guidance and support for migratory birds researchers at all of the Service's Wildlife Research Centers, and he also worked closely with the Cooperative Fish and Wildlife Research Units. He was instrumental in the development of the National Wildlife Health Center in Madison, Wisconsin.

Charlie developed a reputation of being a bit of a workaholic because of conscientious devotion to the job and the long hours spent in the office. He was a key member of the division's staff because of his broad knowledge and experience with migratory birds, as well as the scope of the scientific work and the budget allocated to support this work at the centers.

In 1984, he was named Chief of the Office of Scientific Authority (Now the Division of Scientific Authority in the Office of

International Affairs). He was deeply involved in implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as well as domestic laws promoting the long-term conservation of both foreign and native plant and animal species. During his tenure, the United States worked with other countries in 1989 to transfer the African elephant to CITES Appendix I and adopt a moratorium on ivory trade. He also played a key role in passage and implementation of the Wild Bird Conservation Act of 1992. Charlie was particularly well-suited to this work because of his penchant for scientific details and his meticulous work ethic.

Charlie retired in late 1997 and actively volunteered throughout Fairfax County, Virginia. He also enjoyed several hobbies, including gardening and genealogy. He grew African violets and many other flowering household plants that filled his sunroom.

Charlie is survived by his wife, Dottie, whom he married in 1957 while both were students at Cornell. He is also survived by their son, Douglas; daughter, Sandra; grandson, Carl Anderson; sister, Barbara Harris; and three nephews. Following his death, Charlie was honored by the Fairfax County Board of Supervisors with a moment of silence to mark his passing and recognize his contributions to the county. □

RODDY GABEL

William Joseph “Bill” Savannah, retired national printing and publications officer for the Service in Washington, DC, died September 12 at the Veterans Affairs Medical Center in Martinsburg, West Virginia, at age 85.

Savannah, of Falling Waters, West Virginia, was one in an era of esteemed and skilled, blue-collar craftsmen who honed their talents amid the clattering and ink-stained press rooms of Beltway-area print shops. They produced a heritage of high-quality government publications and books, wall posters and works of art that many agency communications professionals now regard as the “golden age” of federal printing and publishing.

Nowhere were such public materials as creatively designed, eye-catching and evocative as in the Department of the Interior, which drew its visuals from the nation’s national parks and wildlife refuges for its wealth of source material.

“I remember being taken along as a young kid by Bill Savannah and his predecessor, the venerable Peter Anastasi, on press inspections, where we would physically climb on the presses and collating machines and pull proof sheets to check for color registration, proper pagination, and half-tone inking

and photo densities—all of the things that went into producing a quality product worthy of the Fish and Wildlife Service,” says David Klinger, a former agency writer and press officer. “I sometimes returned to the office with ink-stained sleeves, but I gained a lot of practical, nuts-and-bolts experience about printing in the process. It was working-class, no-nonsense guys like Bill Savannah who taught me.”

Savannah was born in Scranton, Pennsylvania, in 1930 during the depths of the Great Depression. He never went to college, but briefly joined his father, a carpenter in the Department in Washington, in 1950, shortly before entering the U.S. Coast Guard during the Korean Conflict. He served on the Coast Guard cutter *Sassafras*, a sea-going buoy tender, as a seaman from 1951 to 1954 before returning to the Department’s printing plant. The father of a family that would eventually grow to seven children, Savannah would work the day shift at the Department and then “moonlight” at night, running a printing press for a milk producers cooperative in Washington to bolster his income.

In 1968, he transferred to the old Civil Service Commission as an assistant printing plant manager, but quickly returned to Interior

when offered a position as administrative materials printing officer with the National Park Service. He joined the Fish and Wildlife Service as its national publications liaison officer in the late 1970s and served until his retirement in 1986.

Recalls Tom Nebel, who succeeded Savannah as publications officer, “Bill believed in quality, discipline and continuity, and would enforce policy and regulation to the hilt. He could be tenacious and argumentative in his beliefs. On one hair-brained project, I once heard a supervisor ask him, ‘Bill, why do you care so much? It’s not your money!’ Bill responded, ‘You’re wrong. It is my money...and every taxpayer’s money in this country.’

“Bill hated waste and decisions that defied common sense and logic. And he would often tell the powers-that-be what he thought, to their chagrin. Curiously, they would hardly ever tell him he was wrong,” Nebel remembers. “He called his position with the Fish and Wildlife Service ‘the best job I ever had.’”

Savannah is survived by his wife, June, six of his seven children, 16 grandchildren and 14 great-grandchildren. □

DAVID KLINGER

Mountain-Prairie



Shane Del Grosso, fire management officer in the Mountain-Prairie Region, died in May at age 50.

Shane was a member of the interagency fire community for 17 years.

Shane was one of the most accomplished fire management professionals in the Service and had been on the forefront of shaping the fire program. He possessed a particular aptitude and rather unique passion for the statistics of fire that benefited the entire fire community. His dedication to employee development, quick wit and jovial nature made him a natural talent for recruiting and developing the leaders of tomorrow. □

Fish & Wildlife *News*

Division of Marketing
Communications
U.S. Fish and Wildlife Service
5275 Leesburg Pike
Falls Church, VA 22041-3803

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

parting shot

Buzz, Feed

A bumblebee enjoys a treat from some creamy indigo.



JOANNA GILKESON/USFWS

Fish & Wildlife News

Editor: Matthew Trott

Assistant Editor: Jennifer Deschanel

Art director: Jane Pellicciotto, Allegro Design

Submit articles and photographs to:

U.S. Fish and Wildlife Service
EA-Division of Marketing Communications
MS: EA

5275 Leesburg Pike

Falls Church, VA 22041-3803

703/358-2512

Fax: 703/358 1930

E-mail: matthew_trott@fws.gov

Submission deadline:

Fall 2016: by August 14