

Refuge Update

National Wildlife Refuge System

www.fws.gov/refuges



A silvery blue butterfly feeds on a milk vetch plant in South Dakota in the heart of the Dakota Grassland Conservation Area. The area was authorized by Interior Secretary Ken Salazar this spring. (Tom Koerner/USFWS)

A Race Against Time In the Dakota Grassland

By Bill O'Brian

Harris Hoistad appreciates robust mid-America grassland, and last spring Interior Secretary Ken Salazar authorized the Dakota Grassland Conservation Area, which is designed to preserve such habitat.

“The beauty of healthy grassland comes from having the ability to walk across the landscape and see all of the life that each of these tracts of land contain,” Hoistad says. “From the tiny insects on the ground to the wetland invertebrates that provide food sources for all the birds, these grasslands are alive, and it is so easy to see why they are such critical pieces of the habitat needs for many species of wildlife.”

Hoistad, refuge manager at Sand Lake National Wildlife Refuge in South Dakota, has been involved with the Dakota Grassland Conservation Area project since its planning inception almost three years ago.

The project was announced in April by Salazar, who heralded it as a model for conserving working agricultural landscapes while benefiting wildlife under President Obama’s America’s Great Outdoors initiative. The project identifies 1.7 million acres of grassland and 240,000 acres of wetland across a swath of eastern South Dakota, North Dakota and Montana. The expansive conservation area is vital, U.S. Fish and

continued on pg 27

Moving Quickly From Vision To Implementation

Implementation of the National Wildlife Refuge System’s *Conserving the Future* vision is on a fast track.

Individual charters have been written for each of the three implementation teams established by U.S. Fish and Wildlife Service Director Dan Ashe during his call to action, which closed the *Conserving the Future: Wildlife Refuges and the Next Generation* conference July 14 in Madison, WI.

Those teams will focus on strategically growing the Refuge System, fleshing out details of an urban wildlife refuge initiative and developing the next generation of Refuge System leaders. Ashe charged the latter team—the Leadership Development Council—to build on the successful approach used to implement the leadership goals

continued on pg 18

Ashe Named 16th Director of Service

Dan Ashe was confirmed and sworn in as the 16th Director of the U.S. Fish and Wildlife Service this summer just days before the *Conserving the Future* conference.



Dan Ashe

In one of his first official appearances as Director, on July 14, Ashe told conference attendees in Madison, WI, and those participating online across the country that “I am deeply honored to serve in this role. I

want to thank you for your kind words and encouragement. I promise you my very best—and ask for your help. We have a lot of work to do *together*.”

In an e-mail to all Service employees days earlier, Ashe said: “Our challenges are many and varied. We face resource challenges, which are national, international and, in some cases, global

in scale. Along with our state partners, and the rest of the federal government, we also face serious fiscal challenges. And we operate in an ongoing environment of political challenges to the decisions we make and the actions we take. My goal is to ensure that we will face all of our challenges head on, and draw from them not a sense of despair, but rather, inspiration and renewed motivation to improve and achieve.”

In announcing Ashe’s confirmation in July, Secretary of the Interior Ken Salazar said: “Dan Ashe has served with distinction and integrity in the Fish and Wildlife Service for more than 15 years ... I’m excited to work with him to foster innovative science-driven conservation programs and policies to benefit our nation’s fish and wildlife and its habitat.”

During his Service tenure, Ashe has helped to craft the strategy that will guide the agency’s efforts to deal with

continued on pg 19

Siekaniec Appointed Deputy Director

Greg Siekaniec has been named deputy director for policy of the U.S. Fish and Wildlife Service, leaving the position of chief of the National Wildlife Refuge System, a post he held since 2009.

In his new capacity, Siekaniec will provide strategic program direction and develop policy and guidance to support and promote program development and fulfill the Service mission.

“Greg has done an outstanding job leading the Refuge System during challenging times, and I’m excited to have the opportunity to work with him as part of our leadership team. I know his more than two decades of field and Washington experience will continue to be an invaluable asset as we move forward with the Service’s conservation agenda,” said Service Director Dan Ashe in announcing the appointment in late July.

Siekaniec has led efforts to prepare the Refuge System to meet the challenges of the 21st century, and he oversaw a process to create a reinvigorated vision to guide it for the next decade. Americans submitted more than 10,000 comments on the vision, which was ratified at the *Conserving the Future* conference in July.



Greg Siekaniec

“We face a host of conservation challenges of a magnitude we have rarely seen,” said Siekaniec.

“But the Refuge System has risen to equal challenges in decades past. With a new vision as its

beacon, the Refuge System will again overcome challenges to add to America’s conservation legacy. I won’t be overseeing the Refuge System on a day-to-day basis,

continued on pg 27

Refuge Update

Ken Salazar
Secretary
Department of the
Interior

Dan Ashe
Director
U.S. Fish and Wildlife
Service

Jim Kurth
Acting Chief
National Wildlife
Refuge System

Martha Nudel
Editor in Chief

Bill O’Brien
Managing Editor

Address editorial
inquiries to:
Refuge Update
USFWS-NWRS
4401 North Fairfax Dr.,
Room 634C
Arlington, VA
22203-1610
Phone: 703-358-1858
Fax: 703-358-2517
E-mail:
RefugeUpdate@fws.gov

This newsletter is
published on recycled
paper using soy-based
ink.



Inside

Managing a Swamp Fire

An interview with Okefenokee
National Wildlife Refuge manager
Curt McCasland. Page 4

Record Floods

Flooding in the Mississippi, Missouri
and Red River watersheds inundated
much of the Refuge System this spring
and summer. Page 8

Sex, Dives and Videotape

Service volunteer Lindsey Kramer
documents coral spawning at
Hawaiian Islands Refuge. Page 9

FOCUS: *Conserving the Future, the Conference*

The *Conserving the Future* conference
in Madison, WI, was like no gathering
the Refuge System has ever had before.
Pages 10-19

QR Codes at “Ding” Darling Refuge

J.N. “Ding” Darling Refuge makes
virtual history with its interactive
iNature Trail. Page 23

Refuges Are Elementary at Virginia School

By Jennifer Anderson

Second-grader Audrey Vizard knows all about national wildlife refuges.

“They’re places where animals can live and be protected,” she says. “I think they are very happy there, and that makes me happy.”

Protecting plants and animals is important, agrees Toni Birnett, a fourth-grader. “We need them for us to survive.”

Fifth-grader Grace Goldman loves animals, too. But, for her, the best part about refuges is the chance to be in nature. “I like digging in the dirt and holding worms,” she says.

Audrey, Toni and Grace, all students at Barrett Elementary School in Arlington, VA, will be exploring refuges in-depth this school year as part of a school-wide initiative to expose youngsters to the outdoors and a commitment by the Refuge System to engage the next generation of conservationists.

The initiative is the brainchild of teacher Laurie Sullivan, who approached the Refuge System for curriculum advice last winter and ultimately procured a \$10,000 funding grant through the Toyota TAPESTRY Program.

“We’ve all been hearing for the past several years about the ‘last child in the woods’ and kids spending less time outdoors in nature and more time indoors playing video games and watching TV,” says Sullivan, who oversees Barrett’s Discovery Lab, where the students delve deeply into topics such as NASA, engineering and now nature.

Plans for this school year include visits to three refuges—Patuxent Research Refuge in Maryland, and Occoquan Bay and Elizabeth Hartwell Mason Neck Refuges in Virginia. Twenty students with strong academic and leadership skills will visit Mason Neck in the fall, in part to help plan activities for the rest of the school, Sullivan says, suggesting that a digital scavenger hunt is a possibility.

Then in spring, the entire third-, fourth- and fifth-grade classes—about 250



Puddles the Blue Goose leads Barrett Elementary School students in a rendition of “Rock the Refuge,” a song written for the school’s year-long project studying national wildlife refuges. (Elizabeth Rente)

children—will visit a refuge. Children in kindergarten through second grade will explore natural areas closer to the school with the likelihood of visiting refuges as they get older and the project evolves.

The overarching theme will be to see how birds and trees change with the seasons, Sullivan says. Because most of the students will be visiting the refuges only once, the project will include visits to parks and instruction in the school’s outdoor garden and Discovery Lab, too. Families also will be encouraged to go on weekend nature outings.

“Life-Changing Experience”

Although details of the refuge visits still are being worked out, activities that traditionally are a big hit with kids likely will be included.

At Mason Neck and Occoquan Bay Refuges, part of Potomac River National Wildlife Refuge Complex, park ranger-intern Patricia Wood says that using “scat and tracks” is one way to draw in elementary-age students. “It’s really about going out and seeing what the animal has left behind.”

At Patuxent Refuge, an electric tram takes visitors through forest, wetland and meadow habitats, and at Occoquan Bay Refuge a songbird banding station allows kids to hold the birds while volunteers

apply bands. “For a kid to hold a bird like that and feel its heartbeat—that’s a life-changing experience and the kind of impression we’re trying to make,” says Marty McClevey, also a ranger at Potomac River Refuge Complex.

The Toyota TAPESTRY grant will cover most project expenses, including digital cameras for the kids, bus trips to the refuges, laptops and child-size work gloves.

As much as the school wants to limit screen time, the goal is not to discourage kids’ interest in technology entirely. In fact, Sullivan says, the students’ final projects could include a music video, a documentary film, an oral report with video images—or even a fine-art painting. 

Jennifer Anderson is a frequent contributor to Refuge Update.

To learn more about the Barrett Elementary School project, visit <http://tinyurl.com/BarrettNature> or <http://tinyurl.com/BarrettNatureFacebook>. To see a pep rally at which the students perform “Rock the Refuge,” a song written for the project, go to www.YouTube.com/BarrettNature. For information on Toyota TAPESTRY grants, visit <http://www.nsta.org/pd/tapestry>.

“Managing a Fire in a Swamp Is Like Running a Marathon”

When an April 28 lightning strike sparked what would become the 302,000-acre Honey Prairie Fire at and near Okefenokee National Wildlife Refuge in Georgia, refuge manager Curt McCasland was new to the job and to the Southeast Region. A 13-year U.S. Fish and Wildlife Service veteran, he had moved east from a similar job at Cabeza Prieta Refuge in Arizona less than seven months earlier. Here are excerpts from a recent *Refuge Update* interview with McCasland.



An alligator approaches flames at Okefenokee National Wildlife Refuge in southeast Georgia. “Since fire is common in the swamp, impacts to most wildlife habitat within the refuge are minor,” says refuge manager Curt McCasland. (Jessica Bowen/USFWS)

Q. How did the fact that you were new to Okefenokee Refuge affect your ability to oversee the management of the fire, especially in the first few days?

A. Given the fact that the refuge staff, our state partners in Florida and Georgia, and the Greater Okefenokee Association of Landowners (GOAL) have been preparing for this event since 2007—after the Big Turnaround Fire—it was fairly easy to pick up the ball and run. We began by implementing a strategy we had developed this January after reviewing the After Action Review of the 2007 fire. I am blessed to be surrounded by a very strong staff that has a lot of experience with fires in the swamp. In addition, [former Okefenokee Refuge managers] Skippy Reeves and George Constantino both made themselves available for support and discussion, as did staff from the Georgia Forestry Commission, Florida Division of Forestry, Osceola National Forest. I am

surrounded by knowledgeable, dedicated folks, so I did not have to reinvent the wheel. I just needed to work from past successes to try to make a very effective and efficient process continue to work. The regional fire staff also provided invaluable support. I truly am humbled by the selfless nature of our refuge staff, our state partners and our neighbors.

Q. How does managing a fire in a Georgia swamp differ from managing a fire at your most recent previous station, Cabeza Prieta Refuge, in the Arizona desert?

A. Fires were infrequent at Cabeza Prieta. Before 2005, our largest was about five acres; it was started by a family that was being smuggled into the United States and became lost. The family kept lighting fires in hopes of being spotted. It took three days to get five acres burned. In 2005, we had a very wet winter and we dealt with

several fires that ranged from 10,000 acres to 50,000 acres on and off the refuge. These were relatively short fires that burned very quickly, then went out. The fires at Okefenokee can last several months and possibly longer; tropical storms typically extinguish them. Soils within the refuge are primarily peat, so they can burn through an area and, after a few weeks, re-burn as the peat dries out. I’ve learned that managing a fire in the swamp is like running a marathon; you have to pace yourself and make sure everybody else is doing the same.

Q. What damage did the fire do to Okefenokee Refuge?

A. The fires have burned more than 300,000 acres, the overwhelming majority within the refuge. From the beginning, our objectives have been to ensure firefighter safety, keep the fire within the swamp, and protect

private timber lands, railroads and the communities surrounding the refuge.

I am truly amazed by and appreciative of the cooperative relationship that exists with our neighbors. We manage a fire-adapted system where large fires occur every few years. The fact that the private timber landowners tolerate and accept our strategy of allowing fire to burn within the refuge is an important relationship. Providing our neighbors with updated maps, information and our strategies are important components of maintaining this positive relationship.

Since fire is common in the swamp, impacts to most wildlife habitat within the refuge are minor. This lack of impact is a product of the hard work and dedication of our staff. We have a long history of prescribed fire within our refuge uplands. This has resulted in the survival of our upland longleaf pine forest. Shrub scrub habitats are extremely fire adapted.

One of the more intriguing aspects of the swamp is many of the areas that burned in May and June *appear* not to have burned. However, we lost the 1.25-mile boardwalk and observation tower at Owl's Roost that were used extensively by visitors at our eastern entrance. Picnic shelters, rest rooms and canoe trails also were damaged by the fire. We are eager to start rebuilding the boardwalk and restoring the trails.

Q. *What benefit do you and your staff expect the fire to provide to the refuge habitat over the short term and long term?*

A. Much of the shrub scrub habitat (especially in the southern portion of the refuge) burned extensively in 2002, 2007 and now. This recovers very quickly and is ready to reignite during the next dry period. Our upland habitats composed of longleaf pine are managed with prescribed fire. Although we do lose individual trees during these events, our dedicated staff have been managing these uplands for over 30 years and the uplands can withstand the effects of fire. Our hardwood stands are a concern. We

have had two large fires occur in just four years. The fire does not run into the crowns, but it burns the peat and organic material at the trees' base, causing them to fall during wind events. Fire continues to burn through these areas as we speak. It will be interesting to see how these hardwood stands recover.

Q. *If you were to give words of advice to any other recently appointed refuge manager whose refuge ignites into a major fire before he or she has barely settled into the new job, what would that advice be?*

A. I should point out that I was here for seven months prior to the start of the fire. My first day at work, Mike Housh, our fire management officer, had informed me that the swamp water level was lower than prior to the start of the Big Turnaround/Bugaboo Fire that burned virtually the entire refuge. Planning for a potential fire was ongoing prior to my arrival. The Georgia Forestry Commission had been implementing a fuel-reduction project around the perimeter of the swamp; our

staff had been working on ensuring equipment and infrastructure, such as our roads and bridges, were prepared for fire. We have been actively conducting prescribed fires around important resources, such as the [100-plus-year-old] Chesser Homestead and our shop area. We also developed lists of what worked well and didn't work so well in the 2007 fire and others. One of the most important things we did was conduct the review of the After Action Review with our partners and incident commanders of all incident management teams in the region. This was invaluable. I guess my advice is to be as proactive as possible to ensure staff, partners and neighbors are actively engaged and working together prior to having smoke in the air. 🦋



The fire at and near Okefenokee Refuge, known as the Honey Prairie Fire, has burned more than 300,000 acres. It destroyed the popular 1.25-mile boardwalk near the east entrance. (Sara Aicher/USFWS)

Progress in the Salt Cedar Struggle

By Karen Leggett

An invasive species strike team is helping three national wildlife refuges in New Mexico eradicate salt cedar within their boundaries. The team hopes to accomplish its goal within three to five years, possibly sooner.

Gina Dello Russo, New Mexico invasive species strike team coordinator and ecologist at Bosque del Apache National Wildlife Refuge, credits the particular topography and the dedication of refuge staff for the imminent success at Maxwell, Las Vegas and San Andres Refuges.

Maxwell and Las Vegas are small refuges characterized by short-grass prairie uplands. San Andres Refuge is remote upland terrain, with limited surface water and few avenues for salt cedar to become established. So eradication is within the realm of possibility at these refuges.

The strike team is also working to control salt cedar at Bosque del Apache, Bitter Lake and Sevilleta Refuges in New Mexico. These three refuges are on floodplains where the moist soil welcomes salt cedar, making complete eradication virtually impossible. By the 1980s, salt cedar had taken over nearly half the riparian floodplain in Bosque del Apache Refuge, threatening the habitat for such species as the endangered Southwestern willow flycatcher and the yellow-billed cuckoo.

Salt cedar, originally imported to the Southwest for decoration and erosion-prevention, can grow to 26 feet, rob arid landscapes of precious water and cause soil to become saline. Resistant to drought and producing 600,000 seeds a year, salt cedar can quickly become a monoculture and displace native birds and animals.

Eradicating or controlling salt cedar is very labor intensive. "It's a lot of chain saw work in these isolated areas," says Dello Russo, followed by treating stumps with chemicals and re-treating sprouts the next year. At Bosque del Apache Refuge, the stumps are removed so the area can be flooded during native tree seed dispersal and planted or reseeded with other native plants.



This native riparian bosque (forest) has been restored at Bosque del Apache National Wildlife Refuge, NM, after the removal of invasive salt cedar. (Gina Dello Russo/USFWS)

An estimated 3,500 acres of salt cedar have been removed at Bosque del Apache Refuge with 3,000 acres restored to native riparian plant communities.

"A native bosque," explains Dello Russo, "includes dense trees but also smaller stands of willows, plus openings of grasslands and wetlands. The patchiness within a native riparian forest is what brings in bird diversity, with the varied light penetration, moisture gradients, food resources, forest structure, and plant variation. It's a beautiful thing to see."

There are still approximately 3,000 acres infested with salt cedar left on Bosque del Apache Refuge, with progress dependent largely on funding.

Strike Teams on the Attack

The Refuge System initiated the Invasive Species Strike Team program in 2004. Teams operate in the Southwest (New Mexico and Arizona), the Florida Everglades, North Dakota, Hawaii and the Pacific Islands, and the Upper Missouri/Yellowstone/Upper Columbia River area.

The 2010 Southwest strike teams mapped 1,503 acres and cut down and treated young and mature salt cedar on 597 acres; youth conservation crews pulled more than 300,000 invasive salt cedar seedlings.

This summer, the New Mexico strike team also partially funded a biological technician who is organizing existing mapping and treatment information into a comprehensive geo-database for all six New Mexico refuges.

Dello Russo expects the New Mexico strike team to assist refuges in building partnerships with surrounding landowners to address salt cedar and other invasives on a landscape level. "San Andres Refuge has established partnerships with White Sands Missile Range and National Monument. The strike team can support mapping and monitoring, so that we move beyond protecting the refuge to working on the landscape around us."

Controlling invasives is a never-ending process. Even when Maxwell, Las Vegas and San Andres Refuges succeed in eradicating salt cedar, there will have to be regular monitoring to catch any new arrivals. The primary objective of all Service strike teams is early detection, rapid response—EDRR. 

Karen Leggett is a writer-editor in the Refuge System Branch of Communications.

Stone Lakes Refuge Is Up Against the Sprawl

By Mary Tillotson

Some of the wildest critters at Stone Lakes National Wildlife Refuge are the two-footed ones: the humans. The refuge directly abuts a densely populated urban area in California's Central Valley. Its neighbor, metropolitan Sacramento, has a population of three million.

Typical urban problems arise on the 6,400 acres managed by Stone Lakes Refuge: theft (copper wire from pumps is the loot of choice), illegal dumping, feral cats and dogs. But, says refuge manager Bart McDermott, the biggest problem with so many people living next door is water.

Stone Lakes Refuge is in the Sacramento-San Joaquin Delta. It is a landscape of wetlands, streamside riparian habitat and grasslands on the Pacific Flyway that historically attracted migratory birds such as greater sandhill cranes and colonial nesting species such as great blue herons.

What is now the refuge was drained and plowed under for farming decades ago. In 1994, when the refuge was established and wetlands restoration began, adjacent dairy farms grew crops compatible with wildlife, says McDermott. Fields of alfalfa, hay and other grains provided a natural filter for runoff to the refuge.

As the refuge grew, so did the city of Elk Grove on its eastern border. Elk Grove's population has doubled to 153,015 in the past decade, and developers have turned wildlife-friendly fields into housing, roads and strip malls. Long-range plans were for the refuge to expand to nearly 18,000 acres, but the frenzied development pushed land prices out of reach for government purchase.

In 1999, a 460-acre subdivision went up within the acquisition boundary, and in the last 10 years, says McDermott, the lower third of the refuge project boundary has been converted from wildlife-compatible crops to vineyards. City officials now hope to expand southward to attract high-tech firms, meaning more acreage could be built up and paved over for commercial



Stone Lakes National Wildlife Refuge borders Interstate 5 and feels enormous development pressure from the city of Elk Grove, CA, which has doubled in population since 2001. (USFWS)

development, increasing runoff and pollutants to the refuge.

Additionally, the state of California is considering expanding a canal and system of dikes that would further divert water from the delta to farms in the Central Valley during droughts. "That's a huge concern," says deputy refuge manager Beatrix Treiterer.

The federal and state governments, under provisions of the Clean Water Act, are now assessing delta water and soil conditions near Stone Lakes Refuge as part of a survey of the nation's most threatened ecosystems. The report will guide the Environmental Protection Agency on where to invest money and personnel to protect wetlands in the future, but it is not due out until 2013.

Despite the challenges of managing a wildlife refuge in urban America, there are pluses.

Stone Lakes has a dedicated corps of 40 to 50 volunteers who donate time to leading tours and doing other work on the refuge, says visitor services manager Amy Hopperstad. About 3,000 people

show up for the refuge's annual Walk on the Wildside festival, she says, and all the new vegetation around the restored wetlands areas has been planted by volunteers—many of them schoolchildren.

To strengthen the connection with local families, refuge staff is planning to create a "junior biologist trail" with hands-on activities around the wetlands. There will be a hazard-free play area where kids can romp over rocks and play in safe water while parents can relax nearby. Beginning this fall, the refuge headquarters area will be open daily, free to the public, for quiet walks in one of the last wild places in the Central Valley.

"The number of kids we reach is phenomenal," Treiterer says. "Coming to the refuge may be the first time they've ever seen a frog ... the first time they've left their neighborhood!"

That's an investment in the future, says Hopperstad. "They're developing a conservation ethic of their own." 🦋

Mary Tillotson is a frequent contributor to Refuge Update.

Flooding: “We Expect It—but Not to This Extent”

By Heather Dewar

Flooding in the Mississippi, Missouri and Red River watersheds smashed high-water records this year, surpassing the Great Flood of 1937, and took a dramatic toll on human settlements. The floods also inundated much of the Refuge System. At least 57 refuges saw significant flooding from April to late July. At least 37 closed, wholly or partially, for up to two months.

At press time, the Midwest Region was waiting for floodwaters to fully recede so it could assess the financial cost. Floods caused an estimated \$83 million in property damage in the Mountain-Prairie Region and \$12 million in the Southeast Region, not including the cost of habitat restoration.

It may take several seasons to assess the effects on wildlife and ecosystems.

Floods “are Mother Nature’s broom. They sweep out everything and bring in new sediments and give everything new life,” said Sabrina Chandler, deputy project manager at Theodore Roosevelt National Wildlife Refuge Complex, MS, which includes Panther Swamp Refuge. “We expect it—but not to this extent.”

Panther Swamp Refuge, along the Yazoo River, illustrates how human engineering can affect flooding. In April, the Yazoo’s waters met a Mississippi River swollen by snowmelt and spring rains. The Yazoo had no place to go and backed up onto nearby bottomlands, as it has done for centuries. But levees that criss-cross the refuge held the floodwaters in place. On the refuge’s east side, forests disappeared under six to 25 feet of water. On the west side, it was too dry to plant corn for waterfowl. Wildlife thronged the west side, forcing managers to close the refuge from May 6 to July 1.

Animals returned to home ranges once the waters receded. “We’re seeing does with twin fawns on the east side,” Chandler said in late July. She was concerned for wild turkeys—ground-

nesters that lost their young—and native trees planted in a reforestation project on 3,000 of the refuge’s 41,000 acres. Bottomland hardwood forests are flood-adapted, but young trees can’t endure submersion for weeks. Many look dead, Chandler said, but some are resprouting. “We’ll know the true effects next April.”

Vegetation die-off is a common concern, especially where refuges double as spillways, relieving pressure on levees that protect farms and towns. Flood control officials planned to funnel water onto Squaw Creek Refuge, MO, through August; in July refuge staffers were seeing signs of tree die-off.

Invasive Concerns

Some managers worried that flooding would spread invasive plants and crowd out native vegetation, doing short-term harm to waterfowl food sources and long-lasting habitat damage. Other impacts included washouts of native prairie plantings and the spread of invasive carp, trash and contaminants, said Mountain-Prairie Region fire management coordinator Jim Kelton.

On the plus side, revitalized freshwater marshes are a boon to fish, which fill anglers’ creels and supply food for wading birds and other wildlife. And floods can be “nature’s way of reforesting,” said Bill Alexander, Bald Knob Refuge manager in Arkansas. After a 2008 flood, native cypress seedlings sprouted in some refuge fields.

Damage to facilities in Arkansas ranged from minor gravel road washouts at Wapanocca Refuge to more than



A feral hog makes its way across Panther Swamp National Wildlife Refuge, MS, one of at least 57 refuges that saw significant flooding from April to July. (USFWS)

\$1 million in lost crops, spoiled grain, damaged roads and a ruined office trailer at Bald Knob Refuge, where the White River crested more than a foot higher than ever recorded.

At DeSoto Refuge, IA, employees packed up a museum collection of 500,000 artifacts from the 1860s steamship *Bertrand* and relocated them and the refuge office to temporary quarters, where they are expected to stay for months.

In flooded communities, refuge staffers helped fill sandbags, build temporary levees and evacuate homes and businesses. Some joined search-and-rescue operations. Some had to leave their own homes. “One of our law enforcement officers’ house is being bulldozed as we speak,” Chandler said.

Nature will rebound, she said, but it won’t be so easy for 30 families near the refuge, most of whom lost their homes. “To see our neighbors lose a lifetime’s worth of hard work and memories, that’s the hardest thing.” 🦋

Heather Dewar is a writer-editor in the Refuge System Branch of Communications.

Sex, Dives and Videotape

By Lindsey Kramer

Each event lasted about 10 minutes. As early morning sunrays pierced the water, coral reef fish went about their business as usual. But for us—free-diving volunteers and staff for the U.S. Fish and Wildlife Service—it was a rare moment of scientific discovery.

On consecutive mornings in May, we formally documented sexual reproduction of cauliflower coral—more precisely, *Pocillopora meandrina*—for the first time in the Northwestern Hawaiian Islands. We were able to capture on video coral spawning off Shark Island in French Frigate Shoals, part of Hawaiian Islands National Wildlife Refuge and Papahānaumokuākea Marine National Monument.

Shark Island is a small sand island about 500 miles from Oahu. Its lagoon is ideal for observing spawning because of its protected shallow waters, its abundant healthy cauliflower coral and its proximity to a Service field station on Tern Island two miles away.

Corals are colonial invertebrates. They reproduce in two ways: asexual fragmentation or sexual reproduction and larval settlement to suitable habitat.

Asexual reproduction occurs when part of a colony breaks off during a storm or other high-energy event and the broken fragment reattaches to the bottom and continues to grow. Often, fragments are not able to lodge into the substrate and are washed away or buried in the sand. Even when successful, asexual reproduction results in genetically identical colonies, which can render a population susceptible to disease and unusual environmental changes.

Sexual reproduction occurs either by fertilization of eggs within the coral tissue (brooders) or by hermaphroditic egg-and-sperm release into the water column with external fertilization (broadcast spawners). New colonies created via sexual reproduction are genetically unique, which increases the likelihood of a population's survival

during a stressful event, such as a viral outbreak or elevated sea temperatures.

Cauliflower corals are unusual in that they are known to spawn just after sunrise in the main Hawaiian Islands (many species spawn in the middle of the night). Observations near the Big Island (Hawaii) over the past decade by the volunteer organization ReefWatchers—led by Sara Peck of the University of Hawaii Sea Grant Program—have helped shape a predictive model of coral broadcast spawning based on seasonality, lunar cycles, water temperature and ocean chemistry. Our team adjusted the Big Island spawning predictions to fit the later sunrise and moonset at Shark Island.

Our first observation at Shark Island, on April 19 from 7:30 to 8:45 a.m., was uneventful. The water felt fairly frigid that morning, which may have precluded spawning. On May 19, two days after the full moon, we monitored 50 coral colonies, and approximately 30 percent of the colonies spawned around 7:30 a.m. On May 20, our team of eight monitored 70 colonies, and 95 percent spawned between 7:40 and 7:53 a.m.

The events were spectacular. The outgoing tide seemed to increase just before spawning began, perhaps cueing the corals. Typically, one or two colonies began to spawn; then neighboring colonies followed. Smoke-like puffs of reproductive materials were ejected from each coral in waves until the water became a hazy gray. The outgoing tide



In May, free-diving volunteers and staff for the U.S. Fish and Wildlife Service documented sexual reproduction of cauliflower coral off Shark Island in French Frigate Shoals, part of Hawaiian Islands National Wildlife Refuge and Papahānaumokuākea Marine National Monument. (Lindsey Kramer)

washed away the spawning materials within minutes.

Although significant, these observations represent just a small piece of the puzzle. More observations are needed to fully characterize and understand the reproductive timing of cauliflower coral.

We do know that successful sexual reproduction helps ensure the resilience of a coral population by improving the odds that it will be able to weather new diseases and difficult environmental conditions, which may become critical in a changing global climate. Knowing where and when reproduction takes place also enables coral reef managers to minimize human interference with the process and help facilitate the creation and replenishment of new corals to the reef. 🐠

Lindsey Kramer, a marine science field technician based in Kailua-Kona, HI, is a U.S. Fish and Wildlife Service volunteer. The Shark Island coral spawning video can be viewed at: <http://www.flickr.com/photos/usfwspacific/tags/coralspawning/>

Focus... Conserving the Future, the Vision and Change ...

By Rebekah Martin

When I first donned my refuge uniform as a SCEP student at Rappahannock River Valley National Wildlife Refuge, I never dreamed that 10 years later I would be coordinating the *Conserving the Future* conference.

What an honor, and what a wild ride the past two years have been! Planning a conference at this scale is not something the Refuge System does frequently. I received helpful guidance from *Fulfilling the Promise* conference organizers, but records from the 1998 Keystone, CO, gathering were scarce. Mostly, I was in an unfamiliar world without a map. My comfort zone is compatibility determinations and RAPP Now, I was evaluating potential conference sites nationwide, deciphering contracts, working with speaker's bureaus, learning the logistics of moving 1,100 attendees through break spaces designed for 600. Those are skills I never expected to hone.

The conference was simply incredible. What can I say about the passion of all

who attended—in Madison and online? They made it successful. As did more than 100 work group members and volunteers onsite who oversaw everything from registering participants and monitoring discussions to arranging banquet centerpieces and helping first-time tweeters.

Watching all we had been working on for months jell was exciting, a relief and even bittersweet.

Having been so fortunate to play this role, I find it fitting to return to the field to help implement the vision the conference celebrated. I will be deputy refuge manager at Eastern Virginia Rivers National Wildlife Refuge



Conserving the Future vision coordinator Rebekah Martin and communications coordinator Michael Gale at the Wisconsin Sendoff banquet. (Jim Kurth/USFWS)

Complex, where I will join you, as I said in Madison, in showing others our way of conservation—persistently, fearlessly and together. 🦋

... on a Grand Scale

By Michael Gale

When I accepted the *Conserving the Future* communications coordinator position, Jim Kurth, then-deputy chief of the Refuge System, sent me an e-mail asking: "Are you ready to change the world?" Right then, I knew this opportunity would be profoundly special.

Using online technologies to open everything up was part of management's vision from the beginning. In the end, more than 75,000 people visited *AmericasWildlife.org*, the draft vision received more than 10,000 comments,

and thousands more connected through social media.

Coming from the Office of External Affairs, I understood the Fish and Wildlife Service's social media policies. Knowing where the lines are drawn helps when you are changing the size of the envelope. Many of the cutting-edge tools already were being used in the agency, just not at this scale. We had the flexibility to try new things. Having management's support made everything more fun and less scary.

Much of what we did is standard practice for large organizations.

However, some of it is new to federal agencies. The conference showed that we can change ourselves to better serve the mission and to be a leader in an evolving federal sector.

Despite anxieties, I knew all along that everything would work out because of our amazing teams. We owe the project's success to their collective passion, vision and hard work.

This is only the beginning. Change starts with a spark—a fire igniting in all of us. Stop being afraid, and continue to fuel the fires of change that we need. 🦋

Live From Madison, It's ... a New Era in Communications

By Kyla Hastie and Jason Holm

It's an exciting time to be a U.S. Fish and Wildlife Service communicator.

The Service is trying to keep pace with shifts in how people get information. We're bringing in new talent and training our experienced communicators to embrace new media so we can tell our conservation story in real time in new ways. We're modernizing Web sites and leveraging communications capacity across programs and regions.

Until recently, though, some have perceived this paradigm shift as a fad—as if Change were knocking on the door, asking to come in. At the Refuge System's *Conserving the Future* conference, Change kicked open the door and declared its intention to stay. We witnessed the moment that modern communications became integral to how the Service achieves its mission.

Like any groundbreaking change, it started with a great idea. The *Conserving the Future* planners wanted to produce two simultaneous conferences—one for those in Madison and a duplicate online for the thousands of staff, partners and others working across the country. Both versions would use new-media tools to engage participants. We'd never done anything like this before.

To turn this idea into action, *Conserving the Future* communications coordinator Michael Gale knew he needed help. Communications and outreach staff members from the Service regions, the Washington office and the National Wildlife Refuge Association were named to serve on three teams: virtualization, multimedia and video, and communications and engagement. The two of us were recruited to integrate the work of these teams into a cohesive operation.

About 30 staff members spent months organizing, planning and securing equipment. Using lessons learned from the 2010 Gulf oil spill and Northeast

Region biologists conference, we established a communications command structure focused on broadcasting the conference live and getting news out quickly and accurately. Then, for one week in July, key communicators and new-media experts from across the Service put aside their day jobs and concentrated on what could be.

Before we arrived in Madison, many of us had never met. After brief introductions, the teams set up a video production war room, a public news desk with a team of mojos (mobile journalists) and correspondents, social media stations and a live broadcast center at the Monona Terrace Center. Our experiment had begun.

Testing to the Max

The day before the conference—to test the system and gauge how much coverage we realistically could produce—we intentionally maxed out our news desk and video production operations. By the opening session on Tuesday, July 12, we were running on all cylinders.

The result was better than any of us had expected.

If you haven't done so already, please check out the archives at www.AmericasWildlife.org/newswire and www.AmericasWildlife.org/live. We offered nine hours of live programming daily—the largest Service broadcast ever. More than 50 news reports, complete with videos and photos, were delivered online throughout the conference. They



Behind the scenes, the video-editing team was the nerve center of the communications effort. With Puddles the Blue Goose, they are, from left, Jennifer Strickland, Megan Nagel, Cortney White, Chuck Traxler, Laura Whitehouse, Dorothy Amatucci, Tina Shaw, Joe Donahoe, Kayt Jonsson and Keith Shannon. (Bob Danley/USFWS)

covered workshops, youth delegates, Friends, efforts to green the conference, plenary speakers, lecturers and more. We distributed our content to the entire social media capacity of the Service and the National Wildlife Refuge Association—an audience of 75,000 people nationwide. Speeches delivered by the Secretary, Director and refuge chief were made available on YouTube.

Conference attendees took notice, too. Two large screens flanking the plenary stage displayed the Twitter feed—showcasing what people were saying about the proceedings in real time. During Director Dan Ashe's call to action speech, many in the audience tweeted their instant feedback; he signed the *Conserving the Future* implementation charter live on an iPad.

Four back-to-back social media stations allowed attendees to tweet and write Facebook posts about the goings-on and the Refuge System vision. Many participants received conference alerts via text message. Questions from the public for the Secretary came from Twitter and text messages. The coolness factor was in full view when

continued on pg 18

Focus... Conserving the Future, the

An Opportunity for Friends to Share

By Colleen Hovinga

The *Conserving the Future* conference was a chance for refuge Friends to learn, share successes and discuss conservation issues. I attended as a Friend of Union Slough National Wildlife Refuge in Iowa. My board asked me to seek guidance on how to regenerate our group's momentum, collaborate with U.S. Fish and Wildlife Service staff to promote the mission of our refuge, and provide environmental education to the public.

The conference helped me, and other Friends, do just that.

Even though my refuge is half a continent from an ocean, marine scientist Dr. Sylvia Earle left a lasting impression. Even though my refuge is rural, I was fascinated by the urban refuge concept. Even though the mountainous landscape of the Blackfoot Challenge is nothing like the prairie terrain of my refuge, I appreciated Montana rancher Jim Stone's insight.

Earle spoke powerfully about oceans' vital role in the life systems that support us all. She noted that oceans produce more oxygen and eliminate more carbon than trees but are less protected. She told us that, while people often ask her if she is afraid of man-eating sharks, over time she has become more concerned about the pace of man eating sharks in a world where some people consider shark-fin soup a delicacy.

Discussions about possible new urban refuges helped me think creatively about connecting with people who can't (or won't) travel to Union Slough Refuge itself. It was clear that urban notions such as rooftop gardens, inner-city revitalizations, refuge children's museums and river "blueways" could have application in rural areas, too.

Stone's presentation, and the conference overall, reinforced the concept that Friends, supporters, landowners and refuge staff must work cooperatively for mutual benefits if beyond-the-refuge-boundaries projects are to be successful. Stone told us that landscape-level conservation requires landscape-level conversation.



Texans Ed Barrios of Friends of Brazoria Wildlife Refuges and Leta Kay of Friends of Caddo Lake National Wildlife Refuge take a break by the lake. (Neal McLain)

I wasn't alone among Friends. Keith Hackland of Friends of South Texas Refuges said he gained a greater awareness of the Service as "an evolving organization."

Pauline Chvilicek of Friends of Patuxent Research Refuge in Maryland was in Madison "trying to find ways to involve people" of all ages. The citizen science workshop about how refuge volunteers can assist with observations, measurements and education was particularly useful. We learned that programs such as Project BudBurst, in which participants help track

phenology, can be educational and reveal surprising data at the same time. For example, plants at Thoreau's Walden Pond near Great Meadows Refuge in Massachusetts recently budded two weeks earlier than they did when the author lived there in the 1840s.

Furthermore, I learned how it's possible to use technology such as EarthCaching and quick response (QR) codes to bring outdoor experiences to new audiences. My Friends group can utilize technologies that have been tested by others as our group moves ahead with events and outreach.

I enjoyed "Wild Legacy," the production in which five talented actors brought the sensation of the Alaska wilderness to us in simple, creative ways while telling the story of Olaus and Mardy Murie and their 1956 expedition that led to the creation of the Arctic National Wildlife Refuge. And seeing the documentary film "Green Fire," about Aldo Leopold, made the conference setting more meaningful.

The vision document was called a cornerstone, a capstone and a touchstone. By any name, it will guide volunteer and career conservationists alike as we work to protect, steward and share nature in our communities.

"It was an honor to be among so many people who are not only conservation-minded but also have the desire to shape a vision that gives consideration to human interaction with nature," said Laurie Peterka of Friends of the Mariana Trench Marine National Monument, who with her colleague Ike Cabrera traveled more than 7,000 miles to be in Madison.

"We left full of hope and vision," Cabrera said. 🦋

Colleen Hovinga is charter member of Friends of Union Slough National Wildlife Refuge in Iowa.

From Top Down, Youth Was Served

By Bill O'Brian

Youth was a byword at the *Conserving the Future* conference. And the 18 youth delegates invited to Madison were treated to a handful of events just for them.

They got serious face time with Dan Ashe just days after his Senate confirmation as Director of the U.S. Fish and Wildlife Service. They sat down with national Service leaders at the Youth Challenge Project, also known as the youth summit. They met one-on-one with Service employees in a speed-mentoring session. They helped rid a local park of invasive species one day and had a youth social picnic at the same park two days later.

The structured events were designed to “force them to network and socialize with the Service,” says Magdalena Tsiongas, a *Conserving the Future* fellow who helped coordinate the young peoples’ activities. But “in the hallways, when people came up to them, is what they enjoyed the most.” During such encounters with Refuge System professionals, the youth could learn about SCEP (Student Career Experience Program), STEP (Student Temporary Employment Program) and who does which job at what refuge.

The highlights for youth delegate Nicole Bradley were the youth summit and the meeting with Ashe. The summit “made me feel like I was actually doing something to help, instead of just listening,” Bradley says. The Service leaders “were so interested in hearing our ideas. The stuff that was so simple to us seemed kind of new to them.”

Bradley knows that the hour-long audience with the Director was a rare opportunity: “He’s really the one who can actually put everything into action.”

And Bradley, an incoming freshman at Iowa State University who changed her

major from premed to wildlife biology after the conference, was blown away by the “celebrate what’s right with the world” presentation by photographer Dewitt Jones on the final day. “Not only was he a great speaker,” she says, “he took my attention. He kept it. He gave hope.”

The speed-mentoring event—organized by youth engagement team chair Mao Lin (of the Gulf of Maine Coastal Program) and Alaska Region youth, partnerships and grants coordinator Kristen Gilbert—was a professional variation on speed dating. It took place in a hot, stuffy, dimly lit hallway of the historic Orpheum Theatre. And it had to be cut slightly short because of scheduling constraints.

Still, “the idea of speed mentoring is very cool,” says youth delegate Marco Sanchez, a fisheries and wildlife major at Michigan State University. “It wasn’t the best scenario. In two minutes, it’s really hard to build up even a tiny relationship with the person who is mentoring you. It was good just to meet a bunch of different people. And, for me, I might contact two or three of them in the future.”

“It was a great experience,” says mentor Steve Agius, an operations specialist at Aroostook National Wildlife Refuge in Maine. “I interacted with the mentorees afterward throughout the whole conference ... I wish I had had that opportunity 10 years ago when I was doing contract work for the Service.”



This photograph by 20-year-old Wisconsinite Evan Eifler won first place in the Youth Multimedia Contest. Eifler attended the conference as a youth delegate.

When asked how the Service could do better by youth, *Conserving the Future* fellow Tsiongas, herself a June 2010 high school graduate and an incoming freshman at UCLA, offers two suggestions.

First, she says, “we should look to be bringing more SCEP and STEP students out to [routine professional] conferences when we have them.”

Second, she says, when young people are invited to such gatherings, there should be an orientation session that introduces the youth to the Service, demystifies the flurry of strange acronyms and identifies the mission, best practices and career pathways of the Refuge System.

“If you just throw them in when they don’t know much about the Service,” she says, “that doesn’t work” as well as it could. 

Focus... Conserving the Future, the Conference Notebook

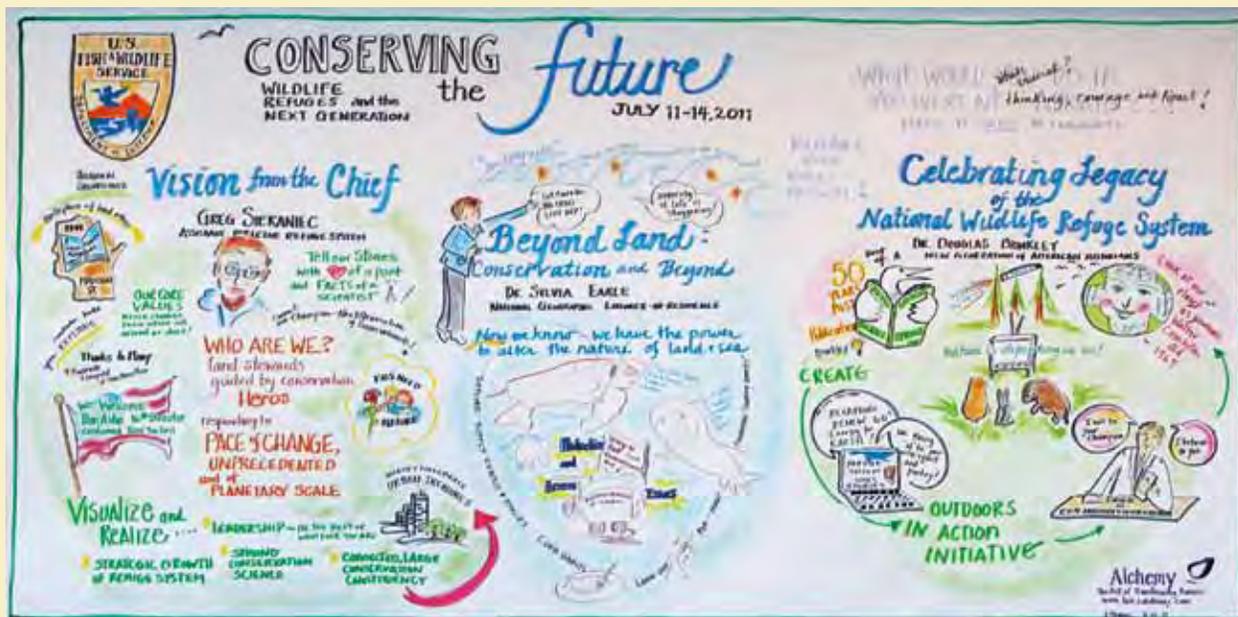
Illustrators Draw Conclusions

To the left of the verdant stage at the *Conserving the Future* conference in Exhibit Hall A at the Monona Terrace Community and Convention Center, next to one of the giant Twitter-feed monitors, Alece Birnbach and Jessica Townsend Teague used pastel, pencils and markers to translate the events, words and concepts of the gathering into art.

Of the 1,100 or so people in attendance, they were among the few who were not intimately familiar with the National Wildlife Refuge System beforehand. And, in addition to drawing a dynamic visual record of the conference, they came away with personal impressions of the Refuge System and its mission.

“My biggest takeaway from the conference was how passionate the Refuge System employees are about their work,” said Birnbach, who with Teague is an affiliate of Alchemy, a Denver-based strategic illustration company. “Both young and older employees were all excited to talk about their jobs and genuinely love what they do. Outside of the arts, this is the first time I’ve come across a group of people who love and believe in their life’s work so much.”

The most surprising aspect of the conference, Teague said, was that the Refuge System is creating an urban wildlife refuge initiative, “a great idea



This strategic illustration captures the first morning’s general session. It was done by an artist with Alchemy (www.link2alchemy.com), a company whose tag line is “The Art of Transforming Business.”

with enormous benefits—aesthetic, ecological and for all of us—as city dwelling becomes the norm.”

“Having grown up in rural Colorado,” said Birnbach, “I hadn’t given much thought to how many people grow up in urban areas now and what a need there is to reach that population with a conservation message.”

Birnbach, Teague and their backstage colleague, Vince Palko, produced seven illustrations during the conference. The drawings can be seen at <http://AmericasWildlife.org/conference>.

Refuge Manager of the Future

It was standing room only in the Refuge Manager of the Future workshop, where five panelists shared heartfelt experiences.

The panel was moderated by Larry Williams, chief of the Refuge System’s Division of Budget, Performance and Workforce, who spoke of three elements of change. First, the demographics of refuge managers, currently 87 percent white and 75 percent male, are changing.

Second, refuge management decisions are increasingly based on the latest scientific information. Finally, refuge managers are finding it more necessary to use technology.

Keenan Adams, deputy refuge manager at Pelican Island Refuge, FL, reminded the audience that the new generation of refuge managers may come from an urban background, and that current managers must be willing to reach out to diverse groups and find shared conservation goals.

Vicki Muller, a wildlife refuge specialist at Aransas Refuge, TX, spoke of the importance of finding a good mentor to discuss experiences and provide advice. “Look for those people throughout your career who model the traits and characteristics that you desire to have,” she said.

Shaun Sanchez, a refuge manager at Desert Refuge Complex, NV, stressed the importance of developing future leaders. He suggested each manager should ask himself or herself: “What am I doing to ensure that there are

Conference

refuge managers in the future?” He also encouraged managers to consider ways to help visitors see national wildlife refuges from the *inside*, not just from outside fences and boundary signs, and to empower the public to feel ownership of their local refuges.

Don Hultman, a retired refuge manager, had even more fundamental advice. “Love the people who come to refuges and waterfowl production areas,” he said, “and they will learn to love the resource.”

To see summaries of some conference workshops and facilitated discussions go to <http://AmericasWildlife.org/conference/> and look under “Learn” and “Discuss.”—**Laura Bonneau**

Low-Tech Messaging

Just steps away from the social media computer stations where conference participants could tweet, blog or share information on Facebook was a simple, low-tech, low-cost communication device that one could imagine in any visitor center in the Refuge System: a chalkboard on which to write pithy conservation thoughts and messages.

Vision process communications coordinator Michael Gale had seen a similar chalkboard at a previous event, liked it and, as “the idea of personal expression became important,” suggested it for the conference. The



Amid the tweeting, Facebooking and live-streaming videos, the hallway chalkboard was a low-tech way to express oneself in Madison. (Nick Zukauskas/USFWS)

free-standing, three-sided, hinged display was not chalkboard per se, but wood covered with chalkboard paint. It was built by Madison retiree John Belknap, a former economics professor who has volunteered at numerous refuges and national parks. Material costs were roughly \$250.

It was a fun and effective diversion.

The playful smile on the face of Friend Kathy Woodward—as she wrote “I ♥ Great Swamp NWR” on the chalkboard—would attest to that. As would the enthusiasm of the anonymous person who wrote: “It’s an honor to be a part of this vision process.”

Have Refuge, Will Travel

One of the biggest non-human hits at the conference was the Silvio O. Conte National Fish and Wildlife Refuge mobile visitor center, also known as the Watershed on Wheels (WOW) Express.

The mobile visitor center is composed of two trailers. A 28-footer is painted with vibrant nature scenes and is home to a walkthrough exhibit that mimics the sights, sounds and even smells of the refuge. A 16-footer carries eight portable exhibits that include games and an interactive watershed table. The entire ensemble made the 2,200-mile, 50-hour round-trip drive from its home base in New England.



The Silvio O. Conte National Fish and Wildlife Refuge mobile visitor center traveled 2,200 miles round trip to be in Madison, where hundreds of conference attendees checked it out. (Patrick Comins/Friends of Silvio O. Conte National Fish and Wildlife Refuge)

Along the way, said refuge visitor service specialist David Sagan, the trailers “got a reaction at every toll booth we went through and every time we stopped for gas. People loved it and were asking all sorts of questions about it ... I think it’s a great way for the refuge to spread its message.”

Silvio O. Conte Refuge partnered with the Vermont Institute of Natural Science (VINS) to create the innovative traveling education trailer. It debuted in the fall of 2010 and is designed to inform the public about the Connecticut River watershed.

“I’ve been an environmental educator for six years, and over the past four months that I have been working with the WOW Express I have reached more people than in my entire career,” said VINS staff member Chris Poulin as he gave tours of the trailer to conference attendees in Madison. The mobile visitor center has reached about 8,000 people in 35 communities in the Connecticut River Valley in that time, he said.

To see two videos about the mobile visitor center, go to the video archive at <http://AmericasWildlife.org/live/>. 

Focus... Conserving the Future, the "Quote ... Unquote"

Over the course of the July 11-14 Conserving the Future: Wildlife Refuges and the Next Generation conference, speakers of all ages, shapes, sizes and perspectives speaking in a variety of forums made inspiring, important and memorable remarks. What follows is a sampling of them.

Primatologist and anthropologist Jane Goodall in a taped message: "It would be absolutely useless for any of us to work to save wildlife without working to educate the next generation of conservationists."

Author and historian Doug Brinkley: "If I tell my regular buddies where I grew up in Ohio that I want to save the whooping crane, they laugh at me. If I show them whooping cranes and how majestic they are, they say, 'We've got to save them.'"

Jim Stone, rancher and board chairman of the Blackfoot Challenge in Montana: "You cannot have landscape conservation without landscape conversation ... The political system works very well when we tell our story ... You better have everyone at the table, or you're going to get burned."



Speaker Juan Martinez of south-central Los Angeles relaxes on a terrace overlooking Lake Monona in Madison. (Nick Zukauskas/USFWS)

U.S. Fish and Wildlife Service Director Dan Ashe: "The vision we are writing here will be just words on paper unless you step up when it's your turn. There are many more recommendations in our vision for conserving the future. I expect action on all of them—prioritized action. I expect progress reports and the continued engagement and leadership of the entire Service Directorate. I expect every Service employee to take personal responsibility. To be successful, we will need the continued support of our state fish and wildlife agency colleagues. Our conservation partners' support will be critical, as it always has been. And we need our Friends groups, now more than ever."

Mountain-Prairie Region refuge chief Rick Coleman on critical thinking: Step back from the day-to-day, "let go of the crank of work, put your head up, look around and *think*—about what you're doing and where you're going."



Secretary of the Interior Ken Salazar addresses the general session on the final day of the Conserving the Future conference. (Tami Heilemann/DOI)

Then-Refuge System chief Greg Siekaniec: "We must tell our stories with the heart of a poet and the facts of a scientist as we engage Americans in the stewardship of our land."

Greg Siekaniec: "In conservation science, as in so much of our vision, we will not succeed alone. We intend to be both strong leaders *and* strong partners."

Service science advisor Gabriela Chavarria on the importance of sound science to the Refuge System: "Our level of scientific accountability must be higher in these times of increased expectations ... All employees, not just biologists, must be well-versed in science."

Deborah Rocque, deputy chief, Refuge System Division of Natural Resources and Conservation Planning, on the vision document: "It's ambitious, it's inspirational and, more important, it's doable."

Secretary of the Interior Ken Salazar on the need to persist in these tight budgetary times: "If we let this time pass us by, if we let the conservation legacy of this country be buried, so goes conservation in other countries of the world."

Association of Fish and Wildlife Agencies' John Kennedy: "It's important to recognize that ... hunter- and angler-based funding supports all conservation, all fish and wildlife, game and non-game species, on refuges."

National Wildlife Refuge Association president Evan Hirshe: “The Gray Goose Battalion”—baby boom retirees—“has the potential to be the mother lode of all volunteers.”

Juan Martinez, who grew up among gangs in south-central Los Angeles, on his first wildlife experience at a camp in the Grand Tetons of Wyoming: “There was only one species I didn’t see there: the ghetto bird [a police helicopter].”

Then-Refuge System deputy chief Jim Kurth: “When it comes to leadership, the little things are the big things ... It takes courage to share, and leadership is about giving.”

U.S. Coast Guard Adm. Thad Allen on dealing with both climate change and the social/news media revolution: “We can suffer, we can manage, or we can adapt.”

Thad Allen: “The more different viewpoints you can bring to bear on a problem, the more robust your solution is going to be and the broader base of support you will have.”

Thad Allen: “Nobody can take our integrity and values away, but we can give them away.”

Desert National Wildlife Refuge Complex manager Shaun Sanchez: “I want people to experience refuges from the *inside*. To feel the refuge, to taste it, to smell it.”



Then-Refuge System chief Greg Siekaniec chats onstage with four members of the Prairie Wetlands Learning Center class, including fourth-grader Alesha Ouren, who is holding the microphone. (Nick Zukauskas/USFWS)

Former Service Director Lynn Greenwalt on the passion of the Refuge System: “I am convinced there is no Fish and Wildlife Service employee who does not enjoy their job ... I wish I could go on this journey with you.”

National Geographic photographer Dewitt Jones: “Great visions release passion ... You have to move from imagination to ‘imagin-action’ ... Nature shows us that there is more than one right answer ... We must learn to ride the waves of change, not shrink from them.”

Eco-entrepreneur Majora Carter: My work is to “green to the ghetto ... Policy follows projects, not the other way around, when you really want to do something ... I believe you don’t have to move out of your neighborhood to live in a better one.”

Tweet from Pacific Southwest Region visitor services planner D.C. Carr while Majora Carter was explaining how rooftop gardens in the South Bronx attract birds: “Urban refuges? Imagine a partnership-based NWR entirely on the roofs of urban buildings.”

Marine scientist Sylvia Earle: The Refuge System “is like the ocean. Even though there are people who haven’t touched the ocean, the ocean touches them all the time. And the same is true with the Refuge System.”

Alesha Ouren, a fourth-grader at the Prairie Wetlands Learning Center, on what she’d tell her classmates who are exploring nature and the outdoors for the first time: “I’d say, ‘Look closer. You’ll see more than meets the eye.’”

For more information about the speeches, lectures, workshops and facilitated discussions at the conference, go to <http://AmericasWildlife.org/>. 

Focus... Conserving the Future, the

Moving Quickly From Vision to Implementation — continued from page 1

of *Fulfilling the Promise*, the Refuge System's previous guiding vision.

Fast-track implementation was a consequence of the passion for progress evident during the four-day conference, which drew about 1,100 participants.

Attendees and an online audience heard from an array of speakers, including Interior Secretary Ken Salazar; oceanographer Sylvia Earle; renowned chimpanzee scientist Jane Goodall via taped message; and eco-entrepreneur Majora Carter, who founded Sustainable South Bronx.

Perhaps no one summarized the conference's conservation passion better than historian and author Douglas Brinkley, who said: "If I wasn't a professor, I would want to be like you because of the integrity of the Fish and Wildlife Service. You undertake this as a spiritual mission."

Brinkley cited the importance of refuge Friends groups, urging them and refuge staff members to cultivate local journalists in the cause of conservation. "Call them up. Feed them stories. Invite them to photograph a sunset. Get your news on the Internet," he said. Brinkley recalled that CBS News anchor Walter Cronkite—whom polls found to be the most trusted man in America in the 1960-'70s—became a conservationist after covering the first Earth Day.

The conference pulsated with excitement. Scores of workshops, facilitated discussions and lectures offered participants opportunities to exchange

ideas, call for vision document refinements and learn new ways to achieve conservation goals. A vibrant news desk produced stories, video interviews and a noontime newscast beamed across the country on www.AmericasWildlife.org.

Cutting-edge technology was everywhere, from the iPad that Ashe used to sign the *Conserving the Future* implementation charter to the two large screens that flashed Twitter feeds during the general sessions. Hundreds of people who had never blogged or tweeted used work stations, staffed by youthful volunteers, to try their hand at new social media.

Now the Work Begins

Overall implementation of the vision will be the work of the Executive Implementation Council—chaired by the Refuge System chief and supported by the Refuge System Leadership Team and a full-time council coordinator.

Ashe mandated that a refined final vision document—which contains 24 specific recommendations—be published by National Wildlife Refuge Week in mid-October. The charter he signed calls for development of an overall implementation strategy within 90 days of the document's publication and for the vision to be largely implemented within five years. The executive council expects that strategy to include six implementation teams beyond the three established by Ashe.

In chartering the strategic growth team, Ashe said: "We need a rapid, top-to-bottom review of current land acquisition projects. We need clear priorities and biological objectives in order to decide



Volunteer Danny Williams from Operation Fresh Start, a Madison nonprofit organization, helps Service Director Dan Ashe tweet at a social media station. (USFWS)

how many new projects we can take on and how to select them."

Calling the urban wildlife refuge initiative "exciting and innovative," he said, "There are many important wildlife and habitat management challenges in our vision for conserving the future. We will not succeed in these endeavors unless we have strong support from a connected conservation constituency. People must be a key component in our conservation strategy." 🦋

Live From Madison, It's ... a New Era in Communications — continued from page 11

the Stepping Up to Leadership class at NCTC texted the Director from 800 miles away to ask "what you see as the role of field personnel in LCCs."

Our team learned what is possible when skilled communications professionals from all regions and programs come

together. Our team learned what the full capacity of the Service's communications effort could look like, if concentrated for a brief time. The conference helped the Service and the Refuge System pave a new way to tell our story and to be more relevant to the American public.

Change is here—and it is us. 🦋

Kyla Hastie and Jason Holm are Service assistant regional directors for external affairs in the Northeast Region and the Midwest Region, respectively.

Two Implementation Teams Selected

The charters have been signed and individuals have been named for two of three *Conserving the Future* implementation teams that Director Dan Ashe mandated to be completed by the end of August.

The charter of the strategic habitat growth team is to develop a plan, policies and support tools to guide strategic growth of the National Wildlife Refuge System in a landscape context. Its members are: Jeff Rupert, co-chair, chief of Division of Natural Resources and Conservation Planning, Washington office; Eric Alvarez, co-chair chief of Division of Realty, Washington office; Rick Schultz, co-chair, regional refuge chief, Midwest Region; Jonathan Bloomfield, realty specialist, Pacific Region; Kelly McDowell, project leader, Southwest Region; Stacy Salveold, private lands biologist, Midwest Region; James Burnett, project leader, Southeast Region; Joseph McCauley, regional realty chief, Northeast Region; Will Meeks, project leader, Mountain-Prairie Region; Rob Campellone, Branch of Conservation Planning, Washington office; Bill Uihlein, assistant regional director for science, Southeast Region.

The charter of the urban wildlife refuge initiative team is to develop standards

and a framework for an urban wildlife refuge program. Its members are: Cynthia Martinez, co-chair, chief of Division of Visitor Services and Communication, Washington office; Scott Kahan, co-chair, regional refuge chief, Northeast Region; Kim Strassburg, visitor services manager, Pacific Region; Ken Garrahan, regional visitor services chief, Southwest Region; Charlie Blair, project leader, Midwest Region; Sharon Fuller, regional outreach specialist, Southeast Region; Sharon Marino, project leader, Northeast Region; Lorrie Beck, visitor services specialist, Mountain-Prairie Region; Kenton Moos, project leader, Alaska Region; Chantel Jimenez, environmental education specialist, Pacific Southwest Region; Mendel Stewart, project leader, Pacific Southwest Region; Steve Suder, Refuge System transportation coordinator, Washington



Then-Refuge System Chief Greg Siekaniec holds the iPad on which Service Director Dan Ashe signed the *Conserving the Future* implementation charter moments earlier. The charter is available at <http://AmericasWildlife.org/vision/>. (Nick Zukauskas/USFWS)

office; Brad Bortner, chief of Division of Migratory Birds and Habitat Programs, Washington office.

As *Refuge Update* went to press in late August, the third implementation team specified by Ashe, the Leadership Development Council, was to be named soon. Six other implementation teams were being formed in September to address the vision's remaining recommendations. 🦋

Ashe Named 16th Director of Service — continued from page 2

the effects of a changing climate. That plan outlined interagency cooperative efforts across landscapes as the most effective way to help fish and wildlife populations adapt to rapidly changing environmental conditions.

Ashe also been a leader in the development of landscape conservation cooperatives (LCCs), which are intended to leverage resources and strategically target science to inform conservation decisions and actions.

Ashe, who had been Service deputy director since 2009, served as the science

advisor to the Director from 2003 to 2009. From 1998 to 2003, he was chief of the National Wildlife Refuge System. From 1995 to 1998, he was the Service assistant director for external affairs.

Before joining the Service, Ashe was a member of the professional staff of the former Committee on Merchant Marine and Fisheries in the House of Representatives from 1982 until 1995.

Ashe was born and spent his childhood in Atlanta, where his father began his 37-year career with the Service. Much of Ashe's youth was spent on national

wildlife refuges and fish hatcheries in the Southeast, where he learned to band birds, fish, hunt and enjoy the outdoors.

“My dad was a respected leader in the Service, and, to use an old phrase, he ‘saved a lot of dirt’ during his career,” Ashe told the *Conserving the Future* conference audience. “Ding Darling in Florida and Sevilleta in New Mexico—two of my favorite refuges—are protected today because of his vision, energy and courage. I am proud of the Refuge System I knew as a boy, the System that my father helped build, and I am proud of the one that I have helped to lead.” 🦋

Around the Refuge System

Three New Regional Refuge Chiefs

The Alaska, Northeast and Southwest Regions of the U.S. Fish and Wildlife Service have named new regional refuge chiefs.

Mitch Ellis, a 25-year Service veteran, was selected in April as chief in Alaska to replace Todd Logan, who retired. Ellis has managed refuges in three regions and five states, worked in wildlife resources management in the Washington office, and was the first chief of Refuge System law enforcement. He has diverse experience with a variety of issues, including endangered species management, water issues, fire management, wilderness stewardship and working with state agencies. Most recently, he was refuge manager at the Southwest Arizona National Wildlife Refuge Complex.

Scott Kahan, a 21-year Refuge System veteran who was project leader at Detroit Lakes Wetland Management District in Minnesota, was selected in June as refuge chief in the Northeast Region. He succeeds Tony Leger, who retired. In addition to eight years at Detroit Lakes WMD, Kahan has worked in North Dakota at Devils Lake WMD Complex and at Tewaukon Refuge. Kahan, who is from Massachusetts, began his Service career in the Northeast Region at Ninigret Refuge, RI.

Aaron Archibeque was named in August to be chief in the Southwest Region, where he replaces Chris Pease, now with the Gulf Coast Ecosystem Restoration Task Force. Archibeque, a native New Mexican who had been regional refuge supervisor for Texas and Oklahoma since 2003, has worked in the Refuge System for 28 years. He served as refuge manager at the 4.7-million-acre Togiak Refuge in Alaska from 1991-2003; before that, he worked at six refuges in the Southwest Region.



The Migratory Bird Conservation Commission approved the purchase of waterfowl habitat at San Bernard National Wildlife Refuge, TX. (Michael Lange/USFWS)

Migratory Bird Habitat

Secretary of the Interior Ken Salazar announced in June that the Migratory Bird Conservation Commission approved more than \$3 million from the Migratory Bird Conservation Fund to protect an estimated 1,600 acres of waterfowl habitat on three national wildlife refuges: Nestucca Bay Refuge, OR; San Bernard Refuge, TX; and Canaan Valley Refuge, WV. The commission also approved \$23.5 million in federal funding for grants to conserve more than 139,000 acres of wetlands and associated habitats in Canada through the North American Wetlands Conservation Act (NAWCA).

Montana

A remarkable fossil found encased in shale last fall in a remote portion of Charles M. Russell (CMR) National Wildlife Refuge is likely a juvenile elasmosaur, or perhaps a species entirely new to science, initial examination by a world-renowned paleontologist indicates.

A team that included marine reptile expert Patrick Druckenmiller, CMR range technician Dan Harrell, other Service employees and the family of David Bradt, a bow hunter who discovered the fossilized bones of the prehistoric sea creature last year, trekked into the site in July to excavate the find. Working in cramped conditions and 90-degree heat, the team was able to remove the specimen. Druckenmiller, a curator at the University of Alaska Museum, is studying it now, but it will remain in the permanent custody of the U.S. Fish and Wildlife Service and will be made available for public display and education or for further scientific study.

An elasmosaur is a long-necked plesiosaur. Plesiosaurs were a common group of marine reptiles in the Western Interior Seaway of North America, a 1,000-mile-wide sea that extended north to south from the Arctic to the Gulf of Mexico 74 million years ago. Marine reptiles are not considered dinosaurs.

While dinosaurs dominated the land, marine reptiles thrived in the oceans. Numerous scattered triceratops and tyrannosaurus rex fossils have been found on the 1.1-million-acre refuge along the Missouri River in the north-central part of the state, but an intact plesiosaur is rare.

California

What was once Skaggs Island Naval Station is now part of San Pablo Bay Refuge. The formal transfer of the 3,000-acre island from the Navy to the U.S. Fish and Wildlife Service was marked by a ceremony in late June. The station, which was a secretive base that performed communications and intelligence-gathering functions for the Navy and other federal intelligence organizations for more than 50 years, was closed in 1993. Over the past year-and-a-half, buildings that formerly housed about 300 military members and their families were torn down to restore the land. Refuge manager Don Brubaker says the island could be open soon for such things as bird-watching tours.

Midway Atoll

Biologists at Midway Atoll National Wildlife Refuge have banded the first confirmed short-tailed albatross chick ever hatched outside of Japan. In June, the chick, then five months old, received a permanent metal band on its right leg and a red-and-white one coded "AA00" on its left. The bird has since fledged, and the bands will help biologists track the rare and endangered seabird to learn where it will go to nest. Most albatross return to the island where they were hatched. The chick hatched at Midway in January—and then survived several storms and the March 11 Japanese tsunami. Short-tailed albatrosses had previously reproduced only at two islands off Japan. Feather hunting pushed the species to near-extinction by the early 20th century.

Wisconsin

Necedah National Wildlife Refuge is collaborating with Dairyland Power Cooperative to help provide renewable energy to local homes and businesses through a solar project at the refuge's visitor center. The new visitor center, whose grand opening took place in May, is a state-of-the-art, energy-efficient facility. It includes a 46-kilowatt photovoltaic solar energy system that was funded through the American Recovery and Reinvestment Act. The refuge has an agreement with Dairyland to sell all renewable energy produced through the solar installation for distribution to cooperative members, which include homes and businesses. The refuge is a member of Oakdale Electric Cooperative, a subsidiary of Dairyland that provided electrical transmission infrastructure for the project.

Texas

In keeping with its efforts to go green, Hagerman National Wildlife Refuge recently put into service an electric-powered, golf cart-size vehicle dedicated primarily to monitoring the 33 bluebird nest boxes along its Harris Creek Trail. The vehicle, tentatively named the Bluebird Buggy, is easy to operate, able to climb reasonable grades, simple to charge and can navigate narrow trails that are inaccessible to larger vehicles. "It's also quiet," says Hagerman Refuge administrative officer Gayle Ellis. "It doesn't bother the wildlife at all." Made by E-Z-GO Company, the vehicle cost \$7,700 through a General Services Administration contract, according to Ellis. It will be particularly useful in the dead of summer, she says, because "some of the trails are just too long to walk in the heat."

Conservation Stamp

The U.S. Postal Service is issuing a special stamp to benefit elephants, rhinoceros, tigers, great apes and marine turtles under the Service's Wildlife

Pennsylvania



This turkey sculpture, crafted from spare lawnmower parts, won a prize in a Trash to Treasure contest at Erie National Wildlife Refuge, PA. Participants made artistic or useful items out of materials that otherwise would be thrown away. The contest highlighted the green theme of the annual Summer Fest, which attracted 266 people to the refuge on a rainy day in June. (USFWS)

Without Borders Multinational Species Conservation Funds. Only the fourth of its kind, the "semipostal stamp" will be available in the nation's 37,000 post offices on September 21. It is scheduled to remain on sale for at least two years. A semipostal stamp is a U.S. Postal Service stamp issued to raise money for a particular purpose and is sold at a premium over the postal value. The three previous stamps benefitted campaigns related to breast cancer, 9/11 and domestic violence. Del. Gregorio Sablan—the House of Representatives member from the Northern Mariana Islands territory, which includes Marianas Trench Marine National Monument in the Pacific—this summer, coincidentally, introduced a bill to provide for the issuance of a National Wildlife Refuge System semipostal stamp in the future. 

“We Saw a Snake, and It Was Cool”

By Nancy C. Brown

This summer, for the third time in as many years, Wichita Mountains Wildlife Refuge in Oklahoma led 60 fifth- and sixth-graders from economically disadvantaged schools on a weeklong outdoors adventure known as Nature Quest.

“A lot of these kids have never slept outside overnight, much less heard a coyote,” says Quinton Smith, a park ranger at the refuge. “You basically spend Monday and Tuesday building trust, so they are ready for the campout.”

But by week’s end, the students—30 boys and 30 girls randomly selected from Title I (low-income) schools—had hiked for miles on the refuge known for its scrub oak forest, rocky mountains and grassy prairie; had seen American bison and collared lizards in the wild; had tried their luck with a cane fishing pole; and had used binoculars to identify canyon wrens and other birds among the 240 avian species that thrive on the refuge.

Here’s how it worked.

The children were divided into six groups of 10. Each group was paired with two teachers and two high school students who served as mentors. On the first two days, the children—many of whom had no experience with camping or nature—toured the refuge and learned about wildlife conservation, leaving no trace, healthy lifestyles and safety. The idea was to create bonds among all involved.

On Wednesday, the children hiked nearly three miles to a campground, where they pitched tents that would be their homes for the next two nights. The hike presented opportunities for education and interpretation, but it also instilled in the youngsters a sense of achievement.

Smith recalls one Nature Quest child who finished the hike 90 minutes behind the others.

“He was short and chubby. He had new shoes that hurt his feet, so he’d stop and take them off while everyone else moved on,” says Smith. “He never complained and never quit trying. Seeing



Fifth- and sixth-graders from low-income schools hike along a rocky trail as part of their weeklong Nature Quest experience at Wichita Mountains Wildlife Refuge. (USFWS)

his determination and the self-fulfillment was really amazing.”

On Thursday, the children learned to fish and practiced archery skills during the day and at night had typical outdoors fun—camp fires, s’mores, storytelling and even occasional hikes.

“Different kids enjoy different programs,” says Smith. Take the birding program. “Some moved on, but others you’d see following the biologist around all week with a bird book in hand.”

Smith attributes much of Nature Quest’s success to the teachers and mentors, who receive one day of training beforehand.

“Having teachers and mentors lead the groups makes the difference. Teachers know how to work with children, and the kids can relate to the mentors,” says Smith. An added benefit is that the teachers and mentors “love this program, and they take what they’ve learned back to their classrooms, families and friends.”

Smith says partners play a vital role in the success of Nature Quest, which, in addition to wildlife conservation, focuses on hiking as a way for kids to stay physically active. One partner, Southwest Oklahoma Fit Kids Coalition,

conducted classes promoting healthy lifestyles. Help also came from the public school system in nearby Lawton, OK, and a local Job Corps Center that donated and prepared meals. The Friends of the Wichitas volunteered and provided food for all participants.

Wichita Mountains Refuge staff members strongly believe in Nature Quest, Smith says, “because we know some of these kids come from really challenging circumstances” and connecting with nature can make a difference.

“My favorite part was making friends and probably the three-mile hike and night hikes” says fifth-grader Hunter Anderson, a first-time participant. “We saw a snake, and it was cool.”

“We saw a turtle that had just laid her eggs,” she adds. “They were white with brown spots, kind of brown things. I had never seen turtle eggs in my real life.”



Nancy C. Brown is a Service public outreach specialist for Oklahoma and Texas. Refuges interested in information about starting their own Nature Quest program may contact Quinton_Smith@fws.gov at Wichita Mountains Wildlife Refuge.

Digital Signs Go Up at “Ding” Darling Refuge

By Lindsay Downey

Mother Nature’s gone digital. J.N. “Ding” Darling National Wildlife Refuge in Florida made virtual history in late June when it unveiled iNature Trail, an interactive, quick response code system along Wildlife Drive.

The Sanibel Island sanctuary is the first of the 553 national wildlife refuges to use QR codes. It is believed to be the first QR wildlife trail in the nation.

QR codes are small barcodes that can be scanned by smartphones to pull up Web sites, videos and other information. QR codes also are known as hardlinks, or physical-world hyperlinks.

As the refuge’s approximately 800,000 annual visitors travel a quiet, four-mile stretch along Wildlife Drive, they now can watch videos about everything from the characteristics of the roseate spoonbill to the types of mangroves that dot the 6,400-acre refuge—all with just a few clicks of their smartphones.

iNature Trail features 10 signs, each with two QR codes—one that pulls up videos and educational Web sites for adults, and another that is tailored to children.

“We used to say, ‘Turn your phones off and enjoy the outdoors,’ but that message doesn’t resonate anymore,” “Ding” Darling Refuge manager Paul Tritaik said, noting the QR system is an effort to bring younger generations outdoors. “If they’re going to be on their smartphones anyway, we might as well have them use them in a way that’s beneficial.”

Developed in Japan in 1994, QR codes are becoming more popular in the United States. Several southwest Florida real estate firms and other companies use them to list property and other information. A March 2011 survey by Baltimore marketing firm MGH found about 65 percent of smartphone users have seen a QR code, and 50 percent have scanned one.

Lars Bredahl, 24, who recently received his master’s degree in interactive media



A visitor prepares her smartphone to scan quick response (QR) codes along the iNature Trail at J.N. “Ding” Darling National Wildlife Refuge in Florida. (Chelle Koster Walton)

from Elon University, developed the interactive trail. Bredahl grew up on Sanibel Island and is nephew of “Ding” Darling Wildlife Society’s executive director, Birgie Vertesch. He approached the refuge about creating a QR system for his graduate school project.

“We used to say, ‘Turn your phones off and enjoy the outdoors,’ but that message doesn’t resonate anymore.”

“I was walking around one of the trails at Ding Darling, and I saw they already had signs labeling some of the plants. I thought, ‘What if we could throw QR codes on that?’ ” he said.

The society spent about \$1,100 in private donations to create the system. It should save resources and money because the refuge won’t have to print as many brochures, Vertesch said.

Bredahl worked with Sanibel Island videographer Ann Peay Potter to

shoot one- to three-minute videos with refuge staff. He spent about a month developing the QR codes, and said they enable visitors to customize their nature tours to learn more about the refuge.

“It’s a way to offer a very multimedia-rich experience without having to build any high-tech stations that take away from the natural setting,” said Bredahl, an intern with SCVNGR, a mobile applications company in Cambridge, MA. “This is like having a guide at your disposal—a pocket tour guide.”

Lindsay Downey is a freelance writer in Florida. This article originally appeared in the Fort Myers News-Press on June 25, 2011.

Nine Employees Honored

Three National Wildlife Refuge System field staffers and six law enforcement officers have been cited this year for exemplary work.

Legends Award

Jennifer Jewett, education and outreach coordinator at Des Lacs National Wildlife Refuge, ND, was named the Legends Award recipient. She was recognized for her innovative programs to inspire and educate youth and for developing community partners.

She oversaw two AmeriCorps National Civilian Community Corps crews that completed major improvement projects, including renovating an accessible nature trail, removing hazardous trees at a dangerous intersection, prepping and assisting with prescribed fires, and organizing events such as Christmas bird counts and an endangered species day at a North Dakota zoo.

The Legends Award is presented annually by the American Recreation Coalition, in partnership with the U.S. Fish and Wildlife Service and other federal land management agencies.

Beacon Award

Pamela Steinhaus, visitor services manager at Upper Mississippi River National Wildlife and Fish Refuge, Savanna, IL, District, and **Lori Iverson**, supervisory recreation planner at National Elk Refuge, WY, were chosen as Beacon Award winners by the American Recreation Coalition.

The Beacon Award is given annually to federal land management agency employees who stand out in the field of information and technology.

Steinhaus was recognized for her work integrating technology into her environmental strategy, which includes the use of free wi-fi service to refuge visitors and the installation of wildlife viewing cams throughout the southern portion of the refuge.

Iverson was recognized for her integration of technology into a program titled “Journals and JPGs—Seasons on the Refuge” and using digital photography to stimulate interest in



Jennifer Jewett, Legends Award recipient, hiking with her son Tommy at Des Lacs National Wildlife Refuge in North Dakota.

the natural resources of the Greater Yellowstone Ecosystem by using the refuge as a living field lab.

Regional Law Enforcement Awards

Isaac Bedingfield, Alaska Region, based at Kodiak Refuge. He patrols the refuge and nearby islands and marine waters by boat and air. His piloting skills give him all-season access to remote areas where people don't expect a law enforcement presence. He is also a Service firearms instructor.

Shelby Finney, Southwest Region, based at Salt Plains Refuge, OK. He helped the Bureau of Indian Affairs fight crime on the Mescalero Apache Reservation, NM, as part of Operation Alliance. As a member of the Service Honor Guard, he helped dedicate a Pennsylvania memorial to passengers of Flight 93 killed by terrorists on September 11, 2001. In 2009 he rescued four women and an infant from flash floods, while piloting an airboat for county sheriff departments.

Deb Goeb, Mountain-Prairie Region, based at Charles M. Russell Refuge, MT. She is the lead firearm instructor in an eight-state area and evaluates officers' performance in the Service's field training program. She established

night patrols to curb illegal drug and alcohol use on the refuge. Her resolve in tracing an elk poaching case in a closed portion of the refuge led to a federal court conviction.

Carl Lantz, Midwest Region, based at Crab Orchard Refuge, IL. While on detail, he helped southern Indiana refuges enforce hunting laws. At Patoka River Refuge and Wildlife Management Area, he determined that a group of hunters had exceeded the duck-hunting limit. Two hunters confessed and paid fines totaling \$1,800.

Bryant Marcial, Southeast Region, based at Caribbean Islands Refuge Complex, PR. He helped convict animal traffickers for selling endangered sea turtle eggs and meat, a violation of the Endangered Species Act, and he also conducted stakeouts to confirm violations of the Migratory Bird Treaty Act.

Gareth Williams, Northeast Region, based at Potomac River Refuge Complex, VA. He saved a life by investigating a matter that other agencies initially had set aside because no missing persons report had been filed. 🦋

The Power of Planning in the CCP Process

By Thomas Larson

What will your national wildlife refuge look like in 15 years? When a new refuge manager arrives, how does he or she know where to begin in managing the refuge? How is the public to know the long-range plans for the refuge? Where can someone find how a refuge has been managed in the past and the goals for the future?

These are the types of questions answered through planning efforts conducted by refuge field staff and regional refuge conservation planning staffs.

Historically, U.S. Fish and Wildlife Service planning efforts have ebbed and flowed over time with increases and decreases of funding and staffing. However, the Service has long recognized the need for planning.

The 1957 Service Field Manual's section on planning stated: "It should be clear that planning in the field of refuge management is a continuous process." The May 1995 *National Planning Needs Assessment* noted the need to "maintain 'steady state' planning capabilities rather than relying on boom and bust staffing patterns to realize longer term-but-realistic schedules for accomplishing plans. Planning efforts are ongoing and long-term in nature."

Refuge planning was revitalized in 1997 when Congress passed the National Wildlife Refuge System Improvement Act, amending the National Wildlife Refuge System Administration Act of 1966.

In addition to giving the Refuge System a solid mission statement, the 1997 act, in Section 7, established the Refuge Conservation Planning Program and mandated that a Comprehensive Conservation Plan (CCP) be prepared for every refuge within 15 years. The Service embraced the act, initiating a refuge planning effort unlike anything else in the history of the agency. Planning capability was greatly expanded, guided by provisions in the 1997 act, with the



Togiak National Wildlife Refuge in southwestern Alaska is among those refuges whose Comprehensive Conservation Plan (CCP) has been completed in time for next year's deadline. (Brett Billings/USFWS)

development of a Refuge Manual planning chapter; Service handbooks such as the *Preplanning Guidance for Comprehensive Conservation Plans and Writing Refuge Management Goals and Objectives*; and a CCP development course at the National Conservation Training Center.

Deadline Looms

Because the 1997 act mandated that the Service complete by 2012 CCPs for all 554 refuges and wetland management districts then in existence, regional planners and field staff have been scrambling to meet deadline. Completion of the plans has been a joint effort involving staff from the Refuge System, Fisheries, Migratory Birds, Ecological Services, states and tribes as well as the public. As of June 2011, 406 units had completed CCPs, 397 of them required by the 1997 act. CCPs were underway for an additional 133 units; 24 required CCPs had yet to be started. The delays are a result of staff shortages, turnover, funding shortfalls and the need to address time-consuming contentious issues.

Nonetheless, the Service is enjoying the fruits of the first round of completed CCPs at refuges nationwide. Local and regional planning efforts have resulted in more public awareness of

and involvement in Refuge System activities as well as clear, science-based management direction and vision consistent with Service goals for improving, expanding or maintaining wildlife and habitat conditions, and providing for enhanced visitor experiences.

"CCPs let us look at the future, the management and the accomplishments of the refuge with our partners and the public" in a comprehensive context, says Paul Steblein, a former refuge manager who is now a Refuge System critical issues analyst. CCPs enable refuges to work through complex, often controversial wildlife and habitat issues with input of the local community in a way that clarifies refuge management policy and objectives. They serve as authoritative guideposts for the Refuge System and the public.

And the first round is just the beginning. The next round of CCPs will include more green-infrastructure planning and coordinated efforts with Landscape Conservation Cooperatives. 

Thomas Larson is chief of the Midwest Region's Division of Conservation Planning.

In Pursuit of Prairie

By Paul Charland

As I rolled north out of Cassoday in southeastern Kansas, everything came together. I was on my Buell Ulysses motorcycle, the weather was perfect, and I was seeing the prairie as open and expansive as it exists today. Mile upon seemingly endless mile of open grasslands; the only trees visible in a few draws; butterfly milkweed blooming everywhere.

These were the Flint Hills as I expected them to be. I was so excited I had to fight the urge to roll on the throttle. I wanted to see more. I wanted to test the limits of the horizon. Unfortunately, I knew that the prairie had limits. That's why I was there.

As a Service employee and a birder, I am consistently reminded of the loss of grasslands and their birds. Just read *The State of the Birds 2011* report: "More than 97 percent of the native grasslands of the U.S. have been lost, mostly because of conversion to agriculture. As a result, grassland bird populations have declined from historic levels far more than any other group of birds."

On this two-week journey, my Prairie Pilgrimage, I wanted to see grasslands and grassland birds while they are still functioning naturally together.

My route was a narrow strip through the heart of the Great Plains. I started in northeast Oklahoma and ended in northwest North Dakota. Refuges featured prominently in the journey, specifically those in the Flint Hills in Kansas, the Sand Hills in Nebraska and the Prairie Pothole Region in North Dakota, a swath of the nation in which the Service long has had a substantial presence.

It was within the Flint Hills Legacy Conservation Area acquisition boundary, north of Cassoday, where I first saw a large expanse of prairie with most of the important pieces intact. There were upland sandpipers in numbers I'd never seen. Recognizing the potential for us—the Service and Americans—to conserve such high-



Lostwood National Wildlife Refuge in North Dakota, the author writes, is "the quintessential prairie pothole landscape." (Paul Charland/USFWS)

quality prairie on a landscape scale is inspiring. The Sand Hills, too, are hope-affirming in their magnitude and quality. From the top of the fire tower at Valentine National Wildlife Refuge in north-central Nebraska, the prairie did in fact seem limitless. That was why I was there. I wanted to see unspoiled grassland and to know that refuges are a seamless piece of the whole.

"I realized that our lands are not only parts of ecosystems; they are also a part of a community. The community enables wildlife refuges to exist."

Lostwood Refuge in North Dakota is legendary among birders. It's the quintessential prairie pothole landscape. The 26,904-acre refuge is recognized as one of the best places to see Baird's sparrow, Sprague's pipits and dozens of other grassland-dependent species. But by the time I got there, ticking individual species had become less important. It was no longer about particular species or even particular

taxa. It was about ecosystems. I wanted to see and know that there still exist places where they all work together. I wanted to be immersed in functional grassland ecosystems, because without functional ecosystems the populations, the individuals and eventually the species cease to exist.

Refuges are important parts of those Great Plains ecosystems. But after seeing firsthand the dramatic expansion of the oil industry in western North Dakota, I realized that our lands are not only parts of ecosystems; they are also a part of the community. The community enables wildlife refuges to exist. Unless the Service gives something to the community and the citizens believe conservation is important to them, we will not have their support and America's lands will not fully fulfill their role within the larger ecosystem.

That, ultimately, is what my 3,900-mile Prairie Pilgrimage taught me. 🦋

Paul Charland is a wildland urban interface coordinator based at Leopold Wetland Management District, WI. A blog about his motorcycle ride through the prairie can be found at <http://thedeliberatebirder.blogspot.com>

A Race Against Time in the Dakota Grassland — continued from page 1

Wildlife Service planners say, because, at current conversion rates, half of the remaining native prairie in the Prairie Pothole Region will be converted to other uses in 34 years—and existing programs can't keep pace.

The project is designed to augment the Service's half-century-old Small Wetlands Acquisition Program, which is funded primarily by Duck Stamps. The Dakota Grassland Conservation Area would use the Land and Water Conservation Fund and North American Wetlands Conservation Act grants to purchase perpetual conservation easements from willing sellers.

“Currently, within the proposed project boundary, there are over 600 landowners waiting to sell us a conservation easement,” says Hoistad. “Our current funding cannot keep up with the demand from private landowners who are interested in working with us to conserve habitat on their lands. Many of the landowners we have on this waiting list are also active livestock ranchers who value grass and water on the landscape. Many of their goals for beef production mesh very well with our wildlife habitat needs. This relationship creates a win-win situation for all parties.”

The Prairie Pothole Region—named for the millions of small, glacially formed, water-filled depressions, or “potholes,” that dot its landscape—has been called North America's “duck factory.” Its grasslands and wetlands are crucial to millions of migratory birds, waterfowl and grassland nesting prairie songbirds.

“Healthy grassland habitat contains a very diverse mixture—over 100 species—



An upland sandpiper alights on the Dakota Grassland Conservation Area. The area encompasses 1.7 million acres of grassland and 240,000 acres of wetland across a swath of eastern South Dakota, North Dakota and Montana. (Tom Koerner/USFWS)

of plants,” says Hoistad. “These plants are of varying heights and also grow and mature at different times of the year. The differences in the growing season are why they are so attractive to a wide variety of birds. The cool-season plants green up early in the spring and provide nesting habitat for the early arriving migratory bird species. Warm-season plants grow later in the spring/early summer and meet the nesting needs of the later-arriving birds.”

There are hundreds of fee title-owned waterfowl production areas and dozens of national wildlife refuges within the Dakota Grassland Conservation Area. These tracts provide the foundation for the Service conservation mission, and

the new project will work with private landowners to preserve the habitat gaps between them.

“The most challenging issue we have to face is that, while the bureaucratic process moves along, there are thousands of acres of native prairie being converted to a tillage-based cropping system,” says Hoistad. “Current high commodity prices are making it very attractive to ‘break up’ the native sod and begin farming it. Once that has taken place, the prairie ecosystem on that tract of land is gone. That is our challenge: secure additional funding and protect more acres as quickly as we can.”

Siekaniec — continued from page 2

but, rest assured, I will always have my eye on the Refuge System.”

Refuge System deputy chief Jim Kurth will be acting chief until Siekaniec's successor is named.

Before taking the helm as chief, Siekaniec spent eight years as the refuge manager at Alaska Maritime National Wildlife

Refuge, one of the Refuge System's most remote and far-flung units. Alaska Maritime Refuge encompasses more than 2,500 islands and nearly five million acres.

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

Montana, North Dakota and Wyoming in addition to Alaska. He served as deputy chief of the Refuge System before taking over leadership at Alaska Maritime Refuge in 2001.



RefugeUpdate

USFWS-NWRS
4401 North Fairfax Dr.
Room 634C
Arlington, VA 22203-1610
www.fws.gov/refuges

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

A Look Back ... Jack Watson

The sign on the trail dedicated to Jack C. Watson at National Key Deer Refuge in Florida is as quiet and understated as the man himself: *Watchful Steward of the Key Deer*. Without Watson’s stewardship there might very well be no Key deer at all.

Unregulated hunting had brought the population of Key deer to an all-time low in the late 1940s—about 50 animals. Public interest in the small deer had been pumped up by J.N. “Ding” Darling’s political cartoons as well as a letter to President Harry Truman from an 11-year-old boy concerned about the Key deer.

By the early 1950s, the Boone and Crockett Club had donated \$5,000 to hire Watson as a warden to protect the few remaining deer. Watson had been a funeral home director and ambulance driver in Miami; now he had joint law enforcement commissions from the state of Florida and the U.S. Fish and Wildlife Service.

Watson had an imposing physical presence and a no-nonsense manner when dealing with poachers. He soon



Jack Watson (1913-82) is largely responsible for saving Key deer from extinction. (USFWS)

was named U.S. game agent, and his territory covered more than a million acres from the Marquesas Keys north and east, including the Everglades. In 1954, three years before National Key Deer Refuge was formally established, he was named its first refuge manager, a position he would hold until his retirement in 1975.

As the Florida Keys continued to develop, cars were as much a threat to Key deer as poachers, and Watson often rehabilitated injured deer in a pen at his home.

During Watson’s tenure on the refuge, the Key deer population grew to about 300. Others built on his efforts, and the population is now close to 800. The National Wildlife Federation named him Conservationist of the Year in 1973. In 1976, Watson received the Department of the Interior’s Meritorious Service award. 🦋



Key deer habitat includes pine rocklands, hardwood hammock and mangrove forests. (John Oberheu)

Follow the National Wildlife Refuge System on Facebook at www.facebook.com/usfwsrefuges and [Twitter@USFWSRefuges](https://twitter.com/USFWSRefuges).

Send Us Your Comments

Letters to the Editor or suggestions about *Refuge Update* can be e-mailed to RefugeUpdate@fws.gov or mailed to *Refuge Update*, USFWS-NWRS, 4401 North Fairfax Dr., Room 634C, Arlington, VA 22203-1610.