



EASTERN CRANE BULLETIN

December 2016

The Eastern Crane E-bulletin is distributed to those interested in cranes in general, and specifically, the Eastern Populations of Sandhill and Whooping Cranes, as well as the continuing work for the protection of these birds and their habitats.

"The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired, in value."

– Theodore Roosevelt

Conserving for the Future: National Wildlife Refuge System

In 1903, President Theodore Roosevelt designated [Florida's Pelican Island](#) – a "Federal Bird Reservation" to save Brown Pelicans – the first wildlife refuge in the United States to protect birds. Since then, the [National Wildlife Refuge System \(NWRS\)](#) has grown to include more than 560 refuges, 38 wetland management districts, and other protected areas encompassing 150 million acres of land and water from the Caribbean to the remote Pacific. There is at least one refuge in every state and territory, within an hour's drive of most major metropolitan areas. Each year, tens of millions of people visit and enjoy these unique wildlife havens, and local economies benefit.

What distinguishes national wildlife refuges from other designated wilderness lands, such as national parks? The National Wildlife Refuge System is the only network of federal lands dedicated specifically to wildlife conservation – and is the largest system of its kind in the world. Conservation of migratory birds is often considered the central connecting theme of the NWRS. It is managed by the U.S. Fish and Wildlife Service. The wildlife refuges provide habitats for hundreds of species, including 380 endangered or threatened species and refuges have been attributed with saving species that were once on the brink of extinction.

[Aransas National Wildlife Refuge](#) is a shining example of such a refuge. In 1941 the only surviving 15 Whooping Cranes in the wild population were found there, wintering on a refuge that was established in 1937. Today's wild population are all descendants of these few birds.

According to the [mission statement](#) and [guiding principles](#) of the [National Wildlife Refuge System](#), the U.S. Fish and Wildlife Service is committed to conserve, protect and enhance not only [Aransas National Wildlife Refuge](#) but all other wildlife refuges for the benefit of wildlife and for the benefit of present and future generations of Americans.

However, with this said, the unbelievable outcome of the recent trial regarding the 41-day armed occupation of the [Malheur National Wildlife Refuge](#), raises serious concerns for the future of not only Malheur but of all other public lands and for the ability of federal employees to safely do their jobs. [From the Malheur Refuge website: The armed takeover required a variety of staff from across the country to provide support for Malheur during and after the occupation - including paying the costs to relocate 17 refuge employees and their families who had to be moved due to ongoing concerns for their safety. The

Service's law enforcement response and support during and after the occupation to ensure the public and employee safety at National Wildlife Refuges across the West has cost approximately \$2.25 million to date.] Without the staff to oversee and maintain the refuge, crucial habitat needed by thousands of migratory birds and other wildlife won't be there.

See also the **Birding Community E-Bulletin, November 2016** article, "Malheur Jury Decision"
To read this latest issue and access all the past E-bulletins on the National Wildlife Refuge Association (NWRA) website, go here: <http://refugeassociation.org/news/birding-bulletin/>

For post-occupation information including the estimated cost in damages during the occupation from [Malheur National Wildlife Refuge](#), go here:
<https://www.fws.gov/nwrs/threecolumn.aspx?id=2147587683>

Malheur Verdict: A Bird of Ill Omen for America's Public Lands
http://www.huffingtonpost.com/jamie-rappaport-clark/malheur-verdict-a-true-bi_b_12694492.html

For an USFWS interactive map – "Find your refuge" go to the following link. Click on the state of choice and then the NWR for more information: <https://www.fws.gov/refuges/>

To learn more about conserving wildlife for the next generation, through the National Wildlife Refuges, go here: <https://www.fws.gov/refuges/vision/index.html>
<https://www.fws.gov/refuges/vision/index.html>

In honor of National Wildlife Refuge Week (second week in October) the Sierra Club highlighted 4 National Wildlife Refuges; to read about them go here:
<http://www.sierraclub.org/sierra/green-life/it-s-national-wildlife-refuge-week-here-s-why-you-should-celebrate>

"If in a given community unchecked popular rule means unlimited waste and destruction of the natural resources—soil, fertility, waterpower, forests, game, wild-life generally—which by right belong as much to subsequent generations as to the present generation, then it is sure proof that the present generation is not yet really fit for self-control, that it is not yet really fit to exercise the high and responsible privilege of a rule which shall be both by the people and for the people. The term "for the people" must always include the people unborn as well as the people now alive, or the democratic ideal is not realized."

— Theodore Roosevelt

Aransas-Wood Buffalo WHOOPERS

Wood Buffalo National Park: Partners celebrating 50 years of Whooping Crane conservation

[Parks Canada](#) and its partners, [Environment and Climate Change Canada \(ECCC\)](#) and the [U.S. Fish and Wildlife Service \(USFWS\)](#), are celebrating 50 years of Whooping Crane conservation at [Wood Buffalo National Park](#). This international conservation partnership began in 1966 when the fragile state of the world's last Whooping Crane flock brought Canadian and American partners together to share their knowledge and work jointly on species recovery efforts. This example of successful international stewardship is a model for cooperation among conservation groups in the preservation of endangered species that cross international borders.

To read more from Chester McConnell, President of the Friends of the Wild Whoopers group, about this important conservation anniversary, go here:

<http://friendsofthewildwhoopers.org/whooping-crane-flock-enlarges-wood-buffalo-national-park-celebrates-50th/>

For photos of the Wood Buffalo National Park Whooping Crane nesting habitat, go here:

<http://www.pc.gc.ca/eng/pn-np/nt/woodbuffalo/natcul/habitat.aspx?a=1&photo={B63052DF-A30D-4E41-9210-46D2B623DB2A}>

Indian Reservations have quality Whooping Crane “stopover habitats”

Continuing in its mission to identify, protect, enhance and develop existing or potential “stopover habitats” for the endangered wild population of Whooping Cranes, Friends of the Wild Whoopers (FOTWW) completed a survey in October 2016 of tribal trust lands in the Great Plains Region. Along with the assistance of reservation biologists, FOTWW wildlife biologist Chester McConnell visited seven Indian reservations involving 3.8 million-acres of trust land.

Together the biologists identified over 1,700 potential stopover ponds/wetlands on Indian reservations in North Dakota and South Dakota that fall within the Whooping Crane migration corridor. The biologists estimated that approximately 1,275 of the ponds already provided good stopover habitat if current management conditions were maintained. And, that the remainder of the ponds needed only low cost management improvements to enhance their potential for attracting Whooping Cranes.

Read more about the project here:

<http://friendsofthewildwhoopers.org/indian-reservations-quality-whooper-stopover-habitats/>

And about the FOTWW Stopover Habitat Project assessment on military bases, here:

Eastern Crane Bulletin/September 2015: Friends of the Wild Whoopers group spearheads project for crucial Whooping Crane “stopover” habitat on U.S. military bases

<https://kyc4sandhillcranes.files.wordpress.com/2015/06/the-eastern-crane-bulletin-e28093-september-2015.pdf>

Go here to learn how to support the work of the Friends of the Wild Whoopers (FOTWW):

<http://friendsofthewildwhoopers.org/support-fotww/>

Whoopers skip journey north, summer on Aransas

Three juvenile Whooping Cranes skipped their migration to Canada this year, choosing instead to spend the summer on the [Aransas National Wildlife Refuge](#). A fourth bird is believed to have stayed on [San Jose Island](#). According to Whooping Crane Recovery Coordinator, Wade Harrell, there have been other years since the 1950's where Cranes spent the summer at Aransas, usually due to injuries. In this case all the birds appeared healthy.

The trio that remained on the refuge are believed to have been young birds that were not yet of breeding age. This may have played a part in why they chose not to migrate to the breeding grounds in [Wood Buffalo National Park](#). Of the three, one had been fitted with a still active radio transmitter, which made it easier to follow the movements of the small group over the course of the summer.

Read more here:

<https://www.victoriaadvocate.com/news/2016/aug/29/whoopers-forego-trip-north-summer-on-aransas/>

Breeding surveys of the Aransas Wood Buffalo population of Whooping Cranes

Breeding pair surveys in May 2016 detected 78 nests, 15 of which were outside the area designated as critical habitat and seven of which were outside Wood Buffalo National Park; 18 pairs of cranes without nests were also observed. Surveys in August 2016 detected 45 juveniles; 43 pairs had one juvenile each and one pair had two juveniles. Annual productivity was 0.57 juveniles per nest, well above than the 20-year average of 0.48 but within the long-term natural range of variation. Estimated numbers of birds outside the primary survey area in 2013, 2014, and 2015 were 6, 6, and 9, respectively.

For a chart of the **Summary of Aransas-Wood Buffalo Population Breeding Surveys for 2013-2016** from *The Unison Call* – Vol. 27 No.1, go here: <http://friendsofthewildwhoopers.org/aransas-wood-buffalo-population-update/>

Whooping Cranes arriving at Aransas NWR

By November 2, 2016 several pairs of Whooping Cranes had arrived at Aransas National Wildlife Refuge and the [Blackjack Peninsula](#). According to Wade Harrell, U.S. Whooping Crane Recovery Coordinator at Aransas, a mild fall in the northern plains states contributed to a delayed migration, making the cranes' arrival a bit behind even last year's fall migration. By December, most of the Whoopers will have reached the marshes in and around Aransas where they feed on blue crabs, wolfberries, crayfish, frogs, large insects and acorns roasted during the prescribed burns.

Read more here: <http://friendsofthewildwhoopers.org/wintering-update-whooping-cranes/>

"Texas Whooper Watch"

[Texas Whooper Watch](#) is up and running and has done a great job in getting the word out to the public about Whooping migration. This citizen-science based reporting system helps track the wild Whooping Crane population and assists biologists in identifying new migration and wintering locations and their associated habitats in Texas.

Texas Whooper Watch also has a project in [iNaturalist](#) that is now fully functional. Sightings can be reported directly in iNaturalist via a Smart Phone including photos for verification and location information. If not a smart phone app user, reports can also be made via email: whoopingcranes@tpwd.state.tx.us or by phone: (512) 389-TXWW (8999).

Please note that the primary interest of Texas Whooper Watch is in reports from outside the core wintering range. If you have questions on where that is, please refer to the primary survey frame map that can be viewed in the USFWS's [Whooping Crane Survey Results: Winter 2015–2016 / 329 Wild Whooping Cranes Estimated](#), go to:

https://www.fws.gov/uploadedFiles/Region_2/NWRS/Zone_1/Aransas-Matagorda_Island_Complex/Aransas/Sections/What_We_Do/Science/Whooping_Crane_Updates_2013/WHCR%20Update%20Winter%202015-2016.pdf

To learn more and/or join Texas Whooper Watch in iNaturalist go here:
<http://www.inaturalist.org/projects/texas-whooper-watch>

Take the "I Give a Whoop" pledge to protect Whooping Cranes

Join thousands across the country who have already taken the pledge to help protect Whooping Cranes. You can help by: 1) Being able to correctly identify a Whooping Crane; 2) Report anyone harassing or harming Whoopers to wildlife authorities; 3) Spread the word to family and friends about the plight of these amazing birds.

To take the pledge, or just learn more, go here: <http://www.savingcranes.org/i-give-a-whoop/>

For the [International Crane Foundation](#) "Large Waterbirds of North America: An Identification Guide" that shows how Whooping Cranes measure up to similar looking species, go here: https://www.savingcranes.org/wp-content/uploads/2015/1/large_waterbirds_of_north_america_id_guide_2000.jpg

Eastern Migratory Population of WHOOPERS

EMP Whooper whereabouts

Due to the unflagging work and dedication on the part of the staff of [Operation Migration](#), Fish and Wildlife Service, the Department of Natural Resources, and the [International Crane Foundation](#), as well as all the volunteers who assist in keeping track of the cranes throughout the year – the reintroduced population of Whooping Cranes is slowly growing. The following is a November 1, 2016 update by the [Whooping Crane Eastern Partnership \(WCEP\)](#) for the Eastern Migratory Population of Whooping Cranes.

Go here for the update:

<http://www.bringbackthecranes.org/technicaldatabase/projectupdates/2016/Oct2016.html>

Or, for a Whooping Crane (EMP) Fall Migration weekly update by Operation Migration, go here:

<http://us5.campaign-archive1.com/?u=11a4cbb353183651db108a7c1&id=85bb9f6985&e=ce2eeee334>

Click on the following link for a chart of the entire Whooping Crane eastern migratory population. Click on the bird's number (left column) to read the crane's full history. The 2016 group of cranes listed are the Parent-Reared colts. [Individual information for each whooping crane in the eastern migratory flock](#) or here: <http://www.bringbackthecranes.org/pdf/PopList13Oct2016.pdf>

The work by Operation Migration of monitoring nests and Parent-reared Whoopers continues and needs your support:

<http://operationmigration.org/InTheField/2016/11/29/givingtuesday/>

USFWS 2016 Status and Harvests of Sandhill Cranes

(Mid-continent, Rocky Mountain, Lower Colorado River Valley and Eastern Populations)

Read the full USFWS report here:

<https://www.fws.gov/migratorybirds/pdf/surveys-and-data/Population-status/SandhillCrane/StatusandHarvestofSandhillCranes16.pdf>

Whooping Crane "parent-rearing"

Parent-rearing, costume-rearing, "target" adults – these are all terms you may be hearing this fall as you follow the next chapter in Whooping Crane reintroduction in the eastern United States. The [International Crane Foundation \(ICF\)](#) addresses questions some may have about the new rearing and release methods that are being implemented this year with the [Whooping Crane Eastern Partnership](#).

Parent-rearing is when a crane chick is raised by adult cranes. The adult cranes may be the chick's biological parents, or an egg from another pair may be placed in the nest as it begins to hatch. This rearing method is in contrast to costume-rearing, in which chicks are raised by trained staff wearing a costume that hides the human form and keeps the chicks from imprinting on, or bonding with, people. This method of rearing is being used with captive Whooping Crane pairs that live at ICF and the [Patuxent Wildlife Research Center](#) in Maryland. Prior to their first fall migration, the chicks are released in

Wisconsin near wild Whooping Cranes. The goal is for the adult birds to “adopt” or associate with the young birds and teach the chicks their migratory route.

Dedicated staff at [Operation Migration \(OM\)](#) have been tracking and monitoring the parent-reared crane colts in Wisconsin for the past three months. Keep up with the young cranes through daily reports at OM's Official Blog/Field Journal, [In The Field with Operation Migration](#).

Read more about the colts in the Class of 2016 here: **Waiting and Hoping for Success**
http://www.learner.org/jnorth/tm/crane/16/update_112016.html

For more information from ICF about parent-rearing go here:
<https://www.savingcranes.org/whooping-crane-parent-rearing-your-questions-answered/>

Pair of endangered Whooping Cranes relocated to Florida in hopes of future success in breeding

Known by scientists as #16-11, the male Whooping Crane was reintroduced in Wisconsin in 2011 and gained notoriety last year for mating with a Sandhill Crane. He proved to be an attentive parent, helping to successfully rear their [hybrid chick](#) that now resides at the International Crane Foundation's crane center in Wisconsin. #16-11's parenting skills make him a valuable asset to the recovering population. Biologists hope that by providing him a mate option of his own species, he will form a pair bond and be able to display the same paternal qualities and raise healthy Whooping Crane chicks to bolster the wild population in the eastern United States.

With that goal in mind, #16-11 and his new potential mate – a female named “Hemlock” – were driven to [White Oak Conservation](#), a conservation and breeding center for endangered species in Yulee, Florida. The facility provides the pair with a vast, open space in a remote natural environment. It is hoped that the two cranes develop a strong pair bond and can eventually be brought back to Wisconsin to join the existing flock, rear chicks in the wild and participate in future migrations.

Read more about #16-11 and Hemlock here:
<https://www.savingcranes.org/pair-of-endangered-whooping-cranes-relocated-to-florida-in-hopes-of-successful-breeding/>

Canada: Newfoundland and Labrador

Sandhill Crane makes rare appearance in Labrador

Birders in Forteau, Labrador and St. Anthony, recently had the opportunity to see a bird still considered to be rare in Newfoundland. While Sandhill Cranes have been recorded on the island almost every year it is usually only during fall migration. The visiting Sandhill was first reported on September 19, 2016 and stayed in the area for almost two weeks.

Florida:

Florida Sandhills *are* still federally protected...

As reported in the September 2016 issue of the *Eastern Crane Bulletin*, the federally protected Florida population of Sandhills has been the target of some disgruntled area home owners who feel the birds are damaging lawns. In May 2016 a Florida man was charged with running over a juvenile crane with his golf cart and was scheduled for sentencing on November 7.

The Florida Fish and Wildlife Conservation Commission is investigating an October shooting death of one of a pair of Sandhills that regularly visited yards in a Parrish neighborhood. It was shot and killed as it stood between two houses by someone using a BB gun. Matthews Wildlife Rescue is offering a \$500 reward with information leading to an arrest.

Then, in early November, a 10-second video of a man shooting at three Sandhills from his car in the Fishhawk Ranch neighborhood of Lithia, Florida was posted to the social media app Snapchat. The video was sent to Florida's Fish and Wildlife Conservation Commission officers and it is now under investigation. At least one crane is thought to have been wounded, wandered off and died.

Louisiana:

Senseless loss used to educate public about Whoopers

Although originally released in Louisiana at the [White Lake Wetlands Conservation Area](#) near Gueydan, the two Whooping Cranes shot and killed by Trey Joseph Frederick, a 19-year-old Beaumont Texas man, had been in southeast Texas for more than eight months. Frederick was sentenced on October 25, 2016 for the shooting deaths of those two cranes.

"We're pleased with the sentence and appreciate how seriously the judge and prosecutor took this case," said Louisiana Department of Wildlife and Fisheries (LDWF) secretary Charlie Melancon. "We are grateful to the state and federal law enforcement agents who worked this case and to everyone else who assisted to ensure that justice was served. We hope this sentence sends a strong message that this type of crime won't be tolerated. We also hope, in this tragedy, that we can further educate the public about whooping cranes."

"It was incredibly frustrating to lose two birds in this senseless act," said LDWF Whooping Crane biologist Sara Zimorski. "But it has not, in any way, discouraged our efforts in bringing back Whooping Cranes to Louisiana. We continue to move forward with our work and are seeing positive gains."

Update: Louisiana's first wild-hatched WHCR

For photos and video of the first wild-born Whooping Crane, LW1-16, in Louisiana in over 75 years visit the LDWF Facebook page here: <https://www.facebook.com/pages/Louisiana-Department-of-Wildlife-and-Fisheries-Whooping-Cranes/733006696805446>

New cohorts arrive in Louisiana

On November 9, 2016 a cohort of four juvenile Whooping Cranes arrived in Louisiana from the [International Crane Foundation \(ICF\)](#) in Wisconsin to their temporary home of a top-netted release pen at the [Rockefeller Wildlife Refuge](#) in Cameron Parish. After several weeks spent getting acclimated to their new surroundings, they were released on November 21 and immediately began foraging in the surrounding marsh. According to the Louisiana Department of Wildlife and Fisheries (LDWF) the usual release site at White Lake was flooded in August due to levee breaches and the water level was still high when the first cohort arrived. Fortunately an identical release pen had been built on the Rockefeller

Refuge last fall and most of the juveniles will go there this winter. LDWF plans to build a smaller, temporary pen in a different unit of the White Lake property to house 8-10 of the chicks. Another cohort of 18 cranes, all hatched and costume-reared at ICF in Wisconsin, is scheduled to arrive early December.

To watch the arrival of the latest cohort of juvenile WHCRs on December 1, 2016, click here: <http://www.katc.com/clip/12940289/new-group-of-whooping-cranes-arrive-in-louisiana>

Where are the cohorts from previous years?

Where are the surviving Louisiana cohort Whooping Cranes from previous years? There are 29 cranes in Louisiana, 5 in Texas, and 3 long-term missing, for a maximum population total of 37 individuals. Cranes in Louisiana are currently located in the following parishes: Jefferson Davis (11), Vermilion (5), Allen (4), Avoyelles (4), Cameron (2), and one each in Evangeline, St. Landry and St. Martin.

Editor's note: Based on information in the November 2016 Friends of the Louisiana Whooping Crane newsletter, the LA population now stands at 34 cranes. L7-13 and L12-12 were found dead possibly due to predation; L4-15, missing for months now is presumed dead so was removed from the list.

Whooping Crane Project Funding

The [LA Department of Wildlife and Fisheries \(LDWF\)](#) is working cooperatively with the US Fish and Wildlife Service, the US Geological Survey, the [International Crane Foundation](#) and the [LA Cooperative Fish and Wildlife Research Unit](#) to restore the Whooping Crane within Louisiana. Project funding is derived from LDWF species restoration dedicated funds, federal grants and private/corporate donations. LDWF's budget for the initial year of the project was \$400,000. The project costs escalate in year two and beyond as the project expands. LDWF estimates that it will be necessary to raise \$3 to 4 million private dollars to help fund a portion of this 15-year project.

Private/corporate donations to LDWF's Whooping Crane Project can be made to the [LA Wildlife and Fisheries Foundation](#). Gifts should be designated "in support of The Whooping Crane Project." Go to the following for information on the Foundation and the donor form to be used when making your donation: <http://www.wlf.louisiana.gov/lwff>

To sign up for LDWF's Whooping Crane newsletter, go here: <http://www.wlf.louisiana.gov/wildlife/whooping-cranes> (see left side column)

Maryland:

Maryland Sandhill Crane Fall Survey

For several winters now there has been a small but growing flock of wintering Sandhill Cranes in the Chesapeake Bay Watershed. Then in 2015, Maryland had its first Sandhill Crane breeding record where a pair successfully raised two chicks. This pair returned in spring 2016 and bred in the same area. In response to these signs of increased expansion of the eastern migratory population of Sandhill Cranes from the Great Lakes states eastward, the [Maryland Bird Conservation Initiative](#) has begun monitoring the species in Maryland. The 2016 survey period was November 9-13.

Learn more about the Maryland Bird Conservation Initiative here: <https://marylandbirds.org/>

Michigan:

Two shooting cases of federally protected Sandhills

In late October a Grand Haven Township man used a 12-gauge semiautomatic shotgun to kill three Sandhill Crane in a residential neighborhood, because he considered them “varmints” that were destroying his lawn. He claimed he didn’t know the cranes are a federally protected species in Michigan and therefore cannot be hunted. Dan Hysell was charged with the misdemeanor of taking protected birds and fined \$400.

During the same period, in Oakland County, two teens were cited for allegedly hunting Sandhill Cranes. Deputies were called after someone reported hearing a hunter open fire as four Sandhill Cranes flew over and then observing a crane fall from the sky. A Department of Natural Resources officer found the teens were in possession of a federally protected Sandhill Crane and issued five hunting violations in connection with the incident including bag-limit violations and baiting federal waterfowl and the Sandhill Cranes while hunting.

For those in the Grand Haven area with questions about wildlife, call the wildlife biologists at the Muskegon State Game Area at [231-788-5055](tel:231-788-5055).

If you see a possible act of poaching, call the state Report All Poaching hotline at [800-292-7808](tel:800-292-7808) and report it.

Mississippi:

Gulf Coast Complex

The [Mississippi Sandhill Crane National Wildlife Refuge \(NWR\)](#) is managed as part of the [Gulf Coast Refuge Complex](#). A National Wildlife Refuge Complex is an administrative grouping of two or more refuges, wildlife management areas or other refuge conservation areas that are primarily managed from a central office location. The Gulf Coast Complex includes: [Grand Bay National Wildlife Refuge](#) (Mississippi and Alabama), and [Bon Secour National Wildlife Refuge](#) (Alabama).

Nebraska:

Rowe Sanctuary unveils the first phase of their 50-year plan

In mid-September 2016, Audubon’s Rowe Sanctuary held an open house to present a plan on Audubon’s future on the Platte River. Several projects scheduled to be undertaken within the next five years include growing office space, educational space, adding trails and modifying viewing blinds. Andrew Pierson, Director of Conservation at the Iain Nicolson Audubon Center, said some cropland will be converted to prairie, but will also be maintained to show the importance of crop land to the Sandhill Cranes. A new trail will run perpendicular to the Platte River at the sanctuary allowing visitors to view a wider range of habitat there.

According to Pierson, the sanctuary also added land to the west end of the property that will be dedicated to Whooping Crane habitat. He said funding was already in place to modify the landscape there, including removal of some power lines and other obstacles, with an end goal of providing a safer, more appealing habitat for the cranes.

To read more about these and other changes at Rowe Sanctuary go here:

http://www.theindependent.com/news/local/rowe-sanctuary-unveils-the-first-phase-of-their-year/article_833d07a2-7574-11e6-b245-13a6e4eca0b1.html

Distinguishing Whooping Cranes from similar species

Usually by mid-November the entire Aransas-Wood Buffalo flock of about 300+ birds will have successfully migrated to Texas. However, a mild fall in the northern plains states may have contributed to a delayed migration this year. Migrating 2,500 miles is risky business and it is a critical few weeks for these birds. Therefore, the Nebraska Game and Parks Commission (NGPC) relies on the public to help track these state and federally endangered birds as they stopover in the state. NGPC asks that If you think you see a Whooping Crane to please do two things:

1. Report the sighting to NGPC (see numbers below)
2. Do not approach or harass Whooping Cranes for any reason.

If you happen to observe Whooping Cranes in Nebraska, please contact one of the following Nebraska Game and Parks Commission:

Lincoln: [402-471-0641](tel:402-471-0641)

North Platte: [308-535-8025](tel:308-535-8025)

Kearney: [308-865-5310](tel:308-865-5310)

Bassett: [402-684-2921](tel:402-684-2921)

Or, contact the U.S. Fish and Wildlife Service at [308-379-5562](tel:308-379-5562).

For excellent photographs of similar looking species and videos of Whooping Cranes dancing and bathing and at Father Hupp WMA and Branched Oak Lake, click the following:

<http://magazine.outdoornebraska.gov/2016/10/distinguishing-whooping-cranes-from-similar-species/>

Tennessee:

Sandhill Crane Festival and hunting – can they co-exist?

The following video by the Tennessee Wildlife Resources Agency (TWRA) was made at the [Hiwassee Wildlife Refuge](#), Birchwood, Tennessee. It is the agency's response to the question of whether hunting Sandhill Cranes on lands immediately surrounding the refuge might affect the numbers of cranes present on the refuge for the annual Tennessee Sandhill Crane Festival (January 14-15, 2017)? The 2016-2017 Sandhill season has been extended to 55 days which overlaps the festival. TWRA said the hunt will be stopped for the weekend of the festival.

Hear what TWRA has to say here: <https://youtu.be/W9IGK7-hFbk>

Tennessee held its inaugural crane hunting season during 2013-14. The season ran from November 28 to January 1 and their management plan allowed for the harvest of up to 1,200 cranes by registered hunters. Regulations have been similar in subsequent hunting seasons.

Statistics from the Tennessee Wildlife Resources Agency indicate that for each season, 400 permitted hunters killed 350 cranes during the initial 2013-14 season; 393 cranes in 2014-15, and 161 cranes during the 2015-16 season.

Source: [USFWS Status and Harvests of Sandhill Cranes 2016](#)

Texas:

Lydia Ann barge mooring project near Aransas halted

In September 2016, the U.S. Army Corps of Engineers revoked the permit for the Lydia Ann Channel barge mooring facility along 8,000 feet of the channel near Port Aransas, ordering the owners to remove the 80 mooring structures already in place. Friends of Lydia Ann Channel (FLAC), a non-profit conservation group in Texas sees this as a major victory in efforts to halt the completion and use of a mile and a half long industrial barge facility within the Lydia Ann Channel.

This decision comes nearly six month after FLAC convinced a federal judge that there were enough oversights, missing details or misinformation in the permitting process to warrant a trial and full re-evaluation of the project, which was already underway. The friends group had earlier filed a lawsuit, citing a violation of the Endangered Species Act, partially because of the proximity of the wintering federally endangered Whooping Cranes. Attorneys for FLAC showed that what was originally proposed to the Corps as a simple short-term storage facility had become a long-term mooring operation and refueling station, resulting in a potential environmental hazard, the scope of which was not addressed in the permit.

In March 2016, Senior U.S. District Judge Janis Graham Jack ordered a full re-evaluation of the project and of the federal process that ultimately permitted the company to build it. A trial involving the lawsuit remains set for February 2017.

To read more as well as the official letters from the US Army Corps of Engineers to Lydia Ann Channel Moorings and to the Captain of the Port of Corpus Christi, and for the official court filing, go here: <http://friendsofthewildwhoopers.org/lydia-ann-channel-projected-halted/>

Read more in an article by the Corpus Christi Caller Time, Sept 16, 2016, by David Sikes here: [Corps of Engineers say Lydia Ann barge mooring project must go](http://archive.caller.com/news/local/corps-of-engineers-say-lydia-ann-barge-mooring-project-must-go-3c9fc26c-eb34-39d2-e053-0100007f61b6-393767791.html)
<http://archive.caller.com/news/local/corps-of-engineers-say-lydia-ann-barge-mooring-project-must-go-3c9fc26c-eb34-39d2-e053-0100007f61b6-393767791.html>

Texas Judge's Decision a Win for Whooping Cranes

On October 25, 2016, in an unprecedented ruling, Federal District Court Magistrate Judge Zack Hawthorn handed down a heavy sentence for Trey Joseph Frederick, a 19-year-old Beaumont man who admitted to shooting and killing two endangered Whooping Cranes. [The International Crane Foundation](#) (ICF), a nonprofit organization working on behalf of Whooping Cranes internationally, assisted in the case and hopes this decision will be a sobering reminder that these cranes desperately need protection. As of today, only 450 of the rare birds exist in the wild across North America.

Frederick's sentence includes:

- \$25,850 in restitution to be shared among Texas Parks and Wildlife Foundation and the International Crane Foundation
- 200 hours of community service (the most ever ordered by this court). The time is to be spent with Texas Parks and Wildlife and/or the U.S. Fish and Wildlife Service
- The maximum of five years probation
- An order that Frederick turn over all firearms
- The rescinding of Frederick's hunting license for the next five years in all states

"The loss of these cranes is not simply a loss for the species. It is a loss for the community, for taxpayers and for future generations deprived of an opportunity to see these magnificent birds thriving in the wild," said Southwest Region Special Agent in Charge Nicholas E. Chavez of the U.S. Fish and Wildlife Service. "Moreover, the killing of these two Whooping Cranes is not an isolated incident. Over the past five years, more than 20 Whooping Cranes have been shot and killed in the U.S. By bringing criminals who perpetrate crimes against wildlife to justice, we hope to prevent future tragedies like this from occurring."

To read the press release from the International Crane Foundation, go here:
<https://www.savingcranes.org/texas-judges-decision-a-win-for-whooping-crane/>

To read the Department of Justice, U.S. Attorney's Office, Eastern District of Texas press release, go here: <https://www.justice.gov/usao-edtx/pr/jefferson-county-man-sentenced-killing-whooping-cranes>

Washington:

WDFW seeks comments on draft status reviews for woodland caribou, pond turtles and Sandhill Cranes

The Sandhill Crane was listed as an endangered species by the state of Washington in 1981. Their numbers were reduced throughout the western states by commercial hunting and habitat loss. For 30 years, beginning in the late 1940s, there were no records of nesting pairs in Washington. Three subspecies of Sandhill Crane occur in Washington, including lesser, greater, and Canadian cranes. Lesser Sandhill Cranes make up most of the flocks that stop in eastern Washington during migration. Greater Sandhill Cranes are the only type that breed in Washington. The number of nesting pairs has steadily increased since the late 1970s with the summer population in Washington now totaling 89 birds, including 33 pairs in 2015.

The Washington Department of Fish and Wildlife (WDFW) periodically reviews the status of protected species in the state to determine whether each species warrants its current listing or deserves to be reclassified or delisted. Public comment will be accepted through December 23, 2016 concerning the listing recommendations and periodic status reports for Woodland Caribou, Western Pond Turtles and Sandhill Cranes. Comments will be taken into consideration as the agency decides whether these species should be kept on, or removed from Washington's list of endangered species.

The draft reviews for Woodland Caribou, Western Pond Turtle and Sandhill Crane are available online at http://wdfw.wa.gov/conservation/endangered/status_review/.

For more information about the public comment period go here:
<http://wdfw.wa.gov/news/sep2316a/>

Habitat Matters!

Indiana:

50 years: Muscatatuck National Wildlife Refuge marks milestone

[Muscatatuck National Wildlife Refuge](#) was established in 1966 to provide resting and feeding areas for waterfowl during their annual migrations. It is now recognized as a "Continentially Important" bird area. Today, more than 280 species of birds, 37 species of mammals, 44 species of reptiles and amphibians and 75 species of fish are known to occur on the nearly 7,724-acre refuge. These along with 33 dragonfly species, 60 species of butterflies, at least 24 species of mollusks and five species of crayfish. In 1995 River otters were reintroduced there and are now thriving. In 2001 the first [Operation Migration](#) ultra-light led cohort of juvenile Whooping Cranes spent the night on the refuge before doing an early morning fly-by for visitors waiting to see them head off on their historic trip south. Muscatatuck NWR is the oldest of the

three national wildlife refuges in Indiana, and part of the over 560 national wildlife refuges in the United States.

Goose Pond Fish & Wildlife Area visitor center opens

The 8,900-acre Goose Pond Fish & Wildlife Area near Linton in Greene County, Indiana opened in 2005 and now draws about 12,000 wildlife watchers each year. Originally corn and soybean fields, it is currently managed as a mixture of wetlands and grasslands, with 7,200-acres of the land as part of the Wetlands Reserve Program (WRP) easement.

On September 22, 2016 the 7,000-square-foot southwest regional office and visitor center at Goose Pond FWA had its grand opening ceremony. The center is also featured in a new video from the DNR Division of Communications (see following link). Sandhill Cranes, Whooping Cranes and American White Pelicans are among the migrating birds featured at Goose Pond in the video. Due to the increase of "short-stopping" (see story below, Science News: **Age before youth: Older cranes lead the way to new migration patterns**) by Whoopers during migration, approximately a quarter of the Eastern Migratory Population of Whooping Cranes now winter at Goose Pond.

To watch the Indiana DNR video about Goose Pond go here:

<https://www.youtube.com/watch?v=eBHvu7vJEWA&feature=youtu.be>

Consider a trip to Jasper-Pulaski for Sandhills

The [Jasper-Pulaski Fish & Wildlife Area](#) is located in a region once famous for the vast [Kankakee Marsh](#), also known as the "Everglades of the North." These wetlands consisted of more than one million-acres of reeds, ponds and bogs. In the 19th century and early 20th century the marsh was drained to make way for agriculture. Today, only 8,142 acres remain.

According to the Indiana DNR, Jasper-Pulaski FWA is dedicated to providing quality hunting and fishing opportunities while maintaining the wetlands and upland and woodland game habitat. This habitat provides an ideal stopover for migratory birds including the greater Sandhill Cranes that come from Wisconsin, Minnesota and Canada. The cranes often spend several weeks staging at Jasper-Pulaski before continuing south in migration. During peak migration it is possible to see more than 10,000 cranes at the FWA but a high count of 32,000 cranes was recorded in 1991.

The best place to view the Sandhills is from the handicapped accessible observation tower next to an area known as Goose Pasture. Although cranes can be seen throughout the day, the best time to witness large flocks is a few hours after dawn as they leave the roost to feed in surrounding fields and at sunset as they return to roost.

For historical information about the Kankakee "Marsh" click here:

<http://kankakeevalleyhistoricalsociety.org/The%20Kankakee%20Marsh%20of%20Northern%20Indiana%20and%20Illinois.htm>

Nebraska:

North Platte River Valley Project targets waterfowl and Sandhill Crane habitat

In 2013, the [Rain Water Basin Joint Venture \(RWB JV\)](#) partnered with Ducks Unlimited, Great Plains Landscape Conservation Cooperative, Nebraska Game and Parks Commission, U.S. Fish and Wildlife Service, and the University of Nebraska to initiate a project titled [Sandhill Cranes and Waterfowl of the North Platte River Valley: Evaluation of Habitat Selection to Guide Conservation Delivery](#). The purpose of this project is to improve the effectiveness and efficiency of conservation delivery on the North and South

Platte Rivers by learning more about the habitat needs of spring migrating waterfowl and Sandhill Cranes. With this information the project partners hope to better prioritize conservation and restoration of stopover habitat within this critical river system and its associated wetlands. The results of this analysis will be available in the final report in early 2017.

To read more about the project go here:

<http://rwbjv.org/wp-content/uploads/2016/03/Sandhill-Cranes-and-Waterfowl-of-the-North-Platte-River-Valley-Munter.pdf>

Wisconsin:

Crex Meadows Wildlife Area draws migrating Sandhills

In 1912, the Crex Carpet Co. bought 23,000 acres to harvest native wiregrass for shipment to Twin Cities factories where it was turned into rugs. The company and the wildlife area took their names from the scientific family name for sedge grass, *carex*. Crex Carpet failed during the Great Depression and the state was able to buy the 23,000 acres the company owned for 75 cents an acre. Later purchases expanded the Crex Meadows Wildlife Area to its present size of roughly 30,000 acres.

Originally part of the Wisconsin Pine Barrens, Crex Meadows WA is now the state's largest remaining portion of this globally endangered ecosystem. Thanks to the combination of brush prairie, sedge marsh, wetlands, open barrens habitat and forests, more than 280 species of birds have been recorded on the property along with nearly every mammal found in Wisconsin, as well as a large variety reptiles, amphibians, and invertebrates. Its varied habitat and location, just five miles from the St. Croix River, makes the area a major draw for migrating waterfowl and one of the top spots in the state to see birds. More than 150,000 people visit annually.

Crex Meadows is a migration stopover for birds coming down the Upper Mississippi Flyway, including some of the eastern population of greater Sandhill Cranes that use the large marshes as staging areas. The cranes come from northern Minnesota, Canada and parts of northern Wisconsin and stay in the area into November.

To learn more about Crex Meadows from Friends of Crex, go here: <http://crexmeadows.org/>

ENVIRONMENTAL impact issues:

EPA approves use of dangerous herbicide *Dicamba* on genetically engineered crops

In a November 9, 2016 press release from the [Center for Biological Diversity](#), the Environmental Protection Agency (EPA) has approved the use of the dangerously toxic herbicide *Dicamba* on crops genetically engineered to tolerate the pesticide – ignoring the legal requirement to examine threats to endangered species. According to Nathan Donley, a scientist with the Center for Biological Diversity, “Iconic species like endangered Whooping Cranes are known to visit soybean fields, and now they’d be exposed to this toxic herbicide at levels they’ve never seen before.”

Dicamba has been around for decades, but this new EPA decision allows the herbicide to be sprayed directly on genetically engineered cotton and soybeans — opening the door for dicamba use to jump from less than 1 million pounds to more than 25 million annually on these two crops. *Dicamba* has made headlines recently because its illegal use has caused extensive damage to crops in the Midwest due to spray drift.

The decision comes on the heels of the agency's recent decision to expand approval for a new pesticide called *Enlist Duo* despite having pulled Dow's registration of the chemical in November 2015. While the EPA's analysis indicated that some threatened and endangered species — including birds [Whooping Cranes] and mammals — may be harmed by the massive increase in herbicide use, the agency has not complied with its obligation to consider impacts to these species under the Endangered Species Act.

Editor's note: *Read last year's ECB coverage concerning Enlist Duo.*

Eastern Crane Bulletin - March 2015, pg 6

Environmental Impact Issues: *EPA Approval of toxic herbicide may harm Whooping Cranes and Indiana Bats*

<https://kyc4sandhillcranes.files.wordpress.com/2014/03/the-eastern-crane-bulletin-e28093-march-2015.pdf>

And here:

Eastern Crane Bulletin - December 2015, pg 8

Environmental Impact Issues: *EPA Pulls Registration for Dow's Enlist Duo Herbicide Citing High Toxicity Levels*

<https://kyc4sandhillcranes.files.wordpress.com/2015/06/the-eastern-crane-bulletin-e28093-december-2015.pdf>

Canada:

Wood Buffalo National Park under siege, say First Nation and environmentalists

In 2015, the Mikisew Cree First Nation sent a petition to the United Nations Educational, Scientific and Cultural Organization (UNESCO), asking that Wood Buffalo National Park (WBNP) be added to a list of world heritage sites in danger. Wood Buffalo, straddling the Alberta-Northwest Territories border, has been a World Heritage site since 1983. The national park covers 4.5 million hectares of boreal forest and grassland. It contains the only breeding habitat in the world for the endangered Whooping Crane, and its large grass and sedge meadows sustain the world's largest herd of endangered wood bison.

The UNESCO mission to assess the "state of conservation" of WBNP took place from September 25 to October 4. Presentations from four environmental groups and the Mikisew Cree First Nation said the park, which is on the prestigious list of World Heritage Sites, is being damaged by upstream hydro projects — particularly the Site C dam — in British Columbia and by expanding oil sands developments. These developments also threaten the Mikisew Cree's ability to sustain their culture and heritage, and the ability to exercise their aboriginal treaty rights,

Alison Ronson, of the Northern Alberta chapter of the Canadian Parks and Wilderness Society, said environmental groups are asking UNESCO and Canada to call for "an immediate halt" to the Site C project until a study can be done on the cumulative environmental impact of the dam and oil sands developments.

There are currently 1,052 sites on the World Heritage List. Only two have been delisted due to inadequate protection. Canada has never had any of its 18 sites delisted, or listed as being in danger, but critics say Wood Buffalo National Park could be a first. The [Yellowstone to Yukon Conservation Initiative](#), a Canadian-U.S. organization, said in a submission to the UNESCO mission that Canada "may well be breaching the international obligations we took on in 1983 when the World Heritage Site was designated."

The UNESCO mission will prepare a report with recommendations to be considered by the World Heritage Committee at its July 2017 session in Krakow, Poland, the organization said.

Read more of the concerns by environmental groups and the Mikisew Cree First Nation

here: <http://www.theglobeandmail.com/news/british-columbia/groups-want-trudeau-to-revisit-site-c-approval-over-world-heritage-status/article32207398/>

and here: <http://news.nationalpost.com/news/canada/wood-buffalo-national-park-under-siege-fears-visiting-unesco-world-heritage-committee>

Mining and oil and gas extraction account for nearly a third of threats to UNESCO World Heritage Sites in Canada over the last 30 years, read more here:
<http://www.cbc.ca/news/canada/calgary/unesco-world-heritage-sites-threats-oil-gas-1.3759713>

Florida:

Duke Energy Florida implements "bird-friendly" power line project to end electrocutions

According to Duke Energy, in a move to be a good environmental steward and provide more reliable grids, the company plans to start a pilot program in Polk County to make 50 miles of power lines more avian friendly.

The electric utility will replace the vertical spreaders on top of power poles and connect the lines vertically on the pole, leaving fewer places for birds to land at critical junctures. Some poles will be replaced to allow for the greater vertical spread required. As a result, the numbers of birds suddenly and violently completing high-voltage circuits should be reduced.

Duke Energy's pole design in the Polk County pilot program is based on some "non-binding guidance" crafted by the [Avian Power Line Interaction Committee \(APLIC\)](#), a collaboration originally between 10 utilities, Edison Electric Institute, U.S. Fish and Wildlife Service and the National Audubon Society. The group was formed in 1989 to address the incidental killing and injuring of Whooping Cranes that collided with power lines. Since its inception, APLIC has expanded to address a variety of avian/power line interactions including electrocutions, collisions, and nests. Duke Energy's "[Avian Protection Plan](#)" is also based on the group's recommendations.

A 2014 study funded by the U.S. Fish and Wildlife Service estimated between 12 million and 64 million birds are killed annually at power lines — between 900,000 and 11.6 million from electrocution. Collisions with buildings cause an estimated 365 million to 988 million bird deaths a year, communications towers an estimated 6.6 million deaths and wind turbines an estimated 573,000, according to earlier studies referenced by the authors.

Increasingly the federal government has worked to make companies responsible for the incidental deaths of migratory birds. Duke Energy Renewables, a subsidiary of Duke Energy, was criminally charged in 2013 for the deaths of 163 protected birds including 14 golden eagles at the company's wind farms in Wyoming — the first such action against a renewable energy company. The company pleaded guilty and was sentenced to pay \$1 million in fines, restitution and community service.

Another wind-harnessing company, PacifiCorp, paid \$2.5 million as part of a settlement agreement over the incidental killing of 338 birds protected under the [Migratory Bird Treaty Act](#), one of the nation's oldest conservation laws.

For more information about power line and avian safety; perching, roosting and nesting of birds on power line structures, read the following report by the Avian Power Line Interaction Committee:

[Suggested Practices for Avian Protection On Power Lines: The State of the Art in 2006](http://www.aplic.org/uploads/files/2643/SuggestedPractices2006(LR-2).pdf)
[http://www.aplic.org/uploads/files/2643/SuggestedPractices2006\(LR-2\).pdf](http://www.aplic.org/uploads/files/2643/SuggestedPractices2006(LR-2).pdf)

Citation:

Avian Power Line Interaction Committee (APLIC). 2006.

Suggested Practices for Avian Protection on PowerLines: The State of the Art in 2006.

Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C and Sacramento, CA.

New Mexico:

Native Americans and conservationists collaborate for milestone water release into Rio Grande

The Rio Grande Corridor in New Mexico is an important migratory, wintering and nesting corridor within the arid intermountain west, supporting over 200,000 waterfowl, 18,000 greater Sandhill Cranes and tens of thousands of other waterbirds and shorebirds, according to Audubon New Mexico officials.

[Audubon New Mexico](#), a Santa Fe-based non-profit conservation organization approached Native American tribes in the Middle Rio Grande Valley with a unique proposition that could benefit not only the Rio Grande but aid habitat restoration on tribal lands. The proposition asked for a transfer to Audubon of a portion of their allotted water from the [San Juan-Chama diversion project](#), which brings New Mexico's share of Colorado River water into the state, and in exchange Audubon would ensure that the water benefited the Rio Grande and in turn help seek funding for habitat restoration.

Four Middle Rio Grande Pueblos — [Sandia](#), [Isleta](#), [Santa Ana](#) and [Cochiti](#) — joined together and each supplied 100 acre-feet of San Juan-Chama water. Before summer, the 400 acre-feet from the four tribes was augmented by a nearly equal donation of surplus water by the [Club at Las Campanas](#), a private Santa Fe golf club, bringing the total volume of water to benefit the Rio Grande to nearly 800 acre-feet, or more than 260 million gallons (980 million liters).

Audubon New Mexico's Executive Director, Julie Weinstein said the donation would increase flow in the river channel for a 35-mile stretch for nearly 24 days. The organization worked closely with the [Middle Rio Grande Conservancy District](#) to determine the best sites to deliver water back to the river to maximize ecological value.

To read more by Sandra Postel of National Geographic's Freshwater Initiative in Water Currents, go here: <http://voices.nationalgeographic.com/2016/09/28/native-americans-and-conservationists-collaborate-to-return-vital-flow-to-the-rio-grande/>

and here, for more on Audubon New Mexico's work:

<http://www.ruidosonews.com/story/news/local/2016/09/08/milestone-water-release-into-rio-grande/89957660/>

Science News:

Research and management to increase Whooping Crane chick survival on Necedah National Wildlife Refuge

In a two-step "process of solutions," this paper addresses the problem of chick mortality at [Necedah National Wildlife Refuge](#) through (1) identification of the most likely predator species causing the mortality, and (2) testing habitat management to decrease susceptibility of Whooping Crane chicks to predation.

With the aid of a 2015 camera trap study, potential predators of Whooping Crane chicks on the refuge were identified as raccoon, coyote, mink, raven, bald eagle, gray wolf, bobcat, fisher, snapping turtle, and several additional mammalian and avian species. According to the report, because crane chicks must survive 10-12 weeks before they are capable of flight, high mortality due to predators during this period is a common limiting factor for crane populations in general, not just Whooping Cranes in central Wisconsin. In comparison to this, Wood Buffalo National Park, Canada, which supports the only remaining natural population of Whooping Cranes, chick survival is much higher than in most other North American crane

populations as predator numbers there are low, and some species common elsewhere, e.g., raccoons, do not occur at all.

As shown in this paper, identification of predators on the refuge coupled with the data from the 2005 through 2015 reproduction rates of the eastern migratory Whooping Crane population will drive subsequent habitat management actions that decrease predator cover and increase quality of crane chick-rearing habitat.

To read the complete report and download the PDF, click here:

[NCD Urbanek 2015 ResearchManagementIncreaseWhoopingCraneChickSurvivalNecedahNWR](#)

or go here: <https://catalog.data.gov/dataset/research-and-management-to-increase-whooping-crane-chick-survival-on-necedah-national-wild>

Age before youth: Older cranes lead the way to new migration patterns

Whooping Cranes are changing migration patterns in response to climate and land use change, and these new patterns are being determined by the older, more experienced, members of the population. Researchers from [Senckenberg Biodiversity and Climate Research Centre, the Goethe University Frankfurt](#), the U.S. Geological Survey, the University of Maryland, and the [International Crane Foundation](#) investigated a behavior known as “short-stopping,” which is the shortening of a migration route by shifting wintering grounds toward the breeding grounds. The Whooping Crane population studied is the reintroduced eastern migratory population, established by the [Whooping Crane Eastern Partnership \(WCEP\)](#) in 2001 with captive-reared birds taught to migrate using ultralight aircraft.

The research results show that the short-stopping behavior has been developed by older birds but has then been passed to younger birds: In 2006, no 1-year-old birds short-stopped, but by 2015, 75 percent of them did so. Research shows that short-stopping in this population occurs to a vastly greater degree than in the remnant wild population, which migrates between northern Canada and the Gulf coast of Texas.

ABSTRACT

Anthropogenic changes in climate and land use are driving changes in migration patterns of birds worldwide. Spatial changes in migration have been related to long-term temperature trends, but the intrinsic mechanisms by which migratory species adapt to environmental change remain largely unexplored. We show that, for a long-lived social species, older birds with more experience are critical for innovating new migration behaviours. Groups containing older, more experienced individuals establish new overwintering sites closer to the breeding grounds, leading to a rapid population-level shift in migration patterns. Furthermore, these new overwintering sites are in areas where changes in climate have increased temperatures and where food availability from agriculture is high, creating favourable conditions for overwintering. Our results reveal that the age structure of populations is critical for the behavioural mechanisms that allow species to adapt to global change, particularly for long-lived animals, where changes in behaviour can occur faster than evolution.

Citation:

Claire S. Teitelbaum, Sarah J. Converse, William F. Fagan, Katrin Böhning-Gaese, Robert B. O'Hara, Anne E. Lacy, Thomas Mueller. **Experience drives innovation of new migration patterns of whooping cranes in response to global change.** *Nature Communications*, 2016; 7: 12793 DOI: [10.1038/NCOMMS12793](https://doi.org/10.1038/NCOMMS12793)

For a PDF of this article, go here: [online in the journal Nature Communications](#).

Read more here: Senckenberg Research Institute and Natural History Museum. "Age before youth: Older cranes lead the way to new migration patterns." *ScienceDaily*, 6 September 2016. www.sciencedaily.com/releases/2016/09/160906103713.htm

Kudos:

Calgary Zoo, International Crane Foundation, San Antonio Zoo, and Audubon Nature Institute recognized with national award for collaborative conservation program

In September 2016 the [Association of Zoos and Aquariums \(AZA\)](#) announced that the [Calgary Zoo](#), [International Crane Foundation](#), [San Antonio Zoo](#), and [Audubon Nature Institute](#) received Top Honors in AZA's 2016 [North American Conservation Award](#) for the *Whooping Crane Recovery Program*. This annual award recognizes exceptional efforts toward regional habitat preservation, species restoration, and support of biodiversity in the wild.

Clement Lanthier, president and CEO of the Calgary Zoo said the recognition shows the hard work being done is worthwhile. "We are proud that decades of collaborations in captive-breeding and innovative conservation science have made such a difference for the recovery of Whooping Cranes in the wild."

A sentiment echoed by Rich Beilfuss, President & CEO of the International Crane Foundation, "Conservation cannot be truly achieved without great partnerships like those of the Calgary Zoo, Audubon Nature Institute and the San Antonio Zoo. With great intention, we are slowly walking Whooping Cranes back from the brink of extinction. We are so honored to receive the North American Conservation Award in recognition of our collective, longtime efforts to save this iconic species."

A historic landmark for this collaboration occurred in April 2016, when the "grandchick" of one of Calgary's breeding birds become the first wild-hatched Whooping Crane in Louisiana since 1939.

Read more here: <https://www.savingcranes.org/calgary-zoo-international-crane-foundation-san-antonio-zoo-and-audubon-nature-institute-recognized-with-national-award-for-collaborative-conservation-program/>

and here: <http://www.calgarysun.com/2016/09/13/calgary-zoo-wins-conservation-award-for-work-with-whooping-cranes>

Ian Nicolson Audubon Center at Rowe Sanctuary celebrates conservation

At its annual celebration on October 8, 2016 Dr. Paul Johnsgard was honored with the *Prairie River Keeper Award*. Dr. Johnsgard is an ornithologist, artist and emeritus professor at the University of Nebraska. His first book, the [Handbook of Waterfowl Behaviour](#) was published by Cornell University in 1965 and his [A Chorus of Cranes](#) was published in 2015.

A true partner with the conservation efforts of Audubon's Rowe Sanctuary, Dr. Johnsgard has written numerous books about the cranes and their dependency on the Platte River as a crucial stopover during migration. Throughout the years, from his position as professor at the University of Nebraska and as a world-renowned ornithologist, he has remained an out-spoken advocate for the Platte River.

Handbook of Waterfowl Behaviour

<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1006&context=bioscihandwaterfowl>

A Chorus of Cranes

<https://store.rowesanctuary.org/ProductDetails/tabid/89/ProductID/85/cranes,biology,conservation,Nebraska,Johnsgard,Mangelsen,migration,chorus,behavi/Default.aspx>

Turning dreams into action – *My Life with Cranes!*

The International Crane Foundation is delighted to announce the publication of Dr. George Archibald's new book of collected stories, *My Life with Cranes!* Experience through Dr. Archibald's gift for storytelling, the high and low points encountered on his journey to turn a dream into what is now the

globally recognized International Crane Foundation – dedicated to working worldwide to conserve cranes and the ecosystems, watersheds, and flyways on which they depend.

Go here to learn more: <http://www.craneshop.org/my-life-with-cranes-by-george-archibald/>

In Memoriam:

Editor's note: *I was struck by the following three individuals and the contributions they each made towards raising public awareness of, and for the conservation of cranes but in very different ways – through art, technology and law enforcement. Their contributions underscore how it is possible for each and every one of us to make a difference, regardless of the path taken, when working towards a common goal.*

Terry Kohler, Wisconsin crane conservationist (1934-2016)

For over three decades, Terry Kohler and his wife Mary supported Whooping Crane conservation efforts and were lead supporters of the [International Crane Foundation](#). In a tribute by Dr. George Archibald, International Crane Foundation Co-founder and Senior Conservationist, remembers Kohler showing him a video of Canadian Bill Lishman leading a flock of Canada Geese behind his ultra-light aircraft when they first met in the 1980's. And that he asked "Why not do that with Whooping Cranes?" Dr. Archibald took Kohler's idea to the Whooping Crane Recovery Team, and for the next 15 years, with the help of [Operation Migration](#), history was made.

Read the tribute by Dr. George Archibald here: <http://www.birdingwire.com/releases/386234/>

And from a [Louisiana Department of Fish and Wildlife](#) tribute: ... "They (the Kohlers), along with their planes and pilots have been instrumental in Whooping Crane conservation and recovery. They transported eggs to help establish the captive breeding population and birds for all the reintroduction projects. In fact, almost every reintroduced Whooping Crane (hundreds of birds!) has taken a flight on one of their planes - sometimes as an egg, or as a juvenile bird being moved to WI, FL, or most recently LA. They flew biologists (including 2 of our own staff) on flights amounting to hundreds of hours tracking the migration of released birds, transporting errant birds back to WI, or circling and circling searching for nests. Whooping Cranes and those of us lucky enough to work with them have lost a wonderful and generous supporter and friend. We will always remember and forever be grateful for the contributions made by Terry Kohler."

Victor Bakhtin's legacy (1951-2016)

Victor Bakhtin was born in the Siberian city of Krasnoyarsk and lived the last 22 years in Wisconsin. Bakhtin, graduated from Moscow Art Institute in 1974 with a degree in graphic illustration. Known in Russia for his work, he illustrated with beautiful paintings all species of mammals and birds in the Red Data Book for Endangered Species of Russia. In 1990, Dr. George Archibald, director of the International Crane Foundation (ICF), met Victor at a historic joint meeting in Estonia of the European and the Soviet working groups on cranes and was eventually instrumental in his move to the United States.

Darcy Love, ICF's Creative Design and Conservation Education Manager knows Victor's legacy will continue through his paintings at the Foundation. "I have seen firsthand, the power of art to tell a compelling story about our work, and why everyone should care about saving cranes. Victor's interpretation of the Platte River has transported our guests to another place, and back in time through the Whooping Crane mural. Having the crane gates (designed by Bakhtin) to welcome people to our site is transforming for many who enter. We are so fortunate to have this lasting legacy from such a gifted artist."

To see some of his mural(s) go here: <https://www.savingcranes.org/victor-bakhtins-legacy/>

To read his obituary and tribute by Dr. George Archibald go here:

http://host.madison.com/news/local/obituaries/bakhtin-victor/article_be4563bd-d51d-5a24-a9d4-7b80b40588f8.html

Special agent Cleveland Vaughn was a friend to wildlife (1944-2016)

"Somebody has to stand up for those birds," Cleveland Vaughn, a former special agent with the U.S. Fish and Wildlife Service, once said. "I'm the person that has to do that. I love the birds." So Special Agent Vaughn traveled around Nebraska, chasing shotgun blasts on hunting season opening days, counting the catch and otherwise making sure Nebraska hunters followed the rules. It's a job he held for half of a 28-year career with the U.S. Department of the Interior, which began with the distinction of being the federal agency's first African-American law enforcement officer. When Vaughn left that job to become a U.S. marshal for Nebraska in 1993, he was also the first African-American in that role.

Read more here:

http://www.omaha.com/columnists/grace/grace-ex-special-agent-cleveland-vaughn-was-a-friend-to/article_cbdf6d5a-69e0-5718-854f-bf648dd60dca.html

Upcoming Events:

Holiday with the Cranes on Galveston Island

December 10-11, 2016

Galveston Island, Texas

For a schedule of events and to register go here:

<http://www.galvestonnaturetourism.org/holidaywiththecranes.asp>

Festival of the Cranes

January 14 – January 15, 2017

Wheeler National Wildlife Refuge

Decatur, Alabama

For more information go here: <http://alabama.travel/upcoming-events/festival-of-the-cranes>

Over 14,000 Sandhill Cranes along with endangered Whooping Cranes, spend the winter at Wheeler NWR. Festival events include viewing the cranes up close, birding, workshops and nature walks, kid's activities, sponsor booths and a live raptor presentation.

The first Whooping Crane arrived November 11, 2016. Parent-reared, juvenile female #69-16 arrived in the company of Sandhill Cranes. Impressive first migration!

27th Tennessee Sandhill Crane Festival

January 14-15, 2017

Hiwassee Wildlife Refuge

Birchwood, Tennessee

For more information go here: <https://www.tn.gov/twra/article/sandhill-crane-festival>

Lizzie Condon from the International Crane Foundation will speak on Saturday about the Whooping Crane conservation efforts at the International Crane Foundation. The 2017 celebration of cranes coincides this year with the 14th North American Crane Workshop annual meeting taking place in Chattanooga, January 11-15, prior to the festival. Crane researchers and conservationists from around North America will attend this prestigious event.

For more information on the North American Crane Workshop visit:

<http://www.cvent.com/d/yvqn1y>

For more about the festival go here:

<https://www.tn.gov/twra/article/sandhill-crane-festival#sthash.yEcjFFYl.dpuf>

Nature Watch Weekend: Sandhill Cranes

January 21 and January 28, 2017

[Barren River Lake State Resort Park](#)

1149 State Park Rd

Lucas, Kentucky 42156

Barren River Lake State Resort Park is offering either a sunrise or sunset tour on both Saturday January 21 and Saturday January 28, 2017. Each weekend also includes an educational session conducted by a wildlife biologist with the Kentucky Department of Fish and Wildlife Resources on Friday evening at 7:00 p.m. Registration is \$40 per adult and \$20 per child 8-12 years old (must be at least 8 years old to go on van tours). The fee includes all educational sessions, a box lunch, a T-shirt and a choice of a Saturday sunrise or Saturday sunset tour.

Click here to download the registration form:

<http://parks.ky.gov/userfiles/barren-river/events/BR%20Sandhill%20Registration%202017.pdf>

21st Annual Whooping Crane Festival

February 23-26, 2017

Port Aransas and Mustang Island, Texas

For online registration (now open); event tickets and festival schedule go here:

<http://www.whoopingcranefestival.org/>

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