EASTERN CRANE BULLETIN

September 2018

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.

Photo courtesy of H. Ray, Operation Migration

Editor: *I know I speak for many others when I thank Operation Migration, its staff and volunteers for their dedication for the past 25 years working towards bringing Whooping Cranes back to the eastern United States. While acknowledging this was a joint effort, along with other members of the Whooping Crane Eastern Partnership, Operation Migration dramatically heightened public interest in Whooping Cranes. What better way to capture the imagination and hearts of thousands than with an ultralight wending its way southward, followed closely by a group of young birds from an endangered species, on their first*

migration south? High in the sky above us all – a delicate, undulating white line of hope – a step on the path to bringing the species back. We thank you Operation Migration for a job well done and wish you all well.

(The following three pieces were written by Joe Duff, Co-founder / CEO, Operation Migration, and are reproduced here with his permission.)

Operation Migration resigns from WCEP & dissolves organization

by Joe Duff, Co-founder / CEO, Operation Migration, August 17, 2018

Operation Migration took flight 25 years ago when two artists-turned-aviators developed a method of teaching birds a new migratory route. The innovative approach helped stabilize the dwindling population of the magnificent Whooping crane.

Bill Lishman and Joe Duff developed the aircraft-guided migration method into an effective means of reintroducing endangered Whooping cranes into an area they had not inhabited in over a century.

Our first migration flight leading Whooping cranes occurred in 2001 – shortly after the 9-11 attack on the United States. It was a time when the nation needed an uplifting story; one of ordinary people working to save an endangered, North American species.

For 15 years, Operation Migration pilots and a dedicated ground crew led Whooping cranes on a journey toward survival. During those years, we contributed more than $10 million dollars and covered 17,457 miles with a total of 186 trusting Whooping cranes trailing off our wingtips.

Each of the cranes that survived the winter period in Florida returned north the following spring and continued to migrate annually thereafter. Gradually, the number of cranes began to increase, giving hope for the species, which in the 1940s numbered only 15.

The aircraft-guided migration method was ended in the fall of 2015 when the U.S. Fish and Wildlife Service published a document titled “FWS Vision for the Next 5-year Strategic Plan” that claimed the method was “too artificial.” They suggested that cranes raised by our costumed handlers resulted in inattentive parents that did not adequately protect their offspring.

We continued work for another 3 years based upon our belief that the goal of a self-sustaining Eastern Migratory Population of Whooping cranes was attainable. However, with new management directives authorized by the Whooping Crane Recovery Team and implemented by Region 3 of the U.S. Fish and Wildlife Service, we no longer believe this goal to be achievable.

As a result, we cannot continue, in good faith, to accept contributions or justify assigning our staff and volunteers to carry out the work outlined in the strategic plan imposed on the Whooping Crane Eastern Partnership (WCEP).

This led us to an extremely difficult decision: The management and Board of Directors are withdrawing Operation Migration from membership and participation in WCEP and dissolving the organization. This decision is heartbreaking for us all, but we have exhausted all possible avenues to avoid this outcome.

Supporters from around the world have generously contributed to Operation Migration’s aircraft-guided work, its successful costume-rearing program, and education and research efforts, all of which have contributed to the recovery of Whooping crane. When our work began there were fewer than 500 Whooping cranes in North America. Today, the species total stands at more than 700 – a significant part of the increase is attributable to your help.

While disappointed that we were unable to achieve our long-term goal to establish a self-sustaining Whooping crane population, we take great pride in Operation Migration’s accomplishments, which your support and time helped to make possible:

- Hundreds of thousands of people are more aware of the plight of Whooping cranes and wetlands thanks to our blog posts for the past 19 years;
- Our partnership with Journey North, a distance learning program, brought information about Whooping cranes to millions of school-aged children worldwide;
- We hosted the first-ever LIVE streaming camera featuring wild Whooping cranes;
- We raised awareness for the Whooping crane and gained global attention for the efforts to save them through the aircraft-guided program for 15 years. Our work was featured in numerous news stories, documentaries and published in many books and magazines that inspired people to care about, and take action for these vulnerable cranes;
- The reintroduced Whooping cranes are avoiding humans, selecting proper habitat, pairing with other Whooping cranes and are producing offspring;
- Aircraft used in our work are now on display at three distinguished locations: Disney's Animal Kingdom, The Smithsonian Air and Space Museum and the Experimental Aircraft Association (EAA), as reminders that people can take innovative action to help wildlife species in trouble;
- Operation Migration contributed images to numerous educational textbooks over the past 20 years to help tell the story of Whooping cranes to students of all ages;
- Our work garnered the attention and support of President Jimmy Carter and noted conservationist Jane Goodall.

We are grateful for the awards we have received over the years, which include:

- 2002 National Wildlife Federation "Conservation Achievement Award";
- 2003 Canada Post "Canadian Environmental Award";
- 2004 The Whooping Crane Conservation Association "Honor Award";
- 2006 American Birding Association, Partners in Flight "Outstanding Contribution to Bird Conservation";
- 2009 U.S. Dept. Of the Interior "Partners in Conservation Award."

So many accomplishments, and all achieved with your help. We want to extend our heartfelt gratitude to all Operation Migration members, supporters, volunteers, and staff (past and present).

Your financial and emotional support kept us going more than you will ever know during many stressful and trying periods over the past 18 years of this reintroduction project. You have been like family to us.

There would not be Whooping cranes migrating over eastern North America without your support.

Just the facts

by Joe Duff, Co-founder / CEO, Operation Migration, August 19, 2018

In an article in the Wisconsin State Journal on August 18 Wade Harrell, coordinator of the Whooping Crane Recovery Team, was asked to comment on the departure of OM from the Whooping Crane Recovery Team. He was very gracious about our contribution but again skirted around the real issue. Here is a link to the article and below, a few excerpts, and facts that he avoided.

> *"The eastern migration population of cranes that Operation Migration nurtured in Necedah National Wildlife Refuge in Juneau County now has over 100 members", said Wade Harrell, Fish & Wildlife Service whooping crane recovery coordinator. "The number is encouraging but the flock is struggling to raise wild chicks and changes need to be made, he said."*
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> *Changes included cutting Operation Migration's plane-led migration training for baby birds — which Harrell said jump-started the cranes' reintroduction to the wild — and shifting raising of the chicks from human caregivers to captive adult cranes. "The changes may help the cranes learn natural rearing abilities, thus reducing chick mortality rates," Harrell said.*
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> *But Harrell said "the flock needs to focus on the unique challenges posed by their environment and circumstances. With sturdy numbers, the eastern migration population needs to focus on raising*

"natural" chicks, rather than pure chick numbers, so they can sustain themselves. The more that we can mimic Mother Nature in how we raise a chick in captivity, the more wild it will be when released," he said.

Response:

The Fish and Wildlife Service and the Whooping Crane Recovery Team insist the cause of low reproduction within the Eastern Migratory Population (EMP) is a result of artificiality – especially in the way Operation Migration raised the birds. Rather than the cranes being raised by people in costume, they directed WCEP to release only cranes that were raised in captivity by real Whooping crane parents. In other words, we could only release parent-reared birds as opposed to costume-reared birds.
Their idea is that birds raised by costumed people miss some nurturing lessons that would help them defend their own offspring once they mature. Inattentive parents, they suggest, is the reason up to 20 or so chicks that hatch each spring at Necedah National Wildlife Refuge die before they learn to fly.

There are many factors that suggest this strategy is wrong, but they continue to ignore the facts:

Fact one: Parent-rearing has been used numerous times in the past. It was even used to release Mississippi Sandhill cranes, but the technique did not improve reproduction success.

Fact two: There is no way to test the benefits of parent-rearing within the EMP. Even if it was a superior method, it is impossible to demonstrate those results. The EMP is a mix of Whooping cranes raised by various means including costume-reared, parent-reared, Direct Autumn Release (DAR), Ultralight-led and even a few wild hatched chicks. If a parent-reared crane breeds with a DAR crane or an ultralight crane, how is it possible to determine which method led to the success or failure of that pair to raise a chick? So how is the Recovery Team going to tell if those "*cranes learn natural rearing abilities, thus reducing chick mortality rates".* Even if two parent reared cranes paired and bred successfully it would be a sample size of one and nothing on which to base any sort of conclusion.

Fact three: The only way to test the superiority of parent-rearing would be to flood the landscape with chicks raised using that release method. If enough of them survived to breed, they would be able to see a clear delineation in breeding success, but the Recovery Team has restricted the number of chicks available to the EMP so that method is not available.

Fact four: It has been known since 2007 that black flies at Necedah cause nest abandonment. Those numbers of black flies do not exist at the White River Marsh State Wildlife Area and the Horicon National Wildlife Refuge, so in 2011, WCEP moved the project to those new locations. However, not enough chicks have been allocated to the program to test those new habitats. Instead, the success of the EMP is judged solely on chick survival at Necedah.

Fact five: It has been known since 2010 that even if a pair can hatch a chick at Necedah, the chances of it surviving long enough to learn to fly are almost zero. However, the cause of that mortality is still unknown and plans to manage that habitat for Whooping cranes has not been developed.

Fact six: Sandhill cranes, which occur naturally in Wisconsin can't keep their chicks alive at Necedah either. Over the last two years the productivity of Sandhill cranes at Necedah has been studied and the results indicate that they are not doing any better than the Whooping cranes. In fact, this year it seems they are doing far worse. So, if a naturally raised Sandhill crane can't breed successfully at Necedah how can reintroduced cranes be successful there? The Recovery Team and the Fish and Wildlife Service however would rather blame OM than admit that their selection of Necedah as a reintroduction site was a mistake from the beginning.

A good year for wild-hatched Whooping Cranes

by Joe Duff, Co-founder / CEO, Operation Migration, August 22, 2018

The Louisiana Non-migratory Population have reported that they are having a banner year. Five wild-hatched chicks have fledged, including a set of twins. Three of the pairs are first-time nesters, and two of the males are just 2 years old. (Here's a link to their press release)

There are four wild-hatched chicks at Necedah this year that should be fledging very soon (If they haven't already) and two more that are referred to as off-refuge – These two off-refuge cranes have been confirmed as fledged.

Six fledged chicks is a record for the EMP and, maybe some indication that they are finally figuring out how to deal with that challenging environment. We know that black flies at Necedah cause nest abandonment and pre-fledge chick mortality has been very high there so far, but maybe this is the turning point.

Defending chicks and other parenting skills are partly instinctive and partly learned. As an example, there was a pair of Whooping cranes in the Florida non-migratory flock that lost their chick each year to a Bald eagle. Eventually, they figured out a defense strategy and during the last attack, the eagle had to be rescued before the cranes killed it.

It is interesting to note that all of these cranes, the two that figured out how to deal with the eagle, the five successful pairs in Louisiana and the six, hopefully soon to be successful pairs at Necedah – were all costume-reared.

The five surviving chicks in Louisiana is exciting news especially the part about 2-year-old males. If it continues, that flock could reach its self-sustaining status in record time.

With promising results in Louisiana and, up until now, poor reproduction success at Necedah, its easy to see why the Recovery Team might shift their focus. They have directed that the majority of chicks available for release be assigned to the LNMP while WCEP gets just enough to keep the partners busy and to test an already disproved release method.

But that strategy ignores the value of the 100 or so birds in the EMP. In fact, with restricted releases, even the great results achieved this year at Necedah won't last. Natural attrition will reduce the number of breeding pairs there and it won't be long before fewer breeders will be available to learn predator defense techniques.

It is becoming obvious that the rearing method is not the issue at Necedah. Black flies causing nest abandonment and chicks that don't survive long enough to learn to fly, point directly at environmental issues. Even the Sandhills can't make it work there.

The Recovery Team should take this year's success as an opportunity to refocus their efforts. The Service should, once and for all, find out what is killing the twenty or so chicks that hatch each year at Necedah and finally determine if something can be done to mitigate the problem.

Parent-rearing should be dropped for the costume-rearing method, which can provide more chicks to be released each year. Parent-rearing takes adults out of production at the captive breeding centers. Rather than producing more eggs to be costume-reared/released, the adult birds spend their time raising one or two chicks. Plus, there are a limited number of adult Whooping crane pairs on the landscape outside of the Necedah area to release the parent-reared chicks with so most end up migrating south with Sandhill cranes.

Dr. Brad Strobel of Necedah uses an innovative technique for circumventing the black fly issue. He uses temperature days to anticipate the bloom of those biting insects. Just prior to the peak, he collects eggs from the pairs that would normally abandon their nest when the flies attack. Those egg are incubated at one or more of the captive centers and eventually the chicks are reintroduced. When Whooping cranes lose their eggs early on in the process, they will often start a new nest and lay more eggs. It's referred to as double clutching and generally occurs after the relatively short black flies season. Those second nests are more successful.

Initially, the eggs collected from the "first nesters" were hatched at Patuxent and returned to Necedah as chicks along with some captive produced chicks. When the Louisiana project began, the Recovery Team made WCEP responsible for all of its own eggs. How many we got depended on how many were

harvested just prior to when the black flies bloomed. All of the captive produced chicks went to Louisiana.

Then the strategy changed. In 2018, the EMP was limited to ten chicks, no matter how many were harvested from Necedah and all were to be parent-reared.

At the last count, four parent-reared chicks will be released this fall. The two chicks fathered by 16-11 at White Oak in Florida are scheduled to be released at Horicon this week. They are also included in the count of parent-reared releases this year.

To read the **New USFWS management directives**, *go here:*
http://operationmigration.org/2016%20WHCR%20Egg%20Allocation%20Memo_Final.pdf

For a PDF of **The Eastern Migratory Population of Whooping Cranes: FWS vision for the next 5-year strategic Plan,** *go here:*
http://operationmigration.org/WHCR_FWS%205-Yr%20Vision%20Doc_09222015.pdf

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Eastern Migratory Population of WHOOPERS

Eastern Migratory Population, Whooping Crane Update – August 2018

Population Estimate
The current estimated population size is 101 (47 Female, 51 Male, 3 Unidentified). This does not include wild-hatched chicks. As of 1 August, at least 74 Whooping Cranes are in Wisconsin, 3 in Michigan, possibly 3 in Illinois, 2 in Iowa, and 3 in Minnesota. The remaining birds' locations have not been confirmed in the last month or two.

Nesting
As of 1 August, at least ten chicks had hatched in Wisconsin, six of which are still alive, and one of which has fledged.
W1-18 and W2-18 hatched to parents 12-11 and 5-11 in Juneau Co, WI. W1-18 fledged in late July.
W3-18 and W4-18 hatched to parents 24-09 and 42-09 in Adams Co, WI. W3-18 is currently alive and with its parents and has been banded.

W6-18 is still alive and with its parents 1-04 and 16-07 in Juneau Co, WI.
W7-18 and W8_18 hatched to parents 9-03 and 3-04 in Juneau Co. W7_18 is still alive.
W9-18 hatched to parents 14-08 and 24-08 in Juneau Co. and is still alive. It is thought that 14-08 may be dead since 24-08 has been seen alone with the chick for most of July.
W10-18 hatched to parents 4-08 and 23-10 in Juneau Co. and is still alive.

2017 Wild-hatched chicks
W3-17 (U) is still in Adams Co, WI, with 39-16. W3-17 was captured during July to be banded with uniquely colored bands and a VHF transmitter. W7-17 (F) was last reported in Wright Co, MN.

For population estimate, 2018 season nesting results; updates for the 2017 Wild-hatched chicks, Parent-Reared 2017 Cohort, Costume-Reared 2017 Cohort, mortality, and to see a map of current Whooper locations, go here:
http://operationmigration.org/InTheField/2018/08/03/population-update/

To learn more about the individual cranes in the Eastern Population, go here:
http://operationmigration.org/InTheField/emp-whooping-crane-biographies/

How many Eastern Cranes that began their first migration are still alive?

Updated July 6, 2017

For a complete account of all Eastern Flock losses, (through death or removal) beginning in 2001 with the ultralight training in Wisconsin, plus birds of the Direct Autumn Release (DAR), birds hatched from wild parents, and birds in the parent-reared release program, click on the following:
https://journeynorth.org/tm/crane/WCEPStats_Losses.html

Hatch Year	Number of Cranes ***Starting First Fall Migration***	Still Counted in Flock
2001	8	0
2002	17	3
2003	16	4
2004	15	5
2005	24 (20 UL+ 4 DAR)	4
2006	23 (18 UL+ 4 DAR + 1 Wild)	1
2007	25 (17 UL+ 7 DAR)	5
2008	20 (14 UL+ 6 DAR)	6
2009	29 (20 UL+ 9 DAR)	15
2010	23 (11 UL+ 10 DAR + 2 Wild)	8
2011	18 (10 UL+ 8 DAR + 0 Wild)	12
2012	14 (6 UL+ 6 DAR + 2 Wild)	4
2013	18 (8 UL+ 5 DAR + 1 Wild + 4 parent-reared)	3
2014	11 (7 UL+ 0 DAR + 1 Wild + 4 parent-reared)	5
2015	18 (6 UL+ 8 DAR + 2 Wild + 2 parent-reared)	15
2016	12 parent-reared, 1 Wild	8
TOTAL		98

Data courtesy of Whooping Crane Eastern Partnership (WCEP)

UL= ultralight *(Chicks were captive-hatched, then raised by costumed handlers and taught to follow an ultralight for their first migration to Florida);* ***DAR= Direct Autumn Release*** *(Chicks are captive-hatched then released in the fall in the company of adult cranes from whom they will learn the migration route);* ***PR=Parent Reared*** *(chicks are captive-hatched and raised by captive Whooping Cranes, then released near a wild crane pair in hopes the pair will "adopt" the juvenile and lead it on migration);* ***W= wild hatched*** *to a wild Whooping Crane pair that then teach the migration route to the juvenile.*

Grasshopper, Hemlock and twins released in Horicon Marsh

The patriarch of this unusual family group is Grasshopper, or 16-11, raised at the International Crane Foundation through the Direct Autumn Release Program. He was released in 2011 at the Wisconsin Horicon National Wildlife Refuge. Unfortunately, he paired with a female Sandhill Crane in the spring of 2016 and the pairing resulted in a hybrid chick.

Even though Grasshopper proved himself to be a great dad while helping raise the chick, he was moved in the fall of 2016 to White Oak Conservation, a private, accredited facility in Yulee, Florida where he was matched with a female Whooping Crane named Hemlock, or 18-12. She was costume-reared at The International Crane Foundation, but not released as a chick for health reasons that have since been resolved. With this match, the Whooping Crane Eastern Partnership undertook a never-before-attempted experiment – trying to create a new pairing and return the new pair back to the wild.

In the case of Grasshopper and Hemlock, things couldn't have gone better – the two Whoopers pair-bonded within the year, successfully nested and fledged twins! In mid-August 2018 the family was returned to Wisconsin where they will reside in Horicon Marsh before hopefully migrating south this fall.

To read the full press release by the International Crane Foundation, go here:
https://www.savingcranes.org/whooping-crane-family-of-four-flown-north-to-horicon-marsh/

Please report Eastern Whooping Crane sightings

For an online form to report your sightings, go here:
https://www.savingcranes.org/report-whooping-crane/

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Aransas-Wood Buffalo WHOOPERS

86 Whooping Crane nests located in Wood Buffalo National Park, Canada

From May 25 - May 28, 2018 the Whooping Crane nesting survey conducted in Wood Buffalo National Park, located 86 Whooper nests. According to Rhona Kindott, Manager of Resource Conservation, this is the second highest count on record, the first being a whopping 98 nests counted in 2017. The next aerial survey, scheduled for September, will help determine the success of the 2018 breeding season by documenting surviving Whooping Crane colts.

For photographs of the Whoopers at Wood Buffalo NP, go here:
https://www.pc.gc.ca/en/pn-np/nt/woodbuffalo/decouvrir-discover/Grue_crane

Several aerial photos of WHCR nesting at Wood-Buffalo
https://friendsofthewildwhoopers.org/whooping-crane-images-wood-buffalo-national-park/

USFWS estimate of Texas wintering Whooper population now tops 500

In an August 2018 press release, the USFWS announced that the 2017-2018 survey – the first winter survey after Hurricane Harvey ravaged the Texas Gulf Coast – estimated that 505 Whooping Cranes had arrived on their Texas wintering grounds. Each fall the birds make their way back by migrating 2,500 miles from their breeding grounds in Wood Buffalo National Park in Canada to Aransas National Wildlife Refuge and surrounding habitats, where they spend the winter. Once they have arrived, wildlife biologists with the U.S. Fish and Wildlife Service survey the birds by air and analyze population trends.

Biologists have completed analysis of aerial surveys of the Aransas-Wood Buffalo Whooping Crane population done last winter. A switch in aircraft the previous winter and a shift to surveying later in the winter when a larger proportion of the population had arrived helped improve accuracy of the counts. Preliminary data analysis indicated 505 Whooping Cranes, including 49 juveniles, in the primary survey area (approximately 153,950 acres) centered on Aransas National Wildlife Refuge near Austwell, Texas. An additional 21 birds were noted outside the primary survey area during the survey. This marks the 6th year in a row that the population has increased in size and the first time the population has topped the 500 mark.

"This is the first year that we have based our winter abundance estimate from a February survey timeframe rather than a December timeframe. It may seem like population numbers jumped more than usual, but, in reality, we are just capturing a more complete proportion of the population, with most birds having completed migration by early February" stated U.S. Fish and Wildlife Service Whooping Crane Coordinator Wade Harrell.

For *a pdf of USFWS's full report, "Whooping Crane Survey Results: Winter 2017–2018," go here:* https://www.fws.gov/uploadedFiles/WHCR%20Update%20Winter%202017-2018.pdf

"Cautiously optimistic" about Aransas count

(The following is a post on August 22, 2018 / In the Field with Operation Migration, by guest author: Tom Stehn, Retired Aransas NWR Biologist and Whooping Crane Recovery Team Co-Chair)

I hope you will celebrate the results of the USFWS 2017-18 winter whooper count … (505 in the primary survey area + 21 outside the survey area) = 526 total.

However, just a cautionary note. **Several things as follows indicate to me that this estimate of 526 may be too high**.

1. I calculated the % average population increase every decade from 1940 to 2010. Flock growth averaged 42.6% per decade. So, from my aerial census done in the 2010-11 winter of 283 cranes, one could anticipate, using the average flock growth per decade, a flock size of around 404 in 2020. The best one-decade growth rate equaled 87.2%. If the growth rate between 2010 and 2020 matches the best ever decade, anticipated flock size in 2020 would be 530. This is the only way I can come close to the current estimated flock size.

2. I have more faith in the accuracy of the nest count done in Canada every June than the winter survey done at Aransas after I retired. I calculated the ratio between # of nests and the flock size the following winter for 10 years between 1967 and 2010. This ratio equaled 3.87. So, given the peak of 98 nests recorded in 2017, projected flock size would be 379 in the 2017-18 winter. If the highest ratio between flock size and # of nests is used (4.78), then the flock size could be 468. Note that not all adult cranes nest every year, so I based my calculations on the peak # of nests ever recorded (98).

3. The document by Butler and Harrell on the refuge web site entitled "Whooping crane survey results: Winter 2017-18" gives the annual long-term flock growth rate at 4.55%. If you start with the last time a complete census of the flock was done in the 2010-2011 winter that found 283 whoopers at Aransas, a growth rate of 4.55% would derive an estimated flock size of 422 in the 2019-2020 winter.

4. The 95% confidence limits as stated by Butler and Harrell for the 2017-18 winter survey provide a flock size at Aransas of between 439 and 577 whoopers.

5. So maybe flock growth in the past decade has been the best ever in the history of the flock. Growth could be exponential. I sure hope so. Based on historic growth rates, that's about the only way I can reach the current flock estimate of 526.

So, I will celebrate cautiously.

What are the chances of seeing twin Whoopers at Aransas?

A recent question submitted to "Ask Tom Stehn" asked the chances of Whooping Crane twins surviving to be seen during the winter at the Aransas NWR. Stehn responded by referencing data collected at the refuge from 1997-2010 during his tenure there. Following are the number of sets of twins during that time: 1997-1, 1998-0, 1999-0, 2000-0, 2001-0, 2002-0, 2003-1, 2004-2, 2005-1, 2006-7, 2007-1, 2008-1, 2009-0, and 2010-5.

Stehn helped with aerial chick surveys in Wood Buffalo National Park for approximately 10 years, and records from those years indicate the loss of one of the two twin chicks in the first couple weeks of life right after a period of cold weather and rain. This suggests that only when nesting ground habitat is in excellent shape and crane food is abundant will a significant number of twin pairs survive to make their first migration south to Aransas.

To learn more about twin colts, check out "Ask Tom Stehn," by going here:
https://friendsofthewildwhoopers.org/ask-tom-stehn/
If you have a question about the wild flock send FOTWW an email at admin@FOTWW.org.

Critical wild Whooper stopover work continues

Whooping Crane "stopover habitats" on U.S. Army Corps of Engineers (USACE) lakes are increasingly important according to Friends of the Wild Whoopers (FOTWW) president Chester McConnell. He explained that, "Due to numerous land use changes on private lands, many wetlands and ponds that once served as Whooping Crane habitat are being drained and converted to other uses. So, the large USACE lakes are being used more and more by the cranes." Because of the ongoing loss of natural habitat either from development or due to drought years when the surface water is reduced, habitat areas adjacent to USACE multipurpose reservoirs become even more important. "Ensuring that ongoing management of these areas is conducive to Whooping Crane use during migration is the primary goal of our partnership," added McConnell.

On July 8, 2018 the U.S. Army Corps of Engineers (USACE) announced the signing of a Memorandum of Understanding (MOU) with the Friends of the Wild Whoopers to assist in the recovery of endangered Whooping Cranes.

Per the MOU, USACE and Friends of the Wild Whoopers will jointly assess migration stopover habitat at USACE water resources development projects (see following about Waco Lake, Navarro Mills Lake and Whitney Lake). The assessments will be used by USACE to develop work plans that maintain and improve existing habitat and create additional habitat for the critically endangered cranes as part of USACE Environmental Stewardship Program. This partnership is consistent with USACE's responsibilities under the Endangered Species Act, which states that federal agencies may use their existing authorities to assist in the recovery of listed species.

To read the USACE press release, go here:
https://www.usace.army.mil/Media/News-Releases/News-Release-Article-View/Article/1571094/us-army-corps-of-engineers-and-friends-of-the-wild-whoopers-agree-to-assist-in/

Waco Lake continues to attract Whoopers

For at least seven years now, Whooping Cranes of the Aransas-Wood Buffalo wild population have been "stopping over" on Waco Lake, a U.S. Army Corps of Engineers (USACE) lake halfway between Dallas/Fort Worth and Austin, Texas. According to United States Geological Survey (USGS) scientific surveys, radio-tagged Whooping Cranes were recorded on the lake in 2011 (fall); 2015 (fall); and 2016 (spring). It is possible that actual numbers of cranes were higher as only about one-third of the population were tagged with radio-telemetry.

What makes the Waco Lake stopovers a bit surprising is its location within the city limits of Waco. In years past, it was rare to have Whooping Cranes make a stopover near populated areas, especially due to all

the accompanying noise and traffic. However, with many traditional stopover habitats destroyed by rampant development, it may become a more common occurrence.

Read more about the work at Waco Lake and to see photos, go here:
https://friendsofthewildwhoopers.org/waco-lake-provides-stopover-areas-migrating-whooping-cranes/

Wetland ponds – more is better at Navarro Mills Lake

Navarro Mills Lake is, located in central Texas about 20 miles west of Corsicana and about 35 miles east of Waco, Texas. It is managed by the US Army Corps of Engineers, Fort Worth District.

FOTWW President Chester McConnell complimented U.S. Army Corps of Engineers (USACE) managers for the wetland development accomplishments made in the past at Navarro Mills Lake saying that "Development and management of the existing wetland ponds in the lake's Wetland Units 1 and 2 currently provides a diversity of "stopover habitats" for endangered Whooping Cranes and thousands of waterfowl, wading birds, shorebirds and other wildlife species that need wetlands." But, he added that there are additional sites within Wetland Unit 1 and 2 that could be developed to increase the number of shallow, wetland ponds, and encouraged the USACE to work towards increasing the number and size of the shallow water wetlands within the two wetland complexes.

Lake Whitney – Corps of Engineers' Jewel for Whooping Cranes

Lake Whitney was originally authorized by the Flood Control Acts of August 18, 1941, to provide flood control, hydroelectric power, water conservation for domestic and industrial uses, recreation and other beneficial water uses in central Texas. The lake is located along the county lines of Hill and Bosque Counties on the main stem of the Brazos River. It encompasses a total of 49,820 acres. Approximately 13,500 acres of government-owned land surrounding the lake are dedicated as natural areas. The lake is a common stopping, resting and feeding area for Whooping Cranes, ducks, geese, shore birds and other waterfowl.

A broad expanse of grassland adjacent to a large lake inlet in H-10 Hunting Area makes for excellent "stopover habitat" for Whooping Cranes. Cranes that stop here have a wide glide path to land on the lake shore. The site is clear of obstructions and provides a gradual slope into the shallow water – a perfect roosting depth of 2 - 10 inches deep. Horizontal visibility around the roost site is good and allows the Whoopers to spot any predator that may be lurking nearby. Whoopers can feed on aquatic life in the lake and forage on insects and grains in nearby fields.

To see photos of the Lake Whitney area, and to read more about the work being done there, go here:
https://friendsofthewildwhoopers.org/whitney-lake-jewel-for-whooping-cranes/

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General News

Alabama:

$5.4 Million Award for Wheeler National Wildlife Refuge

On June 5, 2018, U.S. Senator Richard Shelby (R-Alabama), chairman of the Senate Committee on Appropriations, announced that the Wheeler National Wildlife Refuge in Decatur, Alabama, had been awarded $5.443 million as part of the Fish and Wildlife Service's Fiscal Year 2018 construction projects operating plan, for refuge improvements in public access and management needs.

The National Wildlife Refuge System, within the U.S. Fish and Wildlife Service, manages a national network of lands and waters set aside to conserve America's fish, wildlife, and plants. Wheeler National

Wildlife Refuge was established on July 7, 1938, by President Franklin D. Roosevelt, and now attracts thousands of wintering waterfowl each year. Although Wheeler is primarily designated as a waterfowl refuge, it also provides for a wide spectrum of wildlife. Its great diversity of habitat includes deep river channels, tributary creeks, tupelo swamps, open backwater embayments, bottomland hardwoods, pine uplands, and agricultural fields. This rich mix of habitats provide habitat for over 295 bird species to rest, nest and winter, including over 30 species of waterfowl (ducks and geese), a steadily increasing population of Sandhill Cranes, and each year since 2006, growing numbers of wintering Whooping Cranes of the eastern migratory population. The refuge is also home to 115 species of fish, 74 species of reptiles and amphibians, 47 species of mammals, 38 species of freshwater mussels, and 26 species of freshwater snails. It manages and protects habitat for 12 federally listed endangered or threatened species including the endangered gray bat.

"Wheeler National Wildlife Refuge plays a key role in helping to protect, manage, and restore lands and waters throughout North Alabama," said Senator Shelby.

"Discovering Alabama"

For the past 33 years, in 84 episodes and counting, each with a unique voice that interweaves host Doug Phillips's love of nature and history with explanations of why it's critical to protect the environment, "Discovering Alabama" has explored Alabama's rich natural history. Each episode focuses on a different aspect of Alabama's natural resources – forests, rivers, swamps, mountains, animals, ecology. The Emmy-winning series is produced by the Alabama Museum of Natural History at the University of Alabama.

To watch the Discovering Alabama *special episode on Whooping Cranes, go here:*
https://www.pbs.org/video/whooping-cranes-87cayy/
And, to learn about the host of the series, Dr. Doug Phillips, go here:
https://rootsrated.com/stories/33-years-of-discovering-alabama-with-doug-phillips

Following are three short interviews (produced by Discovering Alabama), with individuals involved with the reintroduction of the eastern migratory population of Whooping Cranes.

Whooping Cranes Extended Interviews - George Archibald: Why we should save the Whooping Cranes (Discovering Alabama/ George Archibald, Co-Founder of The International Crane Foundation)
https://vimeo.com/269932480

Whooping Cranes Extended Interviews - Andrew Cantrell: Whooping Cranes on Private Property (Discovering Alabama/Andrew Cantrell, PhD Student at Alabama A&M University)
https://vimeo.com/269929787

Whooping Cranes Extended Interviews - Lizzie Condon: The Importance of Wildlife Refuges (Discovering Alabama/ Lizzie Condon, Keep Cranes Safe Coordinator at The International Crane Foundation)
https://vimeo.com/269941191

Whooping Cranes Extended Interviews - Andrew Cantrell: Changes to the Study of Whooping Cranes (Discovering Alabama/ Andrew Cantrell, PhD Student at Alabama A&M University)
https://vimeo.com/269928857

Whooping Cranes Extended Interviews - Andrew Cantrell: Daily Study of Whooping Cranes (Discovering Alabama/ Andrew Cantrell, PhD Student at Alabama A&M University)
https://vimeo.com/269928094

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Alaska:

Group seeks to ban pets near wildlife refuge

The 60-acre Campbell Creek Estuary Natural Area borders the Anchorage Coastal Wildlife Refuge in the Sand Lake area and is a regular stopping place for Sandhills during migration. In an effort to keep dogs and other domestic animals out of the preserve, a local nonprofit group, Friends of the Anchorage Coastal Wildlife Refuge, have posted signs saying that dogs are not allowed. It is felt that the presence of dogs may inhibit wildlife viewing. According to Barbara Carlson, head of the nonprofit group, there is support for enacting the law from the city Parks and Recreation Department as well as neighboring community councils. Ultimately, any ban on pets in the estuary would have to be approved by the Anchorage Assembly.

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California:

"Pop-up" wetlands aid migratory birds

As of today, California has lost 90 percent of its wetlands, a fact reflected in a sharp decline in shorebird populations. To address this decline and with the help of crowdsourced data from millions of bird watchers and satellite images from NASA, The Nature Conservancy (TNC) is using the latest technology to try to match migratory birds with water. One plan of action is that TNC pays rice farmers to flood their fields for a period of four to six weeks during migration, creating temporary habitat for the tens of thousands of shorebirds needing to stop to rest and refuel. Then, after the birds move on, the farmers drain the fields and plant their rice crops.

To counterbalance this delay in planting, and as incentive to participating farmers, the Nature Conservancy holds a reverse auction. "The conservation organization is the buyer. We want to source habitat from multiple sellers and so if they want us to buy their habitat, they compete with others to drive the cost down. And our goal is to get the highest quality habitat for the use of our scarce conservation dollars." said Mark Reynolds, Lead Scientist for TNC. Reynolds said these reverse auctions have reduced habitat costs by 20 percent. In three years-time the agency has taken 500 bids leading to about 22,000 hectares of pop-up wetlands.

"We're always trying to meet the needs of nature and people. And so very often that's going to mean sharing land resources, sharing water resources, finding ways to meet multiple needs with the same drops of water and the same parcels of land," said TNC Project Director, Paul Spraycar.

Learn more about the project here: https://youtu.be/jx_82p_O8Pw

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Canada:

Wood Buffalo National Park – no longer a pristine ecosystem

An exhaustive federal study of Canada's largest national park concludes almost every aspect of its environment is deteriorating. The 561-page report on Wood Buffalo National Park says industry, dams, climate change and natural cycles are draining the watery lifeblood from the vast delta of northeastern Alberta's Peace and Athabasca rivers. According to the report the world's second-largest freshwater, boreal delta system is no longer the pristine ecosystem it was even a generation ago.

Drawing on decades of research — the report lists 50 pages of citations — the study is likely to be the most complete assessment on the region downstream of Canada's largest energy developments and one of its biggest hydroelectric dams. "There's literally hundreds of different studies going on with regard to the park or the oil sands or B.C. Hydro," said Don Gorber, the consultant who led the effort for

Environment and Climate Change Canada. Major negative changes have been documented occurring in the park, and all are related to the lack of water.

The study looked at 17 measures of environmental health, from river flows to Indigenous use. It concludes 15 of the 17 are declining.

- Peace River flows have fallen 9% since the Bennett Dam was built in British Columbia. Flows from the Athabasca have declined 26%. Ice jams that once flooded wetlands and isolated lakes no longer occur.
- As a result, bison habitat is shrinking, and prey-predator relationships are changing. For example, more dry land makes it easier for wolves to chase down prey.
- Invasive species are replacing native vegetation. Because of the lack of water and the loss of the water-dependent goose grass on which bison, ducks and geese feed, migratory birds have begun to avoid areas where they once flocked in the millions.
- Indigenous people who depend on boats to get to many parts of their traditional territory have lost access. Trappers who used to bring in hundreds of muskrats a season now say the water-loving rodents are gone. Indigenous people no longer drink from the rivers or lakes.
- Others describe fish kills from stagnant, oxygenless water. Deformed fish show up in nets.
- Lower water levels are concentrating chemicals similar to those produced in the oil sands. Heavy metals and toxic hydrocarbons are showing up in bird eggs. High levels of mercury have been found in fish and bird eggs.

Despite these problems and the risks of additional pollution, industrial groups continue to apply for development permits. Teck Resources has applied to build an open-pit oil sands mine 18 miles from the park's southern boundary. The Frontier project proposed by Teck Resources would also result in direct encroachment into the documented habitat of the disease-free Ronald Lake Wood Bison Herd.

Century of climate change attributed to drying out delta

Some biologists claim that the debate over Canada's largest national park has become politicized and that industrial development is being blamed for changes it didn't cause. Biologists Dr. Brent Wolfe, Geography and Environmental Studies at Wilfrid Laurier University, and Dr. Roland Hall Aquatic Ecology at the University of Waterloo, say B.C. Hydro's Bennett Dam on the Peace River has had only a marginal effect on northern Alberta's Wood Buffalo National Park.

Their conclusion, based on 20 years of research, nearly two dozen published papers, and sediment cores from area lakes, point to climate change beginning in the early-1900's, as the force behind the world's second-largest freshwater delta slowly drying out. "All of our evidence suggests that drying began in the early 20th century," Wolfe says. "We also have evidence that the flood frequency has been declining…This has led us to conclude that the main cause of drying is long-term climate change."

Regardless as to what is behind the decline in delta water, it is important that disparate groups recognize the threats and act quickly to preserve Wood Buffalo's environment for the wildlife and people who depend on it. *"Nipi tapitam"* (Cree phrase for "water is boss").

To read some of the recommended strategies for correcting or mitigating threats to Wood Buffalo National Park, go here: https://www.nationalparkstraveler.org/2018/07/wood-buffalo-national-park-and-its-wildlife-confronted-numerous-threats?utm_source=National+Parks+Traveler%2C+Week+in+Review%2C+July+24%2C+2018&utm_campaign=National+Parks+Traveler+Weekly+Review&utm_medium=email

WBNP Strategic Environmental Assessment

In response to 2015 and 2017 requests by the World Heritage Committee, Parks Canada completed a Strategic Environmental Assessment (SEA) of the potential cumulative impacts of all developments on the world heritage values of Wood Buffalo National Park World Heritage Site. The SEA presents the best available information (Indigenous traditional knowledge and science) on activities and trends that may be having negative impacts on the world heritage values of the site.

The focus of the assessment is cumulative effects on the features and species (including the only existing populations in the world of the threatened Wood Bison, and the endangered Whooping Crane whose

breeding grounds are there), that are relevant to the park's designation as a World Heritage Site. Additional information on the status of Wood Buffalo National Park as a World Heritage Site is available on the Overview page of the SEA.

To read and/or download copies of the 2018 WBNP Strategic Environmental Assessment Summary; a December 2017 Addendum to the WBNP EN Scoping Report; Milestone 1 Scoping Report; WBNP World Heritage Site Action Plan Bulletin, Issue 1 August 2018, and more, go here:
https://www.pc.gc.ca/en/pn-np/nt/woodbuffalo/info/SEA_EES/bulletin

Or, for the 2018 Wood Buffalo National Park Strategic Environmental Assessment Summary, go here:
2018 WBNP SEA_Summary

$27.5 million pledged to protect Wood Buffalo National Park
In a June 2018 news release, Canada Environment Minister Catherine McKenna announced that the government has pledged $27.5 million in funding over five years to develop a plan to secure Wood Buffalo National Park.

The investment comes, the release said, after recommendations in 2017 by the World Heritage Committee, which oversees UNESCO World Heritage Sites. As requested by UNESCO, Ottawa is developing plans with Alberta, British Columbia, the Northwest Territories and First Nations.

"As I have said many times before, the findings and recommendations of the UNESCO World Heritage Committee represent an important call to action," McKenna said. "Our commitment is real, and we will continue to work with all of our provincial, territorial, and Indigenous partners to secure the future of the Wood Buffalo National Park World Heritage Site for generations to come." Armed with the Strategic Environmental Assessment (SEA), Parks Canada is working on a response to the UNESCO report that will outline the country's strategy for correcting the problems that confront Wood Buffalo National Park. That response is expected in December 2018.

Documentary series on the Wood Buffalo National Park

Editor: *This beautifully produced series by The Narwhal, educates viewers about Wood Buffalo NP – not only about its specialized habitat, but also about the wildlife found there and the First Nations dependent on the continued health and well-being of the water, land and air of this delta ecosystem, as well as the forces now threatening it. The Narwhal's reporter Judith Lavoie travelled with the Sierra Club British Columbia (BC) campaigner Galen Armstrong and Sierra Club BC photographer Louis Bockner to Wood Buffalo National Park in early June 2018.*

Wood Buffalo: Canada's largest national park and its people in peril (first in 3-part series)
https://thenarwhal.ca/wood-buffalo-canadas-largest-national-park-and-its-people-in-peril/

Where is the action to save Wood Buffalo National Park? (second in 3-part series)
https://thenarwhal.ca/where-action-save-wood-buffalo-national-park/

'Nowhere else to turn': First Nations inundated by oilsands projects face impossible choices (third in 3-part series)
https://thenarwhal.ca/nowhere-else-turn-first-nations-inundated-oilsands-face-impossible-choices/

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Florida:

St. Cloud, Florida adopts Sandhill Crane as the city's official bird

Sandhill Cranes are a familiar sight around Osceola County in central Florida, and images of the cranes grace lakefront signage and now St. Cloud's official website. Members of birding groups, including the Florida Sandhill Crane Preservation Society and the American Birding Association, were behind the official nomination as another way to promote the area's many ecotourism opportunities. While the

majority of the community already has a strong connection to the cranes, it is thought that spotlighting Sandhills will raise public awareness of them and ultimately help protect them. Area Sandhills are regularly treated by local rehabbers for injuries caused by fishing lures, nets, cars, and even arrows.

Research crops vs. Sandhills

U.S. Fish and Wildlife Service documents show that for over 10 years (2008-2017) the Plant Science Research and Education Unit at the University of Florida Institute of Food and Agricultural Sciences, killed more than 150 birds to protect research plots. Of those killed, 47 were Sandhill Cranes, and 105 were Ring-billed Gulls. Located in Citra, about 30 miles southeast of Gainesville, projects at the unit, including crops like citrus, watermelon and peanuts, allow field researchers to study new crops and growing techniques. Lethal action was taken when the birds were observed either damaging and/or eating the crops.

While the Florida Sandhill Crane is not considered endangered by the federal government, it is designated by the state as a threatened species, according to the Florida Fish and Wildlife Conservation Commission. Since 2016 non-lethal methods have been used to deter cranes from feeding on the crops.

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Louisiana:

Ville Platte man cited for shooting Whooping Crane

LDWF Press release: 08/02/2018

Louisiana Department of Wildlife and Fisheries (LDWF) enforcement agents cited a Ville Platte man on July 26 for allegedly shooting an endangered Whooping Crane in Evangeline Parish. Agents cited Gilvin P. Aucoin, 52, for violating the Endangered Species Act after he admitted to shooting a Whooping Crane. Agents were notified about a shot Whooping Crane that was found near a crawfish pond in the northeast corner of Evangeline Parish. Agents responded to the area and questioned Aucoin, who was working on the land at the time the crane was shot. During questioning he admitted to shooting the crane with a .22 caliber rifle on July 25 while working on the property. Agents seized the .22 caliber rifle. Violating the Endangered Species Act brings up to a $50,000 fine and a year in jail.

LDWF has released 125 whooping cranes since 2011 and are currently tracking 65 whooping cranes. In this case, the male Whooping Crane shot and killed was released in 2011.

Whooping crane dies after second surgery

Sadly, Whooping Crane L10-11, one of the oldest cranes in the Louisiana population, died mid-July 2018 after a second surgery was performed to remove additional necrotic bone in his left wing from an injury he suffered in March 2018. L10-11 had been with his mate L11-11 since they were released as juveniles. The pair successfully nested in Jefferson Davis Parish the past three years, hatching and rearing a chick, LW3-17, just last year. Since the first surgery, L10-11 has been in the care of the Audubon Freeport-McMoRan Audubon Species Survival Center.

To read more about the surgeries, go here:
https://www.jenningsdailynews.net/content/whooping-crane-dies-after-second-surgery

Louisiana nesting season a success – 5 colts!

Whooping Crane nesting season in Louisiana has ended (June 19, 2018) with a final count of 13 nests by 9 pairs, including 3 re-nests and 1 third-nest attempt. Although two pairs got some assistance from biologists, it is heartening that all 5 colts remain alive and are flying – a major milestone as chicks are more vulnerable to predations until they can fly.

WHCR pairs	#eggs		Parish	Colts
L5-14 and L12-16	**2**	**successful**	**Jefferson Davis**	**LW5-18**
L3-11 and L13	2	egg swap/hatch	Allen	LW3-18
L6-12 and L8-13	**1**	**successful**	**Jefferson Davis**	**LW1-18 and LW2-18**
L10-15 and L19-16	1	egg swap/hatch	Acadia	LW4-18

Bold = pair successfully hatched own egg(s)
Swapped fertile egg/newly hatched chick into nest

Additional information:

- Parents, L6-12 & L8-13 were successful in fledging twins (a pair of sibling chicks that hatched from the same nest) which does not happen very often
- 3 of the 4 pairs were first-time parents
- All the parents were originally hatched and costume-reared in captivity before being released in LA.
- All 5 chicks were hatched and raised on private property, in actively farmed crawfish fields.
- 2 of the 'dads' are only 2 years old (sexual maturity for cranes is usually 3-5 years old)

For an August 2018 LDWF press release update, go here:
http://www.wlf.louisiana.gov/news/42237

And, for LDWF updates on the Louisiana non-migratory population of Whooping Cranes, go here:
https://www.facebook.com/lawhoopingcranes/

Louisiana population update

The Louisiana non-migratory population of Whooping Cranes currently stands at a maximum of 66 individuals (29 males, 33 females and 4 unknown). Distribution includes 53 in Louisiana, 11 in Texas, 1 in Oklahoma and 1 long-term missing.

Wandering Whoopers

Two Whooping Cranes of the “non-migratory” Louisiana population have decided to do some traveling this summer. Male L3-16 was photographed and identified by his tags after he moved into Texas from Louisiana. Last year he summered in Alberta, Canada!

Then in late June LDWF reported that female L4-17 was on another adventure. Last winter after release at the White Lake WCA, she traveled northeast, spending some time in Bullock Co., Alabama. Last month, she decided to check out the west, even flying into northern Mexico before traveling northeast where she settled in Oklahoma.

Help LDWF by reporting all Whooping Crane sightings

Anyone encountering a Whooping Crane is advised to observe the bird from a distance and to please report your sighting to the Louisiana Department of Wildlife and Fisheries by using the following link:
http://www.wlf.louisiana.gov/webform/whooping-crane-reporting-form

Anyone witnessing suspicious activity involving Whooping Cranes is advised to call the LDWF’s Enforcement Division at 1-800-442-2511 or use the tip411 program, which may offer a cash reward for information leading to arrests or convictions. To use the tip411 program, citizens can text LADWF and their tip to 847411 or download the "LADWF Tips" iPhone app from the Apple iTunes store free of charge. Citizen Observer, the tip411 provider, uses technology that removes all identifying information before LDWF receives the text so that LDWF cannot identify the sender.

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Tennessee:

TWRA increases number of Sandhill Crane hunting permits

For the coming 2018-2019 Sandhill season, Tennessee Wildlife Resources Agency has increased the number of Sandhill Crane harvest tags to a total of 2,711 tags compared to 2,300 tags allotted last hunting season.

This year TWRA will issue 479 permits (each permit allowing three cranes per hunter per season) for the Southeast Tennessee hunting zone. In addition to the permits issued specifically for the Southeast Tennessee zone, TWRA will hold a computerized drawing for 637 statewide permits. The statewide permits will allow hunters two cranes per season (increased from one per season in 2017).

The 2018-2019 Sandhill Crane hunting season will open December 1, 2018 and close January 27, 2019 with the EXCEPTION that it will be closed from January 18-20, 2018 in the southeast zone where and when the annual Sandhill Crane Festival at Hiwassee is being held.

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Texas:

International Crane Foundation's Texas office reopens

In August 2018 the International Crane Foundation (ICF) had an open house to celebrate the opening of its new office after the original office was destroyed by Hurricane Harvey in 2017. According to Tim Grunewald, ICF's director of North American Programs, Senior Whooping Crane Scientist Liz Smith and Ecosystem Scientist Nikki Davis will soon be joined by an outreach coordinator and a program assistant, thereby doubling the foundation's presence in Texas.

"This past and now continuing office location is in close proximity to our primary work activities – the Lamar peninsula, Aransas NWR, and up coast. It's also just across the Copano Bay bridge from where our boat will be once again permanently docked therefore allowing easy access," Grunewald said. The Coastal Bend Bays and Estuaries Program have allowed Smith, Davis and a temporary project assistant to use their office in Corpus Christi since Harvey made landfall in August 2017.

San Antonio Bay Partnership speaks for environment during drought

Oysters, blue crabs and perhaps most famously, endangered Whooping Cranes, all depend on the estuary, or the place where the San Antonio and Guadalupe rivers' mouths widen and meet the Gulf of Mexico, mixing fresh and saltwater.

IN 2017, to combat what promised to be a long-lived severe drought, the first idea the San Antonio Bay Partnership (SABP) had was to build clusters of wells near the Guadalupe River 12 miles above and below Victoria. The planned wells would pump river water through sand and gravel, which would clean it. The water would then be stored until needed. But, according to James Dodson, the San Antonio Bay Partnership's Facilitator/Project Manager, it would cost about $35,000 just to study the project's feasibility.

However, one idea that the San Antonio Bay Partnership has been able to move forward is the installation of freshwater wells for Whooping Cranes. Several years ago, the International Crane Foundation created a list of places that don't have a source of freshwater and that Whooping Cranes use or may use in the future. While the San Antonio Bay Partnership and other environmental groups have sought grants to install wells at those places, an additional 55 wells are still needed.

"Right now, we're in the middle of a series of replacements, that is wells that couldn't be repaired (after Hurricane Harvey). We're actually drilling new wells. Three are on refuge property and one is on a private property where there's a conservation easement for Whooping Cranes," Dodson said.

Go to sabaypartnership.org to read the San Antonio Bay Partnership strategic plan and become a sponsor. The San Antonio River Authority will match the first $25,000 raised.

Or here: San Antonio Bay Partnership Strategic Plan 2018

Proposed wind farm under scrutiny in Matagorda County

In a county public hearing in July 2018, there was standing room only in the courthouse – filled with people concerned about a proposed 50-acre wind farm. "We have some specific concerns with the location of this wind farm," said Gretchen Nareff, a U.S. Fish and Wildlife Service biologist. "We generally try to discourage companies from building in this area. The iconic endangered species of Texas, the Whooping Crane, have barely 450 individuals left in this population."

In an area known not only for its bird diversity – including several endangered species – but one where a large part of the local economy depends on money spent by birders, mention of wind farms is a negative topic to most. "We wanted you to know that we are highly concerned with how these windmills will affect birding and tourism in the area," Bay City Tourism manager Heidi Martinez said at the July public hearing. "We are a huge birding destination… something we are very proud of. Because of our central location for migratory birds, we have concerns about the specific location these windmills are to be placed."

E.O.N Climate and Renewables announced plans for a 50-turbine, 150-megawatt wind farm on the south side of the county more than a year ago. According to Nathan Yates, E.O.N Wind Development manager, specifics are still pending on the model and size of turbines that will be selected until wind studies are completed by the end of the year. Biological impact studies should be completed by that time as well.

"We follow the U.S. Fish and Wildlife guidelines very strictly. One of the things we do is that we don't go for 'take permits.' Take permit basically says you think you're going to kill birds," said Richard Saunders, E.O.N. Senior Development Manager. "Our impression is if we think that is true, we're going to move on. We've been doing monitoring of all birds for the last two years every single month, so we build a database of what the potential environmental impacts could be."

Papalote Creek Wind Farm located in San Patricio County, between Taft and Sinton, is E.O.N.'s closest windfarm to Matagorda County. It has 196 wind turbines that were completed in 2010. When questioned as to whether any Whooping Cranes have been injured or killed in the San Patricio area, Nereff responded that there was no record of any being hit by the turbines. "But generally, the juveniles are coming into contact with the transmission lines. But as the population is increasing, and they are expanding out… we expect they will be in this area."

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Wisconsin:

What can Sandhills teach us about Whooping Cranes?

The International Crane Foundation (ICF) is now studying Sandhill Cranes in the Horicon Basin to better understand the potential for Whooping Cranes nesting in the area.

In 2011 the Whooping Crane Eastern Partnership, of which the International Crane Foundation is a founding member, began releasing captive-reared Whooping Crane chicks in eastern Wisconsin at Horicon National Wildlife Refuge. This release area was chosen based on low populations of crane-feeding black flies, which have caused Whooping Cranes to abandon their nests at the original release site in central Wisconsin, Necedah National Wildlife Refuge.

Current research being conducted at Necedah is exploring causes of mortality and the influence of habitat management on chick survival and is comparing survival rates between Sandhill and Whooping Crane chicks. Preliminary results indicate similar chick survival rates and recruitment for both Sandhill and Whooping Cranes within the refuge.

ICF is currently developing a study paralleling the research at Necedah to evaluate crane nest success and recruitment by addressing three general objectives: (1) estimate general breeding density for Sandhill Cranes in the Horicon Basin (on both state and federal properties), (2) measure nest success and determine if it is influenced by water levels or management of cattail densities, and (3) monitor chick survival rates to fledging (when they begin to fly).

To read the May 2018 International Crane Foundation press release by Sabine Berzen, and to learn how to become involved with crane research as a citizen scientist by reporting Sandhill observations at Horicon Marsh, go here:
https://www.savingcranes.org/what-can-sandhill-crane-nesting-teach-us-about-whooping-cranes-at-horicon-marsh/

International Crane Foundation closing for renovations

The International Crane Foundation has announced that it will be closed for more than a year to complete a $10-million renovation to its Baraboo headquarters and the expansion and renovation of crane exhibits and construction of new facilities on the 300-acre site.

The wildlife center north of Baraboo will close October 31, 2018 and remain closed until construction is complete in spring 2020. During that time, organization leaders plan to open a pop-up shop in downtown Baraboo to continue its gift shop sales. ICF's internship program will focus on its public outreach efforts.

Habitat Matters!

Alaska:

Sandhills and wildlife benefit from legacy of conservation easements

The Kachemak Heritage Land Trust (KHLT) recently announced the permanent preservation of an additional 17.28-acres of important wildlife habitat on the Homer Bluff. The new acreage expands the amount of protected land in the area by connecting to five existing conservation easements (457.15 acres) owned by the Edgar P. Bailey Estate — an area known as Inspiration Ridge Preserve. Bailey, the first seabird biologist for the Alaska Maritime National Wildlife Refuge, died January 14, 2018.

The addition was made possible by Nina Faust, the trustee of the Edgar P. Bailey Estate, to honor her partner of 45 years. Ed and Nina's dream was to create a preserve for Sandhill Cranes while protecting a corridor for other wildlife to move between summer and winter habitat. The newly protected land enhances the legacy of these conservation efforts.

Kachemak Heritage Land Trust is the Kenai Peninsula's locally based and nationally accredited land trust. Since 1989, KHLT has protected more than 3,200-acres of fish, bird and wildlife habitat, as well as recreational lands important to Kenai Peninsula communities.

For more information on KHLT's work, visit: www.kachemaklandtrust.org

Indiana:

Sandhill Crane Chick born on NRCS restored wetland

In June 2018, Robert Wolfe reported seeing a Sandhill Crane colt on their Prairie Winds Nature Farm property. About a week after photographing the colt, he and his wife Charlotte stopped seeing the adults or the colt in the vicinity. Did the family move off to a neighbor's property? Was the colt killed by predators? They probably will never know. And, while the Wolfes continue to have adult Sandhills periodically visit their Natural Resources Conservation Service (NRCS) wetland, they have not seen a juvenile. They are hopeful that the same pair or another will try again at their wetland and prairie restoration next year.

With the help of NRCS programs, the Wolfes were able to restore over 50-acres of wetlands and prairie on their farm. When they moved to the property about 25 years ago there were no summer resident Sandhills in the Lakeville area (11 miles of South Bend, IN). Now the Wolfes hear them all summer long, not just during the spring and fall migrations. They have also had an increase in Blanding's Turtle sightings on the farm. "I like to think that restorations like ours are part of the reason for their recovery. The NRCS habitat restoration programs do work and deserve our support."

About five years ago a pair of Whooping Cranes stopped by the Wolfe's farm for the night during their fall migration. "Charlotte and I had been out walking and looked out over the wetland and saw the two birds and thought 'My goodness, those are big Sandhills!' That thought was immediately followed by 'Wow! Those are Whooping Cranes!' We stood there and watched them in awe as they lifted off 50 feet from us and drifted over to another part of the wetland."

To see a photo of the Sandhill colt and read more about the encounter, go here:
https://www.stjosephswcd.org/single-post/2018/06/14/Sandhill-Crane-Chick-born-on-NRCS-Restored-Wetland

For information on the Natural Resources Conservation Service, go here:
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/water/wetlands/restore/?cid=nrcs143_010912

For information about the Prairie Winds Nature Farm, go here: http://www.prairiewindsnaturefarm.com/

Nebraska:

Rainwater Basin Joint Venture gets grants to restore, protect wetlands

"In the wetlands of the Rainwater Basin and across Nebraska's mixed-grass prairies, Rainwater Basin Joint Venture partners achieve habitat conservation through cooperation and sound science. Landowners, conservation organizations and government agencies work together through Joint Venture projects and programs to provide habitat for millions of migratory waterfowl, shorebirds, and other wildlife in this highly productive agricultural landscape." - Mission statement of the Rainwater Basin Joint Venture

The Nebraska Environmental Trust is funding $950,920 in grants through its annual grants process to restore wetland watersheds. The money is slated to go to the Rainwater Basin Joint Venture (RBJV), a public-private partnership working to improve and protect wetlands in the Rainwater Basin and habitat in Nebraska's mixed-grass prairies, to help migratory bird habitat.

One of the grant-funded projects will transition 1,200 acres of flood-prone cropland to wetlands or grassland buffers. Andy Bishop, RBJV coordinator, says that while these are habitat projects RBJV tries to find a balance for both the habitat and the agriculture side – a win-win situation – where the wetlands are just part of the operation.

The Nebraska Environmental Trust is also granting nearly $210,000 in support of the Little Blue Natural Resources District's "Puddles under the Pivots" project. As part of this program, the landowner retains the

right to pass a center pivot over the restored wetland. Fencing and livestock watering equipment, funded by the grant, will allow for grazing in the wetland. The Little Blue NRD is a core member of the Rainwater Basin Joint Venture.

Bishop says the overall goal of all the grant projects is to ensure a good habitat for millions of migratory waterfowl. "Most people are very familiar with the central Platte and the half million Sandhill Cranes that stage there every spring," he says. "In the Rainwater Basin, these shallow, playa wetlands are critically important to migrating waterfowl. Annually, we have about 8.6 million waterfowl that use the basin."

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Texas:

The Fennessey Ranch – land conservation in Refugio

Located in Refugio, Texas and owned by fifth-generation Texas resident Brien O'Connor Dunn, the 4,000-acre Fennessey Ranch utilizes revenues from hunting leases, oil and gas drilling, ranching, and ecotours to finance its conservation efforts. The Fennessey is located in the heart of the Central Flyway along a region of the Texas coastline known as the "Coastal Bend." The ranch management plan developed in 1991 emphasized hunting with eco-tourism as a suggested side-benefit.

"What I'm trying to achieve here is a for-profit renewable resource plan to keep landowners on their land; to bring the urban dollar to the countryside in the form of bird watchers," said Dunn.

An array of wildlife makes the ranch its home, from javelina to Russian boar, Painted Buntings and Green Jays, Swallow-tailed Kites and Whistling Ducks, even the endangered Attwater's Prairie Chicken. More than 400 species of bird have landed on or flown over the Fennessey Ranch. And because of the work Dunn has done in restoring the habitat for waterfowl, riparian species, upland game birds, and meadow nesting species, the future for all visiting wildlife is greatly enhanced.

Hurricane Harvey wreaked havoc on the Refugio area, dumping 20" of rain on the Fennessey ranch, downing 200-year-old pecan trees and severely damaging 9-miles of riparian area along the Mission River. On the positive side, the ranch wetlands were filled again, and invasive bulrushes beat back. Birds are slowly beginning to return.

Read the article, "The Fennessey Ranch: A Private Land Conservation Success Story" by Andy Thompson | Publisher, Bird Watcher's Digest, here:
https://www.birdwatchersdigest.com/bwdsite/solve/conservation/fennessey.php

To learn more about the opportunities offered by the Fennessey Ranch, go here:
http://fennesseyranch.com

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ENVIRONMENTAL impact issues:

Wisconsin:

Special needs registration sought for Avipel® to deter cranes

A recent public comment period for a special pesticide registration that would allow Wisconsin corn growers to treat seed with a non-lethal repellent to stop Sandhill Cranes from feeding on planted corn, ended August 22, 2018. Comments received by the deadline will become part of the preliminary environment assessment record.

The special registration proposed by the Department of Agriculture, Trade and Consumer Protection would allow field and sweet corn growers to use Avipel® Hopper Box (dry) Corn Seed Treatment. Avipel® Hopper Box (dry) contains the active ingredient 9, 10-anthraquinone. The product is not currently registered with the U.S. Environmental Protection Agency. The special registration process will allow farmers to buy Avipel®-treated seed corn this fall for planting next spring. Special registrations allow states to register pesticide products for special local needs, without prior EPA approval. Avipel® has been used previously under EPA emergency exemptions and a previous special use registration that expired July 1, 2018.

Arkion Life Sciences manufactures Avipel®. With support from the University of Wisconsin-Madison, the International Crane Foundation and USDA-Wildlife Services, the company sought the special local needs registration to address the problem of crop damage from Sandhill Cranes.

Sandhill Cranes dig in the soil to feed on seed corn and can cause crop losses up to 60-percent. While Avipel® has a bad taste and a laxative effect, to deter cranes from eating the seed corn, it does not have lethal effects. About three-quarters of Wisconsin's 4-million acres of cornfields lie in crane habitat.

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Science News:

Examination of multiple working hypotheses to address reproductive failure in reintroduced Whooping Cranes

Jeb A. **Barzen**,[1a*] Sarah J. **Converse**,[2b] Peter H. **Adler**,[3] Anne **Lacy**,[1] Elmer **Gray**,[4] and Andrew **Gossens**[1]

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The Condor Ornithological Applications, Volume 120,2018, pp. 632-649
DOI: 10.1650/CONDOR-17-263.1

Abstract: Understanding multiple challenges that restrict conservation success is a central task of applied ecology, especially when resources are limited, and actions are expensive, such as with reintroduction programs. Simultaneous consideration of multiple hypotheses can expedite identification of factors that most limit conservation success. Since 2001, reintroduction of a migratory population of Whooping Cranes (*Grus americana*) has been under way in eastern North America. Hatching success, however, has been extremely low. In our study area, in and near Necedah National Wildlife Refuge in central Wisconsin, USA, we simultaneously tested 3 hypotheses explaining poor hatching success: harassment of incubating birds by black flies (Simuliidae), effects of captivity, and inexperience of breeders. When black flies were experimentally suppressed, hatching probability doubled. Daily nest survival for Whooping Cranes was strongly and negatively related to an index of black fly abundance, particularly of *Simulium annulus*. Daily nest survival was negatively but only weakly related to the number of generations that ancestors of breeding Whooping Cranes had been in captivity and was not related to nesting experience. We also examined whether Whooping Cranes were nesting later to avoid stress from black flies. Phenology shifted earlier with more growing degree days and greater nesting experience and was only weakly related to year. Overall, improved hatching success did not lead to better reproductive success. Although effects of black flies on hatching success can be mitigated through management, such actions would not be adequate to generate satisfactory population growth. Recognition of this limitation was hastened through experimentation.

A full-text PDF download is available from Jeb Barzen at:

https://www.researchgate.net/publication/326753751_Examination_of_multiple_working_hypotheses_to_address_reproductive_failure_in_reintroduced_Whooping_Cranes

The importance of early life experience and animal cultures in reintroductions

Claire S.**Teitelbaum**[1,2,3], Sarah J. **Converse**[4], Thomas **Mueller**[1,2]

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[4] U.S. Geological Survey, Washington Cooperative Fish and Wildlife Research Unit, Schoolof Environmental and Forest Sciences (SEFS) & School of Aquatic and Fishery Sciences (SAFS), University of Washington, Seattle, Washington

Abstract: Even within a single population, individuals can display striking differences in behavior, with consequences for their survival and fitness. In reintroduced populations, managers often attempt to promote adaptive behaviors by controlling the early life experiences of individuals, but it remains largely unknown whether this early life training has lasting effects on behavior. We investigated the behavior of reintroduced whooping cranes (*Grus americana*) trained to migrate using two different methods to see whether their migration behavior remained different or converged over time. We found that the behavior of the two groups converged relatively rapidly, indicating that early life training may not produce lasting effects, especially in species that display lifelong learning and behavioral adaptation. In some cases, managers may consider continual behavioral interventions after release if desired behaviors are not present. Understanding the roles early life experience and animal cultures play in determining behavior is crucial for successful reintroduction programs.

To read the full text, go here:
https://onlinelibrary.wiley.com/doi/epdf/10.1111/conl.12599

Conservation Letters. 2018; e12599.
https://doi.org/10.1111/conl.12599

Aerial radio-tracking of whooping cranes migrating between Wood Buffalo National Park and Aransas National Wildlife Refuge, 1981-84 / Ernie Kuyt

Author/Contributor: Kuyt, E. (Ernie)
Occasional Paper, Number 74
Ottawa: Canadian Wildlife Service, c1992.

Abstract: "From 1981 to 1984, Whooping Cranes *Grus americana* migrating between their summer range in and near Wood Buffalo National Park in Canada and their winter range on and near the Aransas National WildIife Refuge in the United States were studied by means of radiotelemetry. Objectives of the aerial study included a precise determination of migration routes, duration of occupancy and location of stopover sites, and documentation of migrating crane behaviour and mortality."

To read and download a complete text PDF of the paper, go here:
http://publications.gc.ca/collections/collection_2018/eccc/CW69-1-74-eng.pdf
If having trouble opening go to "Publication Information," and click on link under Electronic document "Archived Content" – CW69-1-74-eng.pdf (PDF, 4.69 MB).

Permanent link to this Catalogue record:
http://publications.gc.ca/pub?id=9.856015&sl=0

Lead Poisoning of Sandhill Cranes (Grus canadensis)

Windingstad, R. M.; **Kerr**, S. M.; **Locke**, L. N.; and **Hurt**, J. J., "Lead Poisoning of Sandhill Cranes (Grus canadensis)" (1984). Papers in Ornithology. 93.
http://digitalcommons.unl.edu/biosciornithology/93
http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1092&context=biosciornithology

Abstract: Two wild and two captive sandhill cranes (*Grus canadensis*) were diagnosed by National Wildlife Health Laboratory personnel as having died from lead toxicity. Ingestion of lead fishing weights by the wild cranes and of unspent .22 caliber shell cartridges by the captive cranes were responsible for these deaths. One crane force-fed lead pellets showed an increase of blood lead levels from 0.77 ppm to 23.8 ppm (wet weight) just before its death 15 days following exposure. Liver lead concentrations of sandhill cranes dying of causes other than lead toxicity are presented.

Introduction
Lead poisoning has been well described in many species of waterfowl but reports of lead toxicity in cranes are rare. Captive sandhill cranes (Grus canadensis) have been known to die from ingesting lead-based paint (Kennedy et al. 1977). The feeding habits of cranes in the wild may also place them in danger of ingesting lead shot. In addition, the tendency of cranes to pick up shiny objects such as shiny lead sinkers or unspent ammunition cartridges also places them in danger of ingesting objects containing lead.

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Kudos:

Texas

South Texas fly fishing icon partners with airboaters, earns ambassador nod for conservation

"This is about using our natural resources smarter, so they last, and so everyone can enjoy them. There's nothing radical about keeping it natural. It just makes good sense."

–Chuck Naiser, *FlatsWorthy Founder & TPWF Untamed Ambassador*

In 2015, fishing guide Chuck Naiser, along with the help of longtime Rockport airboat captain David Nesloney Sr., began gathering members for a group he called FlatsWorthy, a diverse coalition of anglers with mutual respect for each other and the natural resources they enjoy. His goals were to curb boating discourtesy, while discouraging environmentally destructive behavior on the water. FlatsWorthy, which gained nonprofit status in 2015, now boasts a growing membership reaching into the hundreds.

In April 2018, a group of 30 shallow-water anglers and airboat captains, all members of the group helped USFWS workers block the mouth of an illegal channel through a Whooping Crane marsh on the Aransas Refuge. The effort was supported by Refuge Superintendent Joe Saenz, who said the quarter-mile channel created by repeated boat traffic over many years threatened sensitive habitat used by the wintering wild Aransas-Wood Buffalo flock of endangered Whooping Cranes. This effort by the FlatsWorthy group involved placing 15-tons of oyster shell in sacks at the opening of the channel.

Naiser's efforts at Aransas did not go unnoticed by the Texas Parks & Wildlife Foundation (TPWF), a nonprofit group that supports the Texas Parks & Wildlife Department's mission. The organization tapped Naiser to be one of nine ambassadors in its campaign to inspire conservation of wild Texas. The foundation's We Will Not Be Tamed campaign hopes to harness the conservation spirit and activism of high-profile folks such as Naiser, who lead by example.

To read more about the FlatsWorthy group, go here: https://flatsworthy.com

Wisconsin

Woodland Dunes founder Bernie Brouchoud leaves nature preserve legacy

More than 50 years ago, Bernie Brouchoud, a self-taught naturalist and bird-bander, recognized the importance of the big woods between Manitowoc and Two Rivers. This was an area full of birds, and over the years he banded tens of thousands of them there, during which he also worked with many groups of students. In an effort to preserve the area, Brouchoud coordinated with others and assembled a group focused on preserving what is now Woodland Dunes. It was under his guidance that the non-profit made its first land purchase in 1975.

Brouchoud was the first president of Woodland Dunes' Board of Directors and afterwards the executive director for more than 30 years, until retiring in 2004. He received many awards for his work in conservation, including those from the Isaac Walton League, the Wisconsin Society for Ornithology and the Manitowoc County Conservation Hall of Fame. Brouchoud remained active in the organization until his death in May 2018.

From the first 40-acre parcel of woods purchased in 1975, the nature preserve continued to grow to the 1,500-acres it is today. Each year, thanks to Brouchoud's legacy, school children and visitors alike will enjoy and learn from all the nature preserve has to offer.

To learn more about the Woodland Dunes Nature Center and Preserve, go here:
https://www.woodlanddunes.org

To read a tribute to Brouchoud by Jim Knickelbine, Executive Director for the Woodland Dunes Nature Center and Preserve, go here:
https://www.htrnews.com/story/life/2018/05/12/woodland-dunes-founder-bernie-brouchoud-dies-leaves-two-rivers-wisconsin-nature-center-legacy/603432002/

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Upcoming Events:

7th Annual Yampa Valley Crane Festival
August 30 - September 2, 2018
Steamboat Springs and Hayden, Colorado
Anne Lacy, head of crane research for the International Crane Foundation, will be keynote speaker for the festival. Lacy will provide an overview of the entire Sandhill Crane population, from tropical forests to Arctic tundra, and the places they inhabit between.
For more information about the Yampa Valley Crane Festival, and the daily schedule of events, go to:
http://www.coloradocranes.org

21st Annual Sandhill Crane Festival, Tanana Valley Alaska
August 24 - August 26, 2018
Creamer's Field Migratory Waterfowl Refuge, Tanana Valley, 1300 College Road, Fairbanks, Alaska
Most events are free of charge. For the complete schedule of events, visit bit.ly/2wjqDWY.

Princeton Whooping Crane Festival
September 7-9, 2018
Princeton, Wisconsin
http://operationmigration.org/CraneFestSpeakers.asp
Advance reservations are required!
https://secure.operationmigration.org/np/clients/om/eventRegistration.jsp?event=69&

Greater Yellowstone Crane Festival
September 15, 2018
Driggs, Idaho
The Teton Regional Land Trust presents its inaugural crane festival. Dr. George Archibald of the International Crane Foundation is the keynote speaker.
For more information and to register for the workshop, go to: www.tetonlandtrust.org

International Crane Foundation Member Appreciation Day
Saturday, September 22, 2018
9:00 a.m. - 5:00 p.m.
International Crane Foundation Headquarters
E11376 Shady Lane Rd, Baraboo, Wisconsin 53913

31st Annual Festival of the Cranes
November 14-17, 2018
Bosque del Apache NWR, New Mexico
Registration begins on September 5, 2018
For more information go to the festival website:
http://www.friendsofbosquedelapache.org/festival-of-the-cranes.aspx

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