



October 2014 Volume 53, No. 2

***** News Highlights*****

- Summer on the breeding grounds
 - Remote tracking update
 - Wintering grounds issues

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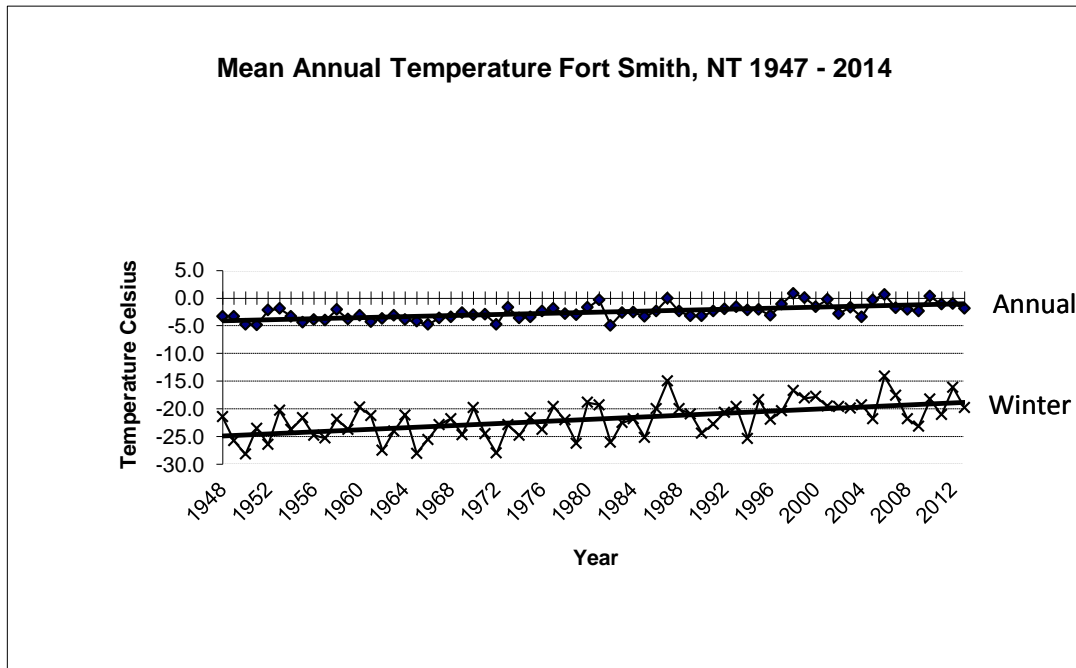
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Whooping crane in flight with a radio transmitter on its leg. Read inside about how cranes are tracked to collect valuable data to aid in their conservation.
 ****Photo by Steve Baynes****

Whooping Crane Summer 2014: One of Fire and Ice

When one thinks of fire and ice we might think of Iceland's volcanos and glaciers, but there is another fire and ice story that belongs to whooping cranes. We have all heard and read about climate change and its potential effects on the planet. Temperatures are increasing globally, and the whooping crane breeding range is no exception. Over the last 60 years mean annual temperature on the whooping crane breeding range have increased 3° C, with winter temperatures increasing by 5° C (Figure 1).



As we know, with climate change, we also get more severe weather events. Even though the trend is for warmer winters, the winter of 2013/14 was an exception with winter temperatures averaging 2° C colder than normal. There was also a 33% increase in precipitation from October thru May. When winter finally released its icy grip in early May, the wetlands in the crane nesting area were full, providing good nesting conditions for the cranes. These wet conditions resulted in a record 82 nests. Unfortunately June was a dry month, with less than 50% of normal rain and June and July were 2° C warmer than normal resulting in very dry uplands. These dry uplands combined with summer thunderstorm activity resulted in the Northwest Territories suffering one of their worst fires seasons on record. At one point fire crews were brought in from Eastern Canada to help fight fires. Wood Buffalo National Park alone had 36 fires (Figure 2, next page).

Grus Americana is a biannual newsletter for members of the Whooping Crane Conservation Association, a nonprofit tax exempt organization dedicated to the conservation of whooping cranes.

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Wood Buffalo National Park - Fire Status 2014

Parc National Wood Buffalo - État des Incendies 2014

Fire Danger
Danger d'Incendie

MODERATE / MODÉRÉ

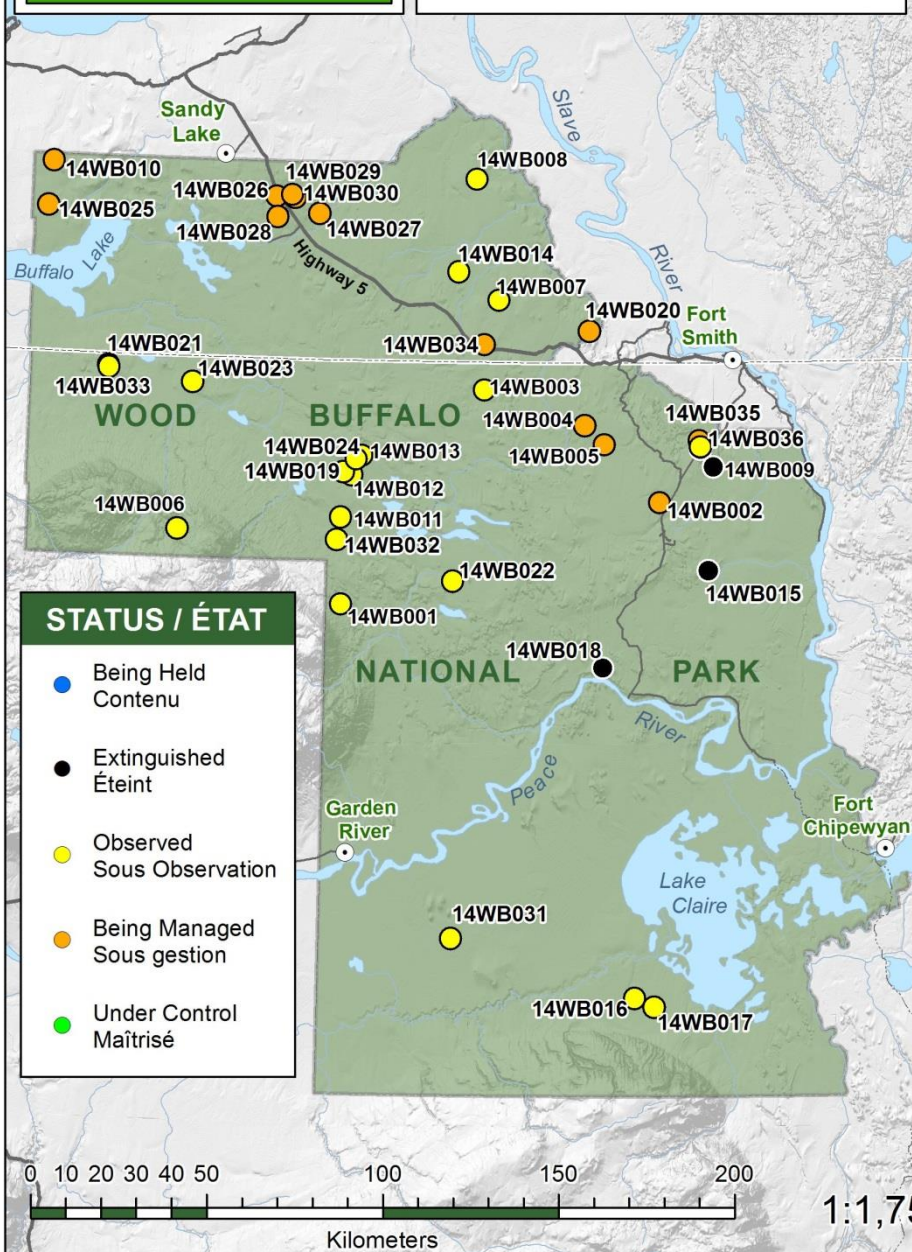
Last Update: **September 12, 2014**
Total area burned: 263,048.3 hectares
Mise à jour: **12 Septembre, 2014**
Superficie totale brûlée: 263,048.3 hectares

Fire ID ID D'INCENDIE	AREA (ha.) SUPERFICIE
14WB001	19,575.0
14WB002	43,332.0
14WB003	40.0
14WB004	8,057.0
14WB005	47.0
14WB006	7,200.0
14WB007	1.0
14WB008	14,005.0
14WB009	2.0
14WB010	5,145.0
14WB011	3.0
14WB012	10.0
14WB013	1,535.0
14WB014	644.0
14WB015	0.2
14WB016	0.5
14WB017	250.0
14WB018	4.0
14WB019	15.0
14WB020	16,000.0
14WB021	5.0
14WB022	5.0
14WB023	4.0
14WB024	3,400.0
14WB025	83,120.0
14WB026	1.0
14WB027	0.2
14WB028	60,593.0
14WB029	0.2
14WB030	0.2
14WB031	6.0
14WB032	3.0
14WB033	3.0
14WB034	14.0
14WB035	20.0
14WB036	8.0

TOTAL FIRE COUNT = 36
Nombre total de feu

STATUS / ÉTAT

- Being Held
Contenu
- Extinguished
Éteint
- Observed
Sous Observation
- Being Managed
Sous gestion
- Under Control
Maîtrisé



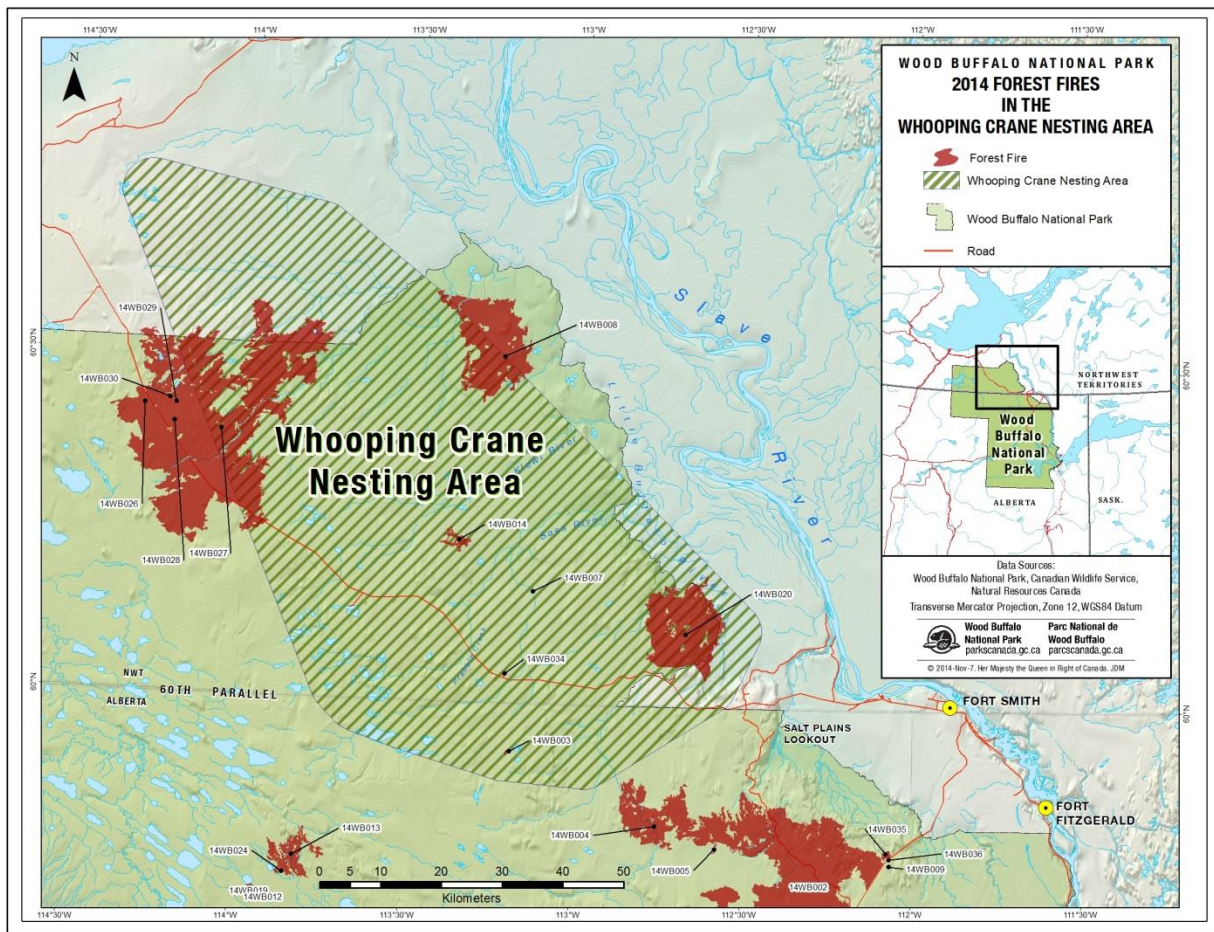
1:1,750,000



Parks Canada
Parcs Canada

Canada

Three major fires occurred in the nesting area (Figure 3 below).



Fire itself is not a bad thing for the cranes, except that they usually occur in a dry season. The aftermath of fires may actually be beneficial to the cranes. The burning of forests thins the vegetation between the wetlands making the area more accessible to the cranes and it recycles nutrients back into the ecosystem, possibly increasing the productivity of the wetlands where the cranes forage.

Fortunately August was one of the wettest ever recorded, with double the normal amount of rain. The increased wetness quenched the fire activity and also partially replenished ground water levels. During years of drier than average conditions (Figure 4 to right), chick survival is usually lower, presumably due to increased predation.

In an average year we would have expected close to 40 chicks, considering the number of nests



initiated, however this year there were 32 fledglings produced (Figure 5 below).



A high precipitation event along with unseasonably cool temperatures on May 30 may have also affected survival of some of the early hatching chicks.

The fall of 2014 was milder than normal until early November and cranes were seen on the breeding grounds into mid October. The mild fall also allowed migrating whooping cranes to linger in Saskatchewan beyond their normal departure dates. A major cold front moved out of the north on November 8 bringing snow and record lows to communities across the prairies. Aided by northwest winds, whooping cranes, tundra swans and snow geese all migrated further south that day.

We thank Stu Macmillan, Sharon Irwin, Jean Morin and John McKinnon from Wood Buffalo National Park for the weather data and the figures. *****Brian Johns, WCCA President*****

Remote Tracking of Aransas-Wood Buffalo Whooping Cranes

Starting in 2009, a partnership of agencies and organizations began conducting research on the Aransas-Wood Buffalo population of whooping cranes. Funds and personnel to support this endeavor are being contributed by the U.S. Geological Survey, U.S. Fish and Wildlife Service, Crane Trust, Canadian Wildlife Service, Platte River Recovery Implementation Program, Parks Canada, International Crane Foundation, and Gulf Coast Bird Observatory. The fundamental objectives of our research efforts are to: 1) advance knowledge of whooping crane breeding, wintering, and migratory ecology, including threats to survival and population persistence; 2) disseminate research findings in reports, presentations, and peer-reviewed literature to provide reliable scientific knowledge for conservation, management, and recovery of whooping cranes; and 3) minimize negative effects of research activities to whooping cranes.

To meet these objectives, members of the partnership have captured and marked 68 whooping cranes. Thanks to the development and implementation of a new capture technique, we captured two juveniles and 35 adults



Members of the capture team attach GPS transmitter and auxiliary markers after a successful capture near a fresh water source at Aransas National Wildlife Refuge. Photo by Whooping Crane Tracking Partnership.

along the Gulf Coast of Texas during winters 2009 – 2013. Prior to this effort, adults from the wild flock had never been successfully captured, marked, and released on the wintering grounds. Capture teams also marked 31 pre-fledged juveniles during summers 2010 – 2012 at Wood Buffalo National Park in Canada using methods developed previously for flightless whooping cranes.

The capture teams consisted of individuals with experience handling and marking endangered cranes. At capture, a licensed veterinarian performed a health check on each crane, which included an external examination and screenings for pathogens, toxins, and parasites. Captured cranes received a satellite transmitter (Platform Transmitting Terminal) with Global Positioning System capabilities mounted on a two-piece leg band. The transmitter and leg band weigh approximately 72 g, which is <1.5% of body weight of adult cranes. Transmitters have the potential to function for approximately three to five years. Transmitters record GPS locations every six hours, providing detailed information on nocturnal and diurnal site use and general flight paths. Transmitters upload new data approximately every 56 hours. Newly acquired location data assists in identifying mortality events when possible.

We have been collecting location data on marked birds since December 2009 and expect data collection to continue for at least the next two years. As our sample of marked cranes has expanded, expectation among research partners has increased as we begin to explore the volume of rich information provided by marked individuals. Researchers gave eight scientific presentations at the 13th North American Crane Workshop held in Lafayette, Louisiana in March of this year, providing some of the first insights about whooping crane ecology based upon these data and how results might integrate with future conservation efforts. There was general agreement that this effort to mark wild whooping cranes with GPS technology represents an exceptional prospect to enhance our understanding of whooping cranes and assess risks they face during their entire life cycle.



Marked whooping crane that has rejoined its mate and colt to forage in the coastal waters shortly after capture. Photo by Mery Casady.

Some interesting findings to date include: during the breeding season, many subadult cranes spent time south of the traditional breeding areas in Wood Buffalo National Park, diffusely covering an expansive area from as far southeast as north-central North Dakota to as far west as east-central British Columbia, an extent of over 1,500 kilometers. During fall migration, two separate birds, each in different years, were located several hundred kilometers east of what was believed to be the traditional migration corridor using stopovers in south-central Iowa, northwestern Missouri, northeastern Kansas and west-central Missouri. On the wintering grounds, detailed information has been collected on known breeding and subadults birds making extensive use of areas up to 275 kilometers inland from the traditional coastal wintering areas around Aransas National Wildlife Refuge. *****Dave Brandt and Aaron Pearse, USGS-Northern Prairie Wildlife Research Center*****

Fifth Circuit declines to rehear whooping crane case; Gulf Coast group vows appeal to Supreme Court

Austin American-Statesman blog, December 16, 2014

In a win for state officials and river authorities, a federal appeals court Monday declined to reconsider reversing a ruling that said Texas' environmental agency is responsible for the deaths of 23 endangered whooping cranes about five years ago.

But latching onto a strongly worded dissent from several of the federal appeals court judges, the plaintiffs in the case, an alliance of Gulf Coast environmental and business groups, led by a prominent South Texas family, said they would ask the U.S. Supreme Court for relief.



A juvenile whooping crane (right) follows an adult pair through the marsh along the Texas Gulf Coast. Credit: Earl Nottingham, TPWD

In 2013, a federal judge held that the Texas Commission on Environmental Quality failed to manage the waters of the Guadalupe River to ensure the cranes' survival. That ruling threatened to upend water permitting in the Guadalupe and other basins, as river authorities balanced the sale of water to cities, industrial facilities and farmers with the water needs of fish and other wildlife.

But in June three judges at the U.S. Fifth Circuit Court of Appeals in New Orleans found that a lower court had failed to adequately determine whether the Texas Commission on Environmental Quality could have foreseen that its action would have led to the crane deaths.

The whooping crane, the tallest bird in North America, known for its whooping call, is a federally listed endangered species.

The Aransas Project, the alliance of Gulf Coast groups was originally chiefly bankrolled by the O'Connor family, which has extensive oil, gas and ranch holdings on land that borders the Guadalupe and San Antonio rivers, asked for a hearing on the issue before the full Fifth Circuit.

Eleven judges declined the request.

But a dissent authored by Judge Edward Prado, joined by two other judges, argued that the three-judge panel incorrectly decided to reconsider the facts of the case and instead should have deferred to the fact-finding by the district court judge.

The way the three-judge panel handled the case "sends a clear message to litigants: if you don't like the factual findings of a district court, the doors of our Court are wide open to endless retrials on appeal," Prado wrote. "This is the wrong message to send, and it evinces an alarming lack of trust in the work of our colleagues in the district courts."

He continued: Given the eight-day bench trial in the original district court case, one involving ten expert witnesses, "The reweighing of facts in this case is particularly egregious." Jim Blackburn, a Houston environmental attorney for the Aransas Project, said he would file an appeal to the Supreme Court within the 90 days allowed.

Bill West, the general manager of the Guadalupe-Blanco River Authority, a defendant in the case, applauding the majority decision of the Fifth Circuit to reaffirm the ruling of the original three-judge panel, said it was made "after considerable thought." *****Thanks to Tom Stehn for pointing out this article*****

Strong dissent in whooping crane case: Appeals court reconsidered facts, not procedure

From the Daily Journal, Posted December 16, 2014

By Janet McConnaughey, Associated Press

NEW ORLEANS — The federal appeals court in New Orleans has voted 11-4 against reconsidering a ruling that Texas is not directly responsible for the deaths of 23 endangered whooping cranes and doesn't have to draw up a conservation plan balancing the interests of water users with the need to protect the big birds' habitat. In June, the 5th U.S. Circuit Court of Appeals overturned a district judge's ruling that Texas should have known that permits to withdraw water from rivers flowing into the Aransas and San Antonio bays would let saltier Gulf of Mexico water flow in, reducing availability of key foods for the world's only natural flock of whooping cranes.

The Aransas Project, an environmental group, will ask the U.S. Supreme Court to consider the case, for reasons including those in a strong 36-page dissent by three of the judges, attorney Jim Blackburn wrote in an email. That opinion, written by Judge Edward Prado and signed by Judges James Dennis and James Graves, said the appeals court did something it should not do, reconsidering facts rather than ruling about procedure. Other 5th Circuit judges have given the same reason in two other dissents this year, including one about Texas' abortion law, Prado wrote.

"This decision, and others like it, sends a clear message to litigants: If you don't like the factual findings of a district court, the doors of our Court are wide open to endless retrials on appeal. This is the wrong message to send, and it evinces an alarming lack of trust in the work of our colleagues in the district courts," he wrote. After an eight-day trial — and after reviewing more than 90 hours of video — Judge Janis Graham Jack found that The Aransas Project's witnesses were credible and those for the state, two water districts and the Texas Chemical Council were not, "and for good reason," Prado wrote.

The Aransas Projects witnesses included an environmental scientist who had won a Nobel Prize, scientists and statisticians from prestigious national universities, MacArthur Fellows and people who had written many scientific papers. "The other side's expert witnesses had limited experience and insignificant expertise — indeed, one of them admitted he 'made up' key portions of his testimony," Prado wrote.

He also noted that the 5th Circuit had affirmed a 1991 decision that government-allowed logging had killed endangered red cockaded woodpeckers because they prefer trees more than a century old, while the logging rules kept trees from growing more than about 80 years.

"If the difference between 80- and 100-year-old trees can support a finding of a 'take,' surely a district court — faced with emaciated crane corpses — could reasonably conclude" that cutting the amount of fresh water flowing into the birds' critical habitat had hurt their ability to find food, Prado wrote. *****Thanks to Tom Stehn for pointing out this article*****

Whooping Crane winter grounds will go underwater, shorebirds will face higher risk

Posted 12/16/14 by the www.birdwatchingdaily.com

Two new studies suggest that climate change will pose a severe challenge to both North America's shorebirds and the last wild population of Whooping Cranes.

[The first](#), prepared by a team organized by the International Crane Foundation and Gulf Coast Bird Observatory and released last summer by the [Gulf Coast Prairie Landscape Conservation Cooperative](#), focused on the crane's future winter habitat needs. If targets set by the [recovery plan](#) are met, the birds will require at least 125,000 acres along the central Texas coast, enough for 250 breeding pairs. Yet only 27 percent of that potential habitat is protected.

Worse, estimates of sea-level rise produced by combining the rate of land subsidence with IPCC climate models show that much of the potential habitat will disappear by 2100. From 23 percent to 54 percent will be inundated. Efforts to protect habitat, write the researchers, should focus to the northeast and inland, within grasslands, freshwater wetlands, and agricultural rice fields.

The [second study](#), from researchers at the Manomet Center for Conservation Sciences, Dalton State College, and Tufts University, argues that the conservation status of 52 taxa of shorebirds that breed in North America should be revised.

Many, including Red Knot and Semipalmated Sandpiper, are already in widespread decline. But when the risks posed by climate change — chiefly, the loss of breeding, stopover, and wintering habitat — are added to their vulnerabilities, the risk of extinction increases for 45 of the 52 taxa.

No species was assigned a lower risk category, while 18 were elevated to the highest risk described by the [U.S. Shorebird Conservation Plan](#).

“Thus,” write the researchers, “a total of 28 of 49 species are now at the highest risk category under the U.S. Shorebird Conservation Plan, or they exceeded this risk level and had to have an additional category created.”

A version of this article will appear in the February 2015 issue of BirdWatching.

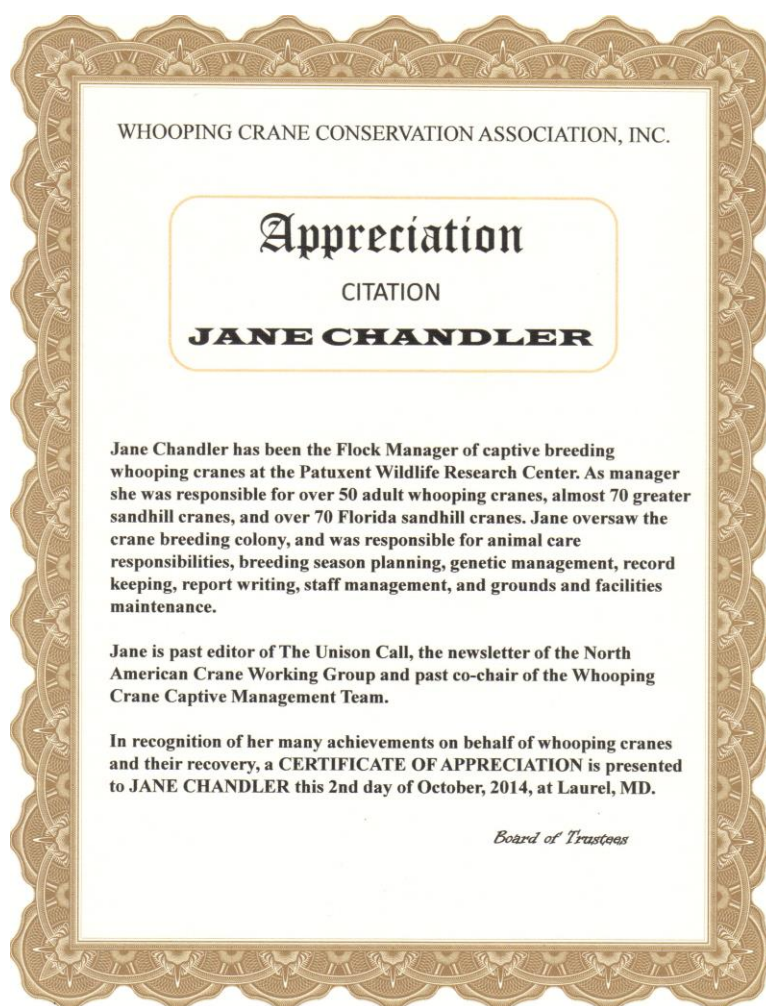
Read the articles:

Elizabeth H. Smith, Felipe Chavez-Ramirez, Luz Lumb, and James Gibeaut, [Employing the Conservation Design Approach on Sea-Level Rise Impacts on Coastal Avian Habitats along the Central Texas Coast](#), Gulf Coast Prairies Landscape Conservation Cooperative, June 2014 (PDF).

Hector Galbraith, David W. DesRochers, Stephen Brown, and J. Michael Reed (2014) [Predicting Vulnerabilities of North American Shorebirds to Climate Change](#). *PLoS ONE* 9(9): e108899.

****Thanks to Tom Stehn for pointing out this article****

Jane Chandler awarded Citation by WCCA



Honor Roll of Donors to the WCCA

Thanks to the following individuals who contributed extra money over and above their annual dues; all contributions will be used toward conservation of the whooping crane:

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Would you like to be more active in the WCCA?

The Whooping Crane Conservation Association is currently seeking interested people to fill upcoming vacancies on our executive team, including those of trustees, secretary, and newsletter editor. All are volunteer positions with no remuneration. For secretary we are seeking a person with organizational skills for keeping track of the membership information and donations. Proficiency with Microsoft ACCESS will be an asset. For newsletter editor we are seeking a person with writing and organizational skills to put together our newsletter "Grus Americana". The editor assembles articles of significance and then uses word processing software to form a newsletter. Proficiency with Microsoft Word or other word processing software will be an asset. If you are interested in any of these positions, please visit this link <http://whoopingcrane.com/contact-wcca/>.

Members—please send your correct address if the one shown below is wrong. Send to the return address below.

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Whooping crane and chick. Read inside about productivity of cranes in Canada last summer. *****Photo by Marty Folk.*****