

WHOOPING CRANE RECOVERY ACTIVITIES

November, 2007 – September, 2008

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HIGHLIGHTS

The Aransas-Wood Buffalo whooping crane flock reached a record population of 266 at Aransas in December, 2007. No mortality was documented during the 2007-08 winter. During the spring 2008 migration, the Cooperative Whooping Crane Tracking Project documented 39 confirmed sightings of whooping cranes in the U.S. Central Flyway. An excellent production year in Canada in 2008 totaling 41 fledged chicks from a record 66 nests should equate into a substantial population increase in the Aransas-Wood Buffalo flock in the 2008-09 winter. However, threats to the flock including water and land development in Texas, wind farm construction in the migration corridor, and tar sands waste ponds in Canada all increased in 2008.

The captive flocks had a good production season. Twenty-two chicks are expected to be reintroduced into the eastern migratory population in the fall of 2008 bringing that flock to 91 total birds. One chick of high genetic value has been added to the captive flock. Production in 2008 lifted the total population of wild (n=387) and captive (n=152) whooping cranes to 539.

Production in the wild from reintroduced flocks in 2008 was a disappointing “zero”. In Florida, 5 chicks hatched from a total of 3 first nests and 2 re-nests, but none of the chicks survived past 25 days of age. In Wisconsin, all 11 nesting pairs abandoned their nests just prior to expected hatching.

The Whooping Crane Recovery Team met in September, 2008 in Wisconsin. The team decided that the probability of success was too low for the Florida non-migratory flock to justify any further releases of captive-reared juveniles. The Team recommended continuing steps to proceed with reintroduction of non-migratory whooping cranes into their historic range in Louisiana if studies can demonstrate that this would not increase the risk of infectious bursal disease to the Aransas-Wood Buffalo flock. The Recovery Team also recommended doing field tests with GPS satellite transmitters on migratory cranes in preparation for radioing birds in the Aransas-Wood Buffalo population. This project has been proposed by the Platte River Recovery Implementation Program to focus on whooping crane use of habitat and causes of mortality in the migration corridor.

ARANSAS – WOOD BUFFALO FLOCK

Summary of the Spring 2008 Migration in the Central Flyway

written by Martha Tacha, U. S. Fish and Wildlife Service (USFWS),
Grand Island, Nebraska

With the help of numerous cooperators up and down the Central Flyway, the Cooperative Whooping Crane Tracking Project documented 39 confirmed sightings of whooping cranes in the U.S. Central Flyway during the spring 2008 migration (Table 1). No mortality was documented during the 2008-09 winter, and an estimated record 266 whooping cranes moved north to the breeding grounds at Wood Buffalo National Park in Canada.

The first push of the migration occurred during the last week of March and first week of April. Whooping cranes were first observed leaving Aransas National Wildlife Refuge (NWR) on March 25 by Tom Stehn and all but 34 had left Aransas by April 10. One of the record 266 whooping cranes in the population remained at Aransas NWR until at least May 15, but was not re-sighted and presumably migrated sometime thereafter.

The first migrants confirmed north of Aransas were observed in central Kansas the morning of March 28; three groups totaling 12 cranes were observed at and southwest of Quivira NWR. Between March 30 and April 2, six groups totaling 24 cranes were confirmed in south central and central Nebraska. On April 14, another strong front pushed these and other migrating whooping cranes north. The initial or final observation of nearly half of the sightings in the flyway (19, or 49 percent) occurred during the 5 days from April 13 to April 17, inclusive. The last sighting in the U.S. Central Flyway north of Aransas occurred on May 8, when a single crane left Medicine Lake NWR in northeastern Montana.

Generally, observed groups of whooping cranes hustled through the migration: 27 groups (69 percent) were observed during a single day only. However, 7 groups were observed for 6 consecutive days or more. One group stopped for 16 days and 2 groups rested for 15 days each (these 3 groups in the rainwater basins in Nebraska), and stopovers of 12 days (Montana), 8 days (south central Nebraska), 7 days (southern Nebraska), and 6 days (South Dakota) were also observed.

The size of migrating groups varied, as expected. Group sizes (followed by observation frequency) were as follows: 13 cranes (1), 11 cranes (1), 8 cranes (1), 6 cranes (3), 5 cranes (2), 4 cranes (7), 3 cranes (11), 2 cranes (8), and a single crane (5). Juveniles were identified in 10 instances, including one set of twins, but juveniles are easy to overlook in the spring, particularly when seen at a distance.

Three whooping cranes from the reintroduced eastern migratory population of whooping cranes (Wisconsin-Florida flock) wandered into North Dakota and were observed near Woodworth in Stutsman County on June 5 and 6. These three were next re-sighted in late summer in east central Minnesota. Another group of four young birds from the reintroduced flock has been observed for some time in western Minnesota, about 15 miles from the South Dakota border. All of these young cranes are expected to wander back east and migrate to Florida in the fall.

The success of the Cooperative Whooping Crane Tracking Project is due to the efforts of the many volunteers and observers in the field who report sightings, and the State and Federal key contacts who gather and transmit the information to the Project Coordinator. The cooperation and diligence of those associated with the project is truly appreciated.

Table 1. Number and dates of confirmed sightings of whooping cranes in the U.S. Central Flyway during spring migration (i.e., north of Aransas NWR), 2008.

State	Number of Observations	Earliest Date Observed	Latest Date Obs
Texas	1	4/1	4/1
Oklahoma	2	4/6	4/9
Kansas	8	3/28	4/11
Nebraska	12	3/30	5/4
South Dakota	8	4/7	4/16
North Dakota	6	4/15	4/18
Montana	2	4/17	5/8
Total or Cumulative	39	4/1	5/8

Wood Buffalo National Park, Canada

Aerial surveys, 2008

Three summer surveys of the nesting area were carried out in 2008. In May, Brian Johns and Kathy St. Laurent of the Canadian Wildlife Service (CWS) located a record 66 nests. In June, the USFWS Partanavia with Pilot Jim Bredy and Biologists Brian Johns and Tom Stehn (USFWS) documented the hatching of 64 chicks, including 12 sets of twins. This compared with 65 nests and 84 chicks including 28 sets of twins in 2007. Fifty-two of the 66 nests (79%) produced one or more chicks compared with 86% success in 2007. Thus, the chick production in 2008 resulted from both high productivity and a large number of nests. Fourteen nests were unsuccessful. In addition, 6 known adult pairs failed to nest but were sighted present on their territories. Thus, there were a minimum of 72 breeding pairs in the population. This number matched the 72 adult pairs identified present at Aransas during the 2007-08 winter.

Habitat conditions in Wood Buffalo in June were better than expected with water levels considered to be good. The weather during the June production surveys was exceptionally warm with no cold, wet weather. The moderate weather conditions favored the survival of the young chicks early on. One of the highlights of the June surveys was finding one whooping crane pair with twin chicks and then spotting two wolves 1.5 km distant from the cranes. The crane family was re-checked 5 days later and both chicks were still alive with no sign of the wolves.

Surveys carried out in August by CWS located 41 chicks. This total included 2 sets of twins, down from the 12 sets that had been present in June. This high level of production is expected to raise the size of the Aransas-Wood Buffalo population to a record 280+ in the 2008-09 winter from its record 266 the previous winter. An increase of the population is anticipated since it is in the growth portion of the 10-year population cycle that has occurred during the middle of every decade.

Threats

The following based on information supplied by Ernie Kuyt is from the May 2008 issue of "Grus americana", a newsletter of the Whooping Crane Conservation Association:

Threats to whooping cranes are also present "north of the border". The Alberta government recently decided that Environmental Assessments (EAs) would no longer be necessary for large power lines. Getting more electricity

to the citizens has become so urgent that EAs were determined to cost too much, take too long, and were largely “unnecessary”. Another threat in Canada was brought to light recently when 500 ducks entered toxic tailing ponds in the oil sands area north of Fort McMurray, Alberta. Only 5 ducks had any hope for recovery from exposure to the oily chemicals. There are 50 square kilometers of these toxic ponds, and they lie within the migration path of the whooping crane. Propane cannons are routinely used to haze birds from this area. A whooping crane family group that apparently became oiled in fall, 2006 could have gotten into these tar sands waste ponds.

Platte River, Nebraska

The Platte River Recovery Implementation Program agreed upon by federal agencies and 4 states was signed by President Bush in May, 2008. More than 10 years in negotiation, the measure benefits endangered species yet allows continued water use and development along the Platte.

The year 2008 marks the 30th anniversary of the Platte River Habitat Whooping Crane Trust, Inc. This non-profit conservation outfit originated as a result of court litigation over a proposed water reservoir on the Platte River located in Wyoming. Its mission is to protect habitat for cranes and other migratory birds along the Big Bend Region of the Platte River Valley. The Trust has made a big difference not only in protecting habitat for the whooping crane, but also improving the environment in south central Nebraska. It currently manages nearly 10,000 acres along the Platte. The Trust also does research to make sure management activities are science-based.

Aransas National Wildlife Refuge, Texas

2007-08 Winter

Whooping Crane Coordinator Tom Stehn stationed at the Aransas NWR wrote up his findings from the 2007-08 winter.

Abstract: The number and distribution of whooping cranes were studied on the wintering grounds at Aransas during the 2007-08 winter. The peak population equaled 227 white-plumaged birds and 39 juveniles totaling 266 cranes. This was 29 birds higher than the 237 cranes present the previous

winter. Mortality between spring and fall, 2007 was estimated at 9 cranes. No mortality was documented at Aransas during the 2007-08 winter.

The peak population of 266 consisted of 144 adults, 83 subadults, and 39 juveniles. At most, 21 cranes were color-marked, representing 7.9% of the population. The estimate of 72 pairs occupying territories was 5 more than the previous winter. Territories and/or use areas were located on the Aransas NWR (20), Lamar Peninsula (3), San Jose Island (16), Matagorda Island (25), and Welder Flats (8). Cranes generally were found on the refuge (74), Lamar (8), San Jose Island (71), Matagorda Island (85), and Welder Flats (27). One juvenile whooping crane that was separated from its parents was sighted in November in West Texas. Record highs were set in the 2007-08 winter for most cranes on Lamar (13), San Jose (77), Matagorda (87), and tied the record on Welder Flats (31). Matagorda Island that held 34.2% of the flock has in recent years surpassed the refuge for supporting the most cranes.

Quality food resources were considered to be very good throughout the fall and winter. The cranes fed heavily on wolfberry, blue crabs and fiddler crabs while at Aransas. Wolfberries were available for the cranes in November and December. Blue crabs declined in mid-winter, but a few were always present. Cranes used open bay habitats to some extent during winter low tide periods foraging on clams and/or invertebrates such as mud shrimp or bloodworms. Some upland use was observed on prescribed burns. Bay and marsh salinities were low the first half of the crane season but increased to around 20 parts per thousand by spring. Moderate use of fresh water sources was observed

Aransas NWR project leader Charlie Holbrook retired in June, 2008 after 8 years at the refuge. Many accomplishments occurred during his time at Aransas. The new manager starting in October is Dan Alonso.

Land Development

Whooping cranes use wetlands and adjacent upland habitats off of Aransas and Matagorda Island NWRs. Some of these areas are included in designated Critical Habitat; others are not. Real estate development pressures are rapidly increasing along these formerly isolated shores. It will bring many new residents to a formerly sparsely populated portion of the Texas coast. Six waterfront developments are planned between Seadrift and Port O'Connor which are

considerably larger than either of those towns. The population of Seadrift is expected to double in the next decade. Additional developments are occurring on the Lamar Peninsula directly west of Aransas NWR. These developments will limit the area the whooping crane flock needs for expansion if the flock continues to grow. Permanent protection of this habitat is essential in the near term in order for the species to reach long-term recovery goals.

To try to conserve key lands currently used by whooping cranes as well as set aside lands expected to be used in the future, conservationists undertook some actions to try to counter the rapid development. The Texas Nature Conservancy (TNC) in partnership with other agencies is working hard to protect key areas with conservation easements placed on key buffer areas as a means for people and wildlife to coexist. Two areas slated for protection using Section 6 grants are located in the crane area at Welder Flats. Matching funds will come partially from one development currently under construction in the crane area near Port O'Connor. The TNC applied for a 1.5 million dollar grant from the Coastal Impacts Assistance Program to protect 5,000 acres of crane habitat in the next 3 years primarily through purchase of conservation easements. This grant application was not funded in 2008. However, it made the cut of worthwhile projects for which there just weren't sufficient funds available, and was re-applied for in 2009. In the meantime, 5 developments are either under construction or in the planning stages in areas where crane use has been documented. I strongly recommend that a Habitat Conservation Plan be prepared for future developments occurring in the current and anticipated future crane range.

In September 2008, Tom Stehn and Felipe Prieto presented a paper at the 11th North American Crane Workshop on the change in territories and range of wintering whooping cranes at Aransas between 1950 and 2006. Based on estimates of minimum territory sizes, they calculated that the current range and nearby adjacent areas of unoccupied habitat will support approximately 511 cranes. If the cranes expand outwards into new areas as far as 69 miles from Aransas NWR, they estimated there is enough salt marsh habitat on the central Texas coast to support 1,004 whooping cranes. Although this meets the criteria set for down-listing the species to "threatened" status, there is insufficient habitat to fully recover the species. Therefore, with marsh habitat a key limiting factor for whooping crane recovery, it is imperative that as much of the marsh as possible be protected from development.

Freshwater Inflows

Two major processes have continued throughout the past year. The state-appointed Environmental Flows Advisory Group met and held hearings to provide future recommendations to ensure rivers have sufficient flows and the bays have sufficient inflows to remain productive. The second planning process that got underway is the Edwards Aquifer Recovery Implementation Program (EARIP) mandated by the Texas Legislature to determine the sustainable levels of pumping from the aquifer and drought management strategies. The Edwards Aquifer now serves 1.7 million people in South Central Texas, providing San Antonio with 95% of the city's water. The population is expected to double by mid-century, increasing the demand for water. The EARIP will develop a plan to balance the needs of aquifer stakeholders in San Antonio and surrounding areas with the requirements of the Endangered Species Act (ESA). Although the Edwards Aquifer is a long way from the coast and the EARIP is focused on endangered invertebrate species in several key springs fed by the aquifer, spring flow can be a major component of inflows (up to 80%) into whooping crane critical habitat, especially in times of drought. Sufficient inflows are essential to support abundant blue crab populations, the primary food of whooping cranes during winter.

Wind Energy Development and Power Lines

The development of wind farms is occurring at a rapid pace in the Central Flyway. Multiple wind farms have already been built, and it is important to analyze the potential impact of literally tens of thousands of wind turbines being placed in the whooping crane migration corridor in the coming years. For example, one notably large project on the border of the Dakotas called Titan is proposing to place 2,000 wind turbines over 200 square miles within the whooping crane migration corridor.

With an investment of over \$9 billion, the wind industry installed 5,244 megawatts of power in 2007, expanding the nation's total wind power generating capacity by 45% in a single calendar year. These new installations are expected to power the equivalent of 1.5 million American households. This was the 3rd consecutive year of record-setting growth, establishing wind energy as one of the largest sources of new electricity for the country. The U.S. wind power fleet now numbers 16,818 megawatts across 34 states, about 1% of national usage, powering over 4.5 million homes. Texas has the most installed wind generating capacity of any state.

Projected growth of the wind industry is hard to visualize. Texas billionaire T. Boone Pickens has gotten heavily involved in wind energy development. His

vision for wind farms is part of his wider vision for replacing natural gas with wind and solar for power generation, and using the natural gas instead to power vehicles. A newspaper article written April 18, 2008 provided the following description;

“To picture Pickens' energy strategy, imagine a compass. Stretching from north to south from Saskatchewan to Texas* would be thousands of wind turbines, which could take advantage of some of the best U.S. wind production conditions. On the east-west axis from Texas to California would be large arrays of solar generation, which could send electricity into growing Southern California cities like Los Angeles. The end result would be to free up more clean-burning natural gas - primarily a power-generation fuel now - to power automobiles.”

* Note that Texas to Saskatchewan is the exact route of the whooping crane migration corridor. Many of the best wind development sites are located in that corridor.

The majority of the wind farms do not require federal permits and thus there is no nexus for the companies to consult with USFWS. However, the projects must avoid “take” of endangered species under Section 9 of the ESA. Wind farms have the potential to directly kill whooping cranes either from the turbines themselves or associated construction of power lines. If whooping cranes completely avoid wind farm areas, wind energy development could result in the removal of hundreds of square miles of migration stopover habitat from use by the cranes. The National Academy of Science Report in 2004 on Platte River endangered species report stated unequivocally the threat to whooping cranes if migration habitat is lost.

I'm concerned that potential impacts to whooping cranes need to be fully evaluated. USFWS biologists throughout the whooping crane migration corridor initiated conference calls to develop a unified approach to wind energy development issues and met in December, 2007 in Lakewood, Colorado. The meeting included both representatives of Endangered Species and Refuges since wind development companies are requesting placing turbines on federal grassland easements in the Dakotas which in some instances USFWS has allowed. From this meeting and follow-up conference calls, it was decided to recommend that the industry prepare a Habitat Conservation Plan (HCP) for wind energy development for the entire U.S. whooping crane migration corridor. An HCP is a document that assigns a level of “take” of an endangered species from development actions that occur on private lands where there is no federal nexus. It legalizes those actions if measures described in the HCP are carried out. Points that involved lots of

discussion included whether or not to include in the HCP all endangered species as well as migratory bird issues. A decision was reached to focus primarily on whooping cranes. A whooping crane / wind energy development summit meeting was held in July, 2008 in Denver to discuss all aspects of writing an HCP. Two USFWS Regional Directors attended along with key wind development and utility companies working in the Central Flyway. Discussions are continuing to try to get this HCP process underway.

I made a presentation in September, 2007 to the Avian Power Line Interaction Committee (APLIC) expressing concerns about increased construction of power lines, especially as wind power is developed. APLIC is very interested in continuing to pursue conservation measures needed for whooping cranes and have formed a whooping crane issue subcommittee. Whooping crane collisions with power lines are believed to be the number one source of mortality for fledged whooping cranes. Continued construction of power lines including those associated with proposed wind farms in the migration corridor threatens the recovery of the whooping crane.

Early on in my meeting with wind companies, I talked of two possible scenarios for offsetting anticipated impacts of wind farms. These were;

1. To mark all new power lines as well as an equivalent distance of existing power lines to offset the threat of whooping cranes colliding with a wind turbine or power lines built to support wind development. Existing lines need to be marked so that there is no net increase in the threat of collision since marking lines is only 50-80% effective in reducing avian collisions. Existing lines targeted would hopefully be in the migration corridor located within 2 miles of a suitable crane wetland or known stopover site.
2. To set aside whooping crane migration stopover habitat in perpetuity to counter potential loss of habitat from wind energy development.

The Nebraska USFWS Endangered Species office in Grand Island, Nebraska using GIS prepared maps with updated information on the location of the whooping crane migration corridor. This is a very important tool for analyzing the risk to the species for specific wind farms. The data showed that 75% of all documented whooping crane stopovers occur in a migration corridor roughly 80 miles wide. This work complemented work done by Dr. Karine Gil de Weir at the Platte River Habitat Whooping Crane Trust.

One wind farm proposed at Wessington Springs in South Dakota entered formal consultation under the ESA, the first case of its kind involving whooping cranes.

The federal nexus existed because of the involvement of the Western Area Power Administration (WAPA). A Biological Assessment was prepared and USFWS wrote a biological opinion. No incidental take of cranes was granted in the biological opinion, but take of habitat was covered. A second project entering federal review involves 27 miles of transmission line in eastern Montana.

ADMINISTRATION

The Recovery Strategy for the Whooping Crane in Canada was posted in its final version on the SARA Public Registry on November 20, 2007. It can be downloaded at: http://www.sararegistry.gc.ca/virtual_sara/files/plans/rs_whooping_crane_final_1007_e.pdf

The Crane Conservation Act was re-introduced in both the House and the Senate in Washington and passed by the House in early June, 2008. This legislation is aimed at helping species of cranes world-wide, and would allow 20% of appropriated funds to go towards crane species in North America.

FLORIDA NONMIGRATORY POPULATION

Work by Drs. Clint Moore and Sarah Converse of the Patuxent Wildlife Research Center was completed on an adaptive management study of the Florida non-migratory population. The model that was developed considered the future of releases into the flock under various release scenarios, taking into consideration expected performance of the flock, costs, public relations, learning opportunities, and other aspects. Three meetings were held in Florida involving key state and federal wildlife personnel to fine tune the model. The analysis was presented in September, 2008 to the Florida Fish and Wildlife Conservation Commission (FLFWCC) and the Recovery Team. The Recovery Team met in September, 2008 in Wisconsin. Although the Team recognized the difficulties of reintroducing avian species, optimistic assumptions in the Patuxent study provided no more than a 41% chance of achieving a self-sustaining population, and most values were around 20% or less. The Team felt that 24 whooping crane chicks per year were not available for continued releases in Florida. Releasing fewer than 24 birds annually lowered the probability for success even further. The Team felt that the water regimes produced by periodic droughts in Florida make it extremely unlikely that reproduction in wild-hatched Florida whooping cranes will ever achieve production rates adequate for success. In addition, crane habitat in Florida is faced with tremendous pressure from developers and is expected to decline in the coming decades. Therefore, the Team concluded that the probability of successful establishment of a self-sustaining population was too low to justify continuing the

reintroduction. The Team recommended that no further releases of captive-reared whooping cranes be made into the Florida non-migratory population. The Team did recommend that the FLFWCC continue to study the remaining non-migratory whooping cranes to maximize learning.

The following information is from the April-June, 2008 quarterly report written by Whooping Crane Project Leader Marty Folk of the Florida Fish and Wildlife Conservation Commission:

The 2008 spring nesting season occurred in the ongoing drought conditions that hindered success. There were 5 nests (2 were re-nests) by 3 pairs, with 3 nests hatching 5 chicks; none of the chicks lived past 25 days. Four of 5 nest locations were in lakes because marsh water levels were too low for nesting.

During the spring quarter 2008, seven birds went missing. In addition, 3 mortalities were documented. The mortality and movements of birds were likely associated with drought and the lack of water in marshes. One of the mortalities was a wild-fledged bird, the fourth mortality from the 9 wild-fledged birds produced in the 16-year life of the project. At the end of June 2008, 26 birds (8 pairs) were being monitored with the total population estimated at 30.

EASTERN MIGRATORY POPULATION

The eastern migratory whooping crane population currently includes 69 adult birds and 22 juveniles. Most of the whooping cranes in the eastern migratory population make the desired migration between Wisconsin and Florida. A few birds continue to summer in Michigan, and a few wander into Minnesota and Iowa. In early June, 2008, 3 birds wandered into North Dakota before returning to Minnesota.

Five whooping crane breeding facilities (Patuxent Wildlife Research Center, International Crane Foundation, Calgary Zoo, San Antonio Zoo, and Species Survival Center {SSC} in New Orleans) either provided eggs or hatched and raised chicks in 2008. Eggs were shipped across international borders and between facilities to meet production targets for the ultralight (UL) and direct autumn release (DAR) reintroduction programs. Twenty-two chicks were raised for the release programs in central Wisconsin (15 UL, 7 DAR). This compares with fall 2007 when 27 birds were re-introduced into the eastern migratory population (17 UL and 10 DAR). Chicks were hatched and trained at Patuxent prior to shipment

to Necedah NWR for the UL project. The Windway Capital Corporation flight team transported the chicks to Wisconsin. Additional eggs were hatched and chicks reared for several weeks at ICF before being transported to Necedah NWR for the DAR project.

The nesting season for the wild migratory whooping cranes in Wisconsin was a disappointment. All 11 nests built in central Wisconsin were abandoned just prior to expected hatching. Four of 6 eggs rescued from the nests successfully hatched at Patuxent. Nesting failure is currently the project's foremost concern. Project Biologist Dr. Richard Urbanek has postulated that the cranes are all abandoning the nests due to a huge hatch of black flies correlated with warm, spring weather late in the incubation period. He noticed hundreds of black flies on the abandoned eggs, photographed one crane with numerous flies on it, and noted one crane pair leaving their nest and running into thick brushy vegetation presumably to find relief from the biting flies. Efforts in 2009 will focus on getting additional evidence for this theory and attempting to control the black fly hatch.

Two substantial changes in the Whooping Crane Eastern Partnership (WCEP) are planned for fall, 2008. Operation Migration has laid out a new migration route west of the Appalachians to try to avoid the rough mountain weather and reduce the number of days they are unable to fly. Also, plans have been formulated to split the flock upon arriving in Florida between St. Marks and Chassahowitzka NWRs. The main reason for this split is to avoid one disastrous event happening to all the birds at once as happened in February 2007 with the loss of 17 cranes from a lightning strike at Chassahowitzka.

WCEP special advisor John Christian is among 16 national recipients of the U.S. Fish and Wildlife Service's 2007 National Recovery Champion awards. The Recovery Champion award recognizes outstanding contributions of USFWS employees and their partners toward efforts aimed at recovering threatened and endangered species in the United States. USFWS Director Dale Hall was quoted in a press release: "These Recovery Champions are extraordinary conservationists dedicated to protecting and restoring our nation's wildlife and ensuring that future generations of Americans enjoy the natural treasures we experience today". Mr. Christian was recognized for eight years of coordination with a variety of public and private landowners to re-establish the endangered whooping crane as a breeding species in eastern North America. In his former role as chair person of WCEP, he organized a group of ultra-light pilots, species experts, conservationists, and federal, state and private biologists who work together to breed, raise and "flight train" whooping cranes. Christian's dedication has led to the current

population of 91 wild migrant whooping cranes in the eastern U.S. He currently serves as the Midwest Region's assistant regional director for migratory birds and state programs.

WCEP held meetings in February and September, 2008 to plan operations for the reintroduction. With so many partners involved in the eastern reintroduction, including agencies and non-profits, the semiannual meetings are important to handle the many issues that arise. The Recovery Team endorsed continued UL and DAR releases in 2009, but urged WCEP to focus on determining the reason for nest abandonment.

LOUISIANA

At their meeting held in September 2008, the Recovery Team recommended that multiple partners carry out actions working towards a potential future release of non-migratory whooping cranes in Louisiana. Recommended actions include;

- Continue ongoing habitat studies led by Dr. Sammy King in an effort to evaluate potential release sites.
- In consultation with the Whooping Crane Health Advisory Team, initiate studies to evaluate the presence/absence of infectious bursal disease (IBD) in the migration corridor of the AWBP. Study results must demonstrate that the AWBP would not be threatened by IBD by the reintroduction of whooping cranes into Louisiana before the Team will support a reintroduction.
- Evaluate the regulatory actions needed to reintroduce nonmigratory whooping cranes into Louisiana.
- Fully coordinate and partner with the Louisiana Department of Wildlife and Fisheries on all actions as appropriate.

Due to uncertainties with the lack of production in the Wisconsin whooping crane population, it is not possible to say when a reintroduction might take place in Louisiana. The Recovery Team hopes that in the next 1-2 years, these questions in Wisconsin can be resolved and that the population of whooping cranes in the eastern U.S. will be close to the target of 125 birds and be reproducing. At that time, assuming the IBD study provides the reassurances needed and that regulatory actions have been completed, it is suggested that a small initial experimental reintroduction could be carried out in Louisiana. This reintroduction could possibly use cranes that are genetically surplus to the eastern migratory population and would test the habitat before a larger reintroduction would be recommended.

CAPTIVE FLOCKS

The whooping crane breeding facilities had a good production season in 2008 but overall fell slightly below our high expectations. Twenty-two chicks were raised for the release programs in central Wisconsin (15 ultralight, 7 direct autumn release), and 1 chick of high genetic value was held back to become captive breeders.

Patuxent and ICF successfully carried out programs for the reintroduction of birds into the eastern migratory population. Both facilities also provide personnel for various field operations with that population throughout the year, and are great partners in helping out in all aspects of the reintroduction. Patuxent hatched a total of 27 chicks, including eggs that came from Calgary (8), ICF (3), SSC (1) and Necedah NWR (4). ICF is renovating whooping crane pens and building a new exhibit for their African crane species.

The Calgary Zoo had another very good production season and transported 9 fertile eggs to Patuxent. Their artificial insemination program for the third year in a row greatly increased flock fertility. They had one adult captive crane escape through flight netting from the zoo for 6 weeks during the summer. It wandered as far as 6 miles away. After extensive baiting, it was re-captured in a net trap and the feisty bird was returned to captivity in time before it would get into trouble from winter weather.

The Audubon Freeport-McMoran Species Survival Center (SSC) in New Orleans finished work on the first phase of their new whooping crane facilities. A dedication was held in April, 2008 that was well-attended. Earlier in the winter, 5 whooping cranes had been shipped to the new facility from ICF (2), Calgary (2) and the San Antonio Zoo (1). In July 2008, one crane dropout from the 2007 reintroduction program was shipped from Necedah NWR in central Wisconsin to SSC. SSC also celebrated their second sandhill crane egg fertilized using frozen semen that is thawed and then used to inseminate. Last year was their first successful sandhill chick hatched using frozen semen. They hope to use this technique on a whooping crane in 1-2 years. SSC also had one breeding pair produce eggs for the eastern reintroduction.

A workshop with whooping crane flock geneticist Dr. Ken Jones and the captive flock managers was held September 21, 2008 in Baraboo, Wisconsin. A genetic analysis was done for both the captive flock and eastern migratory population. The

studbook was updated, pairing recommendations were made, and crane transfers between facilities were planned. The captive flock continues to make excellent progress towards retaining genetic diversity.

WHOOPING CRANE NUMBERS IN NORTH AMERICA October 2, 2008

Wild Populations

	Adult	Young	Total	Adult Pairs
Aransas/Wood Buffalo	227	39	266 ^A	72
Rocky Mountains	0	0	0	0
Florida non-migratory	30 ^B	0	30 ^B	12
Wisconsin/Florida migratory	69	22 ^C	91	11
Subtotal in the Wild	326	61	387	95

^A The 266 cranes above is the estimated flock size in spring, 2008. Forty-one chicks fledged from a record 66 nests in 2008. Chicks hatched in 2008 are not added to the count until they reach Aransas in late fall.

^B This number reflects the 26 birds regularly monitored in Florida plus 4 additional cranes believed to be alive in unknown locations. No chicks fledged in the wild in 2008.

^C The 5 whooping crane breeding facilities (Patuxent Wildlife Research Center, International Crane Foundation, Calgary Zoo, San Antonio Zoo, and Species Survival Center in New Orleans) either provided eggs or hatched and raised chicks in 2008. Four eggs came from abandoned wild nests in Wisconsin and successfully hatched at Patuxent. Twenty-two chicks are currently being raised for the release programs in central Wisconsin (15 ultralight, 7 direct autumn release).

Captive Populations

	Adult	Young ^E	Total	Breeding Pairs
Patuxent WRC, Maryland	62	3	65	13

International Crane Foundation, WI	32	0	32	11
Devonian Wildl. Cons.Cent./Calgary	24	0	24	6
Species Survival Center, Louisiana	12	0	12	1
Calgary Zoo, Alberta	2	0	2	0
New Orleans Zoo, Louisiana	2	0	2	0
San Antonio Zoo, Texas	7	0	7	1
Homosassa Springs Wildl State Park	2	0	2	0
Lowry Park Zoo, Tampa, Florida	1	0	1	0
Jacksonville Zoo, Florida	2	0	2	0
Milwaukee County Zoo, Wisconsin	1	1	2	0
Subtotal in Captivity	147	4	151	32

^E One of these young is a genetic holdback and will remain in captivity as future breeding stock. The table does not reflect captive young that have entered reintroduction programs in 2008.

TOTALS (Wild + Captive) 387 + 151= 538