

WHOOPING CRANE RECOVERY ACTIVITIES

APRIL - SEPTEMBER 2005

by Tom Stehn
USFWS Whooping Crane Coordinator
(361) 286-3559, Ext. 221
Tom_Stehn@fws.gov

HIGHLIGHTS

Production in Wood Buffalo National Park was very good with 62 chicks documented hatching from 58 nests. Mid-August surveys found 31 chicks had survived, including 2 sets of twins.

Forty-two whooping cranes make up the migratory eastern whooping crane population. All but a few are following the correct migration corridor, with most returning to the core release area. Nesting occurred for the first time in the migratory reintroduction as the initial cohorts of birds are just reaching breeding age. Five pairs showed initial nesting behavior, and 2 pairs laid eggs at Necedah National Wildlife Refuge (NWR). Both pairs quickly lost their eggs presumably to predators. Twenty-four additional juveniles are being trained to enter the population in the fall.

Seven sandhill crane hunters that killed 2 whooping cranes last fall in central Kansas were each fined \$3,000 and lost their hunting privileges for 2 years. Following this incident, States increased efforts to protect whooping cranes during hunting season.

The captive facilities had a very good production season, with 39 total chicks fledged. Nine were held back in captivity for their valuable genetics to be future breeding stock. Production was also used to supply 26 birds to the eastern migratory reintroduction which was very close to targeted goals.

ARANSAS – WOOD BUFFALO FLOCK

SPRING MIGRATION 2005

The following is from the Cooperative Whooping Crane Tracking Project report written by Dr. Martha Tacha, USFWS Endangered Species office in Grand Island, Nebraska.

“Departures from Aransas in spring, 2005 appeared about average, with 180 cranes (84%) departing Aransas between March 23 and April 13. Of these, 127 (57% of the population of 215) departed between April 6 and April 13. All but one whooping crane, an injured juvenile, had migrated by April 27. The injured juvenile that failed to migrate with its parents apparently recovered from its injuries and remained at Aransas during the summer.

The first dates for confirmed observations of whooping cranes were March 12 in the United States and April 9 in Canada. The last sighting date was May 25 in North Dakota (a juvenile), and April 29 in Canada. Sightings were reported from Kansas (9), Nebraska (5), North Dakota (4), Montana (1), and Saskatchewan (13). A cluster of 7 sightings in central Kansas from April 11 to April 13 likely were a result of increased activity of hunters and conservation officers associated with the opening day of turkey season in the state on April 13. Duration of recorded stopovers ranged from 1 to 6 days, averaging approximately 1.7 days.

The spring migration included notable sightings of adventurous (or unfortunate) lone juveniles. In addition to the injured juvenile summering at Aransas, the earliest sighting (on March 12) was of a lone juvenile^A in Kansas, and the last sighting (May 25) was of a lone juvenile in North Dakota. The longest stopover recorded this spring in the United States was also a lone juvenile in Nebraska (6 days, from April 28 to May 2), although there was also a pair of adults that spent 6 days in Saskatchewan, from April 10 to April 15.”

^A This juvenile had wintered with sandhills near Bay City in Matagorda County, Texas. It had started migration apparently after all the sandhills had departed Texas.

One whooping crane juvenile may have summered in North Dakota where it was sighted May 25 and an additional probable sighting reported in July.

WOOD BUFFALO NATIONAL PARK

Production in Wood Buffalo National Park was very good in 2005 with 62 chicks, including 14 sets of twins, documented hatching from 58 nests. Water levels looked slightly below average and definitely were lower than optimal. Fourteen pairs failed to nest but were present on territories, an unusually high number of pairs failing to nest. There was little production from the Klewi marshes (6 fledged chicks), a location that usually is excellent but was notably dry at the start of the summer. These observations supported the correlation between low water levels and poor chick production. Heavy rains on June 16 and 19 put out forest fires in the Park and helped the crane habitat, but fell shortly after the chicks had hatched and caused some mortality of the young chicks. Aerial photography was completed for parts of the new nesting areas by Jim Bredy and Chris Lohrengel of USFWS.

Mid-August surveys found 31 chicks had survived, including 2 sets of twins. More unison call recordings were made of pairs. At least 25 chicks are expected to arrive at Aransas this fall. This should allow the population to increase, with 230+ whooping cranes expected to reach Aransas by December, 2005.

ARANSAS NATIONAL WILDLIFE REFUGE, TEXAS

The injured juvenile that failed to migrate with its parents apparently recovered from its injuries and remained at Aransas during the summer. It has a scar on the back of its head where it apparently was hit, possibly by a snake or raptor. After the injury, the head and neck of the juvenile had been very swollen, and the bird stopped eating and was lethargic for about one week. His parents delayed the start of their migration to mid-April until the juvenile was eating. This whooping crane was seen by the winning team that tallied 332 species in 5 days on the Great Texas Birding Classic held after mid-April. The team also saw a sandhill crane on Galveston Island, and was the only team to see either crane species.

The first phase of the Cedar Bayou dredging feasibility study neared completion in September. Cedar Bayou is a natural pass from the Gulf of Mexico into whooping crane critical habitat and is important for the movement of blue crabs to complete their life cycle. It has a history of silting shut and then being re-opened by tropical storms. It is currently open. The engineering study selected a preferred alternative that involves dredging along the mouth of Cedar Bayou, re-opening a channel from Cedar Bayou into Vinson Slough, and putting all dredge material about ¼-mile out into the Gulf to create a delta. Funding has been applied for to complete the second phase of the study that will include engineering specifications and address permitting issues.

Plans for the Lower Guadalupe Water Supply Project (LGWSP) may have changed radically. The LGWSP planned to build off-channel reservoirs near the mouth of the Guadalupe River and pump the water back to San Antonio before it entered San Antonio Bay and whooping crane critical habitat. San Antonio Water Systems (SAWS) pulled out from supporting the project, instead choosing to rely on increased pumping in the Edwards Aquifer and bringing in water from the Colorado River to meet the projected water needs of San Antonio where the population is projected to double in the next 50 years. It was a combination of political, economic, and environmental factors that led to their decision to withdraw. Other water developers are still pursuing LGWSP, and it is still included in the State water plan. However, SAWS was a major funder (89%) for the project so its future is uncertain. Two water groups agreed to continue funding the Texas A & M University study being conducted at Aransas relating freshwater inflows, blue crabs, and whooping cranes.

A major re-working of water legislation (Senate Bill 3) failed to pass in the 2005 session of the State legislature. The bill passed the Senate but was never considered in the House. Proponents hope to modify the bill and introduce it when the legislature next convenes in 2 years. The original bill had received widespread support from conservationists since it had established in-stream flow requirements for Texas rivers.

The whooping crane brochure entitled "Road to Recovery" was updated, but funding for printing will have to wait until the new fiscal year starts in October.

CONTINGENCY PLAN FOR FEDERAL-STATE COOPERATIVE PROTECTION OF WHOOPING CRANES

A group of 7 sandhill crane hunters was formally charged in September under the Migratory Bird Treaty Act with killing 2 whooping cranes in Kansas last fall. The Act carries a maximum fine of \$15,000 and 6 months in jail. Through plea agreements, each hunter had to pay a \$3,000 fine, collectively pay \$2,587 restitution for the veterinary bills for care of the injured birds, perform 50 hours of community service at the Quivira NWR, pass a hunter education course, and lose hunting privileges for 2 years.

The shooting of the two whooping cranes led to renewed efforts to protect whooping cranes, including education of hunters. Oklahoma held meetings with key folks to discuss implementation of the contingency plan. The Texas Parks and Wildlife Department completed a “shoot-don’t shoot” video in September aimed at protecting whooping cranes and other non-game species. Meetings between USFWS and the Kansas Department of Wildlife and Parks were held in Kansas on April 18-19 to try to increase protection for whooping cranes in Central Kansas where the shooting incident took place and whooping cranes concentrate at Quivira NWR and Cheyenne Bottoms State Wildlife Area. This meeting led to recommendations that were later adopted by the agencies involved. Changes included:

Opening sandhill crane season in Kansas 4 days later than in 2004, and having a mid-week opening for the season to reduce hunting pressure.

Sandhill crane hunting will open 30 minutes after sunrise rather than at sunrise through November 30 when whooping cranes are potentially still present.

An on-line hunter education course will be created and made mandatory starting in 2006 for sandhill crane hunters in Kansas.

Information about differentiating whooping cranes from look-alike species was put on a full page in the Kansas regulation book. A new color brochure about whooping cranes was created, and posters given for license vendors that sell sandhill crane hunting permits.

Hunter education classes were taught in Barton and Stafford counties, with an emphasis on identification of migratory birds, especially cranes.

The Whooping Crane Contingency Plan will be updated by March, 2006.

The contingency plan was implemented the last day in September when a single whooping crane showed up at Long Lake NWR in North Dakota in a group of sandhills. Hunting on adjacent lands was underway with a firing line situation next to the refuge. Personnel put up warning signs and made hunter contacts to urge hunters to know their targets.

CRANE CONSERVATION ACT

The Crane Conservation Act was introduced into the Senate on April 28th by Senators Feingold (D-WI) and Crapo (R-ID) to protect cranes and their habitats. Co-sponsors included Senators Kohl (D-WI), Martinez (R-FL) and Sarbanes (D-MD). The bill would

allow authorization of up to \$5 million a year for five years for the conservation of threatened crane species and their ecosystems. Under the Senate language 20% of all annually appropriated funds will be used in North America and 80% internationally. The bill was moved forward this summer by sub-committee for consideration by the full Senate Environment and Public Works Committee.

RECOVERY PLAN

Work was completed over the summer revising the draft whooping crane recovery plan published in January, 2005. Data was updated through August, 2005 with the revised documented finished on September 1. Public comments were considered with many suggestions incorporated. A formal response to comments was written and put into an appendix. The final document is currently being reviewed by USFWS-Region 2.

FLORIDA

There are approximately 60 whooping cranes in the nonmigratory Florida population that continues to have problems with mortality. No whooping cranes produced from the captive centers in 2005 will be reintroduced into the Florida flock. The breeding season of the whooping cranes in Florida was disappointing. From the 15 pairs in the population, 8 pairs made 11 nesting attempts. Only 1 chick hatched but died at 6 days of age. Water levels were good and sandhill cranes did okay, but the whooping cranes struggled. Examination of bad eggs revealed either infertility or embryos that had died at an early stage of development. The lack of genetic diversity of the reintroduced birds may be having a hand in this, but it is an unknown situation.

Whooping crane pair 591/369, which successfully fledged 2 young in the past, failed to hatch any chicks this season. Their first nesting attempt of this season was interrupted by an unpaired whooping crane. The pair re-nested and then a big rain event flooded that nest. It was early enough in the season for another re-nesting, but it never happened. Just after the breeding season the male of the pair was found dead. Necropsy results indicate the bird died of Eastern Equine Encephalitis (EEE). In the past, sick birds had been documented with serologic evidence of being infected with EEE. However, this is the first confirmed mortality from EEE in this flock. A re-introduced *migratory* whooping crane had also died of EEE. That bird died in northern Florida on December 11, 2004^A.

^A(Paragraph contributed by Marty Folk).

Five of the Florida nonmigratory flock apparently took a “vacation” trip and were located at Ace Basin in South Carolina on May 25th. They quickly moved on and their whereabouts remained unknown. In September, 1 from the group of 5 was confirmed back in Florida.

WHOOPING CRANE EASTERN PARTNERSHIP (WCEP)

The migratory whooping cranes for the most part used the proper migration corridor and summering areas. Of the 42 whooping cranes in the flock at the end of September, 35 had summered in the core release area in central Wisconsin on or close to the Necedah NWR, including 30 that usually roosted on Necedah. Six cranes summered in southeastern Wisconsin. Five hatch year 2003 cranes migrated off course in the spring of 2005, with 3 reaching Ontario and 2 reaching Michigan. Those 2 in Michigan later made it back to Wisconsin on their own. The 3 in Ontario separated, with 2 returning to Michigan where they had been last summer, and the third moving to Vermont and then New York. The 2 birds Michigan were captured on June 30 and returned to central Wisconsin where they remained. Three birds in late summer wandered from Wisconsin to central Minnesota. One female released in 2001 continued to summer with no other whooping cranes near the Horicon NWR east of the core reintroduction area.

Nesting occurred for the first time in the migratory reintroduction as the initial cohorts of birds reached breeding age. Five pairs built nests and 2 pairs laid eggs at Necedah NWR. Both nests quickly lost their eggs, presumably to predators.

There were 3 mortalities between April-September 2005, leaving 42 in the flock (25 males, 17 females). Total losses have been 11 birds out of 53 released starting in 2001. Losses resulted from predation (7), powerline strike (1), capture myopathy (1), and 2 mortalities remain under investigation. The bird that was directly released into the wild last fall and followed wild cranes to Florida died hitting a power line in Wisconsin in July.

Twenty-six captive juveniles hatched in 2005 entered "reintroduction" schools. Twenty-one hatched and trained at the Patuxent Wildlife Research Center were transported to central Wisconsin by Windway Capital Corporation and trained to follow ultralight aircraft. Five birds hatched at the International Crane Foundation were driven to Necedah NWR and will be released directly into groups of wild Wisconsin whooping cranes in the fall. One crane from each "school" died during the summer, leaving 24 birds to be added to the wild population.

Fall meetings of the Whooping Crane Eastern Partnership were held September 19-21 at Necedah NWR. One of the decisions made was selection of a site called Halpata Tasthanaki Preserve located about 25 miles northeast of Chassahowitzka NWR in Florida to use as a holding site for an indefinite period if older whooping cranes have not returned and cleared the release site at Chassahowitzka. Windway Capital Corporation of Sheboygan, Wisconsin, was presented plaques of appreciation for all the work they do supporting whooping crane recovery. They actively take part in transporting eggs between captive breeding facilities, fly captive juveniles to release sites, and also provide aircraft and pilots for tracking the eastern population in migration.

The television show “60 Minutes” aired a segment on the whooping crane eastern reintroduction. The segment featured Joe Duff of Operation Migration and what it means to fly with the birds with an ultralight aircraft and reintroduce them into the wild.

CAPTIVE FLOCKS

The year 2005 was very positive for the captive flocks with 39 total chicks fledged. Nine were held back in captivity because of their valuable genetics. This fully met the planned for flock expansion to meet genetic goals, although losses from health problems of a few additional very valuable chicks was frustrating. Production was used to supply 26 birds to the eastern migratory reintroduction that nearly reached targeted goals.

In the spring, weekly conference calls were held with flock managers to coordinate efforts to support reintroductions. Eggs were transported to the USGS Patuxent Wildlife Research Center from the San Antonio and Calgary zoos, the International Crane Foundation (ICF), and the Species Survival Center (SSC) in New Orleans in order to build up a large cohort of similar age needed for the ultralight training project. Patuxent made modifications to pen facilities to handle the additional chicks and shipped some late eggs back to ICF. These late eggs, plus others laid at ICF, formed the basis for providing a cohort of birds for the direct autumn release (DAR) project. This project involves isolation rearing whooping cranes, getting them acclimated to natural habitat as much as possible, and then releasing them in the fall in Wisconsin into groups of older wild whooping cranes. Birds that entered these reintroduction programs totaled 21 for the ultralight project and 5 for the DAR. Each program lost one bird during the summer.

The amount of effort and care that goes into captive breeding of whooping crane is phenomenal. Efforts start in late winter with changes in diet, increase in photoperiods, and eliminating disturbance. Artificial insemination (AI) is carried out on many pairs to ensure improved genetics of offspring and aid pairs unable to perform natural copulation. Initial clutches are pulled and in most cases placed under sandhill cranes to get the females to produce multiple clutches. Most eggs are later moved to incubators with all kinds of care performed. Health care often includes assisting in hatching and treating various physical ailments of young chicks. The environments of the chicks are carefully controlled to reduce disease threats, and chicks are exercised to promote normal growth. All the breeding facilities are supported by excellent veterinarians. Some of the highlights and needs of specific facilities are very briefly touched on below.

In 2005, Calgary had success for the first time with their new AI program, and produced several chicks. In the spring, staffer Cathy Ladiges from Calgary had traveled to Patuxent and been trained in the finer points of AI. This is an example of the training sessions that captive facilities have provided each other to ensure the highest level of staff expertise possible. Of the 19 whooping cranes at the Devonian Conservation Center outside Calgary, 7 females laid 21 eggs, of which 9 were fertile and 6 chicks hatched. Calgary ended up with 2 very genetically valuable chicks this year for the first time.

The San Antonio Zoo helped out by shipping eggs to Patuxent and receiving eggs from Patuxent and ICF in return. They ended up with one very valuable fledged chick to be a future breeder.

For the first time ever, the pair on exhibit at the public Amoco Exhibit at ICF was given a whooping crane chick to raise. There was much initial excitement, but the chick died August 25 from a respiratory disease. The flock of 35 whooping cranes at ICF had 8 females lay 30 fertile eggs this year, and 21 hatched. Approximately 17 of the chicks fledged.

Patuxent holds 54 whooping cranes, with 18 eggs that hatched from 13 producing pairs in 2005. They also hatched 10 eggs received from other facilities, and shipped 5 fertile eggs to ICF and San Antonio. With assistance from staff from Operation Migration, 21 birds were trained to follow ultralights and were transported by Windway Capital in three different cohorts to Wisconsin. In the spring, Patuxent prepared facts and figures on their crane program and assessed potential impacts from a proposed new outer beltway around Washington DC. One proposed route would place the highway down Route 197, about ¼ mile from the crane pens. Any project that forced the cranes at Patuxent to be re-located would be very expensive, hurt productivity for several years, and might cause some crane mortality.

The Species Survival Center in New Orleans shipped eggs to Patuxent and continued working on plans to build a new captive breeding facility for whooping cranes. Hurricane Katrina damaged facilities and disrupted operations, but through some very heroic efforts, the center survived with loss of only 3 cranes (1 whooper and 2 sandhills). I can only be amazed at the work of everyone at SSC and what they had to face. Much of the flight netting for the pens was destroyed by the storm and must be replaced. Their budgets are totally disrupted with all the tragic events that have occurred in New Orleans, but people are helping where they can and the program is continuing. By the end of September, the facility was operational again with electricity and water. USFWS-Region 4 will provide \$100,000 to keep operations going since the Audubon Institute which supports SSC has lost its major source of revenue (zoo and aquarium).

WHOOPING CRANE SCORECARD - September 30, 2005

Wild Populations

	Adult	Young	Total	Adult Pairs
Aransas/Wood Buffalo	215	^A	215 ^A	73
Rocky Mountains	0	0	0	0
Florida non-migratory	60 ^B	0	60 ^B	14
Wisconsin/Florida migratory	42	24 ^C	67	2
Subtotal in the Wild	317	24	341	89

- A** Totals do not include chicks hatched in June, 2005 since chick mortality is usually high when the chicks are small and there is also no measure of adult mortality until December, 2005. In June, 62 chicks hatched from 58 nests, but only about half of those chicks are expected to survive. Thirty-one chicks were documented surviving in mid-August. The flock total is expected to be > 230 at the end of the year.
- B** This number is an estimate since not all whooping cranes in Florida can be located on a regular basis. No chicks fledged in the wild in 2005.
- C** These are chicks hatched in captivity and transported to Necedah NWR in central Wisconsin that are being raised to join the eastern migratory population.

Captive Populations

	Adult	Young*	Total	Breeding Pairs
Patuxent WRC, Maryland	54	2	56	13
International Crane Foundation, WI	35	4	39	10
Devonian Wildl. Cons.Cent./Calgary	17	3	20	7
Species Survival Center, Louisiana	8	0	8	1
Calgary Zoo, Alberta	2	0	2	0
New Orleans Zoo, Louisiana	2	0	2	0
San Antonio Zoo, Texas	5	1	6	1
Homosassa Springs Wildl State Park	1	0	1	0
Lowry Park Zoo, Tampa, Florida	2	0	2	0
Subtotal in Captivity	126	10	136	32

* Numbers are of young remaining at the captive center after eggs and/or birds were shipped out for reintroductions in 2005. In most cases, these young are genetically valuable and will become future captive breeding stock.

TOTALS (Wild + Captive) 341 + 136 = 477