

WHOOPING CRANE RECOVERY ACTIVITIES

MARCH-AUGUST, 2001

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HIGHLIGHTS

The return of a migratory flock of whooping cranes to eastern North America took a major step forward with the publication of the final rule allowing for establishment of an experimental nonessential population of whooping cranes in 20 eastern states. Ten birds were shipped to Wisconsin in July to begin ultralight training for a migration to Florida.

In Wood Buffalo National Park, a record 52 nesting pairs hatched 44 chicks, but only 14 fledged. In captivity, production totaled 29 chicks at four breeding centers.

ARANSAS/WOOD BUFFALO POPULATION

Following the loss of 6 cranes during the 2000-2001 winter, flock size in spring, 2001 was 174 whooping cranes, a net decrease of 13 from the 187 present the previous spring and a disappointing drop from the record 188 present in the 1999-2000 winter.

Mr. Wally Jobman of the USFWS Ecological Services office in Grand Island, Nebraska recorded migration sightings reported during the spring migration, the 52nd migration monitored since the tracking project began in the fall of 1975. The following is from the spring, 2001 cooperative whooping crane tracking project report.

Departures from Aransas were about average (i.e., the majority of departures normally occur between April 4 and 12). The initial major departure of cranes occurred on April 2 and 3, with all but 21 cranes having migrated by April 17. The single bird present at Aransas on April 27... eventually migrated.

The first dates recorded for confirmed observations of migrating whooping cranes were March 23 in the U.S. and April 18 in Canada. The last sighting date was June 18. Sightings were reported from Texas (2); Kansas (2); Nebraska (6); South Dakota (1); North Dakota (5); Saskatchewan, (23); Alberta, (2), and Manitoba (1)..... No confirmed sightings were reported in Oklahoma.

With the exception of three birds reported in west Texas during February, an early migrant confirmed in Nebraska on March 23, and a late migrant reported in North Dakota on June 11, all of the sightings in the United States were reported between April 5 and 25....In spite of variable weather conditions, the crane migration progressed quickly. Consequently, only 16 sightings were confirmed in the United States, the least number of spring sightings reported since the 1990 spring migration, when only 14 sightings were reported.

The 57 years of data in the whooping crane migration sightings database provide a descriptive summary of whooping crane migration over a large geographic region. A report by Jane Austin and Amy Richert was completed in May entitled *A Comprehensive Review of Observational and Site Evaluation Data of Migrant Whooping Cranes in the United States, 1943-99*. Results confirmed findings of previous migration work and also provided new insight into whooping crane habitat use. Palustrine wetlands accounted for more than 75% of records in all states except Nebraska, where riverine systems were also used extensively. Private ownership accounted for more than 60% of all sites used by whooping cranes. The authors also provided recommendations on data limitations, needs for further information, and survey protocol for future monitoring of whooping cranes during migration.

In May, Canadian whooping crane coordinator Brian Johns located a record 52 nests in Wood Buffalo National Park, one more than last summer. At least five pairs failed to nest. Water levels were high, providing what appeared to be excellent habitat conditions. Production surveys were flown in June in the USFWS Region 2 aircraft piloted by Jim Bredy, with observers Brian Johns and Tom Stehn. Production totaled 44 chicks, including 11 sets of twins. However, survival was very disappointing, with only 14 single young located in August. Thus, with annual losses averaging around a dozen adults between spring and fall, the population cannot be expected to increase much from the 174 present in the spring. The decrease in the population last winter and this summer's disappointing results fit the predicted 10-year drop in the whooping crane population that occurs at the start of every decade, with a low for the decade predicted mathematically for 2001. This 10-year cycle in whooping cranes is totally unexplained, although weather research may show a 10-year cycle in Pacific ocean surface temperatures that affects climate and precipitation for North America. However, the 10-year cycle does not appear to fit with precipitation data from Ft. Smith, N.W.T., or water levels in Wood Buffalo National Park.

German crane vocalization expert Dr. Bernhard Wessling completed analysis of calls he recorded at Aransas last winter and will compare them with calls from 12 pairs recorded by Brian Johns in Wood Buffalo in August. Dr. Wessling has recorded about 40 different pairs at Aransas. Results look promising to match pairs on their summer and winter territories without having to capture and band the birds. Observations in the fall in Saskatchewan and at Aransas indicated the "Lobstick" male had lost a metal band, leaving this 23-year-old crane unbanded. Dr. Wessling's recorded calls from the Lobstick pair the past two winters proved that the Lobstick male was still present.

The drought at Aransas continued throughout the spring and summer. Heavy rains August 26-31 brought some relief. In a six-day period, the refuge received 8.5 inches of rain. The town of Tivoli located 15 miles north of Aransas received an unofficial total of 22 inches which flooded the Guadalupe River bottoms. This was a most welcome sight since freshwater inflows on the Guadalupe River are needed to aid blue crab reproduction. The human reduction of freshwater inflows is a huge threat to the whooping crane that could lead to extinction. Data from the last eight winters indicates a direct relationship between freshwater inflows on the Guadalupe River, blue crab

populations, and whooping crane survival. When inflows are high, blue crabs populations increase due to enhanced reproduction and survival, and whooping crane mortality is low. With reduced inflows, crabs do poorly and whooping crane mortality rises dramatically. This makes sense since blue crabs make up 80-90% of the whooping crane diet. In 2 of the last 8 winters when crabs were scarce, whooping crane mortality was 7 and 6 birds, respectively. In the other 6 winters with adequate crab populations, whooping crane mortality was only 0 or 1 bird annually. Also, whooping cranes have to fly to seek out freshwater to drink which forces them to use energy whenever marsh salinities, which are affected directly by inflows, exceed 23 parts per thousand.

With projections over the next 50 years that human uses of water will reduce inflows and decrease blue crab populations by at least 8 %, this is going to have an alarming impact on whooping cranes. With the population of Texas predicted to double in the next 50 years, the Texas legislature has initiated a state-wide water planning effort. As water developers plan to take water from the rivers, there is no direct mechanism in Texas water law to provide freshwater inflows to the bays and estuaries. Basically, the bays get whatever is leftover, and portions of Texas rivers are already over-appropriated. The Rio Grande River made national news this summer when its flows no longer reached the Gulf of Mexico.

The U.S. Fish and Wildlife Service must take a strong stand on the inflow / whooping crane issue. All conservation groups need to do all in their power to ensure that adequate inflows from the Guadalupe River reach the bays. The Service has written a letter of support for the San Marcos River Foundation's application for 1.15 million acre-feet of water that would remain in the river for wildlife. This is the amount of water identified by Texas Parks and Wildlife Department needed to keep the bays productive. The San Marcos River Foundation's water rights application is an important step in ensuring inflows on the Guadalupe reach the bays. It would be precedent setting in Texas for a water right to be designated as an inflow. Water developers are contesting the application. They are saying that human needs for water are too great and that there isn't enough water available to provide the water identified by the Texas Parks and Wildlife Department study. This issue has everyone's attention, and support is needed if the San Marcos River Foundation's application is to be successful.

Work continued between Aransas National Wildlife Refuge, the Nature Conservancy of Texas, and local landowner Al Johnson to protect 829 acres of his property on the Lamar Peninsula. The parcel includes 245 acres of salt marsh and a wintering whooping crane pair. The Nature Conservancy has applied for a grant that should provide nearly ½ the funding needed. Efforts to fund the remainder through the federal Lands and Waters Conservation Act fell just short in a competition with proposed acquisition projects nationwide. Mitigation for gas well construction near whooping crane habitat at Welder Flats is being pursued that could provide some funding.

WHOOPING CRANE EASTERN PARTNERSHIP (WCEP)

(web site: www.bringbackthecranes.org)

In a historic event, 10 whooping cranes shipped from Patuxent to Wisconsin on July 10th marked the return of whooping cranes to Wisconsin which had been extirpated since 1878. Much hard work by many individuals from multiple organizations led up to this event.

The draft rule to establish a nonessential experimental (NEP) population of whooping cranes in 20 eastern states was published March 9. A national news media teleconference was held on that day that stressed the role of the partnership and the consensus behind the proposed action. A delegation from WCEP made a presentation to the Flyway Council meetings in mid-March to gain their final support. Public hearings were held the first week in April in Crystal River, FL, Nashville, TN, Indianapolis, IN, and Stevens Point, WI. Conference calls continued in May to resolve several issues involved with finalizing the NEP rule. These included whether to include northeastern states within the NEP area, and the management for eastern whooping cranes that may stray into the Central Flyway. After much discussion, the northeast states were excluded from the NEP designation, primarily for procedural reasons. Also, eastern NEP whooping cranes that leave the designated 20-state NEP area become fully endangered. A contingency plan will be written with the Central Flyway to manage eastern whooping cranes that stray into the Central Flyway. However, there will be no federally-mandated hunting closures to protect eastern whooping cranes regardless of their location. After summarizing and responding to public comments received, the final rule was submitted to Albuquerque in mid-May and forwarded on to Washington June 1. The submission package also included the Environmental Assessment and Biological Opinion. Final project documents can be found on the web site <http://midwest.fws.gov/whoopingcrane>. The final rule was signed and became law on June 26, just in time to move whooping cranes to Wisconsin to start flight training behind the ultralight. A press conference was held July 2 at Patuxent to publicize the rule. Present were numerous partners including USFWS Acting Director Marshall Jones. The following day, a smaller group met briefly with Secretary of the Interior Gayle Norton and presented her with project-related gifts.

Events at Chassahowitzka NWR in Florida to get ready for the wintering cranes included field trips in March and May to select a release site. Plans were made to construct a release pen and carry out prescribed burns to make the habitat more attractive for the cranes. Summer rains lowered release site salinities to around 15 parts per thousand, making it more suitable for cranes, down dramatically from the 31 ppt present during the late spring drought. A written project agreement with the State of Florida was finalized and signed in May.

Results from the 2000 ultralight sandhill migration project were very encouraging. The migration between Wisconsin and Florida behind the ultralight had taken 40 days, and was the longest human-led bird migration ever completed. Ten of the 11 ultralight sandhills that wintered at St Martin's Marsh Aquatic Preserve in Florida started the spring

migration on February 25. One bird that was low in the social order and had not always made local flights with the other sandhills stayed behind, but after food was withheld for a few days, this crane started migration on March 17. All the ultralight sandhills then put on quite a disappearing act, an encouraging sign that they were showing proper wild behavior. The flock was finally located on April 27 at Necedah NWR in Wisconsin. The birds had unerringly completed the migration to the exact location where they had fledged. Nine of the 10 that had left Florida in a group were present; one was missing. One of the ultralight sandhills was subsequently re-captured and the radio replaced. The single sandhill that had stayed behind in Florida showed up June 22 in North Carolina where it was lured into a shed by a farmer. The bird was taken to a rehabilitator and later driven back to Wisconsin. After diagnosing a chronic inflammatory disease and a continuing respiratory gurgle and swelling around the head, the bird was euthanized. This chronic disease explains the tame behavior exhibited by the bird in North Carolina.

After wintering in Florida, Georgia, and Tennessee, all eight Cohort 3 birds that were released one at a time last summer into flocks of wild sandhills in Wisconsin successfully returned to Central Wisconsin the following spring. Some returned precisely to Necedah where they had been raised. Also, the one sandhill that split off from the ultralight-led migration while still in Wisconsin over-wintered successfully in Deltona, Florida and returned to Necedah on April 27th.

In late winter, several credible reports of whooping cranes in Wisconsin were received, but none could be confirmed. A pair of whooping cranes was reported March 1 at Naperville, Illinois (27 miles west of Chicago), and two independent reports made from different locations near Saukville, WI (20 miles north of Milwaukee) on March 13. It sure seemed like a pair of whooping cranes, possibly from the Florida population, had headed north and were migrating along Lake Michigan. One photograph taken May 4 of a single bird west of Appleton, Wisconsin at the Rat River Wildlife Area sure looked like a whooper, but could not be confirmed. Follow-up visits to the area, including a search by helicopter, failed to find the reported whooper.

At Necedah NWR, a photo blind was constructed as a joint project between Friends of Necedah and the refuge. This blind provides excellent views of flight training at Site # 1 and photo opportunities. Training of the 10 whooping cranes proceeded on schedule with the birds making a 6-minute flight behind the ultralight in early September. Once the cranes fledged, they were allowed some time out of the pens in the natural marsh environment. Problems encountered during the summer involved the water in the pens, which in an effort to provide the birds wetland habitat, created pools with extremely high coliform bacteria counts. Impoundment water levels were lowered to remove water from the pens. Tests showed that the pans used to supply the cranes with drinking water also had high bacteria counts. Solar pumps will be purchased to provide a small flow of fresh water through the pens to try to reduce bacteria problems. The cranes had to be treated for tracheal worms and as usual received preventive treatment for coccidia. An outbreak of eastern equine encephalitis occurred in Wisconsin 150 miles from Necedah, so the whooping cranes were vaccinated for EEE. The first ever cases of west Nile virus in Wisconsin were documented in crows. A decision was made not to vaccinate the

whoopers for WNV because the vaccine was untested in birds, and cranes are apparently not very susceptible to WNV. In the fall, Patuxent and the National Wildlife Health Center will conduct experiments on sandhill cranes to learn about WNV in cranes and whether the vaccine is effective. The migration of the whooping cranes from Wisconsin to Florida is scheduled to start some time around mid-October. Fund raising has continued to be a big effort for WCEP. Although a funding shortfall still exists, enough has been raised to ensure the migration will take place this fall. A donor appreciation event is being planned at Necedah NWR on September 26, followed by two days of WCEP meetings. Project documents completed by WCEP included the roles and responsibilities of WCEP, along with whooping crane training, handling, banding, disposition, and health protocols. One of the ultralight whooping cranes at Necedah NWR died presumably from capture myopathy following health checks and banding on September 11.

FLORIDA

An estimated 75 whooping cranes are alive in Florida at the end of August, including 14 pairs. This number could be higher if any of the 10 birds unaccounted for from the 1999-2000 winter releases show up. One of these birds showed up near Gainesville in early September. A batch of faulty radio transmitters placed on the 99-00 releases has made tracking problematical.

The drought in Florida greatly hampered the 2001 nesting season for both the non-migratory whooping cranes as well as Florida sandhills. Despite probably the worst habitat conditions for cranes in 25 years, two whooping crane pairs nested, but no eggs hatched. The eggs were infertile in one of the nests, and were lost from unknown causes from the other nest about half way through incubation. Nesting totals for the past three years are 7 nests containing eggs from 6 different pairs, but no chick has fledged. During the summer, wetlands re-filled from summer thunderstorms and tropical storm Barry, with water levels closer to but still below average levels.

Survival of cranes released in the 2000-01 winter continued to be good. Pelleted food was provided to these birds for a much longer period to limit dispersal during the drought. Of the 21 birds released in Polk County in 3 cohorts, 18 have survived. Documented losses were from alligator (1) and bobcat (2). One of the losses involved a bird presumably being affected by some illness that was acting tame in a suburban setting trying to get into a screened swimming pool. One bird was taken into captivity so it could recover from an unidentified setback and was released after eight days. At least 16 adult/subadult whooping cranes underwent simultaneous molting of their flight feathers. One subadult was apparently taken by a bobcat while flightless.

Of 10 birds missing from 1999-2000 winter releases, 4 may have dispersed into Georgia (unconfirmed sighting), and one unpaired 4-year-old male moved to Virginia in early May, but returned to Florida by the end of June. The female that summered in Michigan in 2000 remained with other whooping cranes in central Florida in 2001.

One female (# 514) captured from the wild in summer 2000 and held at Lowry Park since fall 2000 continues to do well. The bird was brailled following regrowth of flight feathers. After discussions about whether to try to release her back to the wild, she will be kept in captivity for genetic reasons, a shortage of females in captivity, and concerns about how she might behave in the wild after being in captivity for a year.

Plans were made to form one cohort of cranes at ICF scheduled to be released in Florida at the end of November. The cohort will consist of 1 bird from ICF, 3 from Calgary, and 1 from the San Antonio Zoo. The Calgary and San Antonio chicks were shipped to ICF by commercial air on August 30.

In mid-July, four crows in Florida and one in Georgia were confirmed with West Nile Virus. The disease has been spread by mosquitoes the length of East Coast. The impact WNV may have on whooping cranes is unknown, but is of concern since one captive sandhill crane in Connecticut died from WNV.

There has been final resolution in the case involving the shooting of whooping cranes in St. Johns County on November 19, 2000. The 18-year-old individual spent 75 days in jail, received two and a half years probation, loss of driving privileges and daily curfew imposed during probation, and will provide 200 hours of community service. Initially charged with two counts of taking a species of special concern and taking wildlife from a county right of way, charges were increased to a felony taking of an endangered species after the young man was subsequently involved with vandalism of shooting rocks into businesses. The two whooping crane specimens were returned to Florida from the National Wildlife Forensics Lab.

HEALTH ISSUES

The Whooping Crane Health Advisory Team continued to provide important technical advice for the Recovery Program throughout the year. Issues included the potential threat of tuberculosis at ACRES, planning to start a study of West Nile Vaccine on sandhills and testing of a vaccine, and health issues at Necedah NWR with the ultralight whooping cranes. Positive communications also occurred with the National Wildlife Health Center as a place for housing a centralized whooping crane serum bank and the archive storage of tissue specimens.

LOUISIANA

BP Amoco is working towards providing an easement for their 71,000-acre White Lake property for conservation purposes along with an endowment for managing the property. This could be an important action taken for whooping crane recovery if the cranes are ever reintroduced at White Lake.

ROCKY MOUNTAINS

For the second summer in a row, the one ultralight whooping crane in the Rocky Mountains returned to near the vicinity of Grays Lake NWR. The only other Rocky Mountain whooper summered at Red Rocks Lakes NWR in Montana.

STAGE BY STAGE SANDHILL MIGRATION

Dr. Dave Ellis reports he can still locate some of the sandhills from his stage-by-stage migration experiment. In spring 1999, the survivors of the 1998 migration went north about 100 miles, but apparently got confused, turned south, went to Mexico, and disappeared for good. The 1999 birds did much better. This April, Dave found three in Utah at two locations, and reports of five birds were tantalizing but unconfirmed. Two of the cranes, and perhaps five, were on the exact pond where they were released at Fish Springs NWR, Utah. All are quite wild, as evidenced by unsuccessful attempts to catch three to replace PTTs.

WCCA (web site: www.whoopingcrane.com)

In August, the WCCA held a very successful annual meeting with about 40 participants in Ft. Smith, N.W.T., Canada. Honor awards were presented to George Gee and Brian Johns, and Dale Hjertass got a Certificate of Appreciation. Ernie Kuyt received the Jerome J. Pratt award. Four flights conducted over the crane area provided excellent views of the whooping cranes and nesting area.

In May, the WCCA transferred \$5000 to the National Wildlife Health Center for West Nile Virus research. The ability of WCCA to provide funds for critical needs that aren't met through other channels is an extremely helpful part of the recovery program.

ADMINISTRATION

Dr. James Lewis completed his contract draft combining the Canada and U.S. whooping crane recovery plans into a single document. Recovery biologists are completing final re-writes and a draft plan should be submitted this fall.

USFWS recovery funds for the whooping crane program were handled differently this year. Earmarked funds in support of Florida and ICF were appropriated directly from the Washington office to Region 2 (Albuquerque) which handled the disbursement. Funding support for the recovery coordinator's position continued to be paid from the Region 2 Endangered Species budget.

CALIFORNIA CONDORS

Why would information on California condors be in a whooping crane report? Well, the two recovery programs have interesting parallels. The last condors were removed from the wild more than 15 years ago. In March 2001, 59 captive-bred condors survived in the

wild, with 101 in captivity. This spring, reintroduced condors laid eggs in the wild for the first time, but none hatched. A replacement egg from captivity hatched, but the chick was killed by one of the adult females. In both cranes and condors, the delayed sexual maturity and slow reproductive rates make recovery efforts very difficult. There has still been no chicks fledged from condors or whooping cranes reintroduced back into the wild, although this milestone hopefully will occur in the next few years for both species.

CAPTIVE FLOCKS

Whooping crane production totaled 29 fledged chicks in 2001 at Patuxent (24), ICF (1), Calgary (3), and San Antonio (1). Nineteen will go to the non-migratory flock in Florida, and ten have been shipped to Wisconsin for the new migratory flock.

CALGARY

At the Calgary Zoo's breeding facility, six pairs including four new pairs laid 28 eggs. Five eggs were fertile and hatched, all from one pair, and three chicks fledged. The chicks were shipped to ICF on August 30 for integration into a cohort destined for soft-release in Florida in late November.

ICF (web site: www.savingcranes.org)

ICF had a disappointing production year. Five whooping crane females produced 21 eggs, but only six were fertile and four hatched, all from the female "Ginger". No new pairs laid. Some eggs were less than 100 grams weight with below average survival expected. Only one chick fledged that will be used in the Florida release program.

After 18 years at ICF, Curator of Birds Scott Swengel left at the end of March to work as an independent avian researcher. We all wish him the best of luck and thank him for his tremendous contributions to the crane program. Dr. Mike Putnam was hired to fill the vacancy and has started work.

PATUXENT (web site: www.pwrc.usgs.gov/cranes.htm)

Patuxent had 10 pairs, including two first time layers, produce 52 eggs. Of these, 31 were fertile, and 29 hatched. The hatchlings were assigned to WCEP (11), Florida (17), and 1 to be held in captivity for genetic management. Four of the chicks subsequently died, leaving 25. Without the tremendous productivity of the cranes at Patuxent, reintroduction recovery programs of whooping cranes could not take place.

The Patuxent whooping crane website, <http://www.pwrc.usgs.gov/whoopers> has won an educational award from bigchalk.com. The citation for the "exceptional education site" in part, reads: "Congratulations! Out of more than 110,000 sites reviewed, we found yours to be in the top 2% based on your rich content and its academic relevance". Congratulations are due to web master Lois Loges, author Kathleen O'Malley and others for their work on this project.

Administration changes at Patuxent included the departure of Center Director Dr. James Kushlan, and Chief of Research Dr. Jay Hestbeck has accepted a position at Northern Prairie.

Dr. John French was made Technician Line Supervisor of the Crane Program, allowing Dr. George Gee to focus more on research and less on program administration. In March, Dr Gee was the guest speaker at the Platte River Whooping Crane Maintenance Trust in Wood River, Nebraska. In August, George received an honor award from the WCCA in Ft. Smith, N.W.T. for his many years of contributions to whooping crane recovery.

SAN ANTONIO

In 2001, two pairs of whooping cranes laid 8 eggs, but 7 were infertile despite artificial insemination techniques that were used. Staff turnover may have affected productivity, a potential problem at all the captive breeding facilities. The one chick named "Lonestar" hatched in late April, was costume-reared, and was shipped to ICF in August to join a cohort destined for release in Florida. Adult female Wanda got very sick in the spring but pulled through and resumed laying.

WHOOPING CRANE NUMBERS / September 12, 2001

Wild Populations

| Location | Adults | Young | Total |
|-------------------------|--------|-------|-------|
| Aransas/Wood Buffalo NP | 174 | *- | *174 |
| Rocky Mountains | 2 | 0 | 2 |
| Florida | **75 | 0 | 75 |
| Wisconsin | 0 | 9 | 9 |
| Subtotal in the Wild | 251 | 9 | 260 |

* 14 young fledged in Canada in 2001. However, some of these may have subsequently died along with an unknown number of adults. The WBNP population will remain estimated at 174 until a new total count is finalized in December, 2001.

** This number could be higher if any of the 10 birds unaccounted for from the 1999-2000 winter releases show up.

Captive Populations

| Location | Adults | Young | Total | Breeding Pairs |
|--------------------------------------|--------|-------|-------|----------------|
| Patuxent WRC, Md. | 62 | 15 | 77 | 10 |
| International Crane Foundation, Wis. | 28 | 1 | 29 | 5 |
| Calgary Zoo, Alta. | 19 | 3 | 22 | 3 |
| San Antonio Zoological Gardens, Tex. | 6 | 1 | 7 | 2 |
| Lowery Park Zoo, Tampa, Fla. | 1 | 0 | 1 | 0 |
| Audubon Institute, New Orleans, La. | 4 | 0 | 4 | 0 |
| Subtotal in Captivity | 120 | 20 | 140 | 20 |

TOTALS (Wild + Captive) = 400