

WHOOPING CRANE RECOVERY ACTIVITIES

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HIGHLIGHTS

The Aransas-Wood Buffalo population (AWBP) continued its historic growth with a promising production year in 2007. A record 84 chicks including 28 sets of twins hatched from a record 65 nests in June. Even though the nesting area dried up considerably during the summer, 40 young fledged and are expected to head towards Aransas in the fall.

The captive flocks had a good production season in 2007. Twenty-seven chicks will be reintroduced into the eastern migratory population in the fall of 2007, and 5 genetically valuable chicks will be added to the captive flock. Production in 2007 once again lifted the total population of wild (n=355) and captive (n=148) whooping cranes above 500 to reach 503.

President Bush got up close and personal with whooping cranes on October 20th when he visited the Patuxent Wildlife Research center. He gave a speech on migratory bird conservation. Secretary of the Interior Dick Kempthorne also attended and talked with some of the crane staff.

The third revision of the Recovery Plan was adopted in May, 2007 for the endangered whooping crane. The document for the first time includes needed recovery actions for both Canada and the U.S.

ARANSAS – WOOD BUFFALO FLOCK

Spring Migration, 2007

Data on the spring migration is collected by designated federal and state representatives in each state in the migration corridor. The data is compiled by Martha Tacha in the USFWS-Endangered Species office in Grand Island, Nebraska. Most of the following material comes from her spring 2007 migration report.

“The whooping crane migration in spring, 2007 had several interesting facets. The first was the early use documented on the Platte River in Central Nebraska. Two whooping crane singles migrated ahead of the rest of the flock, arriving on the Platte in mid-March. Both remained on the Platte through April 14th, stopovers of 32 and 26 days, respectively. A third single subadult whooper was present on the Platte River 9-12 April 3.5 miles downstream of the Gibbon Bridge west of Grand Island. All three single whoopers on the Platte were confirmed present on April 11th, all roosting separately.

Confirming the presence of single whooping cranes on the Platte River was made difficult by the presence of at least three leucistic or partial albino sandhill cranes in the Platte River Valley this spring, so observers worked hard and were conservative in the confirmations of whooping cranes made. A leucistic sandhill is a bird where the gray pigment just doesn't develop, making the feathers white, but it does not have albino genes. Two leucistic sandhills traveling together were confirmed present at the Rowe Sanctuary on the Platte River. What are the odds of that happening? Perhaps siblings?

Seventeen dead sandhills were found on a sandbar in the Platte River in the general vicinity of where the subadult whooping crane near Kearney was roosting, and one dead sandhill was found in a nearby corn field. The birds died from aflatoxin ingested from eating moldy corn. It was not known where the sandhills had picked up the corn, or how many additional sandhills might have died and been swept down river by the current. However, the whooping crane and sandhills it was with showed no signs of illness.

A bird reported as a whooping crane juvenile was sighted March 20th about 3 miles southeast of Gibbon in a field south of the Platte River. The juvenile was next reported March 24th in Beadle County, east central South Dakota by a pilot and biologist on a coyote control mission. The airplane crew approached the flying whooping crane closely to see juvenile feathers on the head and neck and a few on the body. The back to back sightings added credibility to both sightings. I have no explanation for why a juvenile would be by itself in the spring on the Platte River ahead of almost all the rest of the flock unless it had separated from its parents in the fall migration and had wintered in an unknown location. However, another explanation could be based on the family group that was seen departing Aransas on March 8th. Maybe that family had split up with the juvenile being seen on the Platte 13 days later.

Also using the Platte River was a pair of whoopers on March 17 near Kearney, a single March 30-31 at the Rowe Sanctuary southwest of Gibbon, and a family group April 1-4. The male in the family group was banded Green-high silver. This family had been observed at Aransas on March 29, was on the Platte River April 1-4, and in Sully County, South Dakota on April 5. Two additional family groups used the Platte April 13-14 near Kearney and April 15 near the Overton Bridge west of Kearney.

The other interesting facet of the spring migration was the large group sizes reported. On the morning of April 11, Refuge Biologist Ron Shepperd carefully observed a group of 34 whooping cranes at Salt Plains NWR. The group contained 30 adults and 4 juveniles. He observed them with a spotting scope for about 2 hours and re-located his vehicle several times to get closer to the group. At about 10:15 AM, the entire group flew north into strong headwinds. This is the largest group of whooping cranes ever seen together in migration. Previously, the largest group sizes recorded had been from the fall, 2004 with 17 at Muskiki Lake, Saskatchewan and 32 at Salt Plains NWR, Oklahoma. However, the 32 had not been together as a single group. Although seen by one observer from a single location, they had been widely scattered over a long stretch of shoreline and broken into smaller groups. In contrast, the 34 Ron reported at Salt Plains were all in one bunch. The sighting of 34 at Salt Plains on April 11th matched up nicely with the evidence of a

large number of whooping cranes departing Aransas April 6th. Around 4 PM on April 11th, a group of 14 adults and 4 chicks was photographed 10 miles south of Hutchinson in central Kansas in the Cheney lake area. Could they have been part of the group of 34 that left Salt Plains that morning? This seemed likely.

On the evening of April 13 and morning of April 14, Martha Tacha accounted for 21 whoopers in central Nebraska. Birds included 3 groups in the Rainwater Basin and a family and 2 singles on the Platte River. A big push of sandhills left the Platte River on April 14-15, unusually late for large numbers of sandhills to still be on the Platte.

One mortality was documented in the spring migration. A dead whooping crane was found by a farmer plowing his field on April 18th in central North Dakota, about 20 miles south of Mandan. The bird had a red band on one leg and Tom Stehn identified the bird as r-Y, a male crane hatched in 1983 that was 23 years old. It had first nested in 1986 and brought its first chick to Aransas in 1987. In 21 years of nesting, it successfully brought seven chicks to Aransas. It was still a very productive male, having brought six chicks to Aransas out of the last 10 years. Tom Stehn recalled a bit of history of the whooper found near Almont that had once carried a radio transmitter. "It was involved in the fastest whooper migration across the United States ever recorded. In the fall of 1983, this bird and its parents were in a flock of six whooping cranes that landed near Pierre, S.D. on November 8. They were found on the Texas coast just three days later. They were pushed by strong tailwinds and a low pressure system on their way south and must have flown pretty much non-stop except maybe for some brief stops. The bad weather connected with the low pressure system kept the tracking crew from staying with them, and basically the trackers caught up to the birds in Texas."

The bird was shipped to the National Wildlife Health Center in Madison, Wisconsin for necropsy. The necropsy showed massive internal injuries caused by blunt force. The bird had been hit by an airplane or else died in flight and dropped from a great height causing the internal injuries. The wings and legs on the bird were not broken so some questioned if an airplane strike was a likely scenario. Inquiries with the FAA and airplane repair facilities in North Dakota did not turn up any reports of bird strikes. Perhaps a bird plummeting to the ground and landing on its back would not break legs or wings. Brain Johns calculated terminal velocity of a falling crane from a great height would be between 60 and 75 mph. The NWHC commented that they had never seen a bird with such massive internal injuries. The loss of this crane left the estimated flock size of the Aransas-Wood Buffalo population at 236.

One other incident occurred during the migration that involved a close call. The morning of May 4th, one white-plumaged crane and one juvenile apparently continued the migration after a stopover near Mullinville, Kansas that had lasted 29 days. The cranes that day took advantage of strong south winds 20-30 mph. The evening of April 4th, a tornado absolutely leveled the town of Greensburg, Kansas that involved the loss of human life. Fortunately, the whooping cranes had left the area about 5 miles from where the tornado had hit earlier that day.

One sighting pointed out the dangers of a new scenario facing the migratory cranes. The April 16 sighting of 6 whooping cranes near Polo in central South Dakota is about 20 miles north of a proposed wind farm. Hundreds of wind farms are likely to spring up in the whooping crane migration corridor. The area with the strongest winds in the Dakotas coincides closely with the crane migration corridor. Are the cranes in danger of flying in to a wind turbine, or will they avoid wind farms? Even if they avoid them, the wind farms would be taking hundreds of square miles of migration stopover habitat away from the cranes. The Rolling Thunder wind farm in South Dakota proposes placing 600 turbines over a 200 square mile area, or roughly 3 turbines per square mile.

There were only 3 confirmed sightings in May in the U.S., 1:1 in Kansas (May 4), 1:0 in Minnesota (May 6), and 3:0 in ND (May 22). Notable during the spring, 2007 migration were sightings east of the typical flyway: two confirmed sightings in Minnesota and one in extreme SE North Dakota (the latter likely the same group of 7 seen 4 days later near Crookston, MN). In addition, there were 3 sightings (by experienced biologists and/or birding experts) of a single crane within about 35 miles of London, Ontario, along or near the north shore of Lake Erie. One would assume that this crane would have been a bird from the migratory eastern population. However, the most detailed description of the 3 sightings was that of a juvenile bird, and no juveniles survive from the 2006 cohort of the eastern migratory population. But how could a juvenile from the Aransas population have gotten to Lake Erie? This situation will continue to be a mystery. Being so far out of the range of the Aransas population adds doubt to the sighting reports.

Brian Johns received his first reports of whooping cranes in Canada starting in mid-April. In total, there were 34 confirmed sightings in the U.S.; TX (1), OK (3), KS (2), NE (16), SD (4), ND (6), and MN (2). Sightings ranged from March 14 on the Platte River in central Nebraska to May 22 in Mercer County, ND.

Wood Buffalo National Park, Canada

Three summer surveys of the nesting area were carried out successfully in 2007. In May, Brian Johns and Lea Craig-Moore of the Canadian Wildlife Service (CWS) located 62 nests. In June, the USFWS Partanavia with Pilot Jim Bredy and Biologist Brian Johns of the CWS and Tom Stehn documented the hatching of 84 chicks, including 28 sets of twins. Three additional nests were located to reach a record 65 nests. This compared with 62 nests with 76 chicks including 24 sets of twins in 2006. Fifty-six of the 65 nests (86.2%) in 2007 produced one or more chicks. This is a very high percentage. Thus, the record chick production in 2007 resulted from both high productivity and a large number of nests. An estimated 5 known adult pairs failed to nest but were sighted present on their territories. Thus, there are a minimum of 70 breeding pairs in the population. The number of adult pairs was close to the 67 adult pairs identified present at Aransas during the 2006-07 winter.

Habitat conditions in Wood Buffalo in June were better than expected with water levels thought to be near average. Two wildfires in the southern part of the park totaled about 120,000 hectares in size. The weather during the June production surveys was

exceptionally warm with no cold, wet weather. The moderate weather conditions favored the early survival of the young chicks. However, the continuing summer drought left the heart of the crane nesting area in the Sass and Klewi River drainages quite dry and the survival of chicks in those areas was lower than expected, especially in the Sass River marshes where only 4 of 16 pairs produced young. Chick mortality during the summer from the 84 hatched was considerable. Brian and Lea found 40 young including 5 sets of twins that fledged. There were another 4 pairs that had young in June that were not located in August, so there could be a few more young out there. This high level of production is expected to raise the size of the Aransas-Wood Buffalo population to a record 250+ this winter.

Platte River, Nebraska

The 4-state Platte River Cooperative Agreement is awaiting congressional funding authorization.

Aransas National Wildlife Refuge

Spring Migration

An aerial survey conducted August 3rd, 2007 at Aransas did not find any whooping cranes. This confirmed that the juvenile "Lobstick" whooping crane injured in the spring of 2005 at Aransas had apparently made its first ever migration north. It had spent the 2005 and 2006 summers at Aransas. It had last been seen in a trio of cranes at Aransas the last week in April, 2007. A whooping crane reported in mid-June on Matagorda Island was not located on the August 3rd flight. It had also apparently migrated.

Rainfall

The year of 2007 was notable wet at Aransas. Victoria had 56 inches of rain through the end of September, a time period that averages only 23 inches. The refuge received 22.65 inches of rain just in the month of July. Seven and ½ inches of rain fell on July 4-5, covering the refuge entrance road with so much water to make it impassable. Highway 35 north of Holiday Beach was also closed for 2-3 days. Bay salinities throughout the summer were around 1 part per thousand, incredibly fresh for an estuarine system. The huge river inflows are expected to really benefit sport fish and blue crab populations, the latter which should be a huge boon to the cranes. The rains also had a down side. Oysters suffered large die-offs, and the first ever recorded dead zone resulting from a lack of oxygenated water was found at the end of July covering 1,700 square miles out in the Gulf of Mexico primarily off Freeport, Texas opposite the mouth of Colorado River. The dead zone stretched from Matagorda Bay to San Luis Pass.

Land Development

With construction started on a housing development by the crane area near Port O'Connor, a second developer has applied to the Corps of Engineers for a 700-acre canal subdivision permit located near Seadrift. This development would remove 136 acres of upland whooping crane critical habitat but would stay out of the much larger salt marsh area on the property where the cranes spend nearly all their time during the winter. The developer has proposed measures to reduce impacts. In response to a Corps of Engineers public notice and article in the Victoria newspaper, a nationwide uproar ensued with a petition started protesting the development. The issue is expected to enter formal consultation under the Endangered Species Act and, to the credit of the developer, he early on opened communications with USFWS.

On nearby property, the State of Texas received a Section 6 grant of \$412,750 to acquire a conservation easement to protect 2,160 acres at Welder Flats, a major whooping crane wintering area. Increasing commercial and residential development pressures in whooping crane habitat in Aransas and Calhoun counties make the need for habitat protection measures paramount for the recovery of the species.

Water Issues

In May, the Texas Legislature adopted a sweeping plan intended to help ensure the state's future water supply. The legislation would require basins to develop recommendations to meet instream needs for specified bays and estuaries. The Texas Commission on Environmental Quality (TCEQ) will be required to adopt these recommendations as environmental flow standards and give consideration to water permit applicants based on conservation considerations like water levels, the environment and public need. The measure would establish the Environmental Flows Advisory Group, made up of appointed members, to oversee the process. This action was hailed by some Texas environmental groups. However, the amount of freshwater inflows needed will be determined through a stakeholder process and there is no guarantee how this will all turn out.

The water bill also gave San Antonio higher pumping limits from the Edwards Aquifer, increasing the annual cap from 450,000 to 572,000 acre-feet. Without the legislation, existing law would have reduced that cap to 400,000 acre feet in 2008 although the Edwards Aquifer Authority already had approved permits for the higher limit after years of litigation over the permit amounts. The legislation would create a federal-state process for studying what are the sustainable levels of pumping from the aquifer. In mid-February, the Recovery Implementation Program (RIP) for Management of the Edwards Aquifer got underway. This RIP is a voluntary effort by all interested parties to create a long-term plan ultimately signed by the U.S. Secretary of the Interior and eligible for congressional funding. It is aimed to resolve the current chaos and adjust pumping levels for the aquifer based on sound science. USFWS is assembling all those affected by spring flows, along with scientists and other interests, to devise scientifically based and defensible policies that hopefully will settle many disputes.

Oral arguments in the San Marcos River Foundation's (SMRF) water right court case were held October 25th. The Texas Council of Environmental Quality (TCEQ) and

others are opposing SMRF's water right application and appealed when SMRF won in District Court in February, 2006. The opposition argued that the new Senate Bill 3 state water law meant that the court should throw out SMRF's application for water to be left in the river since the new law provides a methodology for addressing inflow needs. SMRF disagreed since their application is over seven years old and the date that water rights are obtained is crucial in Texas law. They also want to ensure that water is left in the river and not pumped out and sold.

Wind Power Development

The development of wind farms is occurring at a rapid pace in the Central Flyway. Many of the best wind sites are located in the whooping crane migration corridor. The Nebraska Endangered Species office in Grand Island, Nebraska is preparing GIS-maps with updated information on the location of the whooping crane migration corridor, a very important tool for analyzing the risk to the species of specific wind farms. A half dozen or so wind farms have already been built, and it is important to analyze the potential impact of literally thousands of wind turbines being placed in the whooping crane migration corridor in the coming years. The majority of the wind farms do not require federal permits and thus there is no nexus for the companies to consult with USFWS under the Endangered Species Act (ESA). One wind farm proposed in South Dakota has entered formal consultation under the ESA, the first case of its kind involving whooping cranes.

Biologists throughout the corridor have initiated conference calls to try to help individual Ecological Services offices deal with consultation issues and develop a unified approach to wind farm issues. Whooping Crane Coordinator Tom Stehn made a presentation in September to the Avian Power Line Interaction Committee expressing concerns about increased construction of power lines, especially as wind power is developed. Whooping crane collisions with power lines are believed to be the number one source of mortality for fledged whooping cranes. Wind farms have the potential to directly kill whooping cranes either from the turbines themselves, associated power line development, or could result in "take" of habitat if whooping cranes tend to avoid wind farms.

ADMINISTRATION

International Recovery Plan

After a multi-year process, a new *International Recovery Plan for the Whooping Crane* was adopted in May, 2007. This third revision to the plan originally written in 1980 was developed by an international team of experts and interested parties from the United States and Canada, and has been adopted by both countries as the roadmap to recover the species. Interested persons can obtain a copy of the revised plan on a compact disc from the Whooping Crane Coordinator, Aransas National Wildlife Refuge, P.O. Box 100, Austwell, Texas 77950, or download it from the Internet at <http://www.fws.gov/endangered> (species search, whooping crane).

Environment Canada posted in July the recovery strategy for the whooping crane in a companion “abridged” version of the International Recovery Plan. With public review completed, the final version of the recovery strategy and management plan should soon be posted on the Public Registry. Those recovery planning documents can be found at: http://www.sararegistry.gc.ca/plans/default_e.cfm

Low numbers, slow reproductive potential, and limited genetic diversity characterize the wild whooping crane population. The possibility exists that a stochastic, catastrophic event could eliminate the wild, self-sustaining AWBP. Therefore, the principal strategy of the draft revised Whooping Crane Recovery Plan is to augment and increase the wild population by reducing threats, and through the establishment of two additional and discrete populations. Offspring from the captive breeding population will be released into the wild to establish the populations in Florida and the eastern United States. Reproduction by released birds and their offspring will ultimately result in self-sustaining wild populations. The continued growth of the AWBP and the two additional populations will also stem the loss of genetic diversity.

The Recovery Plan provides objectives and actions needed to change the crane’s status from endangered to threatened and ultimately recover the species so that it no longer requires the protection of the Endangered Species Act. The recovery strategy includes: protecting breeding, wintering, and migration habitat; protecting and facilitating the growth of the current wild population that migrates from Wood Buffalo National Park in Canada to Aransas National Wildlife Refuge in Texas; establishing two additional self-sustaining populations of whooping cranes in the wild in North America; and maintaining a genetically healthy captive population. Downlisting can be achieved when: (1) there are a minimum of 40 productive pairs in the Aransas-Wood Buffalo Population (AWBP) and 25 productive pairs in each of two additional self-sustaining populations, *or* there are 100 productive pairs in the AWBP and 30 productive pairs in a second self-sustaining population, *or* there are 250 productive pairs in the AWBP; *and* (2) there are at least 21 productive pairs in the captive population. A productive pair is defined as a pair that nests regularly and has fledged offspring.

Conservation Award

Terry and Mary Kohler and the Flight Team of Windway Capital Corporation were selected for the prestigious Cooperative Conservation Award for their dedication to reintroducing wild flocks of endangered migratory birds to Wisconsin and to international crane conservation. This highest conservation award of the Department of the Interior was awarded on May 9 at an Honors Award Convocation in Washington D.C. by the Secretary of the Interior. The award nomination was based on the Kohler's and the Windway Flight Team's contributions of time, equipment, and funds and support to crane conservation and the whooping crane eastern migratory reintroduction. Hearty congratulations and gratitude from all those working in crane conservation go to them.

From a Department of the Interior press release:

For nearly two decades, the Kohlers have made significant contributions to migratory bird conservation in the United States and abroad. From 1987 to 1996, they made annual flights to Canada's Wood Buffalo National Park to bring back the eggs that have served as the foundation for the reintroduced eastern migratory whooping crane population, which migrates between Necedah National Wildlife Refuge in central Wisconsin and Chassahowitzka National Wildlife Refuge on the Gulf coast of Florida.

Windway aircraft and pilots have also flown countless missions to identify crane roosting and nesting sites, locate and track migrating birds, and transfer eggs and chicks to propagation facilities, including the U.S. Geological Survey's Patuxent Wildlife Research Center.

The Kohlers have also provided substantial funding to the whooping crane reintroduction effort in the form of matching grants, and they donated ultralight aircraft for the project and purchased a hangar for them. As a result of the Whooping Crane Eastern Partnership's efforts, there are 52 migrating whooping cranes in eastern North America, where just six years ago there were none.

The Kohlers have also made important contributions to international crane conservation, making a record-breaking around-the-world flight to deliver Siberian crane eggs from Wisconsin to Russia. The Siberian crane is one of the world's most endangered birds and a priority species for international conservation.

Among their other contributions to bird conservation in the United States, the Kohlers personally made ten flights to transport imperiled trumpeter swan eggs from Alaska to a captive breeding program at the Milwaukee Zoo. With the Kohlers' help, the Wisconsin Department of Natural Resources has successfully reintroduced wild trumpeter swans in that state.

The work of the Kohlers and Windway are detailed in a new book entitled *Chasing the Ghost Birds: Saving Swans and Cranes from Extinction* by David Sakrison that received favorable reviews.

Crane Conservation Act

From a Press Release April 5, 2007:

Washington, D.C. – U.S. Senator Russ Feingold (D-WI) and U.S. Representative Tammy Baldwin (D-WI) introduced legislation in their respective houses of Congress to protect cranes throughout North America and the world. The Crane Conservation Act would provide funding to assist in the recovery of several endangered crane species, enlist the Department of Interior in helping enhance international and domestic crane conservation projects, and encourage the Department of Interior to seek the input of individuals and organizations actively involved in crane conservation. Feingold introduced the Senate bill along with Senator Mike Crapo (R-ID).

"This legislation will build directly on successful conservation efforts that have helped prevent the extinction of some crane species," Feingold said. "My home state of Wisconsin has been a part of truly inspirational efforts to recover cranes and we would all like to see similar success not only

domestically but internationally, as well. We need to enhance education and research opportunities for crane conservationists so they can continue their important work to save these magnificent birds.”

“The International Crane Foundation in Baraboo, WI has been a world leader in protecting this endangered family of birds,” said Congresswoman Baldwin. “With federal support, the work done in Baraboo can inspire and instruct conservationists at home and abroad in their efforts to protect this magnificent species. This is the Wisconsin Idea in action and I’m proud to join Senator Feingold in introducing this important legislation,” Baldwin said.

Cranes are the most endangered family of birds in the world, with eleven of the world's fifteen species at risk of extinction. None is rarer than the North American Whooping Crane. Industrial development, pollution, and encroachments on their natural habitat have all contributed to the shrinking crane population worldwide. The Feingold/Baldwin bill will encourage further crane conservation efforts on behalf of endangered cranes throughout the world by supporting initiatives and organizations dedicated to the protection of these beautiful birds and their ecosystems.

Other

A Whooping Crane Health Advisory Team (WCHAT) meeting was hosted in September at the International Crane Foundation in Baraboo, Wisconsin. Health professionals from around the country met for two days to discuss issue of concern and update health protocols for the management of whooping cranes. The previous WCHAT meeting had been held in 1996 so many valuable updates were made at this cooperative gathering chaired by Dr. Sandie Black of the Calgary Zoo.

The Journey North website received a record 1.4 million visitors this year and received over 20 million hits. The program now reaches more than 640,000 children in 15,000 classrooms across North America. Widely considered a best-practices model for education, Journey North is one of the nation’s premiere “citizen science” projects for children.

Lifetime avian conservationist Jerry Pratt passes away on April 19th at age 96. He made many contributions to whooping crane recovery in his lifetime. Jerry was a leader in the Whooping Crane Conservation Association for many years and wrote a book on the early years of whooping crane conservation entitled *The Whooping Crane: North America’s Symbol of Conservation*. From Canadian Lorne Scott - “Jerry was a great crusader for whooping cranes for well over a half century. As one of the pioneers with the recovery of whooping cranes, Jerry and others laid a foundation from which we built upon to bring this magnificent bird back from the brink. Jerry left a great legacy!”

LOUISIANA

The Louisiana State Senate passed a bill sponsored by Senator Nick Gautreaux that urges USFWS to reintroduce whooping cranes (migratory and/or nonmigratory) into Louisiana. A response from USFWS was sent out to Senator Gautreaux.

FLORIDA NONMIGRATORY POPULATION

The nonmigratory flock in central Florida currently consists of approximately 41 birds. One whooping crane chick fledged in Florida in 2007 as dry conditions continued to plague productivity of the nonmigratory Florida population. Rain received in July helped some, but water levels remained low. The first nesting attempt in 2007 was abandoned. The second nest located on the edge of Lake Kissimmee in marginal habitat was disturbed by airboats. With concern that the incubating adults were at risk from being hit by airboats, especially at night, the 2 eggs were picked up in mid-April, incubated by Disney in Orlando, and later shipped to Patuxent and added to the first ultralight cohort but later one of the chicks died. Tests indicated a problem with Infectious Bursal Disease (IBD) and the Whooping Crane Health Advisory Team recommended a moratorium on picking up eggs from wild nests in the eastern U.S. and hatching them in captivity because of possible transmission of IBD. By May 9th, the pair on Lake Kissimmee had re-nested at the same spot. Their second nest was run over by an airboat despite the area around the nest being posted "closed". In early June, a different pair nested in Lake County whose female had previously fledged 3 chicks. The new male in the pair was an inexperienced 5-year old that had previously broken his tarsus in 2003 that had healed in the wild. The Florida Fish and Wildlife Conservation Commission (FFWCC) staff built a low fence to keep the family group in the nest wetland and not attempt to cross a busy highway to a foraging area used previously. This strategy worked as the family waited until the chick fledged and within a few days flew across the highway to the other area. This is the 9th chick to fledge in the wild in Florida since 1993.

Crane researchers met September 5, 2007 in Gainesville, Florida to discuss the modeling effort of the Florida nonmigratory population headed up by Patuxent researcher Clint Moore. There was a good exchange of ideas between FFWCC, USFWS, and USGS staff. Different models all showed poor chances of the Florida population reaching target goals after 100 years. Ideas were expressed to refine the models and present final data by January, 2008. The one bright spot for the Florida reintroduction is the survival of 8 of 9 chicks fledged in the wild. The first wild-hatched chick, the one named "Lucky", was not so lucky. Three of the surviving 8 chicks from wild nests have paired, but periodic droughts have really hurt flock productivity. Additionally, about half the Florida flock is using areas scheduled for development. Another problem is that reintroduced male whooping cranes are not living as long as females, with none living past 10 years of age.

WHOOPING CRANE EASTERN PARTNERSHIP (WCEP)

The eastern migratory whooping crane population currently includes 52 adult birds and 17 juveniles. The whooping crane breeding facilities worked hard in 2007 to support WCEP. Eggs were produced at the Calgary Zoo, the San Antonio Zoo, and the Species Survival Center in New Orleans as well as Patuxent and the International Crane Foundation (ICF). Eggs were shipped across international borders and between facilities to meet production targets for the ultralight (UL) and direct autumn release (DAR) reintroduction programs. Seventeen captive-hatched birds were raised and conditioned for the UL-led release and 10 chicks were raised for the direct autumn release (DAR)

project. Chicks were hatched and trained at Patuxent prior to shipment to Necedah NWR for the ultralight (UL) project. The Windway Capital Corporation flight team transported the chicks to Wisconsin. Additional eggs were hatched and raised for several weeks at ICF before being transported to Necedah NWR for the DAR project. The UL migration team started the migration on October 17. DAR chicks were released into the wild at the end of October. At present, the 5 DAR birds from past year releases do not associate with other whooping cranes. It will be good to have a larger sample size of DAR birds released in 2007 to determine whether current rearing and release methods have made a difference in DAR bird behavior towards other whooping cranes.

The nesting season for the migratory whooping cranes in Wisconsin was a disappointment. All four nests built in central Wisconsin were abandoned for unknown reasons. Nesting failure is currently the project's foremost concern. Nest abandonment may be related to the inexperience of the parents. Abandonment occurred over the same time period for all 4 nests and coincided with the arrival of a warm front that increased local temperature to 70°F. There was speculation that the abandonment could be food-related if the warm weather provided access to a food source not available in cold conditions. Remote cameras will be used again in 2008 to observe nests. One noteworthy success was that the wild chick hatched in 2006 returned north to Wisconsin in spring, 2007. It demonstrated good behavior during summer at Necedah NWR and associated with other whooping cranes.

Two eggs were collected from the abandoned nests and incubated at ICF. An egg swap was attempted in one re-nest of a sibling pair of Wisconsin cranes to improve flock genetics. The pair left the nest site during the swap and never returned, so the single egg was picked up and incubated at ICF. However, it turned out that the egg was infertile.

The loss of 17 juveniles in the pen at Chassahowitzka due to a lightning event in February, 2007 set back the reintroduction by nearly a year. One juvenile bird had escaped from the pen during the storm and moved inland. It died 3 months later from unknown causes prior to starting the migration. The WCEP Project Direction Team undertook a comprehensive review of the events leading up to the loss of the 17 cranes. Some changes are being made to protocols for managing the birds at Chassahowitzka during the 2007-08 winter. The team is also considering whether the winter release site should be moved to St. Marks NWR in 2008-09.

The Whooping Crane Eastern Partnership in mid-September held their fall meeting at Necedah NWR in central Wisconsin. With so many partners involved in the eastern reintroduction, including agencies and non-profits, the twice a year meetings are important to handle the many issues that arise.

CAPTIVE FLOCKS

The whooping crane breeding facilities had a very good production season in 2007 but overall fell just slightly below our sky-high expectations. The Calgary Zoo had another very good production season, with their earliest ever first egg laid on March 31, with a snow storm hitting the very next day. Their artificial insemination program for the

second year in a row greatly increased flock fertility. Calgary shipped 9 eggs to Patuxent in two separate shipments and 3 eggs to ICF, and held back two chicks for genetic purposes to build the captive flock. San Antonio shipped 2 eggs to Patuxent in mid-April from their one producing pair. The Species Survival Center (SSC) in New Orleans shipped 2 eggs to Patuxent and 2 eggs to International Crane Foundation (ICF). SSC completed work on their new crane pens and expects to receive whooping cranes from other facilities this fall.

Patuxent had a year of challenging health issues in the chicks, but still managed to ship 18 birds to Necedah for the ultralight migration project. This was a little disappointing but understandable. It is just plain difficult to breed and raise whooping cranes in captivity, and all the captive facilities do an outstanding job. Patuxent kept two holdbacks for genetic purposes and had one additional chick held back for health reasons.

In addition to President Bush's presence in October, Jane Goddall visited Patuxent in April to get information for a book that she is writing on restoration of endangered species. She is a remarkable lady for those who have never had the chance to meet her.

Patuxent has hired Dr. Sarah Converse as a crane researcher at Patuxent. Dr. John French continues to have responsibility for much of the administration while Sarah will focus on research. Patuxent made other personnel moves including making one animal care staff permanent and hiring a technician for the veterinary hospital. Facility upgrades were completed in the white pen series where the older chicks targeted for the eastern migratory release are housed.

A major snow storm at ICF on April 11th collapsed some pen flight netting. Some cranes had to be moved while repairs were made. In 2007, ICF at one point produced 12 chicks for DAR and had one genetic holdback being raised at their whooping crane exhibit. ICF was fortunate to have only a few minor leg problems this year along with a few crooked toes. However, health issues resulted in final production totals of the 10 DAR chicks.

A crane named "Rattler" at ICF broke the record for longevity of a whooping crane in captivity! He turned 39 on June 2nd. Rattler hatched at the Patuxent Wildlife Research Center on June 2, 1968 and lived there until 1989. Thus, half of the longevity should be credited to Patuxent. The previous record was 38 years, 7 months for "Canus" (an injured wild caught chick) at Patuxent who died in 2003. The aviculturists gave Rattler special food treats throughout his birthday week to celebrate and baked cupcakes for themselves for Rattler's birthday party.

At the Milwaukee County Zoo, their single whooping crane was moved to its public exhibit on May 22nd. The bird's injured wing which has been repaired surgically looks great, is being carried normally, and can nearly be fully extended with some remaining limited range of motion.

During the summer, one of the cranes at the Jacksonville Zoo injured his leg in mid-April. Following surgery and an extended recovery period, the knee and hock seem to

have fully recovered but the bird is still receiving treatment for a problem with one of his feet.

WHOOPING CRANE NUMBERS IN NORTH AMERICA October 29, 2007

Wild Populations

| | Adult | Young | Total | Adult Pairs |
|-----------------------------|-----------------|-----------------|------------------|-------------|
| Aransas/Wood Buffalo | 236 | ? ^A | 236 ^A | 69 |
| Rocky Mountains | 0 | 0 | 0 | 0 |
| Florida non-migratory | 40 ^B | 1 | 41 ^B | 17 |
| Wisconsin/Florida migratory | 51 | 27 ^C | 78 | 4 |
| Subtotal in the Wild | 327 | 28 | 355 | 90 |

^A A record 84 chicks hatched from 65 nests in 2007, and 250+ cranes are expected to arrive at Aransas by early winter, including 40 juveniles. The number of chicks hatched in Wood Buffalo in 2007 will not be added to population totals in this table until the flock is censused at Aransas in early winter, 2007.

^B This number reflects the birds regularly monitored in Florida. A few additional cranes could be present in unknown locations. One chick fledged in the wild in 2007.

^C The 27 chicks were raised in captivity and shipped to the Necedah NWR in central Wisconsin for later reintroduction. Seventeen will be led by ultralight to Florida, and 10 are scheduled to be released with other wild cranes in central Wisconsin. 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) all either provided eggs or hatched and raised chicks in 2007. Two eggs came from a wild nest in Florida and 2 eggs came from wild nests in WI.

Captive Populations

| | Adult | Young* | Total | Breeding Pairs |
|---------------------------------------|-------|--------|-------|----------------|
| Patuxent WRC, Maryland | 60 | 3 | 63 | 13 |
| International Crane Foundation, WI | 35 | 0 | 35 | 11 |
| Devonian Wildl. Cons.Cent./Calgary | 21 | 2 | 23 | 6 |

| | | | | |
|------------------------------------|-----|---|-----|----|
| 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 | 8 | 0 | 8 | 1 |
| Homosassa Springs Wildl State Park | 2 | 0 | 2 | 0 |
| Lowry Park Zoo, Tampa, Florida | 2 | 0 | 2 | 0 |
| Jacksonville Zoo, Florida | 2 | 0 | 2 | 0 |
| Milwaukee County Zoo, Wisconsin | 1 | 0 | 1 | 0 |
| Subtotal in Captivity | 143 | 5 | 148 | 32 |

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

TOTALS (Wild + Captive) 355 + 148= 503