

WHOOPING CRANE RECOVERY ACTIVITIES

SEPTEMBER 2002 - MARCH 2003

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HIGHLIGHTS

The Species at Risk Act (SARA), the Canadian equivalent of the Endangered Species Act, received Royal Assent in Canada in December and will take effect later in 2003.

The Aransas-Wood Buffalo population was estimated at 169 adults + 16 chicks = 185 total, an increase of 12 from last spring. One chick died in February, 2003 making the current population 184. Blue crabs were abundant throughout the winter, leaving the cranes in good condition for the upcoming migration and nesting season.

Lucky, the first whooping crane chick to fledge from the reintroduced Florida population, separated from his parents in January and socialized with other whooping cranes. He was captured and fitted with a radio transmitter. Chicks have hatched in three nests through March, 2003.

The five ultralight whooping cranes from 2001 summered in central Wisconsin in 2002 and returned to western Florida in the 2002-2003 winter. Only one of the five remained in the salt marsh at Chassahowitzka NWR. Sixteen more whooping cranes were led south behind the ultralight and wintered successfully without any mortality. By April 1, all 21 migratory whooping cranes were migrating north.

The captive crane named CANUS, the oldest known whooping crane of almost 38 years, died in January. He had sired 186 offspring during his long stay at Patuxent.

A genetics workshop was held at the International Crane Foundation (ICF) in September with many key personnel participating. A product from the workshop was a whooping crane genetics master plan written in January by Ken Jones and Dr. Bob Lacy.

In January, recovery actions for 2003 were formulated at international meetings held in Sacramento, California of the Whooping Crane Captive Management and Recovery Teams, followed by the 10th North American Crane Workshop. Meetings of the Whooping Crane Conservation Association (WCCA) and Whooping Crane Eastern Partnership (WCEP) were held in February in Texas.

Dr. John French of the Patuxent Wildlife Research Center became the newest member of the Recovery Team. Former team member Dr. George Gee retired and was awarded the Lawrence Walkinshaw award for his many contributions to crane recovery. Congratulations, George!

CANADA'S SPECIES AT RISK ACT

The Species at Risk Act (SARA) received Royal Assent in Canada on December 12, 2002, bringing to a close a 9-year legislative process to protect Canada's Species at Risk. This is Canada's equivalent of the U.S. Endangered Species Act. It will take effect sometime in 2003. SARA is one of three elements of the government's Strategy for the Protection of Species at Risk. The government works with provinces and territories on a common approach to protecting listed species. Under the Stewardship Agenda passed in 2002, the government encourages Canadians to work together in a landscape approach to protect habitat, contribute to the recovery of species at risk, and conserve Canada's natural heritage. The new Act also requires federal agencies to meet tight guidelines for recovery strategy development, to develop these strategies in cooperation with authorized wildlife management boards, aboriginal and other organizations, to evaluate the socio-economic costs of the action plan, and to designate Critical Habitat. The Canadian Wildlife Service and other parties deserve tremendous credit for persisting with their intensive efforts over the years to get this legislation passed.

ARANSAS

The Aransas-Wood Buffalo population made a significant increase of 12 cranes in 2002. The peak population at Aransas during the 2002-2003 winter was estimated at 185, higher than expected from the 173 cranes present at Aransas in spring 2002. Sixteen juveniles arrived at Aransas in the fall. Adult mortality between spring and fall, 2002 was below average and equaled only 4 birds. One chick died in February, 2003 lowering the current flock size to 184.

Fall Migration

The following on the fall migration is from the Cooperative Whooping Crane Tracking Project written by Wally Jobman.

“The first dates for confirmed observations of migrating whooping cranes were July 1 in Canada and October 13 in the U. S. The latest confirmed migration sighting was November 17. Sightings were reported from Saskatchewan (43), Alberta (3), North Dakota (16), South Dakota (2), Nebraska (9), Kansas (12), Oklahoma (12) and Texas (5). The first storm system of the fall moved through the Great Plains on October 12-14, prompting a sandhill crane migration and the first whooping crane sightings in the U. S. Mild weather then returned until the last 3 days of October, when a major storm with snow and unseasonably cold temperatures initiated a major migration of cranes and waterfowl. The first whooping crane arrived at Aransas on October 24th. About 91 % of all arrivals (i.e. 168 birds) occurred between October 24 and November 20.”

A total of 17 whooping cranes with 7 different sightings including one group of 8 were confirmed stopping along the Platte River. Eleven of 17 were outside Critical Habitat. This was the first fall monitoring season for Whooper Watch, an organized effort that includes much work by volunteers.

Aransas National Wildlife Refuge

At Aransas, abundant fall rains, including a tropical storm on September 6, broke the drought and provided flooding inflows to the bays, dramatically lowering salinities. Survival of blue crabs increased, a result of reduced predation in the less saline waters. Blue crabs were available throughout the 2002-03 winter, leaving the cranes in good condition for the upcoming migration and nesting season. Finding abundant food supplies, cranes remained on their territories throughout the winter and did not have to fly to fresh water to drink.

Two prescribed burns carried out on Aransas NWR in January were visited by whooping cranes, but use quickly tapered off. It is believed the light use of these uplands resulted because of the abundance of food in the salt marsh. Why expend energy and fly to eat acorns when blue crabs high in protein are available?

In February, in partnership with the Coastal Bend Land Trust and the Texas General Land Office, the Texas Nature Conservancy purchased 245 acres of marshlands on the Johnson Ranch located adjacent to the Lamar Unit of Aransas NWR. This salt marsh habitat will be donated to the refuge. A crane pair has had a winter territory on this property for 30 years. An additional 571 acres will be protected through a conservation easement that allows the ranch owners to continue living on the property and operating a bed-and-breakfast that offers views of the cranes. Many thanks go to ranch owners Al and Diane Johnson for their land ethic to protect forever a beautiful piece of property, their love of cranes, and their patience working to make this conservation transaction happen.

Biological technician Nick Antich of the Platte River Habitat Trust, under the direction of Dr. Felipe Chavez-Ramirez, spent January and February at Aransas. Nick spent most of his time recording crane unison calls, and also worked with testing camera systems that may be used for monitoring crab movements into the salt marsh.

In the summer of 2002, the Army of Engineers began two marsh creation projects. Beneficial Use Site D is located near Rattlesnake Island next to the refuge, and Beneficial Use Site A is at Welder Flats. Material was placed at both sites, but an additional round of dredging will be needed to get the elevations needed for marsh creation. These projects are part of the 50-year plan to use dredge material that will create marsh habitat.

The Festival of Whooping Cranes and Other Birds was held at Port Aransas, Texas February 21-23, 2003. The refuge provides materials at a booth, and provides a speaker for one of the main programs.

At the Aransas centennial celebration held March 15 at the refuge, the ConocoPhillips Corporation presented Jane Goodall with a whooping crane feather. Ms. Goodall had wanted a feather from a species that had made such a remarkable comeback and felt it would symbolize hope for all wildlife around the world. About 1,100 people attended a

public presentation Ms. Goodall gave, and a long line of hundreds of fans stood in the rain to get items autographed. She is a very gracious and caring person. Thanks go to ConocoPhillips for hosting the entire event that included a banquet for special guests, public tours of the refuge, and a special boat tour to about 30 invited guests to show Ms. Goodall a whooping crane. The cranes cooperated and provided her close up views and even guard called for her. It was quite a memorable day for the refuge and all who participated.

In December, the refuge staff moved into new offices in the basement of the Visitor Center. The refuge maintenance staff did a remarkable job over the past year converting an unfinished concrete dark, dingy basement into a beautiful complex office.

Whooping crane coordinator Tom Stehn was presented a 2002 Recovery Champion award at a ceremony at the Corpus Christi aquarium on November 7th. Awards were given to USFWS employees who are making a difference in promoting the recovery of a single endangered or threatened species, and contributing to achieving milestones in advancing a species towards recovery.

Freshwater Inflows

Issues connected with freshwater inflows on the Guadalupe River that flow into Whooping Crane Critical Habitat continued to swirl in all directions. After the staff of the Texas Council on Environmental Quality issued a draft permit to the San Marcos River Foundation (SMRF) recommending that a conservation water right of close to one million acre-feet be granted, TCEQ Commissioners denied the permit in March, stating a water right could not be granted to leave water in a river. Many politicians including the Lieutenant Governor of Texas, along with water agencies and the city of San Antonio, had mounted a campaign to deny the permit application. Diane and Tom Wassenich and other SMRF members did yeoman work garnering support from fisherman and other coastal interests to support their application. They have really turned this into a major issue in Texas and accentuated the need to provide conservation flows in rivers before they all become over-appropriated as the overwhelming growth of South and Central Texas continues, with the human population expected to double in the next 50 years. This is a conservative estimate; counties such as Guadalupe County are expected to have double the human population in 15 years. These are the types of water demands Texas Rivers are facing. USFWS had written a letter of support for the SMRF application.

Diane Wassenich of SMRF provided the following on the hearing:

“On March 19, TCEQ denied the SMRF instream flow application, saying they did not have authority to grant instream flow permits for protecting rivers and bays... They said they wanted to continue their past practice of protecting rivers and bays with conditions on any permits to pump water out of the rivers. They went against the recommendations of their staff in denying our permit. Their staff had recommended it go to a hearing. Needless to say, if the TCEQ had been protecting the rivers and bays, we would not have needed to apply for this permit. We don't see this as a set back, it

is just another step in the long process. SMRF attorneys will immediately file a request for a rehearing by the TCEQ Commissioners, a standard first step when a permit is denied, that you have to do in a very short period. If they do not change their decision, we will go to district court to prove that the law is clear; our permit should be allowed to go to a hearing to decide how much water should be granted. There are other instream permits that have been granted in the past by this agency for wildlife, fish, recreation and preserving wetlands. We remain committed to protecting instream flows and freshwater inflows, and we know you all do too. We had a good turnout of folks from all over Texas for the hearing with representatives from many groups. We just have to look at this as a good press opportunity to get the word out that we must protect our rivers and bays in Texas, right now, before it is too late, and it is NOT being done currently. We were thrilled about the recent National Wildlife Federation poll about how Texans really do want their rivers and bays to have enough water, even if they have to be more efficient with water to accomplish that. That poll is a real boost! It helps to know the majority of Texans are firmly with us on this.”

The Guadalupe Blanco Water Authority has applied for a permit for all unappropriated water currently remaining in the Guadalupe River. How much water is available? TCEQ studies found that their minimum conservation flow of 980,000 acre-feet would only be available in 4% of years, and if tabulated by individual months, available in 44% of months. Thus, minimum conservation flows would be available less than half the time. In drought years, there is not even going to be the minimum amount of water needed by the bays and estuary. TCEQ water availability computer models clearly show how over-appropriated some Texas rivers really are. This illustrates the urgent need to preserve some of the water left in this river system, especially during dry periods.

Two meetings were held in San Antonio (Jan. 31 and Feb. 27-28) to fine tune the proposed study on the relationship of inflows, salinities, blue crabs, and whooping cranes. The study will involve 4 professors and an equal number of graduate students and is to be completed in 2007. Well-known crane people involved will be Dr. Doug Slack and Dr. Felipe Chavez-Ramirez. This study is being funded by water developers that have applied for 289,000 acre-feet per year, proposed building a diversion reservoir at the mouth of the Guadalupe River, and would pump both river and ground water from the Gulf coast back to San Antonio. This project, called the Lower Guadalupe Water Supply Project, is one of the major proposed developments in Region L as part of the new State Water Plan.

Crab Trap Pickup

The second closed season for commercial crabbing was held at the end of February, 2003. Over 4,000 abandoned crab traps were picked up by the general public and agency personnel during the closure. The first crab trap pickup in 2002 resulted in almost 8,100 traps removed. Prior to 2001 and the new legislation, only TPWD wardens were authorized to pick up traps, but the job was beyond the scale they could handle. When not picked up, “ghost” traps continue to kill numerous wildlife species. In a random sample, two-thirds of the traps collected lacked the mandatory biodegradable panels that

reduce ghost fishing losses from abandoned or lost traps. Studies done in Louisiana indicated that each abandoned trap killed 26 blue crabs annually.

This effort may not be done next year until more traps accumulate. However, hundreds of traps still remain on Matagorda Island. High winds and the remote location did not allow any cleanup efforts in the crane area on Matagorda Island during the February closed season. Tom Stehn is helping organize a 1-day pickup in conjunction with TPWD and USFWS law enforcement personnel in April on Matagorda Island to cleanup the locations in the crane areas with the most traps.

ADMINISTRATION

In a special report in February, the National Wildlife Federation named the whooping crane as the wildlife winner over the past year. This selection was based on successful recovery efforts carried out during 2002, including milestones for the central Florida and Wisconsin to Florida flocks. Congratulations to all who were responsible for all the accomplishments in the past year.

The National Academy of Science has started a 1-year study of Critical Habitat of four endangered species on the Platte River as proposed by Representative Osborne of Nebraska. He questions the designation of critical habitat and believes that the best available science was not used in that determination. The review will be concluded and a final report issued in 2003. A summary statement for the NAS study is as follows;

"A multidisciplinary committee will be established to evaluate the Central Platte River habitat needs of the federally listed whooping crane, Northern Great Plains breeding population of the piping plover, interior least tern, and the Lower Platte River habitat needs of the pallid sturgeon. The committee will review the government's assessments of how current Platte River operations and resulting hydrogeomorphological and ecological habitat conditions affect the likelihood of survival of and/or limit the recovery of these species, and whether other Platte River habitats do or can provide the same values that are essential to the survival and/or recovery of these species. The committee will consider the scientific foundations for the current federal designation of Central Platte habitat as "critical habitat" for the whooping crane and the Northern Great Plains breeding population of the piping plover."

Feathers and eggshell fragments from Wood Buffalo National Park were imported in mid-February for genetic testing. It took Coordinators Brian Johns and Tom Stehn more than 6 months to get all of the approximately 9 permits and/or required documents together for the import. Due to an oversight, the material shipped by FedEx, never got inspected by wildlife and USDA officials, but the paperwork still had to be forwarded before officially cleared after the fact. Permit issues are at best a hassle and are always time consuming.

The zoo in Victoria, Texas has asked to display a pair of whooping cranes. Dr. Mike Putnam of ICF inspected the Victoria facilities in February and will make recommendations to the Captive Site Selection Team.

GENETICS

A genetics workshop was held September 24-25 at the International Crane Foundation (ICF). Present were flock managers and genetic specialists Ken Jones, Claire Mirande, and Bob Lacy. A goal was set to retain 90% of the genetic material of whooping cranes in captivity for 100 years. To do this, the size of the captive flock will have to be increased to 153 cranes above the current level of 118. Participants also listed all pairs as to their genetic uniqueness, and designated offspring for different purposes, including retention as breeding birds, production birds for reintroductions, or over-represented pairs needed for role models, parenting chicks, display birds, research, etc. Following the workshop, a whooping crane genetics master plan written by Ken Jones and Dr. Bob Lacy was finalized in January and serves as the species survival plan. Ken Jones is the new AZA species coordinator.

WHOOPING CRANE RECOVERY TEAM

Dr. John French of the Patuxent Wildlife Research Center became the newest member of the Recovery Team after former team member Dr. George Gee retired after many years contributing to cranes. Thank you, George, and good luck building your new home in Maine!

In January, the Whooping Crane Captive Management and Recovery Teams met in Sacramento, California. A consensus was reached to continue waiting 2 years to see if a pair is naturally fertile. Pairing of young captive birds should occur at approximately 2 ½ years of age. Plans were formulated for placement of captive produced young in 2003 to support improving genetics of the captive flock, and support the Florida and WCEP reintroduction programs. Production in 2003 is anticipated to be between 36 and 48 chicks. Production in 2002 totaled 35. The Recovery Team allocated 4 or 5 chicks from designated pairs to be kept in captivity for genetic reasons, up to 18 chicks to Florida and 20 chicks to WCEP if available. A cohort of 9 chicks will be formed at Patuxent based on the genetic needs of the Florida population. ICF will form a second cohort of 9 for Florida with some eggs shipped to ICF for that purpose from other captive facilities. The priority allocation for chicks remains; 1) needs of the captive flock 2) Florida non-migratory reintroduction, 3) eastern migratory reintroduction, 4) research on other release techniques, and 5) chicks for display or other research projects. It was anticipated there would not be enough production to support a 1 x 1 Wisconsin release in 2003. The Recovery Team recognizes the need to develop a supplemental release technique and recommends that WCEP proceed with steps to implement the project in 2004, including seeking concurrence from the Florida Fish and Wildlife Conservation Commission.

The effects of removing second eggs from nests in Wood Buffalo National Park were present by Dr. Mark Boyce, University of Calgary, and by Mark Bradley of Wood

Buffalo National Park (via conference call). Although Dr. Boyce's analysis indicated that picking up the second egg actually increased chances of one chick surviving, this increase was offset by the occasional twins that survive if both eggs are left in the nest. A key for describing egg pickup impacts was in what part of the 10-year whooping crane population cycle the eggs were collected. When predator populations are decreasing, signifying tough times for predators, predation apparently increases on whooping crane young, and Dr. Boyce's analysis indicates it would be advantageous to pick up the second egg. Mark Bradley pointed out weaknesses of the data set, such as the lack of random nest selection when picking up eggs and lack of a control group of nests, and cautioned against drawing conclusions. Brian Johns and Mark Bradley in March went through the data set to provide a better product for Dr. Boyce to do a final analysis on.

The Recovery Team in January stated their belief that egg collection would not increase the recruitment of the AWBP over the long term, but could increase recruitment in selected years. The Team would like to document the rate of twinning over the next 4 years without any egg collection in order to observe the population dynamics through a full 10-year population cycle (1997-2006). The genetics master plan indicates that genetics of the AWBP is well represented in the captive flock; hence there would be little to gain genetically from removing additional eggs from WBNP. The Team felt that the issue of egg collection should be re-evaluated when the MOU is up for renewal in 2006.

The draft Whooping Crane Recovery Plan was sent out in mid-September to the Recovery Team and other partners for review. Major revisions were made in December based on new draft USFWS recovery plan guidelines that resulted from several court actions. Additional revisions were discussed at the January Recovery Team meetings. Coordinators Brian Johns and Tom Stehn hope to have a final draft in April, 2003 for agency review followed by public review.

NORTH AMERICAN CRANE WORKING GROUP (NACWG)

The 9th North American Crane Workshop was organized by NACWG and held January 21-25. The workshop in Sacramento, California allowed participants to see sandhill cranes in the Pacific Flyway and learn about the problems they face, especially from the continued development in California. This workshop held every 3-4 years is an important event for crane recovery since it allows scientists from all over North America to exchange ideas and publish research findings. Special thanks go to Dr. Dave Ellis who edited the last Proceedings, and to Dr. Felipe Chavez-Ramirez who has promised to edit the 2003 Proceedings. Board members Mary Bishop, Wendy Brown, Steve Nesbitt and Scott Hereford of NACWG decided to step down after more than a decade of service. New board members elected were Dr. Glenn Olsen (President), Dr. Gary Krapu (Vice-President), Tracy Grazia (Secretary) Tom Hoffmann (Treasurer), Dr. Felipe Chavez-Ramirez, Dr. Marilyn Spalding and Dr. Richard Urbaenk. The new editor of the newsletter is Sheryl Leffer, and Richard Urbanek is webmaster. The Lawrence Walkinshaw award was awarded to Dr. George Gee of Patuxent. Lifetime achievement awards went to C. D. Littlefield, Dr. Rod Drewien, and Steve Nesbitt. A special achievement award was given to Xiomora Galvez and Cuban biologists for their work on

the Cuban sandhill crane. The next workshop will be in Mexico in December, 2005 or January 2006.

Resolutions were passed at the workshop supporting:

1. freshwater inflows from the Guadalupe River for the conservation of blue crabs and whooping cranes
2. continued designation of whooping crane critical habitat on the Platte River in Nebraska
3. the Crane Conservation Act (Senate Bill 128) that would provide funding for crane conservation worldwide and focus on 11 of the 15 crane species that are endangered or threatened.
4. construction of whooping crane breeding facilities at Audubon Center for Research on Endangered Species (ACRES) in Belle Chasse, Louisiana.

WHOOPING CRANE CONSERVATION ASSOCIATION (WCCA)

The annual meeting of the WCCA was held in Port Aransas, Texas in February in conjunction with the Festival of Whooping Cranes and Other Birds. Members went on birding tours, including a whooping crane boat tour, and heard speakers on a variety of conservation topics.

A special field trip by bus was made to Aransas NWR. WCCA members were elated to observe many whooping cranes during the two field trips.

In addition to a business meeting, the WCCA invited various speakers for an interesting afternoon of presentations and discussions. Steve Nesbitt has been elected the new Trustee for the WCCA. In January, the WCCA passed a resolution requesting that the Recovery Team should immediately resume picking up the second egg from nests in Wood Buffalo National Park to help reintroduction programs, improve the genetics of the captive flock, and increase survival of 1-egg nests in Canada. The WCCA has enlarged and improved its *Grus Americana* newsletter and completely revamped its web page. WCCA's web page is <http://www.whoopingcrane.com/>.

CENTRAL FLORIDA

Lucky, the first fledged chick from the non-migratory flock continued to do well. The family group was captured in a clap trap September 3rd and received radio transmitters, the first multi-crane capture using the clap trap. Lucky separated from his parents in January and found other cranes to associate with prior to his parents nesting at the end of January.

The Florida crane crew was kept busy dealing with individual birds. Between October and December, 9 whooping cranes were captured. In September, crane 597, a female hatched in 1995 at ICF, was observed with a broken leg and was attracted by bait and captured with a net gun from 25 feet away. Animal Kingdom is now handling trauma

cases. Following surgery, crane 597 was transferred to Lowry Park Zoo where she died unexpectedly eight days after capture. The necropsy showed she had inhaled a kernel of corn, presumably during the capture operation when startled by the loud sound made by the net gun. A proposed remedy to prevent this from happening is to attract cranes for capture with cracked rather than whole kernel corn.

One adult crane was found dead on October 10th, apparently from bobcat predation. In November, an adult female was captured and diagnosed with aspergillosis. The bird was started on drug therapy at Animal Kingdom and then transferred to Lowry Park Zoo where treatment continued for two months. After this long stay in captivity, biologists felt she had become too tame to put back in the wild, so she will remain in captivity. This bird had been captured one and a half years previously, but veterinarians had not been able to find anything wrong.

Releases continued in Florida with birds hatched from the captive flock in 2002. Six whooping cranes, a mixed cohort of cranes from the International Crane Foundation (ICF) and the Calgary Zoo, were shipped December 18th. A cohort of six from Patuxent that included one chick from the San Antonio Zoo arrived in Florida on February 5th. All cranes were released at a former release site in Lake County where water levels had risen dramatically after the end of the drought, and a few older whooping cranes were present. A single juvenile from the San Antonio Zoo was shipped to Florida on March 6th and released 1 on 1 with the birds from the other cohorts. Although it hid at times in tall vegetation on an island and did not socialize well for parts of the first week making it extremely vulnerable to predation, the crane survived and gradually socialized with the other cranes. This bird had been scheduled to be with the Patuxent release cohort, but health tests were not completed due to an error by a commercial lab, so that health clearances were not received in time to ship it to Patuxent for socialization.

One of the released juveniles hit a power line and was killed. A second bird suffered a broken leg but was able to locomote and continued to feed. A decision was made not to attempt to capture this bird and see how well the leg would mend on its own. The other 11 released birds are doing well.

The return of rain to Florida brought wetlands back to life and raised water levels substantially. Biologists were hopeful that the greatly improved water levels would stimulate crane nesting in 2003. Sandhill crane production in Florida was only 8-9% in 2002 compared to the long-term average of 11%, a result of poor habitat conditions because of the drought.

By the end of March, 2003, Florida whooping cranes at spring training batted 3 for 3, with chicks hatched from 3 nests, including at least 2 sets of twins. Lucky's parents were one of these successful pairs that hatched one chick but the second egg was infertile. Additional pairs are expected to nest in April.

One of the topics focused on at the January Recovery Team meetings was Infectious Bursal Disease, a malady that had resulted in greater than 50 % mortality from all the

cohorts released in the 2001-02 winter. IBD is a virus known from domestic poultry that only affects birds in their first year. It is not known if the cranes are picking it up in Florida or are first exposed at the captive facilities. A vitally important research proposal by Dr. Marilyn Spalding for \$48 K to study IBD remains unfunded at this time. We need to learn about the biology of the virus, source and transmission, presence in wild Florida sandhill cranes and captive flocks, use of a vaccine, and continued surveillance of future and archived sera. For this and other unexpected events, the Recovery Program needs a relatively small pot of money to cover critical needs as they arise.

WHOOPING CRANE EASTERN PARTNERSHIP (WCEP)

In the summer and fall, preparations continued for the second ultralight-led migration from Wisconsin to Florida. Improvements continued to be made as methodology, facilities, and equipment got fine-tuned. A major need was to provide suitable roosting habitat at the release pen at Chassahowitzka NWR in Florida to accommodate rapidly changing tide levels. In September, 95 tons of shell (200 loads carrying 750 lbs per load) were transported by helicopter to create sloped roosting habitat in the salt marsh pen site. A MarshMaster tracked vehicle was used to shape the shell once it was dropped into the marsh. The operation involved personnel from 5 refuges as well as 4 pilots and 2 helicopter ground crews. The pen was also more than doubled in size, the work done by a fencing contractor. The folks from Chassahowitzka NWR and Jacksonville Ecological Services field office, along with help from many others in the southeast region, are to be congratulated for getting this accomplished. The new pen site is greatly improved from last year. A new FEMA trailer was driven from Texas to Florida by two Aransas volunteers in November in preparation for the arrival of project personnel.

WCEP pre-migration planning meetings were held September 22-23 at the International Crane Foundation in Baraboo, Wisconsin. These meetings immediately followed the successful Crane Festival at Necedah that attracted approximately 3,800 visitors from 14 states and 8 foreign countries. A small team met at Necedah NWR in early October to formulate plans for an experimental 1 x 1 release where whooping crane juveniles would be released into the wild in Wisconsin with older whooping cranes. This proposal was presented to the Recovery team in January and hopefully will be carried out in 2004.

The migration got underway October 13th but quickly ran in to bad weather. Strong winds led to choppy flight conditions and one crane was injured colliding with a wire on the ultralight. This crane had to drop out of the migration and later was euthanized. The remaining 16 whooping cranes soon learned the migration routine, but not without numerous adventures as birds occasionally dropped out from flights and were transported by vehicle in a crate to re-join the cohort. The migration team was held up on numerous days by bad weather. The team was joined in flight one day in November over Tennessee by two of the ultralight-led whooping cranes from 2001. After great perseverance, the team finally made it south of all the bad weather and made great time through Georgia and Florida, covering 560 miles in 8 consecutive flight days. The team arrived November 30th with all 16 birds in flight behind four ultralights. The 49-day

migration was extremely successful; it just took time and lots of hard work, but was actually one day shorter than last year's trip.

The migration in 2002 generated even more publicity than last year, as public relation specialists traveled with the team and stayed extremely busy handling media requests, promoting the project and doing educational work. Once again former President Jimmy and Rosalyn Carter visited the migration team. An arrival event at Chassahowitzka created additional great interest, although made difficult by the Thanksgiving weekend. Web sites of WCEP partners have proven to be an effective outreach tool, with over 4.5 million visits.

The 16 ultralight-led whooping cranes adapted well to life in their improved release pen at Chassahowitzka NWR, leaving the release pen for short periods throughout the winter. They frequently roosted on the oyster bar in the pen constructed during the summer. They were joined by one of the 2001 ultralight cranes that spent its second winter in the release pen. The other 4 whooping cranes from 2001 also returned to western Florida. One of them arrived at the release pen at Chassahowitzka on November 21 after leaving Horicon NWR in Wisconsin on November 14th. This bird was discovered by a work crew finishing improvements to the new release pen. This crane later wintered at the Hixtown Swamp, an area in Madison County about 135 miles north of Chassahowitzka. A second 2001 ultralight whooping crane also wintered in this area. This second bird had spent a long time in the early winter at Hiwassee NWR in Tennessee. When food resources became scarce at Hiwassee, the crane continued its migration south on January 3rd and quickly found the other whooping crane at Hixtown Swamp on January 5th. Two other 2001 ultralight whooping cranes also returned to Chassahowitzka and spent several days in the salt marsh to the north at St. Martin's Marsh. When tides rose and there was no suitable roosting habitat, the two cranes moved 40 miles south to Pasco County where they spent the rest of the winter inland with sandhill cranes in freshwater wetlands and pasture lands.

The Recovery Team recommended that more information be obtained from the 2002 ultralight-led cranes on winter habitat preference in Florida. It has become apparent that there may be problems with wintering conditions in salt marsh in western Florida including fluctuating tides, high salinities, and limited suitable upland habitat. The Team recommended that WCEP should confer with the Florida Fish and Wildlife Conservation Commission this summer about aspects of the reintroduction.

In mid-February, the two wintering whooping cranes at Hixtown Swamp started the migration separately at least 3 days apart, but were apparently seen together March 2 in Tennessee. They later split up again. One crane was reported back in Wisconsin at the end of March. The two wintering cranes in Pasco County headed north on March 25. The 5th ultralight whooping crane remained in the release pen at Chassahowitzka with the 2002 cohort until April 1st, when they all started the migration.

WCEP meetings were held in Port Aransas, Texas on February 24-26. With so many partners and so many elements, these face to face meetings held twice a year are crucial

for keeping WCEP organized and planning for the future. The weather didn't cooperate on a one-day field trip to Aransas, with wind chills just above freezing, one of the coldest days of the winter.

LOUISIANA

A meeting of the Louisiana Crane Study group was held September 3rd in Lafayette. A tour was made of the White Lake marshes hosted by Wayne Sweeney. The recent donation of the property for conservation purposes has not been without political turmoil. Dr. Felipe Chavez-Ramirez plans an assessment of the suitability of White Lake for whooping cranes in the summer of 2003.

CAPTIVE FLOCKS

AUDUBON CENTER FOR RESEARCH ON ENDANGERED SPECIES (ACRES)

Following a meeting of the Mississippi Sandhill Crane Recovery Team, a meeting was held at ACRES September 4-6 to look at the breeding programs of the Mississippi sandhill cranes and whooping cranes. The facility has limited pen space and the recent addition of whooping cranes to ACRES has limited management options. A team of experts including Drs. George Archibald, George Gee and Mike Taylor made numerous suggestions on the management of cranes at ACRES, including maintenance needs. It was clear that a separate, new facility for 10 whooping crane pairs is needed. The Recovery Team encourages ACRES to proceed with plans to build this new facility. This is a major funding need. This would resolve the shortage of pen space and meet the genetic needs of the whooping crane captive flock that must expand to 153 total birds to meet genetic goals. There was considerable discussion of West Nile Virus, the serious illness of one crane keeper, and the loss of 7 out of 18 sandhill crane chicks to the virus in August. ACRES is the first facility to have vaccinated whooping cranes for WNV.

CALGARY ZOO

The Calgary Zoo shipped two robust juveniles to ICF on September 25th for socialization into a cohort of 6 and eventual release in Florida. Two new pairs were formed in December. Calgary will change to use of a breeder pellet that more closely replicates that being used at ICF and Patuxent. Calgary has plans to start artificial insemination on one whooping crane pair in 2003 to train staff and see if better egg fertility can be obtained. Dwight Knapik spent time at Patuxent in the spring renewing his skills doing AI. Megan Lauber of ACRES traveled to Calgary and provided staff training for AI. Plans in 2003 call for raising one chick for display at the zoo, and one chick for possible use as an imprint model.

INTERNATIONAL CRANE FOUNDATION (ICF)

ICF is heavily involved supporting the Wisconsin to Florida whooping crane reintroduction. ICF personnel monitor the released birds throughout the year, manage the

release cohort at Chassahowitzka NWR in Florida, and provide veterinary and crane keeper staff to Necedah NWR throughout the summer and fall. Cranes bred at ICF are formed into a cohort for the Florida release program. Six cranes, including 2 from Calgary, were shipped to Florida on December 16. Four crane chicks were held back with either health problems or for the purpose of genetic management.

Much effort went into promoting the proposed Crane Conservation Act that was re-introduced into the Senate. Prominent legislators for the bill include Senator Feingold of Wisconsin and Senator Breaux of Louisiana.

LOWRY PARK ZOO

The Lowry Park Zoo in Tampa, Florida currently holds four whooping cranes. Two are a recently formed pair permanently on display. The other two birds, including one with aspergillosis, are from the central Florida reintroductions that are undergoing rehabilitation. One of these birds will be put on display at the Homosassa Springs Wildlife State Park in the spring, 2003. A second whooping crane was approved to go to Homosassa once a new exhibit is constructed.

Lowry Park has been a tremendous help to the recovery program caring for injured birds from the Florida reintroduction, and shipping and receiving birds for genetic management purposes. Thank you to Jennifer Hackshaw and the entire crane crew at Lowry Park for being a tremendous partner. The Recovery Team encourages Lowry Park to consider building a new facility for the formation of cohorts for the Florida reintroduction.

PATUXENT WILDLIFE RESEARCH CENTER

West Nile Virus (WNV) is an introduced disease to North America and is having a drastic impact on bird populations. It is an unknown threat to cranes, which in general do not seem to very susceptible to the disease. One of the whooping cranes at Necedah NWR in Wisconsin in 2002 tested positive for WNV, but did not show any symptoms. After the loss of sandhill crane chicks in captivity at ACRES last summer, WNV concerns for cranes increased. Drs. Kim Miler and Glenn Olsen completed a research project with adult sandhill cranes that involved vaccinating and then challenging the cranes. The dosage of WNV used in the challenge caused the cranes to be lethargic for a short period but did not cause any severe illness. The vaccine apparently helped some in reducing reaction to the disease.

John Christian and Tom Stehn made a presentation at Patuxent on October 28 and met the new director Dr. Judd Howell. After more than 30 years working with cranes, Dr. George Gee retired and will be missed. Dr. George Gee received an award from WCEP for his accomplishments to the eastern reintroduction and the Lawrence Walkinshaw award from NACWG for his many contributions to crane recovery. Congratulations, George, and good luck building your new house in Maine.

With much uncertainty with the Federal budget picture still not resolved by March, 2003, Patuxent may be facing a \$1 million budget cut for the Center. To address this possible scenario, one research scientist position and two technician positions remain unfilled in the crane program. Co-chairman Brian Johns and Tom Stehn wrote a letter to USGS on their concerns of how these unfilled positions are already negatively affecting the recovery program.

CANUS, the 38-year-old male and oldest whooping crane in captivity, died of natural causes in January. CANUS was captured in Wood Buffalo National Park as a juvenile with an injured wing. He has sired 186 offspring and has been a major part of the captive-breeding program since its inception at Patuxent in 1965. It is noteworthy that CANUS was the great grandfather of Lucky, the first chick fledged in the wild in Florida.

SAN ANTONIO ZOO

The two juveniles produced at the San Antonio Zoo in 2002 both ended up in Florida, but with very different routing. Due to a mistake by a commercial lab that failed to run a tuberculosis test on one of the crane juveniles, only one of the chicks was shipped to Patuxent and socialized into a cohort and later released in Florida. The second juvenile was shipped to Florida on March 6th and released 1 on 1 with other cranes.

Dr. Mike Putnam met with San Antonio Curator Josef San Miguel on February 22 to discuss remedies for the poor incubation success with whooping crane eggs in 2002. Modifications have been made to the Grumbach incubators that hopefully will resolve this problem, including hand turning of the eggs. However, no incubator at least so far matches the hatchability of eggs incubated initially under crane pairs.

The Recovery Team recommended that the 6 adult whooping cranes in San Antonio not be vaccinated for WNV. San Antonio should assess the prevalence of the disease in the local area and consult with the Health Advisory Team about the need to vaccinate any chicks produced.

WHOOPING CRANE NUMBERS / March 31, 2003

Wild Populations

Location	Adults	Young	Total
Aransas/Wood Buffalo NP	169	15	184
Rocky Mountains	0	0	0
Florida non-migratory	*84	11	95
Wisconsin/Florida migratory	5	16	21
Subtotal in the Wild	258	42	300

* This number is a conservative estimate. At the end of December, the population could have been as high as 93 adults. Sixty-five were accounted for on a regular basis.

Captive Populations

Location	Adults	Young	Total	Breeding Pairs
Patuxent WRC, Maryland	49	1	50	10
International Crane Foundation, Wis.	27	4	31	10
Devonian Wildlife Conservation Center, Calgary	17	0	17	6
ACRES, New Orleans	8	0	8	0
New Orleans Zoo	2	0	2	0
San Antonio Zoo, Texas	6	0	6	2
Lowery Park Zoo, Tampa, Fla.	4	0	4	0
Subtotal in Captivity	113	5	118	28

TOTALS (Wild + Captive) 300 + 118 = 418