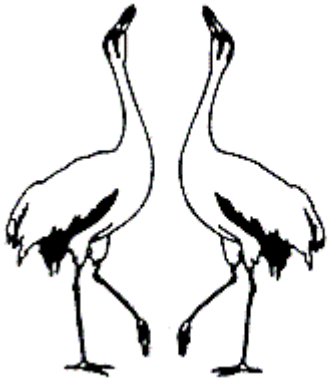

THE UNISON CALL

A Newsletter of the North American Crane Working Group

Vol.9, No.2,1997

NEWS & ANNOUNCEMENTS

NEW WHOOPING CRANE COORDINATOR SELECTED

Tom Stehn, the Refuge Biologist at Aransas National Wildlife Refuge, was appointed the new U.S. Whooping Crane Coordinator in September 1997. Tom began working with whoopers when he joined the staff at Aransas in 1982. He began his career with the U.S. Fish and Wildlife Service working with waterfowl at the McFaddin National Wildlife Refuge on the upper Texas coast. Prior to that, as a member of the Peace Corps in South Africa, Tom helped to set up a national park in Swaziland.

The Coordinator position became vacant last March when Jim Lewis retired. Kathy Granillo did an excellent job as Acting Coordinator while the selection for a replacement was being made and finalized. Tom has been very busy since he assumed his new role in September. He notes two changes which have been very helpful in managing his new responsibilities. A new clerk, Sue Forbis, has been hired at Aransas and is assisting with whooping crane business, and Manuel DeLeon, also a biologist at Aransas, has taken on some of Tom's non-crane duties.

Congratulations and good luck in your new position, Tom!

CRANE WORKSHOP PROCEEDINGS AVAILABLE

Proceedings of the Seventh North American Crane Workshop (held on the Mississippi Gulf Coast in 1996, 262 pages) are available for $25 per copy postpaid from International Crane Foundation, P.O. Box 447, E-11376 Shady Lane Road, Baraboo, WI 53913-0447 (Wisconsin residents add 5.5% sales tax).

Any registrants of the Workshop who have not already received their copy (covered by registration fee) should contact Teresa Searock at ICF (608/356-9462).

TIME TO RENEW! It's time to renew your membership if a "98" does not appear after your name on the mailing label. Please fill out renewal form on the last page of this newsletter and send in with your dues.

REGIONAL REPORTS

FLORIDA

The first group of whooping cranes for 1997/98 release were released 19 November and all 7 are surviving. Six are doing very well, the seventh is not as willing to fly and we are assessing the situation day to day. Since July we have had 8 mortalities: 3 were powerline related (2 electrocutions, 1 impact), another died of aspergillosis, and the remainder were due to predation. There are currently 65 whooping cranes in Florida (31 males and 34 females). Forty of these birds will be at least 3 years old by spring 1998.

We are currently paying close attention to 5 pairs of potential breeders for the approaching 1998 nesting season. Water levels are excellent due to heavy rains in December and these levels should hold through the first part of the nesting season anyway.

Steve Nesbitt, Gainesville, FL

MISSISSIPPI

A record 19 pairs attempted 21 total nests. Thirteen nests hatched 17 chicks, the latter nearly twice the previous 33 year high. After record high attempts and fine hatching success, the joy of the early season turned sour as not one chick fledged. Since water conditions were excellent throughout the season and predator sign was low, the fledging bust was a bit of a surprise. We may attempt to radio-tag some chicks in 1998. Results of the Autumn census and ongoing monitoring indicate a population of 90-100 cranes.

Three captive-reared cranes from White Oak were released at the Fontainebleau Pen in December. Fourteen captive-bred birds from Audubon are expected to arrive in early January for acclimation and release.

We are pleased to announce that Tracy Grazia has been hired as a full-time permanent FWS biological technician at the refuge and will start in early January. She has been working over a year here and doing an excellent job as a contract field tech (through Patuxent).

Scott Hereford, Gautier, MS

GREAT LAKES REGION

Results of the 1996 annual fall census of the eastern flock of greater sandhill cranes, which would normally be published at this time, are unavailable because Wisconsin data have not yet been received by the Coordinator. In 1997 the fall count on 29 October yielded 12,542 cranes at the major stopover at Jasper-Pulaski Fish and Wildlife Area, Indiana, and peak count at J-P was 27,642 cranes on 19 November.

Richard Urbanek, Seney, MI

ROCKY MOUNTAINS

Greater sandhill cranes of the Rocky Mountain Population were counted at 51 premigration staging areas in 5 states (Colorado, Idaho, Montana, Utah and Wyoming) and at the population's fall migration stopover in the San Luis Valley, Colorado, during mid-September. The cooperative survey involved the U.S. Fish and Wildlife Service, Fish and Game agencies of 5 Pacific and Central Flyway states, the Jackson Hole Bird Club, and volunteers. A total of 18,036 RMP cranes was recorded with 45.1% counted in Idaho. Numbers of cranes recorded by state and comparisons with other recent counts are shown in Table 1. The 5 most important sites were: 1) Ashton-St. Anthony area, Idaho (1,844), 2) Bear River Valley in Idaho, Utah and Wyoming (1,752), 3) Teton Basin, Idaho (1,360), 4) Beaverhead River, Montana (1,334), and 5) Blackfoot Reservoir, Idaho (1,232). Two other areas had over 1,000 cranes, including the Musselshell River, Montana, and the San Luis Valley, Colorado.

For the 26th year, a recruitment survey of the RMP was conducted during October in the San Luis Valley, Colorado, by the author, W. Brown, D. Benning, E. Boeker, W. Kendall, and P. Thorpe. Flocks were surveyed to assess the proportion of adults and juveniles and brood size. Methodology was reported elsewhere (1995. J. Wildl. Manage. 59(2):339-356). We sampled 116 flocks, and 6,586 cranes were classified by age. The proportion of juveniles was 9.7%, which was 22.8% above the 26-year average. Mean brood size among 378 families was 1.26. A comparison of annual RMP recruitment over 26 years is shown in Fig. 1.

Rod Drewien, Wayan, ID

Table 1. Premigration staging area counts of the Rocky Mountain Population of Greater sandhill cranes during September 1987, 1992, 1995-97.

State	1987	1992	1995	1996	1997
Colorado[1]	1,443	3,181	2,284	1,255	1,606
Idaho	10,686	5,801	6,864	8,334	8,132
Montana	1,447	5,264	3,681	2,974	3,595
Utah	1,578	2,810	1,528	1,849	2,450
Wyoming	2,327	2,241	1,671	2,526	2,255

TOTAL	**17,481**	**19,297**	**16,028**	**16,938**	**18,036**

[1]Counts in Colorado include migrants that had arrived at the fall staging area in the San Luis Valley.

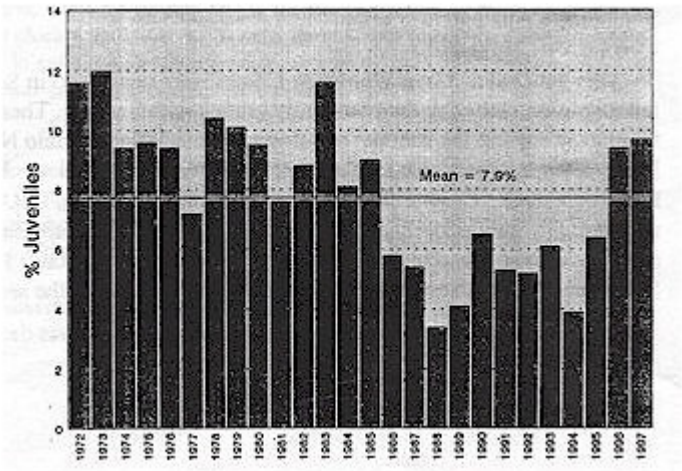

Fig. 1. Recruitment (% juv.) In Rocky Mountain Greater Sandhill Cranes, San Luis Valley, Colorado, 1972-97.

TEXAS

With excellent conditions on the nesting grounds in 1997, hopes were high for a record number of whoopers to arrive at Aransas. The first whooper arrived at Aransas on October 21. One hundred twenty-two whoopers arrived between October 31 and November 6. The fastest passage of color-banded cranes were 7 days North Dakota-to-Aransas and 10 days Saskatchewan-to- Aransas. A record 29 chicks including 1 set of twins were present on November 13. These are the first twins to arrive since 1964, the last year before the start of many subsequent years of picking up some (but never all) of the second eggs from Wood Buffalo. In the third week of December the flock totalled a record 181 birds. Present were 100 adults, 52 subadults, and 29 juveniles. The only known mortality in the fall was 1 subadult whooping crane that hit a powerline in Saskatchewan, but 7 other birds are still unaccounted for.

Habitat conditions look excellent at Aransas. Blue crabs and wolfberries are abundant. Flooding fall rains have filled refuge wetlands and lowered marsh salinities dramatically. Weekly census flights will be conducted throughout the winter to see if any more cranes arrive.

Tom Stehn, Aransas, TX

CANADA

Whooping Crane Nesting Season Update

The 1997 whooping crane nesting season was one of shattered records. Fifty-one pairs nested producing at least 58 chicks including an unprecedented 16 pairs with twin young. Thirty-five chicks survived to fledging age including 2 sets of twins. The Canadian Wildlife Service (Brian Johns) and Parks Canada (Doug Bergeson) conducted breeding pair and hatching success surveys in May and June and chick survival surveys in mid August. Jim Bredy and Tom Stehn of the USFWS assisted Brian Johns during the mid June summer range surveys.

Whooping Crane Fall Migration

One hundred and five whooping cranes were confirmed in Saskatchewan during the 1997 fall migration including the 2 family groups with 2 young. These are the first "twin" young families to survive the summer and migrate from Wood Buffalo National Park since 1964. Two losses of birds have also been documented. A badly decayed subadult whooping crane was found dead under a power line near Zelma, Saskatchewan, on Oct.13. This bird had been seen in the area with sandhill cranes from Sept. 15-22 and then disappeared about the same time the sandhills migrated south. A family group with 1 young and only 1 adult was observed near Spiritwood, Saskatchewan, on Oct.23 indicating the loss of the second adult.

Aerial Photography of Whooping Crane Nesting Area

Jim Bredy and Al Cilurso of the USFWS completed colour infrared photography of the crane nesting area for the CWS. The majority of the nesting area was photographed in 1993, and the 1997 photography covered the remainder as well as new areas that the cranes are now nesting in.

Brian Johns, Saskatoon, Saskatchewan

CAPTIVE FLOCKS

Patuxent Wildlife Research Center provided 8 and the International Crane Foundation 3 whooping crane eggs for the Rocky Mountain ultralight experiment led by Kent Clegg. The eggs were hatched at Patuxent, 10 of the 11 eggs hatching. Eight chicks went to Idaho after being reared for the first few weeks at Patuxent. Only 4 of the whooping cranes survived to fledging and participated in the migration experiment.

In addition to the 3 whooping crane eggs sent to Patuxent for the Rocky Mountain ultralight experiment, 8 more whooping cranes hatched at the International Crane Foundation in Baraboo, Wisconsin. Seven of the 8 whooping cranes fledged, and all have been sent to Florida for release. Also during 1997, a breeding pair of whooping cranes that were genetically incompatible were split and artificial insemination with semen from a different male used to fertilize the female from this pair. Three chicks were successfully hatched from this female this year. A pair of whooping cranes on exhibit laid eggs for the

first time. The female was 4 years old at the time. This pair was taken off exhibit and another new pair substituted for them. The exhibit area has a large pond, and this may have played a role in stimulating egg laying in the young pair. Two adult whooping cranes died during the summer. At the end of 1997, the International Crane Foundation had 30 whooping cranes, including 5 successfully breeding pairs.

Patuxent Wildlife Research Center currently has 40 adult and 17 young whooping cranes. For the 1997 breeding season, 8 breeding pairs laid a total of 55 eggs, 30 were fertile, and 29 hatched. Six naturally fertile pairs had a fertility rate of 70%, while the fertility rate in the pairs requiring artificial insemination was 100%. Patuxent had 1 crane chick with scoliosis this year. Sixteen other whooping crane juveniles are now under quarantine in anticipation of being shipped to the Florida release site in late winter. Patuxent also raised 18 greater sandhill cranes for the Operation Migration ultralight project this year.

The Calgary Zoo had 2 breeding whooping crane pairs last year. A total of 12 eggs were laid, 8 were infertile, 3 eggs were broken by the pairs, and 1 egg hatched, but the chick died after 5 days. Calgary has a total of 20 whooping cranes. Other whooping cranes in captivity are at the Lowery Park Zoo (1), San Antonio Zoological Gardens (4), and White Oak Conservation Center (2).

White Oak Conservation Center successfully raised 4 Mississippi sandhill cranes this year. There was no repeat of the elevated white blood cell counts seen in earlier breeding seasons. Three of the Mississippi sandhill cranes were sent to the Mississippi Sandhill Crane National Wildlife Refuge (MSCNWR) for release. One bird unfortunately had a heart murmur and was sent to the University of Florida Veterinary College for ultrasound study. This crane will remain in captivity.

Audubon Species Survival Center had a very successful season with the Mississippi sandhill cranes. They performed 199 separate artificial insemination procedures, had 52 eggs laid, 31 of which were fertile, and 17 hatched. In addition, 2 eggs were transferred from White Oak and 1 from the MSCNWR; all 3 of these eggs also hatched. Of these 20 chicks, 15 fledged. Fourteen will be released on the refuge in January, and the 1 chick from the egg brought from the refuge will be retained in captivity for addition to the breeding flock.

The annual Mississippi Sandhill Crane Captive Propagation Meeting was held November 4, 1997, at the refuge. Movements and pairing of cranes and the refuge's needs for 20 release birds in 1998 were addressed. A dBASE necropsy file will be maintained by the U.S. Fish and Wildlife Service, Jackson, Mississippi, office. Research issues, semen banking, and sites for display of cranes not needed in the breeding program were among other topics discussed.

Ken Jones is making progress on the pedigree analysis of the whooping cranes in captivity and the wild. Further decisions on mating pairs and breeding needs are being deferred until his work is completed this summer. If there is an immediate need to decide

something before then, please contact Claire Mirande at the International Crane Foundation.

I thank Mike Taylor at White Oak Conservation Center, Steve Baynes at Audubon Species Survival Center, Claire Mirande and Scott Swengel at the International Crane Foundation, and Scott Hereford at the Mississippi Sandhill Crane National Wildlife Refuge for help with information included in this report.

Glenn Olsen, Laurel, MD

CRANE RESEARCH

Search for a Reintroduction Site for a Migratory Population of Whooping Cranes

The Canadian Wildlife Service and the Delta Waterfowl and Wetlands Research Station (DWWRS) at Delta, Manitoba, began an investigation to identify suitable reintroduction sites in the region. Five of the 11 sites identified as having potential in a preliminary study in 1996 by the DWWRS and the Manitoba Dept. of Natural Resources were selected for detailed study. Information on habitat suitability and landowner/local government acceptance is being investigated. Recommendations should be available early in the new year.

Brian Johns

Whooping Crane Diet and Chick Mortality Study

Ph.D. candidate Doug Bergeson of Wood Buffalo National Park is conducting the study in cooperation with the Canadian Wildlife Service and the University of Alberta. Eight pairs of whooping cranes were monitored throughout the summer of 1997. These particular pairs all hatched two chicks by mid June, however by the end of June seven pairs had only one chick while the other pair still had twins. No direct causes for the loss of the single chicks could be determined and ground searches for the missing chicks were unsuccessful. The chicks were observed to be quite mobile (precocial) shortly after hatching and during the first few weeks the family groups moved 200-400m per day. The largest observed daily movement by a family of cranes was 1.5 km (the pair with twins). During the summer 48 aerial surveys occurred, from which 1,200 observations of cranes were recorded which included 450 feeding observations. The locations of the ponds where the cranes were observed feeding were plotted onto air photos. The majority of the feeding occurred in small (<100 m diameter) shallow ponds (<50 cm). These ponds were then sampled for potential prey items, including: fish; invertebrates; amphibians; and the surrounding shorelines for small mammals. In total, 27 ponds were sampled where the cranes were observed feeding, and 27 randomly selected ponds in the nesting area were sampled using identical methodology. Of the ponds where the cranes were observed feeding, 22 contained fish (brook stickleback, dace sp., and fathead minnows), while only 9 out of 27 ponds randomly selected contained fish. Although preliminary, it appears whooping cranes may prefer to forage in ponds which contain fish.

Doug Bergeson

Aransas

Dr. Bruce Pugesek and Mike Baldwin of the National Wetlands Research Center (BRD-USGS) in Lafayette, Louisiana, initiated blue crab research at Aransas with monthly sampling scheduled throughout the winter. Aransas Americorps enrollee Cinda Massey has begun graduate work at TAMU-College Station. She will use GIS techniques to analyze habitat in whooping crane territories. Graduate student Ken Jones at TAMU-Kingsville has successfully extracted whooping crane DNA from fecal material. This is a major breakthrough and he is continuing to learn much about the genetics of the whooping crane population.

Tom Stehn

Rocky Mountain Ultralight Experiment

Sandhill eggs were picked up from the wild and hatched at the Clegg Ranch. Kent Clegg travelled to Patuxent in the spring and helped raise/imprint 8 whooper chicks provided by ICF and Patuxent. These birds were flown to Idaho at 2 weeks of age. One died from a coliform bacterial infection shortly after arrival in Idaho. A second died of aspergillosis. Two of the whoopers died after attempting to fly in the pens and hitting the pen structure.

On October 13, Kent and 5 crew members started the migration leading 8 sandhills and 4 whooping cranes. Up to 4 sandhills were trucked daily because 8 birds was the maximum workable number to lead behind the ultralight. One sandhill was killed colliding with the plane, and 1 whooping crane was knocked down in Colorado by a golden eagle. After getting stitches to close 2 puncture wounds in the thigh, the whooper was trucked the rest of the way and recovered from its weakened condition. With very cooperative weather, the migration covered 800 miles in 9 days. The team arrived safely at Bosque del Apache NWR on October 21 with a large gathering of friends and media waiting. Kent led the ultralight cranes back and forth between a corn field and a river roost for several days until the birds began to make the movements on their own. One ultralight sandhill was shot north of the refuge during the opening weekend of the sandhill season, and 1 whooper was killed by a coyote.

Tom Stehn

Weather or Not... Migration '97

Joe Duff

1997 must have set a record for bad weather. It may not have been reflected in a poor harvest or an increased flu rate, but from the point of view of an ultralight pilot it was dismal. Anyone less dependent on perfect conditions may remember several sunny days but they probably didn't notice the constant wind that spoils that recollection in the eyes

of a pilot. Ultralight aircraft are like small boats, beautifully designed and efficient, but not built for high seas.

Bad weather was a factor right from the start. A diligent effort from the crew at Patuxent produced 18 healthy sandhill chicks. After careful planning and an extensive search, we found an area that was soon to become their fledge grounds. Bordering on 3,000 acres of wetland, it included enough high ground to fly from, and a pond we planned to incorporate into their pen. Unfortunately an abnormally dry July turned the pond into a botulism hazard and the freshly planted grass on our make-shift runway into brown stubble.

Through August and September our flight training schedule was erratic. Two or three days of good flying and we could see the birds start to get the idea, tentatively following the airplanes, then we would watch as the hard-won training dissolved in day after day of rain. By late September this sporadic routine left the birds confused. Their loyalties were torn between following us and breaking away to head back to the pen. Drawing on the experience of three migrations and hundreds of hours of flying with birds, we tried every trick we knew. We adjusted the group order, building on their individual dominance. We tried a little abandonment conditioning and even some human avoidance training. By late October half of the flock got the idea. Eight of the older birds would follow in perfect order. Unfortunately adding the younger group would only turn order into mayhem. Again the weather played a role. This late in the season all the boats large enough to follow us across Lake Ontario were stowed for the winter. The decision was made to circumnavigate the lake to the east. This route added another 100 miles to our journey but was safer than an unprotected crossing of 30 miles of open water.

On October 21, under the watchful eye of several film crews and well wishers, three airplanes and 14 birds took off with the grand ambition of flying in tight formation on the first leg of migration '97.

Two exhausting hours later good sense won over pride and the young birds departed in a trailer. With the chaotic element finally removed, the 8 older birds again found their order and followed the leader to the first stop. A less than grandiose beginning, we had covered all of 15 miles and spent the next five days testing our mobile accommodations in the wind and rain. When the weather would finally break we could make good time covering 80 to 100 miles on each leg with no sign of fatigue from any of the birds. At every opportunity we added the younger birds to the group hoping for a breakthrough. The results were always the same. After no more than 5 miles they would turn back, convincing the others to join them. We tried taking the young birds to fields away from the pens, leaving them alone with nothing familiar but the aircraft. Often this would work but only for a short time. The older birds, launched from their pen at the same time, would cruise overhead and watch the turmoil below as we set course for the next destination. Constantly harassed by blustery winds, even early morning attempts were delayed while we removed thick layers of frost from our wings.

On October 28 the forecast of more rain was enough to convince Bill he would not be missed if he headed home for the day. Naturally the next morning dawned unexpectedly calm and we decided to make the trip short-staffed. Richard Van Heuvelen gladly accepted the job of flying Bill's MaxAir. We took off in still air, but with lowering ceilings and increasing head winds it took us 2 hours to cover 40 miles. This was our "border crossing" leg. After ten days we finally made it to the end of the lake. Unfortunately, driven by seasonal westerly winds, most of the weather in North America piles up at the end of the lake and weighs heavy on the city of Watertown, a friendly place but aptly named. Five more soggy days chipped away at the crew's morale before we headed south again. With each leg the endurance of the 7 flying birds increased while the 6 younger birds became more familiar with the trailer. We battled snow, turbulence, and constant head winds as we made our way past the Finger Lakes and down through Pennsylvania. Over the ridges of the Allegheny Mountains we were tossed like tops in airplanes that weigh less than 400 pounds.

The final run from Gettysburg to Warrenton must have been our reward. We covered 77 miles in silk-smooth air, drifting south along the ridges and turning west at Point of Rocks. While floating over the opulent splendour of Virginia horse country, we were joined by a lone wild goose hoping for a free ride in the long line of soaring birds off the wing of the lead airplane. The only flaw in this crystal day was the thought of the 6 young birds protesting their way south in the trailer below. Twenty-one days to cover 600 miles took its toll on the crew but added to the jubilation of our arrival. We now have 7 birds that flew the distance and 6 that arrived somewhat confused. This odd demographic may change our protocol for their release in the spring, but we still consider it a success.

Three days later, after the crew had dispersed, Joe led the flock on a local flight to show them their new surroundings. As if in defiance, all 13 birds took off in perfect unison and followed in close formation for 27 minutes.

An investigation like this is a large investment. You risk life, limb, and livelihood in a huge effort that takes the better part of a year, all to further the cause. The results can never be predicted. That's why they call it an experiment.

Bill Lishman and Joe Duff from Operation Migration would like to thank the entire crew. Special appreciation to Deke Clark (retired Boeing 777 Captain), who gave up his entire summer and the comforts of an airliner cockpit to fly by the "seat of his pants"; the team from Patuxent, who raised the birds, and especially those who helped on the migration. Thanks to Dan Sprague, Brian Clauss, and Jane Nicolich. We'd like to acknowledge the efforts of Dr. Richard Urbanek, who drove 12 hours to join us en route, and to Dr. George Gee, who paved the way. Many thanks for the long standing support of Dr. David Ellis, who weathered the wind and rain with us, but didn't get to witness our arrival in Virginia. Much gratitude to Adele Conover, writer with Smithsonian Magazine, who we now considered an official team member. As always, we are grateful to Paula and Don Lonsbury, who have now flown top-cover for us on four migrations. Many thanks to Richard Van Heuvelen, "Master Fixer" and enthusiastic back-up pilot, and to Aaron Lishman who kept us in communication with the outside world through our Web Site and

who's good nature helped smooth the rough edges. Last but not least, we'd like to thank all of those we met along the way for their generosity, hospitality, and support.