

# THE UNISON CALL

- A Newsletter of the North American Crane Working Group -

*Fall/Winter 2006*  
*Vol. 17 No. 2*

## **President's Report**

The past year has been an exciting one in the crane world. We had our workshop in Mexico for the first time, and that was a great success thanks to all those who worked hard on the scientific program and the local arrangements. We had folks from Canada, Cuba, Mexico, the US and several European countries, making it a truly international meeting. Marty Folk and Steve Nesbitt have taken on the job of editing the manuscripts from this meeting. Your papers should be in to them by this time, and we would hope to see the proceedings in print by this time next year. Speaking of proceedings, the long awaited proceedings from the 2003 Sacramento meeting are now in print thanks to the tremendous effort of Felipe Chavez-Ramirez and his crew. We thank them for all their effort in producing this great volume.

What else has happened in the crane world? Well, the cranes have become super achievers. The big news on the whooping crane front is that bird numbers have topped 500 in the world for the first time (combined wild, reintroduced and captive numbers). We have come a long way from the 21 birds alive 65 years ago, but we still have a long way to go. Congratulations should go out to the Whooping Crane Eastern Partnership who had a pair of introduced birds raise and fledge a chick in the wild for the first time after only 5 years of releases. Another successful migration, though the longest at 75 days, has been completed, teaching another 18 whooping cranes the way to Florida.

Things have been happening in the sandhill world, also. I am writing this from Long Point, Ontario, where there are still several hundred sandhill cranes in January. There is now a large population of sandhill cranes in some areas of Ontario east of Lake Huron and north of Lake Erie. I have heard reports of sandhill cranes breeding as far east as Maine, so their populations are definitely expanding. However, the Mississippi sandhill crane population still hovers around a hundred birds in the wild, maintained by releases from the captive centers. In Florida, the accelerated development

of rural lands for housing has reduced habitat available for both Florida sandhill cranes and whooping cranes. A way needs to be found to protect some of the rural areas from development to preserve open areas and wildlife. In Cuba the population of sandhill cranes still remains about the same, but we worry about changes that may come to this island nation in the next few years that may threatened the wild places used by these cranes.

Our organization is planning a meeting for the fall of 2008 in Wisconsin. Why Wisconsin? Well, from a crane perspective, this is an exciting place. The International Crane Foundation has been there for years, and we will certainly visit them. They have a variety of programs, including a strong research program with the wild sandhill populations in central Wisconsin. An hour north of the Baraboo/Wisconsin Dells area is Necedah National Wildlife Refuge where the Whooping Crane Eastern Partnership has its summer quarters and training grounds. There are some public areas where you can watch the whooping crane training each morning, weather permitting, and we will start our meetings later in the morning each day to accommodate those who want to go and see whooping cranes fly behind ultralight aircraft, and those colleagues who do the flying and care for these birds. The third Saturday of September is the Necedah Whooping Crane Festival with its famous whooper brew, great food, and live entertainment at night. We will be planning the meeting to allow you to stay and visit the festival. So keep September 2008 open on your calendar.

Your Board of Directors always welcomes your input and help in the organization. We welcomed Jane Austin as a new board member in 2006. As we move into a new year, we can use volunteers, especially in Wisconsin, to work with Tom Hoffman on the coordination of the next meeting, and we need a volunteer or volunteers to take on the coordination of the scientific program or the editing of the resulting proceedings. Send me an email at [olsengh@aol.com](mailto:olsengh@aol.com) if you want to work in any of these areas.

*Glenn H. Olsen, President NACWG*

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## Regional Reports

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### Wild Whooping Crane Population

The highest numbers of endangered whooping cranes are wintering in Texas in approximately the last 100 years. U.S. Fish and Wildlife Service Whooping Crane Coordinator, Tom Stehn, completed a census flight in mid- December and accounted for 237 whooping cranes. The current population exceeds by 17 the previous high of 220 whoopers present in the fall of 2005.

The increase in numbers is due to extremely good nest production last summer. A record 62 nesting pairs fledged 49 chicks on their nesting grounds in Wood Buffalo National Park, Canada, as reported by the Canadian Wildlife Service. The young cranes were old enough to fly by mid-August increasing their ability to escape from predators and their survival. The record population of 237 includes a record 45 young cranes that have completed their first migration to Texas. Especially notable are 7 whooping crane pairs with two chicks each. Although whooping cranes normally hatch 2 chicks every year, usually only one of the youngsters is able to survive. The presence of 7 families with 2 chicks each is especially exciting since it surpasses the previous high of 4 sets that occurred way back in 1958. This is a special year for the birds.

The population in Texas reached a low of only 15 birds in 1941, before efforts were taken to protect the species and its habitat. The population has been growing at 4.6 percent annually and reached 100 birds in 1987 and 200 birds in 2004. However, the whooping crane population continues to face many threats, including collisions with power lines in migration, limited genetic variability in the birds themselves, loss of crane migration habitat, and winter habitat threatened with loss of productivity due to reduced fresh water inflows, chemical spills and sea level rise. Adult mortality between spring and fall, 2006 totaled 22 birds taking 10.3% of the flock, the second year in a row with higher than average mortality, preventing an even greater increase in flock size.

The only natural wild population of whooping cranes nests in the Northwest Territories of Canada in summer and migrate 2,400 miles to winter at the Aransas and Matagorda Island National Wildlife Refuges and surrounding areas. Their winter range stretches out over 35 miles of the Texas coast about 45 miles north of Corpus Christi, Texas. Wintering whooping cranes use salt marsh habitat foraging primarily for blue crabs. Unlike most other bird species, whooping cranes are territorial in both summer and winter and will defend their estimated 350-acre territories.

Although whooping crane migration starts in mid-September and is usually completed by mid-December, it is still possible that a few additional cranes will turn up to be counted on the census flights conducted by the Service. It takes up to 8 hours of flying to cover the 55,600 acres of marsh over a 35-mile stretch of the Texas coast to find all the cranes. These flights determine the size of the total population, locate crane territories, and any mortalities that may occur. Private pilot Dr. Tom Taylor, age 74 of Rockport, Texas came out of retirement to conduct the flight and helped make the record count on his final flight as a commercial pilot. Dr. Taylor's experience conducting the crane flights for the past 13 years with the Service was a huge help in finding all the cranes.

The current total North American population of wild and captive whooping cranes is 517, the first time this number has exceeded 500 in nearly 100 years. Although the whooping crane population remains

endangered, the comeback of the species sets a standard for conservation efforts in North America. A revised Recovery Plan for the species is scheduled to be completed in early 2007 that outlines targets that must be reached before the species could be down-listed to be considered a “threatened” species rather than “endangered”, including a minimum of 1,000 whooping cranes in the wild.

## WHOOPING CRANE NUMBERS – December 30, 2006

### Wild Populations

	Adult	Young	Total	Adult Pairs
Aransas/Wood Buffalo	192	45	237	71
Florida non-migratory	49 <sup>B</sup>	4	53 <sup>B</sup>	17
Wisconsin/Florida	59	23 <sup>C</sup>	82	5
<b>Subtotal in the Wild</b>	<b>300</b>	<b>72</b>	<b>372</b>	<b>93</b>

<sup>B</sup> This number is an estimate since not all whooping cranes in Florida can be located regularly. Four chicks fledged in the wild in 2006. Birds routinely monitored include 46 adults and 4 chicks.

<sup>C</sup> One pair hatched twin chicks, the first whooping cranes to hatch in the wild in Wisconsin in over 100 years. One of the twins survived.

### Captive Populations

	Adult	Young*	Total	Breeding Pairs
Patuxent WRC, Maryland	57	3	60	15
International Crane Foundation, WI	31	5	36	11
Devonian Wildl. Cons.Cent./Calgary	19	3	22	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	0	2 <sup>D</sup>	2	0
Milwaukee County Zoo, Wisconsin	0	1 <sup>E</sup>	1	0
<b>Subtotal in Captivity</b>	<b>131</b>	<b>14</b>	<b>145</b>	<b>34</b>

\* Numbers are of young remaining at the captive centers after eggs and/or birds were shipped out for reintroductions in 2006. In most cases, these young are genetically valuable and will become future captive breeding stock.

<sup>D</sup> Two juveniles at the Necedah NWR had health problems and were shipped to the Jacksonville Zoo in Florida in October, 2006.

<sup>E</sup> One juvenile scheduled for wild release in Wisconsin broke its wing and is undergoing rehabilitation at the Milwaukee County Zoo and will remain there in captivity.

**TOTALS (Wild + Captive) 372 + 145= 517**

*Tom Stehn, U.S. Fish and Wildlife Service, Region 2*

## **Whooping Cranes in Wood Buffalo National Park**

The summer of 2006 in Wood Buffalo National Park averaged 2 degrees Celsius warmer than normal. Water conditions were above average at the beginning of the nesting season but declined throughout the summer with only 67% of normal rain falling on the nesting area.

Several production records were set during the summer. A record 62 nests were discovered in May, up four from the previous year. The increased number of nests also contributed to a record 76 young that hatched. The warm weather along with little rain, especially just after hatching, was conducive to chick survival resulting in a record 49 young fledging. A record seven sets of twins arrived at Aransas.

For more information on Wood Buffalo whooping cranes please visit the Canadian Wildlife Service whooping crane web page: <http://www.pnr-rpn.ec.gc.ca/nature/endspecies/whooping/index.en.html>

*Brian Johns, Canadian Wildlife Service*

## **Eastern Migratory Whooping Crane Reintroduction**

*Summer and Autumn 2006.*—Summer distribution consisted of 58 adults/subadults and 2 chicks in Wisconsin and 3 birds in Lower Michigan. Of birds summering in Wisconsin, 3 yearlings spent autumn in Iowa, and 2 other birds moved to Minnesota in early autumn before returning to Wisconsin. Four juveniles were added to the population in October by direct autumn release (DAR) on Necedah National Wildlife Refuge (NWR).

*Mortality.*—Three mortalities of adults or subadults occurred during the summer: a 3-year-old breeding male in Monroe County, Wisconsin, a 4-year-old breeding female on Necedah NWR, and a yearling male in Mason County, Michigan. Primary contributing factor to the first two mortalities appeared to be predation facilitated by drought. Cause of the third mortality was undetermined. An additional bird, a 4-year-old paired male, was found alive but immobile under a powerline at a migration stop in Greene County, Indiana, on 23 December. He later died in captivity. There have been 17 mortalities of released birds since beginning of the reintroduction in 2001.

*Reproduction.*—The pair of 4-year-olds that renested on Necedah NWR on 23 May hatched two chicks and reared them to fledging age. The parents and larger chick flew from their territory on 12 September. The smaller chick was not capable of sustained flight and was left behind. It was apparently killed by a predator that night. The remaining family departed on migration on 19 November and landed to roost along the Wabash River, Vermillion and Parke Counties, Indiana. They resumed migration on 7 December and arrived on Chassahowitzka NWR, Florida, on 9 December.

*Winter 2006/07.*—As of 2 January 2007, early winter distribution was Florida (47), Indiana (4), Tennessee (6), Alabama (1), South Carolina (3), and undetermined (3). The birds in Florida included all 4 DAR juveniles: 2 each in Lafayette and Pasco Counties. The flock of 18 juvenile ultralight-led whooping cranes arrived at the holding site on Halpata Tastanaki Preserve, Marion County, Florida, on 19 December.

*Current Population Size.*—As of 2 January 2007, the eastern migratory population numbered 64 birds (35 males and 29 females). This total includes 1 wild-hatched and 4 DAR juveniles. The 18 ultralight-led juveniles will be added to the population after they are led to Chassahowitzka NWR later in January.

*Richard P. Urbanek, U.S. Fish and Wildlife Service, on behalf of Whooping Crane Eastern Partnership*

## **Patuxent Wildlife Research Center**

The past year, 2006, was a time of challenge and change for Patuxent. We were faced with a great challenge when, on February 11<sup>th</sup>, as we were gearing up for breeding season, a snowstorm hit. The heavy, wet snow built up on the nets during the night so quickly that the staff who struggled to keep the nets clear could not keep up. They battled for hours through the night as netting collapsed around and on top of them and full-winged cranes escaped. By the end of the storm, 105 of our 110 netted pens were damaged and 18 cranes had gotten out of their pens. It took three days to move all the birds to safe pens and to capture all the loose whooping cranes. We were then faced with the enormous task of repairing the pens, replacing all the flight netting, and moving the birds, especially the whooping crane pairs, back to their breeding pens as soon as possible. We feared the huge disruption to the cranes would have such an impact that we might not have a breeding season this year. The Patuxent crane program was very lucky to receive a tremendous amount of support from our director, the refuge, the region and so many of our fellow Patuxent researchers. With an army of helpers, we were able to remove all the old netting, repair damaged pens and cover the pens with new netting within three weeks of the snowstorm. All of the whooping crane pairs were back in their breeding pens by March 10<sup>th</sup> and we caught the last of the loose sandhill cranes five weeks after the snow storm. We were very lucky that no birds were lost or seriously injured in the storm or its aftermath.

Breeding season came late, but thankfully it did come. Our first whooping crane egg was laid on April 10<sup>th</sup>, about 3 weeks later than usual. All but one of our normal layers produced, and one young female even laid for the first time. Our whooping crane egg production and fertility were lower than normal this year, but we did manage to produce 14 fertile eggs – 14 more than we expected in mid-February. We were lucky to receive many fertile eggs from our colleagues at the Calgary Zoo, ICF and Audubon Species Survival Center, which kept us plenty busy throughout chick season. With the help of volunteers and Operation Migration staff, we raised and trained 18 chicks for the Whooping Crane Eastern Partnership ultralight migration project. Those chicks were sent to Wisconsin in June and July and 3 additional whooper chicks were kept in captivity for health and genetic reasons.

The change we were faced with in 2006 is in our long-term staff. Kathy O'Malley, who has been with our program for 21 years, accepted a job in the Department of Agriculture and left us in June. Kathy ran our masked bobwhite quail program, was involved with our eagle and condor programs, and did a great deal of outreach work. Most notable, however, was her role in crane chick rearing. Kathy's great passion was working with the chicks, and she made countless improvements to Patuxent's method of rearing crane chicks. She has trained many staff members and helped to rear hundreds of chicks and has devoted 21 springs of her life to crane chicks. We are very grateful to Kathy for her contributions and miss her – though she did promise to volunteer this chick season! Our staff also changed with the resignation of Jennifer Green, who left Patuxent to attend graduate school. Jennifer, who was on the crane crew for 6 years, led our cryopreservation efforts and was our lead incubation

technician. She also worked on the myriad other tasks of the crane program. We will miss Jennifer's hard work, her positive attitude and cheerfulness.

*Jane Chandler, USGS Patuxent Wildlife Research Center*

## **Mississippi Sandhill Crane National Wildlife Refuge**

The 2004 and 2005 Firetower release cohorts continued to frequent small suburban yards and lots in north Gautier south of the refuge but mostly stayed out of harm's way. Two captive-reared parent-reared juveniles from White Oak were transferred to the refuge, acclimated, and successfully released at the Fontainebleau Pen in November.

Six crane carcasses were recovered, all in June. Two died from vehicle collision, including one adult female. The cause of the other four deaths was unknown. Another crane, a breeding male, was injured in a vehicle collision in August, eventually disappeared and was presumed dead.

Twenty-three people participated in the Annual Autumn Crane Count on November 3. About 78 different cranes were observed at a total of 31 locations.

Wildlife Biologist David Zabriskie transferred to Tern Island NWR out in the middle of the Pacific Ocean in September. We wish him well in what will be a fascinating experience. Although we hope to replace that position in 2007, it was the first time since the 1980s there was only one biologist/biotech on the refuge staff. Interns are doing their best but the number of radio-triangulated locations in 2006 was 10% that of 3-4 years ago. By the end of the year, there were 18 cranes with working radios.

Brad Long, recently retired from the Navy, was hired for a 3-4 year term position at the refuge to oversee all the contractor work on hurricane rebuilding projects. Site preparation began on the new Headquarters/Visitor Center; it is expected to be completed by winter 2007-8. Contractors began work to rebuild all four release pens (Gautier, Ocean Springs, Fontainebleau), this time in chain-link and about 2.5 acres each. The Ocean Springs pen was completed. Work had begun on Gautier and Ben Williams. Work on road rebuilding and pond construction will begin later in 2007.

The rains finally returned in October and continue into the early winter. Nesting and roosting areas are being replenished. Yeehaa!

*Scott Hereford, U.S. Fish and Wildlife Service, Mississippi Sandhill Crane NWR*

## **Florida Nonmigratory Flock**

We are tracking 44 birds (16 pairs) in the nonmigratory flock these days. You will recall from our summer update in the *Unison Call* that the flock had a record breeding season in 2006. Well, we finished the year with 4 chicks fledged in the wild, which is twice as many as we'd ever had fledged in a single year. This brings the project total to 8 chicks fledged.

Despite the record breeding season this year, the nonmigratory flock is still reproducing at a level lower than expected. As mentioned in our last update-we are considering many possible reasons.

Marilyn Spalding has been analyzing productivity data, with a focus lately on environmental variables. She has discovered the most important bit of news, to date, regarding why the flock has exhibited wide year-to-year fluctuations in breeding success. There is a strong correlation between water and productivity. Results are still preliminary; however, it appears that rainfall *prior* to the breeding season is highly associated with breeding success for that season. She is also considering well depth, marsh surface area and circumference, and also finding the strong relationships here (which is somewhat intuitive). The nonmigratory flock has had trouble hatching eggs in some years and not others. Marilyn's analysis suggests that whooping cranes are pairing and laying eggs regardless of water levels (provided there is water in which to build a nest of course), but the success at which they hatch and rear young is determined by the amount of water in the marshes at the beginning of the breeding season. Stay tuned as we unravel the mysteries of whooper productivity in Florida.

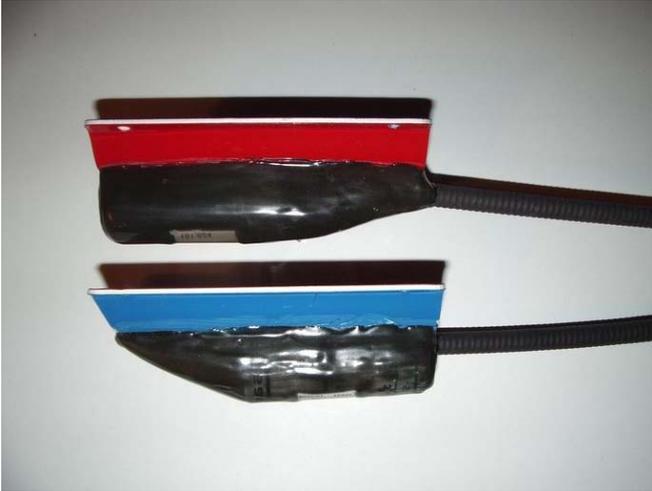
Power lines have become, in recent years, an important source of mortality for the nonmigratory flock. One set of high voltage transmission lines, in particular, has been responsible for the majority of the problems.

At our request, Progress Energy placed visibility markers on select spans of the line. However, we continued to have collisions with unmarked spans. In July, at our request (with help from Billy Brooks of the USFWS), Progress Energy marked the entire 8 km length of lines where there is considerable crane traffic. Along this problem stretch of lines, our field team documented power line strikes of not only whooping cranes, but also sandhill cranes, a bald eagle, and a kestrel. The lines were fitted, at our request, with state-of-the-art swiveling, reflective, glow-in-the-dark markers (Firefly Bird Diverter/Flapper, PR Technologies, Portland, Oregon). These visibility markers should help prevent future collisions by whooping cranes and other species of birds.

In addition to marking the power lines, we are testing new designs of radio transmitter configurations in order to reduce the effects of whooping crane strikes to power lines. A number of whooping cranes have struck power lines and survived; their broken transmitter and bands were recovered from directly beneath the power lines. Apparently as the birds fly over the lines, they sometimes were in contact with the lines, and their transmitters, which hang below the leg, struck the wire and broke. We are trying a more streamlined transmitter that will be less likely to strike the power line, or will glide smoothly over the power line, as the birds drag their legs over it. So far we have outfitted 12 birds with the new style transmitter. Nine of these birds live in close proximity to the problem line mentioned above.

Since the marking of the problem power lines and deployment of new style transmitters there have been no fatal collisions with the lines. We did, however, document one bird losing its transmitter to the lines (the bird was uninjured). The bird had not yet been fitted with a new streamlined transmitter.

A notable mortality recently was the male (Bird 800), which raised 3 chicks to fledging (including the first chick fledged, known as Lucky). The cause of death was unknown, but based on observations from the public, the bird could have been struck by a vehicle, or could have collided with power lines. The good news, if there is any, is that this pair consisted of full siblings and there were genetic concerns. Bird 800 was 8 years of age. No males have survived to 10 years of age, a major concern for the nonmigratory flock.



**Figure 1. New transmitter design (bottom) showing the tapered band and transmitter on the leading edge, as the bird is in flight.**

On a brighter note...this fall we caught the 4 fledged chicks (and their parents) in clap-traps and got the youngsters fitted with transmitters. Along with other captures this fall, we caught 1/3 of our flock in 10 weeks. How was this record-setting *capture blitz* possible? We had the assistance of Jeannette Parker who assisted us until all of this year's chicks were caught and radioed. She and her husband Tylan Dean (a wildlife biologist with the USFWS) then became parents of an 8 lb., 13 oz., boy, Corben, on 9 November. Congratulations!

*Marty Folk, Florida Fish and Wildlife*

## **Operation Migration**

If you follow the reintroduction of Whooping Cranes or kept up with the progress of Operation Migration, you would know that the 2006 migration was the longest yet. In fact if you read our daily updates and listen to us whine as we sat for days waiting for flyable weather, you might think that was the highlight of the year. Despite all the complaints about the 76 days it took to cover the 1200 miles between Wisconsin to Florida, there were other events last year that made it all worth while.

Having taught Whooping Cranes to follow us on migration for 6 years, we are now getting the hang of it. For the first time, all the birds that we transported from Patuxent to Necedah in the spring made it safely to Florida in the fall. Not one bird was lost to accident or illness. Much of that was the result of a generous donation by the Disney Wildlife Conservation Fund that allowed us to purchase four new wings. The new designs are strut based and do not require additional flying wires above the wing where many birds have been trapped and a few have been lost. The new acquisition means we have virtually eliminated the danger of mid-air impact with the birds.

This was our sixth season so our oldest birds are reaching breeding age. In 2005 we had a few pairs build nests and show some interest but no successful attempts. There was lots of activity this past spring at Necedah NWR as 10 pairs built nests. Five of them even laid eggs, but in their inexperience they all wandered off to forage in the marsh and local predators had a good breakfast. This is

somewhat normal behaviour for new breeders, so we weren't overly concerned. In fact one abandonment was witnessed by the Dr. Richard Urbanek of the Tracking Team, and when he was convinced that the prodigal parents would not return, he collected the eggs before the raccoons did. The eggs were shipped to Patuxent in Maryland for incubation and both hatched. One survived to become number 2 of our flock, and it was returned to Wisconsin with our first cohort. Eventually that bird, with 17 others, completed the migration behind our ultralights.

One of the five pairs that vacated their original nest decided to try again and found a new territory within the refuge. This time they were more vigilant, and they hatched and raised two chicks to fledging age. One was abandoned and taken by a predator when the parents and the stronger chick flew away. The other chick followed the adults along the route we taught them in 2002 and arrived safely in Florida. In fact, they roosted for one night in the release pen that we use in Chassahowitzka NWR before they moved on to their traditional territory in Pascal County, Florida. This one chick is the first migratory Whooping Crane hatched in the U.S. in over 100 years. Its arrival in Florida proves the technique is viable and that birds costume reared and taught to migrate will pass that knowledge on to their offspring. It shows that a migration route that may have evolved over millennia and lost through our ignorance, neglect, or carelessness can be reconstructed if people care enough.

*Joseph Duff, Operation Migration*

## **Conboy Lake NWR Greater Sandhill Crane 2006 Season**

This season marks the eleventh year of comprehensive data collection on the nesting sandhill crane population with additional data collected for off-refuge crane nesting. The first documented arrival of cranes to the valley in 2006 was 16 March (by USFWS staff).

Twenty-one pairs defended territories at least partially on NWR holdings, and eighteen of them were confirmed nesting. Twenty-four nests were located on the refuge, with one pair having made three nesting attempts (ultimately failed). Six pairs fledged seven colts; seven pairs are suspected of having lost chicks after hatching.

Four colts were banded this year. Several volunteers, including the Youth Conservation Corps (Glenwood High School students) and Ellie Thomas (the Glenwood science teacher) were involved in 2006 colt captures. A total of 29 crane colts have been color-banded on the refuge since 1996, seven of which did not achieve fledging. Eighteen of them were seen in 2006, and three have not been observed since 2003 or before. The fourth bird, banded in 2000, was last seen in a non-breeding flock in July 2005.

On 2 October, two family groups of three were rising in high circles on thermals. This was the last 2006 sighting of cranes in the valley.

Two helicopter flights over the valley and surrounding areas were made on 31 May and 18 July. The first provided valuable information concerning nesting attempts and locations. The second was crucial in locating family groups for capture in the tall grasses and led to two captures that day. No off-refuge nests were located in either of the two territories flown.

Gina King, the Yakama biologist, confirmed the presence of two pairs on the reservation. Neither pair was witnessed with chick/colt. She needs outside assistance in performing nesting surveys in 2007.

### Sandhill Crane Breeding Pairs and Production in Washington, 1992-2006

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Population Estimate <sup>A</sup>	6	6	8	22	26	34	39	40	47	50	50	49	53	60	61
#Breeding Pairs On-Refuge ( ) <sup>B</sup>	3	3	3	7 (2)	8 (2)	12	14	13 (1)	13 (3)	14 (2)	11 (5)	15 (2)	18 (1)	15 (5)	18 (3)
#Breeding Pairs Off-Refuge ( ) <sup>B</sup>			1	1 (1)	2 (1)	3	(3)	3 (1)	2 (1)	2 (2)	2 (2)	3 (1)	1#	3 (2)	1 (2)
#Subadult (non-breeders) On-Refuge				0	0	4	5	4	9	10	10	7	15	10	12
# Young Produced*	3	0	0	1	3	5	5	5	6	0	2	5	5	5	7

1992-1994 data is based on incidental observations; the numbers presented are unconfirmed estimates.

<sup>A</sup> – data includes confirmed pairs, unconfirmed pairs, and sub-adults but does not include young fledged that year

<sup>B</sup> – data in parentheses represent territorial pairs without confirmed nesting data

“On-refuge” refers to cranes nesting within the Glenwood Valley

“Off-refuge” refers to cranes nesting outside the Glenwood Valley

\* - this number reflects young known or suspected of joining the fall migration

# - unable to confirm 2 traditional pairs at Deer Creek and Panakanic Valley based on limited surveys

Molly Linville, new manager of the refuge, is bridging many gaps between the local landowners and the USFWS. Harold Cole, the former refuge manager, has been invaluable in instructing her on the quirks of the refuge. The landowner who had been draining his fields early in the season and affecting nesting on his and surrounding properties has agreed to trade his acreage for a larger portion of [less sensitive] refuge land. USFWS realty personnel are considering the trade.

Jay McLaughlin, founder of the Mount Adams Resource Stewards will be working with the refuge to remove lodgepole pine from actual and potential crane nesting habitat, a project funded by NACWG. Ellie Thomas, the Glenwood School science teacher (grades 6-12), developed a crane-focused lesson plan about wetlands. It tied concepts on the Washington State standardized tests to crane habitat as a local concern. Having done some fieldwork over the summer, she was able to share her newfound appreciation with the students.

Plans for the 2007 season include:

- A concerted effort in the early spring to document which colts survived fall and spring migrations.
- Capture of adult cranes will be attempted again, but it needs to be completed as early as possible to avoid disturbing nesting.
- Five or six permanent tree stands will be built to allow for nest observations.
- Outreach will be extended beyond Glenwood School.

*Jessica Stocking, North American Crane Working Group*

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## News and Announcements

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### First West Nile Virus Case at ICF

A 37 year old captive male Florida sandhill crane (*Grus canadensis pratensis*) housed at the International Crane Foundation exhibited abnormal neurologic signs in September of 2006. Despite supportive therapy, the ataxia (wobbliness) and weakness worsened and the crane was euthanized after 6 days. Antemortem and postmortem serum was positive for flavivirus antibody, and a cloacal swab was positive for West Nile virus (WNV) by reverse transcriptase polymerase chain reaction (RT-PCR). Necropsy revealed pectoral muscle atrophy and multifocal myocardial necrosis. Histopathology showed inflammatory and necrotic lesions in sections of brain, spinal cord, eye, heart, blood vessels, lung, air sac, esophagus, ventriculus, intestine, thyroid, adrenal, kidney, testicle, and feather follicles. An RT-PCR of brain tissue was positive for WNV. Most of the lesions were consistent with what has been previously described in birds with WNV, but were more severe and broadly distributed. The impact of WNV on captive crane populations has been variable. Currently, 13 of 15 crane species held in captive centers in the U.S. have been documented seropositive for WNV, but mortality has been limited to sandhill cranes.

*Barry K. Hartup, DVM, International Crane Foundation*

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**The Proceedings of the Ninth North American Crane Workshop, 17-20 January 2003, Sacramento California is now available!**

Go to:

[http://www.savingcranes.org/ordering/index.cfm?action1=Prod&action2=Details&prod\\_id=307&prod\\_cat\\_id=1&onsale=false](http://www.savingcranes.org/ordering/index.cfm?action1=Prod&action2=Details&prod_id=307&prod_cat_id=1&onsale=false)

*Betsy Didrickson, International Crane Foundation, 608-356-9462 x 124*

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**Editor's Note:** *The Unison Call* is a forum to share updates and opinions. Articles are not peer reviewed. Reviews and opinions included in any section of the newsletter are those of the author and do not necessarily represent the views of the NACWG.

*The Unison Call* is published twice yearly, winter/spring and summer/fall. Membership is based on a calendar year. Contributions, suggestions, opinions, drawings, cartoons, and photographs are welcome. Items can be sent to:

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Deadlines are normally June 10 and December 10. Please send information as a Microsoft Word attachment (e-mail) whenever possible.

**You are invited to join the North American Crane Working Group**

Membership is based on a calendar year. A membership directory is periodically mailed to members. Provide the contact information below **that you want printed** in the directory.

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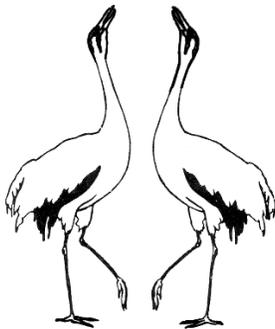
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Mail completed form and check (US\$ payable to **NACWG**) to:

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**Return Address:**  
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David and Cathy Ellis, Editors