

PRELIMINARY DATA  
NOT FOR PUBLICATION

BANDING OF JUVENILE WHOOPING CRANES

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by

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## INTRODUCTION

Breeding pair surveys over Wood Buffalo National Park in 1986 resulted in the location of 27 nests, 24 nests with 2 eggs, three nests with a single egg each (Figure 1). Evidence of a 28th nest was discovered on 4 August, 1986. After removal of 25 surplus eggs on May 21, 24 and 25, 26 single eggs remained in the 26 nests known at that time (nest 18/86 was terminated and both eggs removed due to the death of one adult).

Production surveys, in preparation for the annual colour banding program were carried out by E. Kuyt and Paul Goossen on 29 July, 31 July, 4 August and 9 August. Results of the latter two surveys indicated a minimum of 17 chicks available for banding and a maximum of 20 chicks with an outside chance of 21 (family 7/86).

Rod Drewien of Idaho again consented to come to Fort Smith and assist with the colour banding. He was again accompanied by Kent Clegg, who assisted in previous years. This year, Drewien's brother Gary (from Australia) also assisted. Jonathan Kuyt, who had previous experience in whooping crane catching (1983, 1985) also participated.

On 22 July Goossen and I met with Dr. C.C. Lin and discussed the blood sampling of cranes (for sex determination) to be banded and arranged for receipt of blood collecting supplies.

On 30 July and 2 August I talked with G. Masson, Chief Forest Fire Control, WBNP and arranged for a survey flight by Cessna 185, courtesy of WBNP. Forest fires have been few in the Fort Smith area and Masson had been requested by Superintendent K. East to assist the whooping crane project if possible.

From 2-5 August I attempted to contact Lakeland-Maple Leaf helicopters to arrange for a definite date for the banding operation. On 5 August my call was returned and I was informed that the required helicopter was in Snowdrift, Great Slave Lake, on a DINA contract. I advised that we would like to have the banding done possibly on 8-9 August.

It rained during the night of 8 August and although on Saturday 9 August the rain had stopped, a low ceiling prevailed, seriously handicapping the effectiveness of the Cessna to be used as a spotter aircraft. Conditions in the field (with all vegetation being soaking wet) would be difficult for catchers and hazardous to young cranes, so I initially delayed our departure.

This brought up yet another problem. There is no commercial flight out of Fort Smith on Sundays and crane blood collected after Saturday's PWA flight departure would not be shipped to Edmonton until Monday p.m. Dr. Lin advised us that was too long a waiting period. I therefore visited pilot Chalifoux, discussed our problems and requested a postponement of the operation until Sunday. Chalifoux consented to do the work on Sunday. I then called fixed-wing aircraft pilot Brian Webster and requested a delay to Sunday. He agreed but mentioned that Sunday was the last day of his WBNP fire spotting contract. Goossen called Dr. Lin in Edmonton and advised that blood specimens would now be arriving on Monday p.m. Blood would be stored at room temperature in Ft. Smith Sunday night and Monday a.m.

As the "free" aircraft was still available on Saturday, it seemed to good an opportunity to miss making another survey to locate family

groups (only 17 chicks had been located on 4 August, the most recent flight). I talked with Eric Bell, WBNP fire duty officer and was given permission to use the fire contract Cessna on Saturday. Goossen and I flew on Saturday until we were called back to Fort Smith for an urgent matter in the Goossen family which necessitated Paul's travelling to Winnipeg immediately. Paul was therefore unavailable for the spotter's duties in the fixed-wing aircraft the following day and that put a serious crimp in our planning because Paul and I were the only ones familiar with the crane area. I tried to get additional help late on Saturday and early on Sunday, but was unsuccessful. In the end, pilot Webster flew the spotter aircraft. Webster had been on 3 or 4 previous surveys over the crane area and was therefore not able to orient himself at all times, even with maps and airphotos I had supplied. He was able to direct us to two families in the Sass area (the most open of the nesting areas) but was generally ineffective. His presence was extremely useful from a safety point of view (in case of a helicopter accident). Use of his aircraft on the previous day by Kuyt and Goossen turned out to be of great benefit as on 10 August many of the chicks were banded near the sites where we found them the previous day.

In retrospect, weather on Saturday 9 August was excellent, vastly better than forecast, and banding could easily have been carried out if it had not been for the difficulties in blood shipment mentioned above.

Banding was carried out on 10 August. The helicopter required several refuelings. I had earlier received permission from WBNP to use a fuel cache near Klewi Lake. We used a total of 135 gallons of fuel.

Colour banding, 10 August, 1986

Weather

CAVU, light wind from south; temperature 20°C;

Aircraft

1. Lakeland - Maple Leaf Helicopters Ltd. Bell 206-L C-GQEZ (on skids), pilot B. Chalifoux, crew E. Kuyt, R. Drewien, K. Clegg, G. Drewien, J. Kuyt. Total flying hours about 11.5 hrs.
2. Loon Air Ltd. Cessna 185 C-GPAF (floats), pilot B. Webster. Total flying hours est. 7.5 hrs (no charge to CWS).

Observations

1. Family 8/86

We saw a single adult and chick about 800 m NE of the nest (for approximate banding locations, see Figure 1). The helicopter touched down to let R. Drewien and K. Clegg off. The machine then lifted off immediately to relocate the family and to hover in order to keep the three birds from moving. In a few minutes the catchers, working their way to the area below the hovering helicopter, had caught sight of the adult which flew off, shortly thereafter joined by the second adult, hitherto unseen. The large chick was caught by Clegg, about 5 minutes after he began the chase. The helicopter landed nearby, allowing the others to get to the capture site so that the chick could be measured, weighed, banded and a 2 mm blood sample collected. Banding etc. was accomplished in about 10 minutes and we were in the area about 20 minutes. I have only sketchy information on actual time on the ground at the various banding sites as I was busy searching for and plotting

family groups (in the absence of a spotter in the fixed-wing aircraft). The chick was the heaviest caught in 1986 (the chick from this pair in 1985 was also the heaviest that year). As we were carrying out our banding, one of the adult cranes flew over us. We believe the large chick to be capable of flight, judging by the long, well-developed primary feathers. It was probably a male.

2. Family 19/86

I had planned to concentrate first on the Klewi area where most of the families were concentrated. If we could do that area (and the single Nyarling chick) successfully, then the remaining 6 families would be closer to our fuel cache and to Fort Smith, an advantage if we had to come back the next day. I, therefore, requested the Cessna pilot to fly ahead and start looking for family 15/86 (Figure 1). Unfortunately he was unable to find the birds.

We circled the area of 15/86 for a few minutes but saw no cranes. We did locate a family (19/86) just west and the chick was caught and banded. Although the chick weighed over 5 kg we guessed it was a female.

3. Family 28/86

This family is identifiable by a colour banded adult (Yellow-B/B, 15/83). The chick, probably a female, was quite small and primaries were only partly developed. New breeding pairs often nest later than the more experienced breeders and the chick's small size indicates a late nest. The chick may have been about 50 days old and the estimated laying date is about 24 May. If we had found the nest during spring,

the egg (if there had been 2 eggs) would have been too young to be collected.

The chick was caught by Clegg in about 5 minutes.

4. Family 20/86

This family was observed 300 m NW of Big Birdhead Lake (A22896-29). One adult of the present family had red and white bands and undoubtedly was the adult of family 20/86, about 1.4 km north of the nest. The chick was probably a female. This nest only had a single egg.

5. Enroute to our fuel cache, we spotted a family at Small Birdhead Lake, probably from nest 13/86, 900 m south. The chick was caught in only 5 minutes. The chick weighed about 5 kg but other measurements implied it was a female.

6. We then flew to the Klewi fuel cache where we were on the ground from 1300-1320 hrs. Enroute I asked the pilot to fly over the marsh where family 16/86 usually foraged and we were fortunate in spotting the birds.

7. As we had a heavy fuel load we decided to do the distant Nyarling site in order to burn off some fuel first. After a few minutes searching, we spotted the family (17/86) and the chick was caught by Clegg in 5 minutes. The chick was probably a female. The helicopter pilot could not find a suitable landing site in the forested area and he was forced to circle during our 15 minute banding operation.

8. The pilot of the Cessna advised that he had found a family apparently near family 13/86 but he was unable to tell if the chick was already banded or not. He quickly lost sight of the birds. We decided

to do the chick of family 16/86 located earlier. The chick was well advanced and was able to fly short distances. The birds was "herded" into a brushy area where Clegg and J. Kuyt caught the bird. The bird probably was a large female.

9. We saw a pair of cranes (at least one banded with Red and White) on West Oval Lake.

10. A short distance NW of the above pair we spotted a family, probably 2/86, 1.7 km south of nest 2/86. The juvenile, probably a male, was caught by Clegg and J. Kuyt in only 5 minutes.

11. We located a family in the extreme WNW portion of the Klewi marshes over 1 km north of nest 10/86. We believe the chick banded was a female. It was caught by the Drewien brothers.

12. We were fortunate to spot a family sheltering amongst tall spruce, about 1 km due east of nest 3/86. Several of the crane families found today were in similar situations which suggested the birds were taking shelter from the hot sun. The birds' apparent need for shade and the tall marsh vegetation this year, made detection of cranes difficult, particularly in the absence of a spotter in the fixed-wing aircraft. The cranes stayed in the spruce as the helicopter landed nearby. Clegg and J. Kuyt were able to catch the young bird in about 10 minutes. The chick was almost 5 kg in weight, but measurements hinted it was a female.

13. We returned to the fuel cache where we refueled from 400-410 pm. With most the of Klewi birds caught, I then decided to do the second key area, the Sass River.



14. Enroute to the Sass we flew past the territory of 4/86 and were lucky in spotting the family right away. The Drewien brothers caught the chick after a brief chase. Gary Drewien was given a 12" gash on the forearm by the chick as it clawed him during capture. The chick was large and strong, most likely a male.

15. Family 9/86 in the West Sass was found without problem. The chick was captured by Rod and Gary Drewien; it was another large and tall bird, probably a male. One of the adults was visible from the banding site. The bird was walking back and forth, calling frequently. The juvenile, when released after blood sampling and banding walked towards the calling adult. Undoubtedly the family was reunited shortly thereafter.

16. Family 5/86 was spotted by the Cessna pilot but he lost sight of the birds. He also reported a pair of birds. As we circled, I saw a pair 450 m NE of nest 5/86. Both birds were banded and I saw yellow bands on one bird and red on the second. No doubt this is the radio-equipped pair which nested at nest 26/86 about 3 km north and lost the egg or chick in June.

17. Shortly after sighting the above pair we found family 5/86 just north of Belly Lake. The helicopter landed nearby to let off Clegg and J. Kuyt and they caught the chick in about 8 minutes. The open nature of the Sass area provided good visibility and with better footing in the area (burned over in 1981) it did not take long for the chick to be caught. It was another large chick, probably a male and able to make brief flights. Both adults were on the ground nearby and we could hear them calling as we banded their chick.

18. Almost immediately after we became airborne again we sighted a family of cranes just west of Big White Lake. The birds were over 1 km south of yesterday's site. This is one of the oldest chicks and I feared that the bird could already have been flying. Yesterday's sightings and today's location implied that the crane family was highly mobile. The 2 Drewien brothers were let off and the crane was caught in less than 5 minutes. It was a hard chase with the bird running and flap flying and the catchers not getting any nearer. The helicopter pilot did an excellent job in hovering and keeping the bird from reaching a large open lake. At the last moment the chick flapped out of a patch of brush and would have reached the lake but Gary Drewien jumped in the lake and grabbed the chick's leg. The chick was a large and strong bird and most likely a male. It was the tallest bird banded this year.

19. We flew to the SW corner of the Sass marshes where yesterday I located family 6/86. About 1 km SW of the most recent previous sighting I spotted a single adult and chick. A second adult flew in from 200 m away. The chick was taken by Clegg and J. Kuyt in less than 10 minutes. I had expected this to be the oldest chick and if it was, measurements indicated it probably was a female.

20. We were now required to return for fuel but enroute to the cache we detoured slightly in order to pass over the area where I had seen family 22/86 yesterday. We passed over the actual nest site and the pilot spotted cranes in a tall stand of spruce immediately SE of Twin Lakes. Three men were dropped off in different locations around the family and instructed to converge on the hovering helicopter. This tactic was necessary to keep the family together as long as possible in

the heavy woods. Also the helicopter could not land close to the birds. All went according to plan and the family stayed together until the catchers were within 10 metres. Clegg almost caught an adult but it brushed by him. Clegg then grabbed the chick as it ran past. The chase lasted 10 minutes. This was the 16th chick banded which equalled last year's record.

21. We refuelled at Klewi Lake from 655-715 pm. It was then decided to return to Fort Smith via the Klewi area in hope that we might find another of the several families not yet located.

22. As we flew over the area 300 m west of the location of a family seen yesterday, I was fortunate in seeing the three cranes standing motionless in a patch of spruce on the edge of the huge sedge-cattail marshes extending west and south of nests 25/86 and 10/86. Clegg and J. Kuyt got out of the hovering helicopter and began moving to the family. The aircraft could not land in the lush sedge meadows where vegetation was up to a person's chest. We temporarily lost sight of the chick but fortunately Clegg spotted the bird hiding in tall sedge. The helicopter remained airborne during the 10 minute banding operation. The crew was removed two at a time after banding, as the pilot was reluctant to take everyone out of the confined space at once with a full load of fuel. Part of the crew was ferried to an open area without trees.

23. We searched briefly for family 11/86 which we had not been able to find earlier. Finally we located the family in relatively heavy forest cover 300 m west of Snoopy Lake. R. Drewien and Clegg left the aircraft and in 5 minutes the bird was taken. Two other men were then

let off. I was not able to join the rest of the crew at once as I removed dead trees and brush in preparation for a helicopter landing site. The bird probably was a female. After banding was complete, the crew was taken out two at a time. Clegg and J. Kuyt were ferried to an open area a few km north. On the return to pick up the Drewiens the pilot overshot the site and for 5 minutes we could not locate the 2 men. With the use of the airphotos we were able to locate the 2 men and pick them up. We then collected the rest of the crew and flew on to the east Klewi.

24. We saw a pair of cranes immediately south of the Klewi Five Lakes (not plotted on airphoto), but we failed to locate family 15/86. We landed at Fort Smith just after 9 p.m.

Summary:

On 10 August, 1986, 18 juvenile whooping cranes were captured, measured and colour banded by a USFWS-CWS team of biologists, augmented by several volunteers. Parks Canada provided important support. Blood samples were collected, to be used for eventual sex determinations. Weights of birds banded varied from 3.6-5.3 kg and the mean weight was 4.7 kg (4.8 kg in 1985). Several of the cranes were capable of short flights.

Habitat conditions continue to be excellent and 1986 habitat is, I believe, the best since 1967. None of the 5 crew members noted wolf sign during their stay on the ground in the 18 different capture sites.

Two families (14/86 and 15/86) believed to be in the Klewi River area could not be located. No search was made for family 7/86 (Alberta) which has not been seen during any of the 5 surveys since June 9.

Postscript

I made a survey by fixed-wing aircraft on 13 August and located and identified all juveniles banded on 10 August. All chicks were with two adults, except chick 8/86 which was with a single adult. A second adult was a short distance north. Two additional families, most likely 14/86 and 15/86, both with an unbanded chick were observed in the east Klewi. Chicks from families 15/86, 5/86 and 1/86 were observed flying short distances as we circled them. A pair of cranes without chick was seen in the territory of Alberta pair 7/86.

Acknowledgements

It would be extremely difficult to carry out the banding without the experienced and dedicated assistance of Rod Drewien and Kent Clegg. I acknowledge my gratitude to these colleagues as well as to the volunteers, G. Drewien and J. Kuyt. Parks Canada again provided extraordinary logistical support before and during the banding.

E. Kuyt  
Wildlife Biologist

A handwritten signature in black ink, appearing to read 'E. Kuyt', with a horizontal line underneath.

11 - Nyeartling area

Figure 1 - 1986 Whooping Crane Colour Banding

- 8 Approx. location of banding
- M/S C Approx. location of family with unbanded chick

