



With the generous, ongoing support of our partners, the Namibia Crane Working Group was able to fit two leg-mounted GSM trackers and one GPS PTT to three of this year's chicks, two of which are shown in this photograph (centre) at Fisher's Pan on 31 May 2020 (photo: Franca Valsesia).

IN THIS ISSUE

- Update on the 2019-2020 breeding season and success in tracking efforts ...1**
- Thank you to all our supporters ...3**
- Blue Crane tracking data 2020 ...5**
- Unusual Blue Crane moult in summer 2019-2010 ...6**
- Blue Crane records and sightings ...10**
- Previous years ...10**
- Blue Crane sighting and counts: 2019-2020 breeding season ...10**
- Wattled Crane records and sightings ...18**

UPDATE ON THE 2019-2020 CRANE BREEDING SEASON AND SUCCESS IN TRACKING EFFORTS

This past season has been an eventful one for our Blue Cranes and our small team of dedicated crane workers.

The season started with an interesting observation of whitish colouration in the feathers of at least seven birds by Eckart Demasius, and of one bird by Peregrine Rowse, in December 2019. This resulted in much discussion, and a tentative conclusion that this could likely be related to an unusual, early moult, possibly brought on by nutritional deficiencies due to the extremely dry conditions over the past years, especially the previous year. But, as always, there are more questions than answers (see p6 below).

After the (relatively) high maximum of 33 cranes recorded in March 2019, the highest subsequent figures are only 13 in November 2019, and 9 in March 2020. These figures are

for adults and subadults, but excluding chicks. Hopefully there will be a higher count during the coming months. However, the rainfall has been better than the previous year, which was one of the most severe droughts on record. The following average annual (July – June) rainfall figures for Okaukuejo, Halali and Namutoni, combined, serve to illustrate these striking differences (MEFT data supplied by Claudine Cloete):

2017/18: 384 mm

2018/19: 147 mm

2019/20: 543 mm

This correlates with an improvement in breeding success, with four chicks on record (one for Halali Seep, two for Fischer's Pan and one from an unknown breeding site). The Charitsaub pair were also on eggs, but with no success as the site is believed to have been flooded.

The restrictions on travel, imposed by the global Covid-19 pandemic, have resulted in fewer tourists at Etosha NP, and consequently fewer reports of crane resightings, including of ringed birds. Details of the ringed birds recorded this season are included in the table on p4.

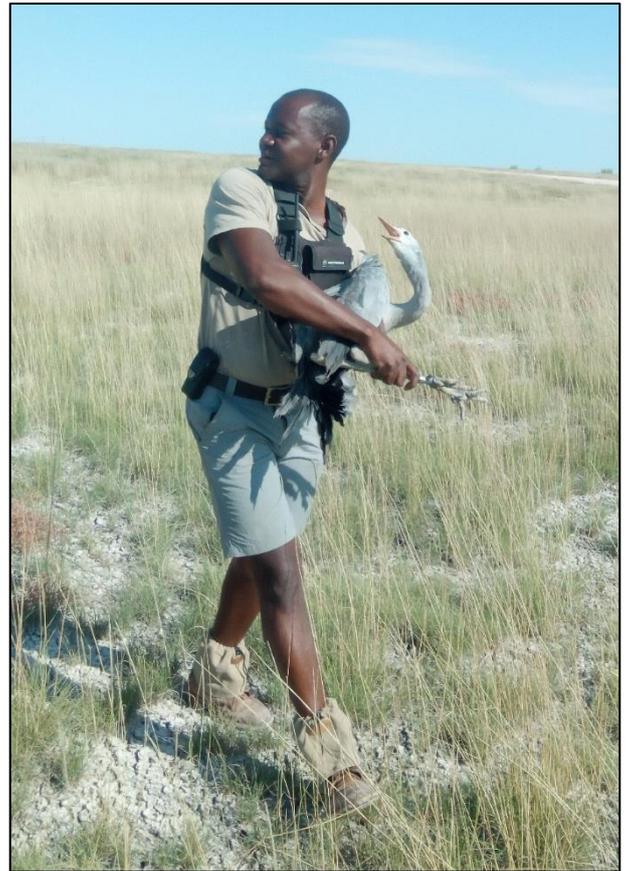
Our key questions has been: what are the reasons for the decline in Blue Crane numbers, where is this happening and how can the causes be addressed? It is considered that satellite telemetry may be the best way to reveal the population sink, and our efforts have been ongoing to achieve this goal.

The good news is that Gabriel Shatumbu of the MEFT and his team (Peterina Ndumbu, David Tsumib, Simon Amupolo, Markus Kubeb, Ute von Ludwiger) have been able to fit two GSM trackers and one GPS PTT to three of this year's chicks. A special thank you to all our sponsors and supporters (see below), without whom this wonderful progress could not have been made.

- On 18/4/20, the chick at Halali Seep was fitted with GSM tracker 1067, colour ringed **NEV**
- On 8/5/20k, two chicks at Fischer's Pan were fitted, one with GSM tracker 1068, ringed **NAT**; and one with GPS PTT 178801, ringed **NAV**

The three trackers have been transmitting well and supply a large amount of data (see tracking maps on p5 & 6). The chicks have used nursery areas of around 5.6 km² (Halali) and 3 km² (Fisher's Pan), and during this stage have made quite extensive local movements.

Unfortunately NAV, the chick with the GPS PTT at Fischer's Pan, was found dead some five weeks later, with the last PTT signal being sent on Wednesday 10/6/20 at 20h57. The family group was reported to be in good health on 9th, but the chick was seen with a broken leg on the morning of 10th. According to the tracking data, it seems that the chick (presumably with the adults) was at the water's edge (a roost site?) on Fischer's Pan on Wednesday night at 20h29, and then for some reason they (or the chick) moved 3 km north-westwards into the bush at 20h57, where the last signal was sent.



Top: Gabriel Shatumbu with chick NEV, fitted with a leg-mounted GSM tracker at Halali Seep on 18 April 2020.

Bottom: The GSM tracker (1067), sponsored by Microwave Telemetry Inc. (photos MEFT).



Gabriel Shatumbu (right) and Markus Kubebe with chicks NAT, fitted with a GSM tracker, and NAV, fitted with a GPS PTT, at Fischer's Pan on 8 May 2020 (photo Ute von Ludwiger).



Tom and Kathy Leiden kindly made funding available for our tracking initiative through the International Crane Foundation's Leiden Conservation Foundation – Project Fund for Africa.

At the same time NEV, the chick with the GSM tracker at Halali, finally made an epic maiden flight on 9-10/6/20, covering around 80 km in all, in less than 24 hours (see maps on p5). It flew northwards via Andoni and then left the Park in the early hours of 10th. We now have confirmation of which sites the cranes use at Andoni and to the west and north-west (within and outside the Park), and at Lake Oponono; the importance of waterbodies for safe roosting sites; and multiple records of a crane crossing a power line, often in dark conditions.

On 27/6/20, after 16 days in the Andoni area, NEV moved up to the Lake Oponono area, covering more than 100 km in 5-6 hours. However, at 12h10 on 30/6/20 it started on a return journey southwards down the Ekuma River and then eastwards along the Pan edge, reaching the inside of the Park again by 15h07, covering 75 km in about three hours. Gabriel reports that there is still water in the Ekuma River, and there are many people there who are catching the fish that are now available; levels of human disturbance could thus be high. Since then the bird has remained in the north-eastern parts of the Pan edge, within and outside the Park, and appears to favour the gravel pit at Andoni above the water hole with pumped water. Frequent signals in one area show the importance of water in pans/waterholes for safe roosting.

A further follow-on to the moulting story is the unusual large gaps in the flight feathers of both adults in the Fischer's Pan group. The chick, NAT, finally made its

maiden flight up to Andoni on 17/7/20, covering 37 km in about 5 hours. By 19/7/20 the two groups appear to have met up at the two Andoni waterholes.

Two other changes of note have taken place: the Ministry of Environment and Tourism (MET) is now the Ministry and Environment, Forestry and Tourism (MEFT); and Tweek Palms, much beloved of Etosha fans, is now Een Palm (One Palm), as one of the iconic palm trees has fallen down.

The activities of the past breeding season are outlined chronologically, and in more detail, below (see Blue Crane records and sightings, p10). Our key long term data are shown on p4 below, and current tracking data on pp 5 & 6.

THANK YOU TO ALL OUR SUPPORTERS

Thank you all for your ongoing interest, support and contributions. We are pleased that the trackers are functioning so well – this has been a very productive group effort. Special thanks to our team on the ground, including Gabriel Shatumbu and his colleagues from the MEFT; Hanjo Böhme, Ute von Ludwiger and Dirk Heinrich.

Four trackers were kindly donated by Microwave Telemetry Inc., through Dr Paul Howey, who has provided ongoing support. Funding for the Argos tracking and related activities was procured through Kerryn Morrison of the International Crane Foundation / Endangered Wildlife Trust Partnership, through the International Crane Foundation and the Leiden Conservation Foundation – Project Fund for Africa. As mentioned in our previous

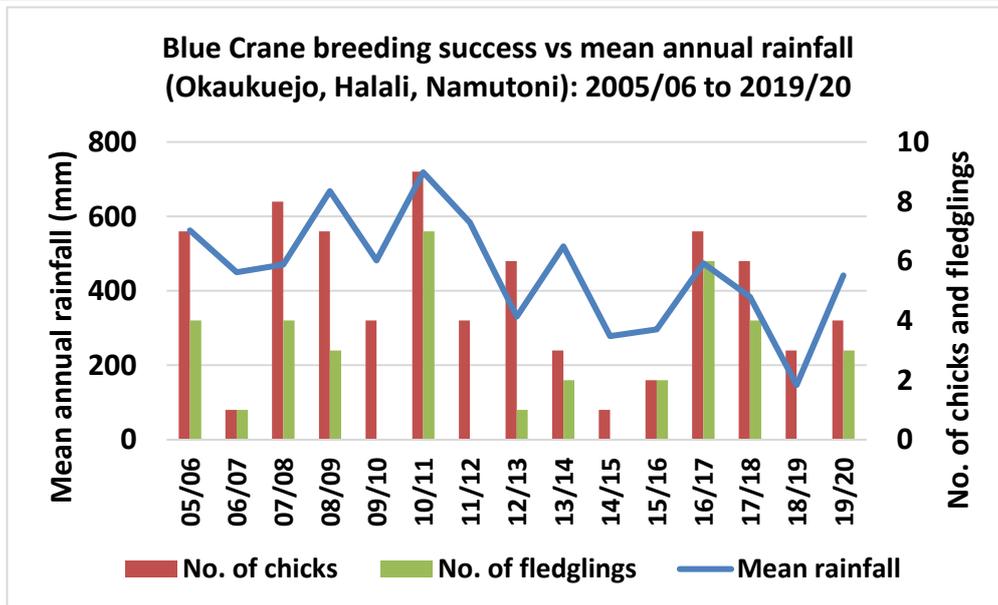
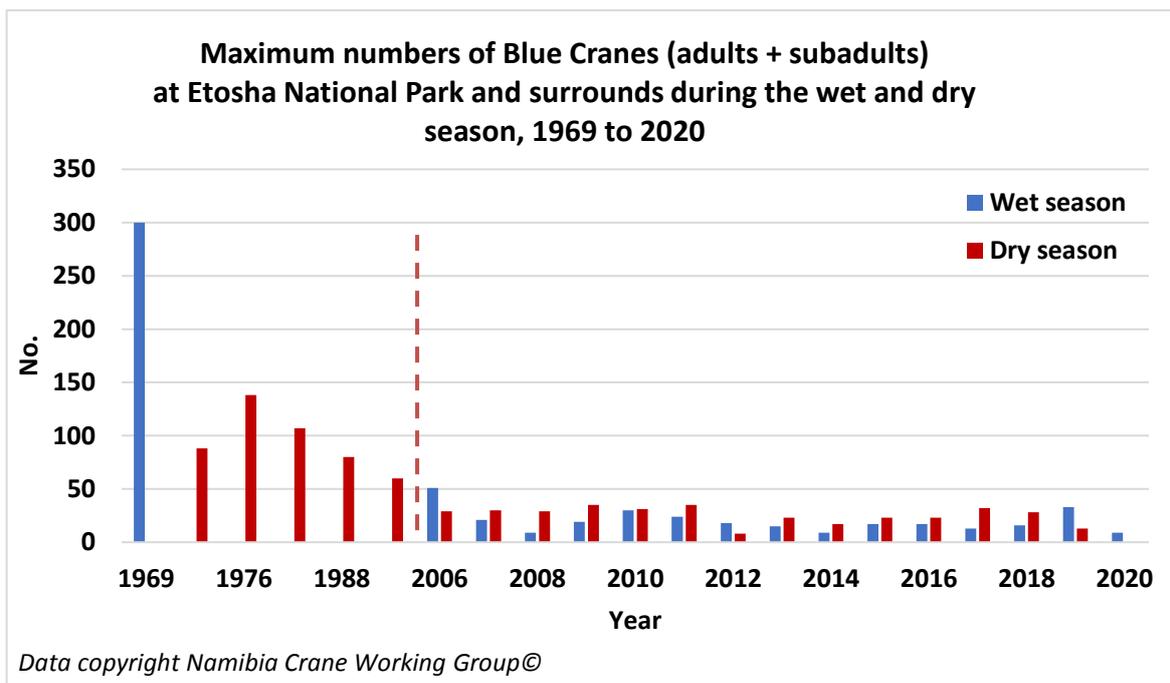
newsletter, the Max Planck Institute for Ornithology in Germany has also donated ten Lika Uni KN GPS/GSM tags, facilitated by Ortwin Aschenborn and Martin Wikelski, but unfortunately there were not enough chicks to make use of these additional trackers. Our crane surveys are kindly subsidised by means of ongoing support from the Hessische Gesellschaft für Ornithologie und Naturschutz e.V. (HGON) and their associates in Germany, Mathias Stein and Barbara Hudec.



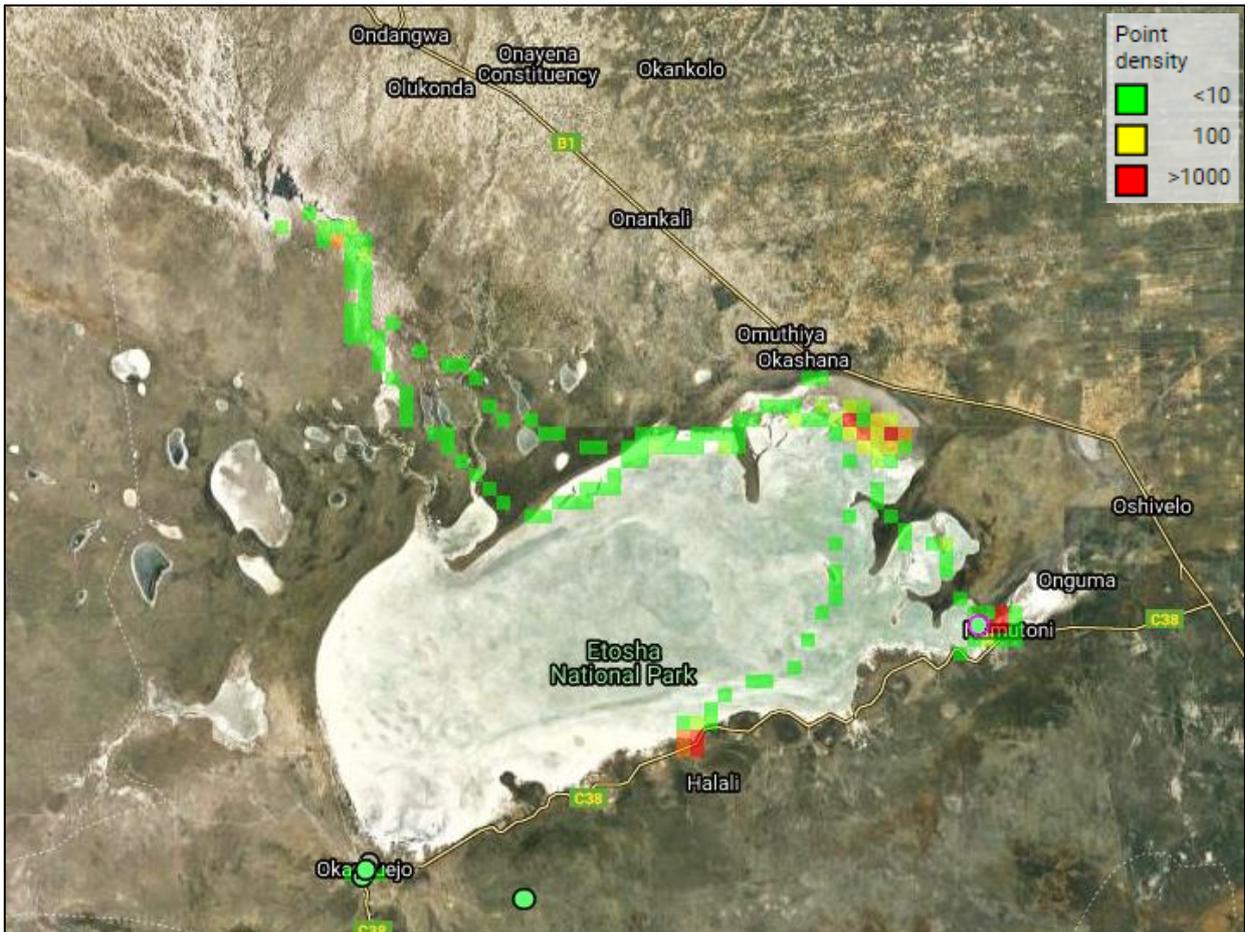
As a key partner, the Ministry of Environment, Forestry and Tourism (MEFT) provides ongoing and invaluable support in the form of crane monitoring surveys, sightings and chick ringing; rainfall records; tracking data management; and access to the Park for the crane group. The Namibia Nature Foundation provides financial administration and other ongoing support.

As always, we are indebted to all those who so generously send in their crane observations and the beautiful photographs – thank you very much for your interest.

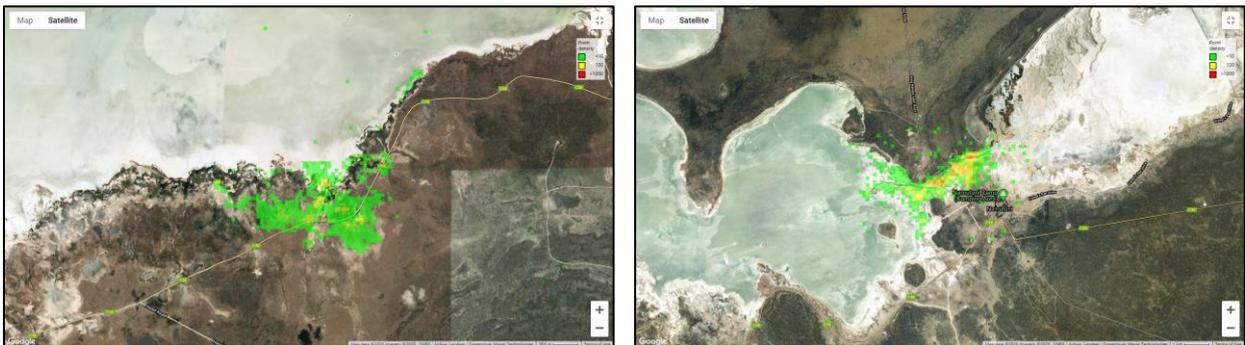
Code	Ringed	First breeding
NHD	2006 Halali Plains	2010 Halali Seep
NHH	2007 Salvadora	2013 Charitsaub
NBZ	2008 Nam Causeway	2011 Chudop
NBN	2008 Salvadora	2012 Halali Seep
NCN	2016 Halali Seep	-
NEF	2017 Twee Palms	-
NEV	2020 Halali Seep (GSM 1067)	-
NAT	2020 Fischer's Pan (GSM 1068)	-
NAV	2020 Fisher's Pan (GPS PTT 178801)	-
Metal only	2+ birds Andoni; 2 at Fischer's Pan; 1 at Charitsaub (right leg)	



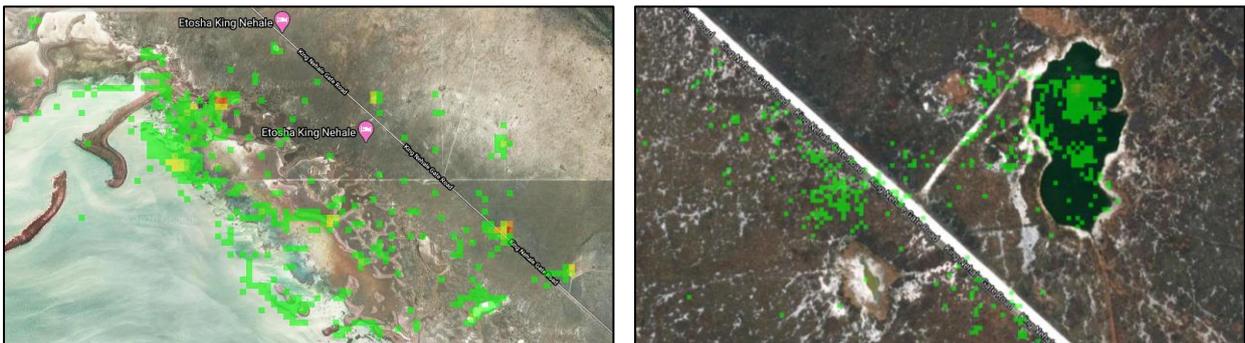
BLUE CRANE TRACKING DATA 2020, ETOSHA NATIONAL PARK AND SURROUNDS
 DATA AS SUPPLIED BY MOVEBANK, BASED ON GOOGLE EARTH MAPS



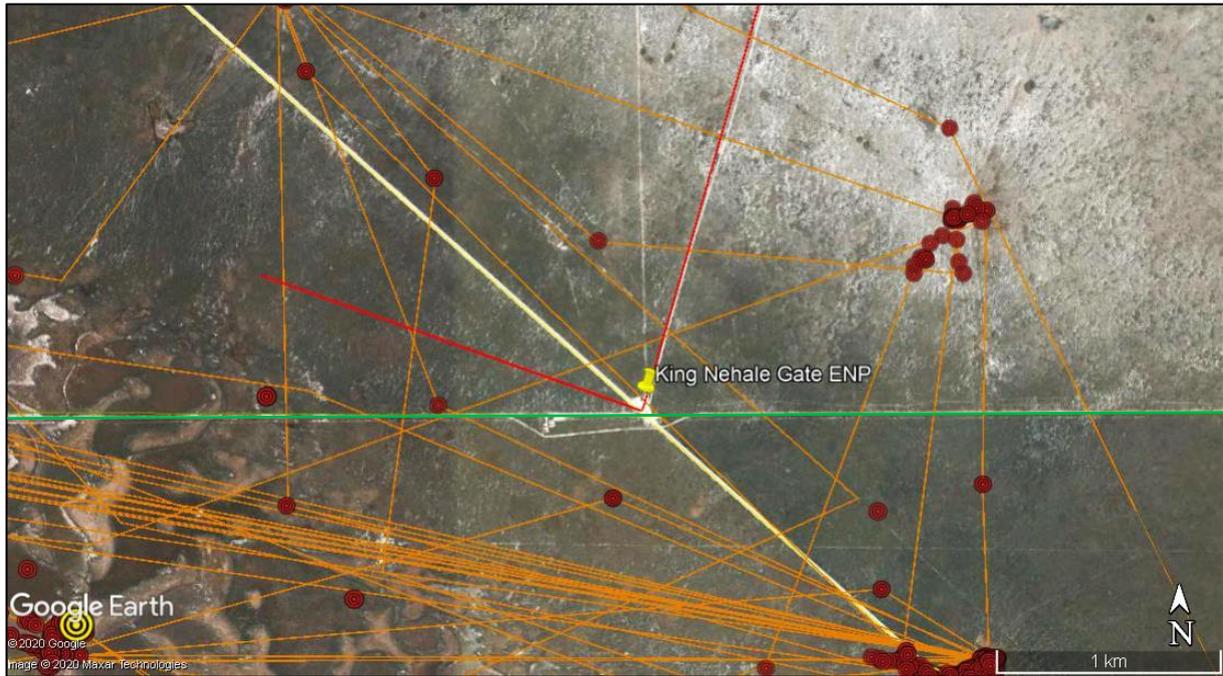
Tracking data for NEV, GSM tracker 1067; NAT, GSM 1068; and NAV, GPS PTT 178801: 18 April 2020 – 19 July 2020.



Nursery area use for NEV, GSM 1067 at Halali Seep (left) and for NAT, GSM 1068 and NAV, GPS PTT 178801 at Fischer's Pan (right).



Use of the Andoni area by NEV, GSM 1067 (left), showing frequent use of the Andoni gravel pit as a roost site (right).



Tracking data for NEV, GSM 1067 (orange lines; June – July 2020) in the Andoni area showing regular crossings of distribution power lines (red lines) north of the Park boundary (green), when moving between water bodies in the area; some crossings take place in the dark or under poor light conditions (white = gravel access road).

UNUSUAL BLUE CRANE MOULT IN SUMMER 2019-2020

Unusual white colouration: December 2019

Blue Cranes with unusual white feather colouration at Etosha over the past summer season were first reported by Eckart Demasius and (retrospectively) by Peregrine Rowse in December 2019 (see photographs on right).

Eckart saw six cranes at Andoni on 27-28/12/19 (none of them ringed), and one ringed bird between Salvadora and Charitsaub (NHH, hatched in 2007 and now a regular breeder at Charitsaub) on 29-30/12/19, all with surprisingly white feathers. This colouration was not reported on NHH in previous years. (Prior to that, NHH was last observed only on 27/12/18 by Gabriel Shatumbu, and did not breed in 2018/2019, as conditions were very dry from January 2019 onwards [see previous news-letter]).

This atypical colouration raised some questions. Are the cranes moulting? But in Etosha our cranes normally seem to moult after breeding (and not before the breeding season)? Could this be some form of nutritional stress, due to the current dry conditions? Could this be some form of genetic disorder, linked to inbreeding depression? Perhaps these feathers will fall out and be replaced by more normally coloured blue-grey ones in due course?

We have received input from a wide range of interested contributors (see list of at the end of this report, p10), to whom we are indebted, and we take the liberty of summarising the main ideas below. Our initial questions have led to further questions, and hopefully some will be answered as time moves on.



One of seven Blue Cranes with unusual white feather colouration first reported in December 2019 by Eckart Demasius.



NHN, with similar unusual feather growth, recorded in December 2019 by Peregrine Rowse.

Moulting

There seems to be consensus that the unusual colouration is most likely caused by moulting, which is thus responsible for the revelation of white patches in areas where missing feathers no longer cover light-coloured portions of other feathers, and especially down feathers. Because of this, the shafts of the primaries, secondaries and tail feathers are being exposed, and they are white at the bottom end.

Blue Cranes observed at the Andoni waterhole in November 2019 were reported to be very dark, and appeared dirty in colour; some may not have moulted all their feathers in the last season due to the drought.

What is unusual?

- If this condition is due to moulting, it has taken place very early in the season (the [limited] other Blue Crane moults that we have on record are in April, after the breeding season: see right).
- The condition has affected at least seven birds simultaneously, and possibly more.

WHAT IS MOULT?

Peter Ryan explains the essential feather moulting process in his article, entitled, 'Moult. The cost of annual renewal' (African Birdlife, March/April 2014, pp36-42; excerpts are provided below, and a pdf of the full article is available on request).

Moult is intimately linked to the process of feather growth, which occurs from specialised follicles in a bird's skin. Moult typically occurs when a new feather starts to grow, loosening and eventually pushing the old feather out of its follicle. Such a 'scheduled' moult forms a key part of a bird's annual cycle and typically is triggered by cues such as day length and temperature that result in hormonal changes.

Birds have adopted two ways of dealing with the rigours of moult. Most have a protracted moult, spreading the impact over a long period and minimising the cost per day. Other birds condense the process over a much shorter period, at a higher cost per day. In the latter case, all the flight feathers are replaced simultaneously. This results in a flightless period that requires access to safe moulting areas where the risk of predation is low.

Feather growth time varies among bird groups. It could take a large eagle, vulture, bustard or crane up to 100 days to grow its longest primary feather. This makes it impossible for large birds to completely replace all their flight feathers each year without resorting to a flightless moult.

Some species of cranes and flamingos are able to vary their moult strategy, undergoing a flightless moult in secure locations, and having a slower, progressive moult in areas where the predation risk is greater.



The Etosha cranes normally moult after the breeding season (March/April).

Top: The first crane fitted with a PTT (James/007, captured on 8/4/08), showing moult in process (photo Holger Kolberg).

Centre and bottom: The moulting adult fitted with a VHF radio transmitter in April 2011 (Polly Moul), which shows darkish, dirty-looking plumage (this bird could be captured as it could not fly) (photos Ann Scott).



Poor plumage / heavy feather wear

Poor plumage overall: there is a great deal of abnormal wear, some loss of normal structure and poor pigmentation (not a vibrant grey). Heavy feather wear could be exposing the downy feather bases/down layer. It has been noted that the cranes' feathers get worn down when foraging in the tall hard grass at Oponono and Andoni during the dry months.

Poor plumage may have psychological causes: increased stress that might further a lack of grooming and other maintenance behaviours that leads to poor feather condition; or medical causes: poor diet or external problems such as parasites or bacterial infection; however, the latter usually occurs in a focal area and less across an entire bird's body; and one would not typically see either of these in so many (wild) birds.

Leucism (lack of pigmentation in parts/all of the plumage): Leucism may be related to nutritional deficiencies, but the exact causes and mechanisms are poorly understood.

Bad condition could lead to subsequent infection.

Parasites such as mallophagan feather lice or feather mites could be involved.

Drought conditions

Strange moults with a lot of birds being in moult pause, or moulting late and not at regular times have been reported by a local bird ringer (Dirk Heinrich) in other species in Namibia recently, which supports the idea that this condition is probably linked to the drought conditions.

Nutritional stress

Is there any possible link between nutritional stress and moulting?

The colouration could be due to stress or some kind of food/mineral deficiency in the environment. Nutritional stress would result in plumage of a poorer quality, both structurally and in pigmentation.

Etosha has had 6 - 7 years of low rainfall/drought, and endured a particularly bad drought year in 2019. The nutritional stress caused by these unfavourable habitat conditions, both within and outside the Park, is also associated with increasing human/stock pressure in the Lake Oponono areas, and competition for scarce food resources.



It seems that the plumage of the Blue Cranes at Andoni in November 2019 was very old and worn.

This can be clearly seen on the following photographs (top to bottom):

1. NHH together with two other cranes.
2. NHH
3. NBN
4. In comparison, a picture of NHH in January 2020 at Charitsaub shows that this bird is busy with a body moult, some feathers being replaced, others not yet. The tail feathers seem to be old still and have not been replaced

(comments and photos Dirk Heinrich).

The idea of nutritional stress makes sense, especially when viewed against the seasonal movements of these cranes: they breed within the Etosha National Park during our summer/wet season (January-March; when there is usually sufficient food for the chicks); then, once the chicks have fledged, move up to Andoni in the north-eastern part of the Park, and from there to the communal areas north of the Park for the winter/dry season (May-November; in the area of the Omadhiya Lakes, including Lake Oponono). One of their main sources of food in these areas appears to be a small corm, *Cyperus* sp. ('uintjies' or nut-grass/sedge; family Cyperaceae), which the cranes find amongst the roots of heavily grazed grasses. In these areas, the cranes have been observed feeding almost non-stop on this food source during daylight hours.

These northern areas are being used by increasing numbers of people and their stock (cattle, goats, pigs), coupled with the increasing availability of water through artificial water points. It seems very likely that this growing human/agricultural pressure, coupled with the present drought conditions over the past few years, is likely to be having a cumulative impact on the feeding of the cranes during the dry season. The *Cyperus* corms are nutritious and are likely to be attractive to other consumers, including goats and pigs - and they are also eaten (roasted) by humans, especially in times of food scarcity.

The good news is that Etosha has received better rainfall this season, and hopefully the condition of the cranes will start picking up again.

A genetic problem?

Could this be due to some genetic issue?

Will any of these birds manage to breed successfully?

We know that NHH was incubating eggs at Charitsaub in March 2020 (although the nest was eventually flooded).

How soon will the cranes grow new feathers?

Dirk mentions: I have seen three cranes in early February 2020, one at Fischer's Pan far away and a pair at Charitsaub. They all had their normal colour, no dirty looking feathers, nor white patches or exposed shafts. One was a bird Hanjo and I saw at Andoni in November 2019, where they appeared dirty and darkish.

Further feather puzzles

As an interesting sequel to the moulting discussions, these photographs (right) by Ute von Ludwiger of the pair of adults at Fischer's Pan (the group with the chicks fitted with trackers) in June/July 2020 show large gaps in the secondary feathers for both birds. Dirk Heinrich and Hanjo Böhme comment that this is probably not a natural moult, but rather feathers accidentally damaged and either missing or broken off. Normally, during a moult a bird loses the same feather on each side and during growth, and the feathers on both wings are always more or less in the same stage of growth.

What could also possibly have happened is that the cranes had been at pans with concentrated salty water and this could have resulted in feather barbs sticking together?

The birds in the photographs seem to have fairly new feathers, and the missing secondaries were most probably lost when landing or taking off and hitting an obstacle like a tree trunk or branch.

The birds were still able to fly, and by 17/7/20 appear to have reached Andoni with their tagged chick, NAT.



Both the adults in the Fischer's Pan group show large gaps in the secondary feathers on one wing in June/July 2020; this is thought to be the result of trauma (e.g. a collision with a tree trunk or branch), rather than natural moult.

Top: 10/6/20 (which is when one chick, NAV died)

Centre: 5/7/20

Bottom: ~9/7/20

(photos Ute von Ludwiger).

Thank you

Special thanks to all the following for their invaluable contributions to this discussion:

Eckart Demasius (e-b.de@iway.na)
Peregrine Rowse (prowse@keystrokepro.com)
Dirk Heinrich (dirkuheinrich@gmail.com)
Hanjo Böhme (gmbhanjo@iway.na)
Ute Von Ludwiger (utevl@gmx.net)
Gabriel Shatumbu (gshatumbu@gmail.com)
Holger Kolberg (holgerk@afol.com.na)
Wilferd Versfeld (wilferdversfeld@gmail.com)
John Mendelsohn (john@raison.com.na)
George Archibald (george@savingcranes.org)
Barry Hartup (hartup@savingcranes.org)
Kerryn Morrison (kerrynm@ewt.org.za)
Tanya Smith (TanyaS@ewt.org.za)
Paulette Bloomer (paulette.bloomer@up.ac.za)
Arrie Klopper (arrie.klopper@up.ac.za)
Peter Ryan (peter.ryan@uct.ac.za)
Darrell Abernethy (darrell.abernethy@up.ac.za)

BLUE CRANE RECORDS AND SIGHTINGS

PREVIOUS YEARS

Record number of 300 cranes for 1969 confirmed

March/April 1969 Jan & Suzie van der Reep, Huab Lodge & BushSPA (suzirene@icloud.com)

Ed: I was going through some of our older crane records (collated by Wilferd Versfeld and others) and wanted to find out about this one:

J. & S. vd Reep Andoni - 300 cranes Etosha Fly-in Safaris and Huab Lodge 1968/69; much competition at waterhole at midday.

Jan & Suzie reply: Must have been March/April of the year 1969. Unfortunately, all photographs were drowned in the flooding at Halali in March / April 1973 while Jan lived in a tent on the campsite... after that he got a caravan. Sorry not to be able to help more on this one, but it certainly was quite remarkable!

Ed: Thank you for this confirmation, as you say it is quite remarkable – and our highest count on record. We also have relatively high counts of 138 by Hugh Berry in 1976, and 107 by Roy Miller in the late 1970s (see graph on page 4) ... so it seems that there were lots of cranes around during these 10 years or so, and then for some reason their numbers gradually declined.

16-17/5/19 Ignatius Kauvee, Enviro Marine Consultants cc (ikauvee@gmail.com)

I concur with the sightings of cranes on center pivot irrigation systems (see previous newsletter) as I spotted a crane, in the lucerne fields of Dr Joggie Bredenhahn on farm Hartebeestloop, Stampriet (near Mariental) during a farmer's day on 16-17/5/19. Unfortunately, the camera

with the pictures was stolen before I could download the pictures.

I appreciate your email and hope that the Hartebeestloop community will be of assistance to you. I happened to see an email by UCT student presentation for cranes before my visit to Hartebeestloop, hence that my observation of it being a crane.

Ed: We spoke to the wife of the farm manager there (Mrs Rene Swart) (who coincidentally grew up in the Cape Overberg, where there are many Blue Cranes) and she says they will definitely keep a look out for the cranes in the future. We also spoke to her husband.

You will be interested to hear that one of our 'historical' records of Blue Cranes in Namibia was of a pair, seen at Stampriet in a lucerne field on 6/7/60 by a youthful Warwick Tarboton, who later became a well-known ornithologist in South Africa. This area is far from the normal distribution of these cranes in Namibia, as they are found mainly within Etosha and occasionally in the areas to the north. The main population is in South Africa, with a few recent records in Namaqualand in the Northern Cape.

As mentioned in the newsletter, these agricultural developments would be potentially attractive to the cranes, although we do not have many records as yet. However, one of our associates, Gabriel Shatumbu of the MEFT at Etosha Ecological Institute also mentioned a report of two Blue Cranes in an irrigated area at Ruacana (north-west of Etosha) in May 2019.

BLUE CRANE SIGHTINGS AND COUNTS: 2019-2020 BREEDING SEASON

8/5/20 Hanjo Böhme (gmbhanjo@iway.na)

Two Blue Cranes have been recorded at Erindi Private Game Reserve (near Omaruru) (exact date not known).

Ed: Does anyone else have records of cranes in this area?



7-9/7/19 Fred Hodgson (fhodgson@manx.net)

I am just back from three days in Western Etosha and was shocked at the conditions. Sadly we saw no Blue Cranes at all in the usual spots. So I suppose that it is a survey report

in itself if you need it. 7-9/7/19. No Cranes seen between Galton Gate and Rietfontein down any tracks.

Despite the nil return do keep up your good work which is much appreciated and it is to be hoped that next season turns out better.

20/10/19 Leona Mukai, Tucson, Arizona
(leonaarizona@gmail.com)

On 20/10/19 I saw two Blue Cranes at the Andoni Waterhole in Etosha NP. One was ringed. I cannot completely read the letters. It is Nxx. Attached is a photo.

ED: Could be NEF?



5/11/19 Gabriel Shatumbu, Etosha Ecological Institute, MEFT (gshatumbu@gmail.com)

Date: 05.11.19

Time: 12:56PM

Location: Andoni waterhole

Number: 13

Rings: 1 with NNF or HNF (photographed through telescope with cellphone)

Photo top right: Saddle-billed Stork

ED: Ringed crane is NEF?



16/11/19 Peter Cunningham, Environment & Wildlife Consulting Namibia (pckkwrc@yahoo.co.uk)

11 x Blue Cranes seen at Andoni water point on 16/11/20 @ 13h00 (at least 1 with rings, but too far to ID).

PS 2-Palms now 1-Palm - see pic.



17-24/11/19 Hanjo Böhme (gmbhanjo@iway.na)

We arrived back in Windhoek yesterday, after a VERY hot trip to Etosha (+ 38°C daily) with just a little of a promising result. We first went to Andoni on 17/11/19, observing far away from the waterhole in the field 5 perhaps 6 Blue Cranes. Difficult to see, but then they came to the waterhole. After waiting for nearly three hours in the soaring midday heat, suddenly out of the blue another 7 Blue Cranes arrived. So the count stood at 13 for that day;

due to unfavourable light conditions we couldn't make out any ringed birds. I also first thought these birds are much darker and smaller, but that could have been due to the light conditions and the angle of observation.

We went back to Andoni on the 19/11/19 and again on 20/11/19. Luckily we did that, because then (those) 13 Blue Cranes were standing at the waterhole and due to favourable light conditions we could see and photograph all of them. On those photos we could identify 5 ringed birds (NHD//NCN//NBN//NEF//NHH). I presume that these 13 birds were the same group as those of 17/11/19. We stood there all together for more than 10 hrs, observing/sweating and the figure remained at 13 birds.

We visited ALL the other known spots at least twice during the course of the week with no records of Blue Cranes anywhere. There is no rain, thus no food and I must admit that I never ever saw Etosha in the last 60 years in such a dry and horrible condition. Frightening to say the least.

Luckily there is a bit of water left at Charitsaub and hopefully the cranes will be attracted. Salvadora/Sueda look pathetic, so does Koinachas, Chudop, Twee Palms (on top of it there is only one Palm left) and Nebrowni.

26/11/20: After scrutinizing ALL the BC pictures again, we saw another 2 birds ringed at Andoni. Unfortunately here we don't exactly know which birds they are, because the green rings were missing and just the silver/metal rings at the base of the feet are visible. This in itself is a very interesting observation, because it demonstrates that those green rings don't last ad infinitum.

24/12/19 Peregrine Rowse

(prowse@keystrokepro.com)

I found your web page requesting information on ringed Blue Crane sightings in Etosha whilst trying to find out more about a single Blue Crane I saw on the 24/12/19 between Halali Rest Camp and the Rietfontein waterhole. By enlarging the photograph I can see that the bird carries a green ring with white lettering NCN on its right leg. I attach a cropped photo (right, top; also see p6).

I would be very grateful if you could provide any information about when and where this bird was ringed, and age if ringed as a chick. I am alarmed to read on your web page that the 2017 population estimate for Etosha is only 32 birds. Is that still the case?

Ed: This bird was ringed as a chick on 5/4/16 April 2016 in the Halali area, on the Pan's edge (fairly close to where you spotted it). It has also been seen again in 2016, 2017 and 2018.

You will be interested to hear that this bird was part of a group of at least 13 birds that were observed at Andoni in November 2019, showing signs of what is thought to be an unusual moult (hence the white fluffy feathers and darker, tatty-looking wing feathers) (see above).

On another matter I saw an adult African Crake (photo

below, bottom) on the 23/12/19 at the Onguma Tamboti waterhole on the eastern boundary of Etosha NP. Photos of this bird are attached. The Atlas of Southern African Birds, though now quite dated, suggests that this is a pretty scarce bird in Namibia. There seems to only a single Namibia record at Hobatere in March 2011 on eBird.org.



27-30/12/19 Eckart Demasius (e-b.de@iway.na)

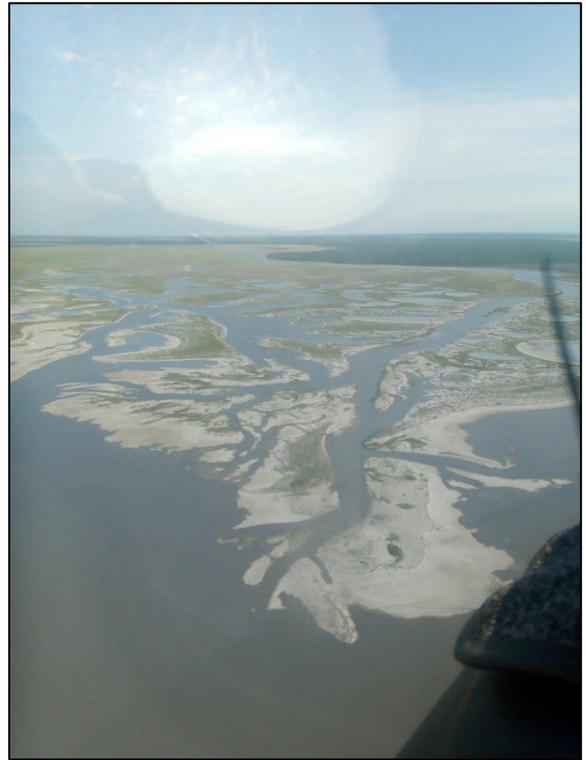
As is customary by now, we spend time after Christmas in Etosha. There were only six BC's at Andoni, one with surprisingly white feathers. I have never seen something like this before. Can you explain this? We saw these BC's on 27 and 28/12/19 (pto for photograph; also see p6). One BC was seen between Salvadora and Charitsaub on 29 and 30/12/19 (NHH, photo below and top one on p13).





24/1/20 Gabriel Shatumbu

Lake Oponono is full of water, the flood is now at Ekuma River inflow to Etosha Pan. The largest number of flamingos are at Ekuma River delta, small pans between Ekuma river and Amupini corner, Oshigambo pans, and Fischer's Pan. The flood water according to community is not linked to flood from Angola, but more rain was received at Omusati and Oshana regions.



3/1/20 Gabriel Shatumbu

Crane count 03.01.2020

- Okashana=0
- Andoni=0
- Twee Palm/One Palm=0
- Fischer Pan bridge=0
- Chudop Triangle=0
- Halali Seepage=2
- Halali Plains=0
- Salvadora= 2 pair possible busy nesting
- Charitsaub=0
- Kapupuhedhi, Ondongab and Nebrownii=0

Rainfall: 55mm King Nehale, 10.2mm Okaukuejo

Total rainfall Okaukuejo 1-31/12/19: 77mm



On those birds that were close enough to observe, the new feathers seem to be growing out after the moult, but the birds spend a lot of time preening and scratching (see photo, p15 bottom left).

The metal ring (right leg) on the bird at Charitsaub appears to be very loose, and the foot seems to be badly injured, with swollen toes, and also apparently the skin on the lower leg is grazed (see photo, p15, bottom right). The bird seems to be using its foot and walking around, for now. Could this bird be the usual long-term mate, NHH (2006), that has now lost its colour ring?



3/3/20 Gabriel Shatumbu

Today's count was as follows:

- Charitsaub: two adults nesting, two eggs.
- Halali Seepage: two adults and one chick about 2 weeks old in already grey color.

There are tall grasses, come with your good scope and elevated vehicles to see better. Do not forget to bring mozzie repellents.



8-12/3/20 Ann & Mike Scott (ecoserve@iway.na)

We did a full count from 8-12 March 2020. It was good to see all the grass, and water. However, we found only 9 cranes + 1 chick; and 3-4 possible nests:

- Charitsaub: Nest, NHH (almost sure, but no clear ID photo of rings on right leg; this is probably the female); and a mate with metal ring only on right leg; on nest; both birds feeding on grass seeds
- Halali Seep: 2 adults + 1 small chick, too far away and not possible to see if ringed in the long grass
- Salvadora: Nil
- Springbokfontein: Nil; a little water
- Chudop Triangle: Nil
- Een Palm: 2 adults (apparently unringed, but too far away to confirm); normal nest site covered, but they may still nest in the surrounds
- Fischer's Pan: Crane on new nest site on an island; one other crane (unringed) nearby; and a third crane (unringed) a bit further to the east
- Andoni: Nil

TOTAL 9 + 1 ch





Left: *Salvadora* during the dry conditions in June 2019, and Right: during March 2020 (photos Ann Scott).



Left: *Charitsaub* during the dry conditions in March 2019, and Right: during March 2020 (photos Ann Scott).



Left: NHH busy preening at nest; and Right: Mate with metal ring (only) and injured right leg; both at *Charitsaub*, March 2020 (photos Ann Scott).

11-12/4/20 Estelle Oosthuysen, Nhoma Safari Camp
(info@nhomasafaricamp.com)

It's been a long time since I've seen a Crane News. Is it still being distributed?

I have a question. Visiting Etosha this weekend we saw no cranes and only 3 flamingoes. What happened? Did the rainy season start too late?

Hope you are still following the cranes.

13/4/20 Gabriel Shatumbu

Cranes counted during 2020 wet season count:

- Twee Palms: no cranes observed
- Fishers Pan nest: not found
- Halali Seepage: 2 adults with one chick big ready to be tagged by this week
- Salvadora: nothing.
- Charitsaub: 2 adults on nest still; I suspect eggs were soaked in water and will not be able to hatch, but I will give them another week before I go and observe the eggs; see attached pictures of cranes, taken with cellphone camera and scope



18/4/20 Gabriel Shatumbu

The following tag was fitted:

Plastic ring: NEV/ green & white, metal ring: 9A-15719, GSM tag:1067, wing: 55cm, tail: 18.5cm, beak:6.5cm

Location: Halali Seepage

Date: 18.04.2020

Time:10:20

Team: Gabriel Shatumbu, Peterina Ndumbu, David Tsumib, Simon Amupolo (all MEFT)

The tag fitted on nicely and bird was walking nicely. The deployment took about 15 minutes, I had Halali people to help me to hold the bird. After gluing on top I added clear silicone, just in case.

**See p2 for photographs and further details.*

18/4/20 Hugo Haussman, via Hanjo Böhme

Two small Blue Crane chicks reported at Fischer's Pan (causeway area).



8/5/20 Gabriel Shatumbu

Two more chicks were tagged today at Fischer's Pan at 18h00, as follows:

Team: Gabriel Shatumbu, Markus Kubeb (MEFT); Ute von Ludwiger (photographs) (Mushara Lodge)

Crane 1

Plastic ring: NAT/ green & white, metal ring: 9A-15875, GSM tag:1068, wing: 29cm, tail: 11.5cm, beak: 5.5cm

Crane 2

Plastic ring: NAV/ green & white, metal ring: 9A-15874, PTT tag:178801, wing: 31cm, tail: 11.5cm, beak: 5.6cm

The tags fitted on nicely and birds were walking nicely. The deployment took about 20 minutes, I had Ute and Markus to help me to hold the birds.

The area was very difficult to catch them as there was water and thick bushes. The morning's first attempt failed as they ran into bushes and there was herd of elephants; we left them and tried later afternoon.

The one crane was smaller than other, and was struggling a bit to walk with the tag. On 9/5/20 at about 12:00 Ute von Ludwiger reported she found them safely united with the parents.

**See p3 for photographs and further details.*



14/6/20 Hanjo Böhme, Christiane Maluche, Ute von Ludwiger

After a nice trip to Etosha I safely returned to Windhoek late Friday evening.

We visited all the known BC sites and on top of it spent a whole day at Mushara waterhole, because after seeing the parents together with their offspring doing flight exercises at Fischer's Pan, I thought they perhaps will move up north via Mushara to Andoni, before heading west into the direction of the Ekuma/Oshigambo rivers and then to Oponono.

We observed BCs on :

5/6/20 + 6/6/20 + 7/6/20 + 9/6/20 = Fischer's Pan = 2 BC/1 ringed (NCN)/1 unringed

6/6/20 = Twee Palms = 2 BC/not ringed

10/6/20 = Fischer's Pan eastern side= 2 BC/ not ringed (most probably those from Twee Palms).

7/6/20 + 9/6/20 = Fischer's Pan = 4 BC/2 adults/2 chicks (the family was happily together and the rings and transmitters perfectly positioned)

10/6/20 = Fischer's Pan= 4 BC/ 2 adults/1 chick healthy and perfect/ 1 chick, while lying, but still feeding. When it tried to catch up with the rest of the family we could see that it was injured. Photos immediately confirmed our observations.

10/6/20 = Andoni waterhole = 2 BC/1 ringed (NHH)/1 not ringed.

Ed: The last signals from the PTT on NAV were sent on 10/6/20 at 20h57, and this is when, sadly, the chick is presumed to have died.

Unfortunately NAV, the chick with the GPS PTT at Fischer's Pan, was found dead some five weeks later, with the last PTT signal being sent on Wednesday 10/6/20 at 20h57.

The family group was reported to be in good health on 9th, but the chick was seen with a broken leg on the morning of 10th. According to the tracking data, it seems that the chick (presumably with the adults) was at a probable roost site on Fischer's Pan on Wednesday night at 20h29, and then for some reason they (or the chick) moved 3 km north-westwards at 20h57, away from the water, where the last signal was sent.

The remains were collected by Ronny Namupala, Filip Haodom (MEFT) and Ute. A closer examination of the leg injuries by Gabriel and Hanjo supported the theory that the bird could have crash-landed in a tree or bushes, most likely in the dark.

Ute subsequently informed us that she saw two unringed BC's at Namutoni waterhole (presumably they come and go between Namutoni and Twee Palms) and that the adults with the one chick left are happily together at Fischer's Pan. They will most probably leave only after the one adult has stopped moulting.

Ute von Ludwiger (email utevl@gmx.net) has sent us many beautiful photographs – thank you very much. The ones below were taken on 5/7/20, showing the Fischer's Pan family group with the remaining chick, NAT; and a group of five more cranes: two with a metal ring (only); and one of them a fourth chick for the present season (nest site unknown), clearly seen on the right in the bottom photo.



The above gathering appears to have been very noisy, with some territorial displays and much trumpeting.



WATTLED CRANE RECORDS AND SIGHTINGS

26/7/19 Rich Beilfuss (President & CEO, International Crane Foundation) (rich@savingcranes.org)

I am in Zambia for six weeks and we have been experiencing the drought severity here also. Interesting to note that the drought seems to be impacting Wattle Cranes much more than Grey Crowned Cranes. We saw no evidence of chicks this year on the Kafue Flats (no juveniles observed out of many hundreds of Wattle Cranes) and only evidence of two WC juveniles on the Busanga Plains, which were especially dry for this early in the year. Alternatively, most of the Grey Crowned Cranes appeared to have chicks on the Busanga Plain, where there are dozens of family groups. Given the higher water/wetland dependency of Wattle Cranes, I suppose this is not too surprising, but conversely I was surprised and relieved to see that Grey Crowned Cranes can apparently fledge chicks even during such a severe drought as this.

19/10/19 Peter Cunningham, Environment & Wildlife Consulting (pckkwrc@yahoo.co.uk)

3 x Wattle Cranes at Mahangu - pic attached, but too far - opposite coordinates: 18 12 24.4; 21 44 43.7



17/6/20 Franca Valsesia (franca.valsesia@gmail.com)

Today a wonderful surprise in the Mahangu Park got to see 11 Wattle Crane all together for many times I was able to see 2 max 3.

25/2/20 Dave Ward (dward@iway.na)

Crane sightings in Zambezi conservancies, 2014 to 2019

Attached please find crane sightings from the Zambezi conservancies from 2014 to 2019 (taken from the game guards' Event Books).

Unfortunately, no sightings of Grey Crowned Cranes were made between 2014 to 2019 in Zambezi by the game guards. Nyae Nyae Pan has been dry for the past two years or so. However, in 2017 it was full of water so I am sure there must have been some Wattled Cranes in the vicinity but none were recorded in the game guards' Event Books.

Ed: Well done to the Zambezi conservancies for the dedicated recording of cranes over all these years – not only of scientific importance, but also as a valuable awareness-raising activity. Thank you for your ongoing interest in submitting these records, Dave.

WATTLED CRANE SIGHTINGS IN ZAMBEZI COMMUNAL CONSERVANCIES FROM 2014 TO 2019

CONSERVANCY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mashi	2014			100									10
Salambala	2014						11						
Kabulabula	2014			4	3	4	3		2	4			4
Kabulabula	2015	4	11	3	5	4	7	6	4	5	3		4
Kasika	2015										2		
Nakabolelwa	2016					3							
Kabulabula	2016	14	11	9	6	4	13		12	4	7		4
Kasika	2016							9					
Kabulabula	2017				3	4	3	3		6	7	6	
Kasika	2017	1							2				
Kabulabula	2018	4			4		3	7	2	2	2	4	
Kasika	2018									2			
Kabulabula	2019	3	8		6		3		5				
Kasika	2019									2			