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FIVE-YEAR MILESTONE

The NamPower/Namibia Nature Foundation Strategic Partnership is now five years old!

During the past 4-5 years we have been occupied in creating awareness about wildlife and power line interactions and their consequences; training; gathering information on such incidents; and developing a multi-disciplinary environmental information service.

The focus for the next phase – namely to address the impacts of these incidents, and to plan, implement and monitor mitigation measures – was the subject of a recent planning workshop.

This issue also brings you update on the flamingo tracking initiative; the bustard and power lines project; and the power line surveys and incidents that have been reported over the past six months. Many thanks to all for these ongoing and invaluable contributions!



Enthusiastic workshop participants meet in Windhoek to share ideas on 17 October 2013 (photo Ester Naikaku)



Greater Flamingo NFF, fitted with a solar-powered satellite tracker, flying at Mile 4 on 30/5/13 (photo Katharina Reddig)

FEEDBACK AND PLANNING WORKSHOP

A milestone feedback and planning workshop took place in Windhoek on 17 October 2013.

The objectives of the workshop were to:

- Provide feedback on wildlife/power line incidents recorded to date
- Provide feedback on new lines being planned, and on sections of line that have already been marked and the effectiveness of this mitigation
- Brainstorm in order to prioritise sections of line for applying/testing new mitigation; and/or for further monitoring
- Discuss budgetary implications of mitigation and make (provisional) recommendations for generic guidelines for EIA practitioners.

The participants were mainly from NamPower: Abiud Kaura, Hendrik Espag, Nico Goagoseb, Hansie Peens, Dockter Kandjou and Dagga Zimmermann (Network Operations); Ernst Krige (SSP); Danie Louw and Reginadia Haihambo (SHEW); Karl-Heinz Wagner (PDS); and also two MSc students, Julia Amukwa and John Pallett, and his field assistant Allen Kafene; and Mike and Ann Scott.

Ernst Krige first provided an overview of new power lines being planned. The present demand for energy (650 MB p.a.) is likely to increase to 1000/1300 MB p.a. over the next 15-20 years. The power line network will increase accordingly, with the forecast being at various levels of probability.



Discussing the mapping of areas for the planning of mitigation
(photo Ann Scott)

Ann Scott then provided feedback on wildlife/power line incidents recorded to date. Current records include 280 animals in 233 incidents, chiefly bustards (44%; excluding further surveys still in progress, see below) and flamingos (25%). The spread amongst the groups of power line structures involved is: HLPD/A-frame (31%), wooden pole (21%), pylon + Kamerad (21%), pylon (9%), guyed-V (15%) and monopole (3%).

John Pallett presented the preliminary results of his bustard research project. The present surveys of four lines in the South will continue until the end of 2014. The highest number of mortalities has been recorded for Ludwig's Bustard, with the (provisional) estimate being 0.6 bustards/km/year (compared to 1 bustard/km/year in the Karoo, South Africa).

Julia Amukwa reported on progress with her project to investigate the role of bird nests in power outages, and identify possible mitigation actions. So far she has designed field sheets for public volunteers; completed the project design for 2013-2014; and drawn up an equipment budget. Further plans are to visit more areas and locate the best testing sites; scout for equipment suppliers; and begin with method testing.

These presentations were followed by a brainstorming session on the way forward, focussing on evaluating mitigation that has already been fitted, and prioritising sections of line for applying/ testing new mitigation and/or for further monitoring. Further details will be reported in the following newsletter.

Much has been achieved with these constructive discussions, which will be continued on an ongoing basis. Everyone was thanked for their participation and positive inputs, in particular Danie Louw and Abiud Kaura for their help with organising the workshop, and Karl-Heinz Wagner for ongoing support; the presenters; and the Namibia Hotel and Tourism School of the Polytechnic of Namibia for providing the venue and refreshments.



Greater Flamingo at Mile 4 on 22/04/13; note the aerial on the battery-powered PTT, and green ring with ID: NFX
(photo Mark Boorman)

UPDATE ON FLAMINGOS AND POWER LINES

Two Greater Flamingos and one Lesser Flamingo were successfully fitted with GPS satellite tracking devices (platform terminal transmitters or PTTs) at Mile 4 Saltworks, Swakopmund in January 2013 (see previous newsletter, No. 11 March 2013).

Tracking data received from CLS/Argos over the past six months have shown localised nomadic north-south movements (see below and page 3), indicating that the trackers have been functioning according to expectations; that the birds normally fly at relatively low altitudes for local movements; and that the flamingos do indeed fly during times of darkness or poor light.

The details of the recorded flamingo movements are indicated below and on the map on page 3:

- On 30 April 2013 between 16h13 and 19h13, the Greater Flamingo fitted with a solar-powered PTT (ID no. 122802, plastic ring code NFF) flew south from Mile 4 Saltworks to Walvis Bay – a straight-line distance of about 35 km - and returned to Mile 4 on 5 May between 04h07 and 07h06, possibly due to the strong east wind conditions.
- On 21 May between 15h14 and 21h14, the Lesser Flamingo fitted with a solar-powered PTT (ID no. 122803, plastic ring code NFZ) flew north from Mile 4 Saltworks to Cape Cross Saltworks – a straight-line distance of almost 100 km – where it remained.
- Between 29 May at 14h11 and 30 May at 02h10, the Greater Flamingo fitted with a battery-powered PTT (ID No. 122804, plastic ring code NFX) moved 17 km south to a point south of the Swakop River mouth; its next fix (on 30 May at 14h09) was at Langstrand, further to the south and then it moved down to the Bird Island area.



Localities recorded for three flamingos on 18 June 2013 and suspected flight paths (based on a Google map compiled by Ann & Mike Scott)

Why do flamingos fly under conditions of poor light? According to Dr Tony Williams (former ornithologist for Cape Nature Conservation at Walvis Bay), flamingos either fly at night or, if travelling by day, do so at considerable height, in order to avoid predation by raptors.

Large-scale movements eastwards and inland were anticipated only after good rains inland, and the project unfortunately hit a relatively dry period, with limited movement inland.

Unfortunately, after six months, the Lesser Flamingo went off the air at Cape Cross in June, and has not been observed since; the second, a Greater Flamingo, died at Swakopmund in July and the tracker was recovered by Mark Boorman; and the third, also a Greater Flamingo, died near Walvis Bay in August. This tracker has also been recovered, thanks to the kind assistance of the Appollis family of Walvis Bay, who found the device on the dead bird near the Bird (Guano) Island north of Walvis Bay and took it home for safe-keeping, and then to their place of



Mike Scott (left) with members of the Appollis family of Walvis Bay, who kindly assisted with the recovery of the PTT from Greater Flamingo NFX (photo Ann Scott)

business in Walvis Bay while they tried to track down its owner. Meanwhile, we were also searching from our side; and Chief Inspector Gerber of the Namibian Police Service in Walvis Bay and his team were able to locate these precise localities on the basis of the last signals the tracker sent from these sites, supplied by Dr John Mendelsohn! Many thanks to all for this help.

Large numbers of flamingos are being observed on the coast at present: 141,000 were counted here in July 2013 during the national MET wetland bird census. According to MET ornithologist Holger Kolberg, these high numbers are considered to be normal; however, with the unusually high rainfall inland over the past few years, many of the flamingos stayed inland and bred successfully there, rather than return to the coast in winter, and as a result numbers have been lower during this time. These birds have now returned to the coast, and the good breeding is evidenced by the many young birds being seen here now.

Large numbers of dead flamingos are also being observed on the coast. This may be a natural phenomenon, given the large numbers present and the resultant increase in competition for food and space. However, some investigations are being made into possible causes of mortality, in order to try and confirm several speculated reasons.

Once there are good rains inland and the flamingos start moving there again, the next steps being planned are to fit the trackers to two more birds and to carry on with the tracking initiative. In the meantime we are still searching for the third device.

The tracking of flagship Red Data wetland bird species such as flamingos is a ground-breaking initiative of the "Flight paths for wetland flagships" project, funded by the Environmental Investment Fund (EIF), the Nedbank Go Green Fund and the NamPower/NNF Strategic Partnership. It is hoped that the flight paths that emerge will indicate focal areas for addressing potential interactions between flamingos and overhead lines – one of the main concerns of the Partnership. It should be kept in mind, however, that at best, the data obtained will indicate a straight line between two reliable GPS coordinates, and that further investigations will be needed to plot actual flight paths between such points in more detail.

Since January 2007, 26 incidents involving 59 flamingos on power line structures in Namibia are on record (NamPower/ NNF Strategic Partnership records). These records have been submitted by NamPower personnel, as part of standard line inspection procedures and in collaboration with the Partnership, and by members of the public.

As a pro-active means of minimising the chances of collisions of flamingos and other birds, NamPower is fitting mitigation to sections of new power lines identified as being sensitive to such species through the Environmental Impact Assessment (EIA) procedure. Retrofitting of existing lines – although more expensive and difficult – is also receiving attention (see pp 1-2). Line inspections/ monitoring and the reporting of incidents are also part of standard procedure.

NATIONAL BUSTARD CENSUS

John Pallett (email john.pallett@saiea.com)

Say, for argument's sake, that 50,000 Ludwig's Bustards collide with power lines in southern Africa every year (an estimate that is not unreasonable). What proportion of the total population is that? 10%? Half? ... To put it differently, how significant is the threat to bustards from power lines? To answer this, we need to get some basic information on the total Ludwig's Bustard population, and on their breeding dynamics.

This was the motivation for taking long drives along Namibia's quietest back roads on the inland edge of the Namib, to count all bustards. In June and July 2013 we travelled from central Namibia north-westwards, and then took a similar trip headed southwards, through about 4,000 km of some of the country's most spectacular pro-Namib scenery, scanning for the characteristic bustard profile of long neck and bulbous head ("we" being John Pallett, supervisor Peter Ryan and field assistant Allen Kafene). While the scenery was enchanting, the sad truth was that bustard numbers were low. We can confidently report that the area north of the Ugab River up to



The striking male Ludwig's Bustard – *Globally Threatened* and now regarded as *Threatened* in Namibia (photo Peter Ryan)

Orupembe had lots of cattle but no bustards! There was a pocket of these birds hanging out in the Marienfluss, where Joh Henschel separately recorded a small concentration of this species in the grassy plains. Alas, it was so dry that no other plains in the north-west seemed to have any grass whatsoever.

The exception was a small patch centred close to Gobabeb, where rainfall over Easter had brought on a flush of insects. This concentration of about 20 birds in a small area is typical of Ludwig's Bustard behaviour: they move around nomadically, and any flush of food such as grasshoppers or weevils will quickly attract a number of birds. Usually they are scattered over a wide area, but up to 80 birds have been seen clustered together, feeding on a small outbreak of locusts in the Namib in the 1970s. The southern leg of the census produced more birds than in the north, with small concentrations of birds in the NamibRand area, and further south close to Betta. These tantalising records will be entered into some fancy software that calculates bird density along the sample route and then extrapolates towards a total population figure over similar habitat. This will help us calculate a Namibian population figure.

Of course, we should not expect that the birds in Namibia stay within the country boundaries, and a recent ringing recovery reported by Dirk Heinrich proved that an (adult) Ludwig's Bustard ringed on Farm Wiese near Rehoboth in August 2003 made it all the way to Kakamas in the Northern Cape, a distance of around 700 km. Sadly, this bird met its death on a power line there. We have also learned that individuals have been observed in south-western Angola, where there is plains habitat similar to that in the northern Namib. So how do we combine the South African Ludwig's Bustard population figure (~ 114,000) with the Namibian and Angolan numbers? Combined surveys will need to be undertaken, and vehicle plus aerial surveys, thus expanding the scope of our work even further! Still more difficulties lie in getting a handle on breeding dynamics. Ludwig's Bustards are so shy that any



The sturdy Mazda Wildlife Fund bakkie in action in north-western Namibia, during the bustard population census (photo Peter Ryan)



Ludwig's Bustards were observed in the Marienfluss in June 2013, where there was still some grass cover (unlike most of the rest of the drought-stricken north-west) (photo Joh Henschel)

disturbance at the nest can quickly drive the parents to abandon the nest permanently. It is going to be very difficult to figure out how many chicks are normally produced per year, and how many of these are recruited into the population. These are issues that need an inspired and imaginative approach. Any ideas out there?

Also see: <http://travelnewsnamibia.com/news/bustard-and-power-lines-project-bustard-and-power-lines-project/>

FISH-EAGLE ELECTROCUTION

Neil Thomson (email batqs@mweb.com.na)

I found the following short article by Edmund Oettle and Frans Meyer in the latest issue of Promerops March 2013 no. 293 (Magazine of the Cape Bird Club). We thought that it may be of interest to you as it seems highly likely that the bird may have been electrocuted when its prey touched a conductor rather than the bird itself coming into contact with the conductor, which is what we suspect also happened in the case of that electrocuted Brown Snake-Eagle we found at the Gammams Sewage Works on 08/08/2010 (see newsletter no. 5, Sept 2010 p7).



According to Roberts' VII, an adult African Fish-Eagle can weigh up to 3.9 kg! (photo Chris van Rooyen)

On 11 October 2012 there was a power outage on the farm Limietrivier outside Wellington. The cause turned out to be a fatal electrocution of an adult male African Fish-Eagle which weighed 2400g. Of particular note was that the eagle had been carrying a fish, which was also electrocuted and was found next to it on the ground. The fish weighed 940g. It is possible that the very large size of the fish (39 percent of the eagle's mass) caused the eagle to struggle to land correctly, alternatively the fish might have been the agent that caused the short between the live and earth wires. The fish had clearly just been caught, as it was largely unscathed except where the eagle's talons had held it.

Eskom were informed of this occurrence as they had to fix the power outage, and the eagle (a perfect specimen) and fish were donated to the SA Museum.

The EIS currently contains information on 8,195 data sets (www.the-eis.com)

UPLOAD YOUR REPORTS ONTO THE ENVIRONMENTAL INFORMATION SERVICE!

Chris Brown, Sustainable Solutions Trust (email chrisbrown.namibia@gmail.com)

Some of Namibia's more prolific and competent researchers and consultants are being a bit slow to put their life's work on the EIS. This is a real shame, because their reports and publications are then not easily accessible to other researchers, policy-makers, environmental managers and students. Also, the researchers and consultants are not reaping the full benefit of their work – they do not get the recognition nor the uptake of their work that they deserve.

One of the most important features of the EIS is that Namibia's best collection of environmental information is available to people wherever they are – in remote regions of Namibia or anywhere else in the world – as long as they have internet connection and a PC or laptop (or even a "smart phone"). The environmental e-library is at their fingertips. This means that people in the regions are no longer disadvantaged with regard to accessing environmental information and no longer have to travel to a large centre or Windhoek to undertake literature research.

These key researchers have not only their own reports and publications but usually also a significant private library of reference material - on their computers as well as hard copy. We are approaching them individually. We provide them with a list of their publications and reports already on the EIS and asking them to upload all their other important reports and publications directly to the EIS, as well as relevant reference material in electronic format in their private libraries. We also ask them to select the important hard-copy material in their private libraries which we will have scanned.

Through the EIS the best library on Namibia's environmental issues comes directly to the user via the internet and their PC or laptop – they no longer need to physically visit a library. This means that students, researchers and environmental managers in remote regions have the same access to information as students in Windhoek!

It is really easy to upload electronic material from your PC or laptop to the EIS:

- 1) Access the EIS website at www.the-eis.com;
- 2) Click on the "Upload data, reports, web links etc." under "Get involved" in top left corner;
- 3) Under "1. Find the file you want to upload" click on "Browse". This will take you to your computer directory. You simply navigate to the report you want to upload and click on that file;
- 4) Enter your contact details (suggest e-mail address) under point 2.
- 5) Then click on "Upload" under point 3. Job done!!
- 6) To upload the next document start at point 3: "1. Find the file you want to upload"... etc.

POWER LINE SURVEYS

Power line survey: Aroab 33 kV HPCD line (100 km)

Aroab – Koës

9-10 July 2013

Participants: Pieter Cloete, Johannes Haman (NamPower);
Mike & Ann Scott



Greater Flamingo
26.11370S 19.22604E

Collision

VULNERABLE species in Namibia



Kori Bustard (juvenile)

26.15467S 19.30058E

Collision



Bustard

26.27704S 19.57416E

Collision



235 Bustard

26.33973S 19.60731E

Collision



237 Lappet-faced Vulture

26.35884S 19.61476E

Electrocution

VULNERABLE species in Namibia and
also **GLOBALLY THREATENED**



238 Bustard

26.68435S 19.63168E

Collision



Power line surveys: Trekkopje-Wlotzka 132 kV + Trekkopje Bypass 220 + 66 kV (100 km)

Arandis

22 April 2013

Participants (AREVA): Richard Gurirab, Helmut Ochurub, Kaarina Nkandi

20 August 2013

Participants (AREVA): Sandra Muller, Kaarina Nkandi

Ludwig's Bustard
22.13541S 14.96752E
Collision, fresh

GLOBALLY THREATENED species



Ludwig's Bustard
22.11903S 14.86883E
Collision, fresh

GLOBALLY THREATENED species



Power line survey: Trekkopje Bypass and Trekkopje-Henties Bay 220 kV + 66 kV (Bypass); 66 kV (65 km)
8 October 2013

Participants: Chenault Sabattie, David Natanael (NamPower); Mike & Ann Scott



Korhaan
22.12087S 14.83672E
Collision (Bypass)



Flamingo (a)
22.13488S 14.62019E
Collision
VULNERABLE species in Namibia



Flamingo (b)
22.13488S 14.62019E
Collision
VULNERABLE species in Namibia



Continued on p8

Continued from p7

Bustard
22.13467S 14.61890E
Collision



Crow
22.12892S 14.45867E
Electrocution?



Flamingo
22.12863S 14.45496E
Collision
VULNERABLE species in Namibia



Flamingo x7
Bustard (older bones)
22.12820S 14.44219E
Group collision
VULNERABLE species in Namibia



POWER LINE INCIDENTS

Greater Flamingo (6 birds)
Trekopje-Wlotzka 132 kV line
Near Wlotzka Desalination Plant
22.37161S 14.44832E
Group collision, fresh
VULNERABLE species in Namibia
Reported by Kaarina Nkandi &
Richard Gurirab (AREVA)
15 April 2013



Cormorant (species unknown)
Namdeb MA1, aerial ropeway
28.57289S 16.35800E
Collision
Reported by Jefta Ampueja
15 May 2013



Flamingo (species unknown)
Namdeb MA1, pumping structure
28.50142S 16.27942E
Collision after feeding in pond
VULNERABLE species in Namibia
Reported by Jefta Ampueja
17 May 2013

Lesser Flamingo
Namdeb MA1, 6.6 kV "X-mas tree"
power line
28.50506S 16.28275E
Collision, fresh
VULNERABLE species in Namibia and
also **GLOBALLY THREATENED**
Reported by Jefta Ampueja
5 June 2013



Kori Bustard
Bismarck-Rehoboth 66 kV line
Farm Aris, Windhoek
22.77592S 17.16994E
Collision
Reported by Hanjo Böhme
5 June 2013



Damara Hornbill
Van Eck-Omburu 220 kV line
Omaruru
21.87106S 16.43522E
Fresh; first hornbill collision on
record in Namibia
Reported by Peter Cunningham
21 June 2013



Kori Bustard
Van Eck-Omburu 220 kV line
Omaruru
21.69083S 16.25394E
Reported by Peter Cunningham
21 June 2013



Lappet-faced Vulture
Van Eck-Omburu 220 kV line
Omaruru
21.99503S 16.60944E
VULNERABLE species in Namibia and
also **GLOBALLY THREATENED**
Reported by Peter Cunningham
21 June 2013



Turtle Dove (3-4 birds)
Auas-Omaere 132 kV line
Witvlei
22.43847S 17.68183E
Apparent collision?
Reported by Peter Cunningham
25 June 2013

Kori Bustard
Gerus-Otjikoto 220 kV line
Otjiwarongo
20.09703S 16.75242E
Collision
Reported by Peter Cunningham
27 June 2013

Namaqua Sandgrouse (2 birds)
Gerus-Otjikoto 220 kV line
Otjiwarongo
19.98722S 16.883062E
Collision
Reported by Peter Cunningham
27 June 2013

Kori Bustard
Bismarck-Rehoboth 66 kV line
Farm Aris, Windhoek
22.77878S 17.16486E
Collision
Reported by Hanjo Böhme
7 July 2013

Flamingo
Auas-Omaere 132 kV line
Witvlei-Gobabis
22.40406S 18.76067E
Collision
Reported by Peter Cunningham
10 July 2013
VULNERABLE species in Namibia

Unknown bird
Gerus-Otjikoto 220 kV line
Otavi
19.41817S 17.42733E
Collision
Reported by Peter Cunningham
15 July 2013

Turtle Dove (4 birds)
Gerus-Otjikoto 220 kV line
Otavi
19.31264S 17.54611E
Collision
Reported by Peter Cunningham
17 July 2013

Kori Bustard
Korridor 33 kV HLPD line
Aminuis
23.5660S 19.73844E
Collision
Reported by Peter Cunningham
22 July 2013

Black-chested Snake-Eagle
Kokerboom-Auas 400 kV line
Rehoboth (east)
23.30565S 17.26648E
Collision, fresh
Reported by Dagga Zimmermann
18 July 2013



Kori Bustard
Korridor 33 kV HLPD line
Aminuis
23.64019S 19.55650E
Collision
Reported by Peter Cunningham
22 July 2013

Kori Bustard
Korridor 33 kV HLPD line
Aranos-Aminuis
23.99458S 19.16261E
Collision
Reported by AC van Zyl
21 August 2013



Greater Flamingo + Lesser Flamingo
 Walmund-Walvis Bay 66 kV line
 Walvis Bay
 22.96416S 14.53102E
 Collisions, very fresh
 Both species **VULNERABLE** in
 Namibia, Lesser Flamingo also
GLOBALLY THREATENED
 Reported by Joh Henschel
 28 July 2013



Greater Flamingo
 Walmund-Walvis Bay 66 kV line
 Walvis Bay
 22.96396S 14.53148E
 Collision, fresh
VULNERABLE species in Namibia
 Reported by Ann & Mike Scott
 15 August 2013



Lesser Flamingo
 Namdeb U20 line (6.6 kV "X-mas
 tree")
 Oranjemund
 28.50142S 16.27942E
VULNERABLE species in Namibia and
 also **GLOBALLY THREATENED**
 Reported by Jefta Ampueja



Greater Flamingo
 Walmund-Walvis Bay 66 kV line
 Walvis Bay
 22.96416S 14.53102E
 Collision, fresh
VULNERABLE species in Namibia
 Reported by Karel Naibab
 8 August 2013