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Mike Scott (front) and Mark Boorman release one of three flamingos fitted with GPS satellite tracking devices at Mile 4 Saltworks in January this year (*photo Ann Scott*).

PROGRESS WITH PROJECTS AND UPDATE OF OUR ACTION PLAN

This issue brings news of excellent progress with our initiatives! As we near the end of our first funding phase from the European Investment Bank, the time has come to review our progress and sharpen the focus for the next phase ahead. Our action plan has therefore been reassessed and updated (see below).

Exciting news is that we have managed to fit GPS satellite trackers to three flamingos, and hopefully this will enable us to determine their flight paths more accurately, in collaboration with an important ground tracking project. The bustard and power line project gathers momentum,

with results that are sobering and a spur to further action. The weaver birds project has reached an exciting stage, where field trials will bring new insights for addressing the problems caused to the power supply by their nesting. We would like to thank the European Investment Bank for the generous funding that has enabled us to make this progress, and all our collaborators and supporters for their ongoing contributions. The challenges ahead are great but we have every faith that we can address them together.

Summary of our updated action plan:

1. Conduct power line surveys/monitoring

- 1.1 Continue with power line surveys/ monitoring
- 1.2 Enter/process data
- 1.3 Analyse data; make recommendations, provide feedback

2. Implement effective mitigation

- 2.1 Implement environmental checklist
- 2.2 Conduct focal mitigation trials
- 2.3 Review mitigation situation
- 2.4 Address potential impacts of wind energy proactively

3. Conduct focal research projects

- 3.1 Sociable Weaver and Red-billed Buffalo-Weaver nesting project
- 3.2 Bustard and power lines project
- 3.3 Flamingo tracking project

4. Promote awareness, information-sharing, education, outreach, collaboration

- 4.1 Produce newsletters
- 4.2 Produce a booklet and poster on wildlife/bird and power line interactions
- 4.3 Disseminate information and material to identified target groups
- 4.4 Encourage further communication and information sharing with local partners
- 4.5 Encourage further communication and information sharing with international partners

5. Further develop & promote sustainability of the EIS

- 5.1 Increase information on the EIS
- 5.2 Refine existing atlases
- 5.3 Incorporate new atlases
- 5.4 Develop Environmental Assessment component
- 5.5 Establish a "mark and resighting" platform
- 5.6 Set up a "help desk" for the EIS
- 5.7 Promote the outreach programme and building sustainability of the EIS

FLAMINGOS TRACKED BY SATELLITE TO IDENTIFY "HOTSPOTS" FOR CONSERVATION ACTION



Mark Boorman (left) and Ann Scott with a Greater Flamingo captured at Mile 4 Saltworks on 9 January 2013 (photo Mike Scott).

Ann & Mike Scott (email ecoserve@iway.na)

Three flamingos were successfully fitted with sophisticated GPS satellite tracking devices at Mile 4 Saltworks, Swakopmund in January 2013. This milestone initiative is a key component of an innovative project to track the flight paths of flagship wetland bird species in order to address major conservation issues (also see page 1, and the November 2012 issue of this newsletter).

Large, charismatic birds such as flamingos and cranes are universally regarded as flagships for the conservation of wetland habitats. Unfortunately, these species cannot be confined to protected areas. Nomadic migratory species often encounter threats in unprotected areas, including collisions with overhead lines or snaring/hunting. As an aid to mitigating these problems, there is a need to determine the flight paths of such species so that potentially problematic areas can be identified and targeted for further conservation action.

The "Flight Paths for Wetland Flagships" Project was initiated in 2012 by the NamPower/NNF Strategic Partnership, in cooperation with the Namibia Crane and Wetlands Working Group. The project is funded by the Environmental Investment Fund (EIF) of Namibia, the Nedbank Go Green Fund and the above Partnership. Other collaborators include the Ministry of Environment and Tourism and many other organisations and individual supporters, both local and international.

The project seeks to accomplish its aims by tracking the flight paths of Greater Flamingo and Lesser Flamingo, and Blue Crane – all on the Red List; monitoring their numbers (and breeding success); investigating the mitigation of power lines on documented flamingo flight paths; and publicising the results to promote awareness of the plight of such flagship species. In so doing, the results will have a ripple effect on environmental conservation in a broader

sense, to the benefit of all inter-dependent wetland species, habitats and their human communities.

The first adult Greater Flamingo was captured on 9 January 2013 at the Mile 4 Saltworks near Swakopmund and fitted with a battery-powered GPS Platform Terminal Transmitter (PTT). A second adult was fitted with a solar-powered GPS PTT on 11 January, and an adult Lesser Flamingo with the same type of device on 17 January. Transmitters of different designs, with different duty cycles, are being tested for optimum efficiency. The birds were ringed with a green plastic band with a unique code (i.e. NFX, NFF and NFZ). Subsequent re-sightings of the birds in the area showed that they were in good health. The devices are now transmitting signals with detailed information that is picked up by satellite and relayed by *Collecte Localisation Satellites* (CLS/Argos) in France, and downloaded regularly on the internet. The latest GPS positions indicate that the birds are still on the salt pans at Mile 4 Saltworks. Although some flamingos have already migrated inland during the rainy season, possibly to breed (see p4 & 5), many of these birds are not showing signs of moving as yet; they may well move only after the next good rains (i.e. towards the end of the year). When they do move, we hope that the flight paths that emerge will indicate focal areas for addressing potential interactions between flamingos and overhead lines.

The project funders and partners, the many supporters and especially the flamingo capture team are all thanked for their invaluable contributions – in particular Mark Boorman for his expertise in capturing the birds and, with Hartmut Kolb, Sue Roux and Timo Britze, for assistance in the field; and Wilferd Versfeld for his advice. The Klein family is thanked for providing access to Mile 4 Saltworks, and John Mendelsohn for his ongoing assistance with tracking the birds. Further information is available on the Partnership and EIS websites and www.nnf.org.na/CRANES.htm.



Mike Scott (left), Mark Boorman (centre) and Ann Scott fitting a solar-powered satellite tracking device to a Greater Flamingo (photo Hartmut Kolb).



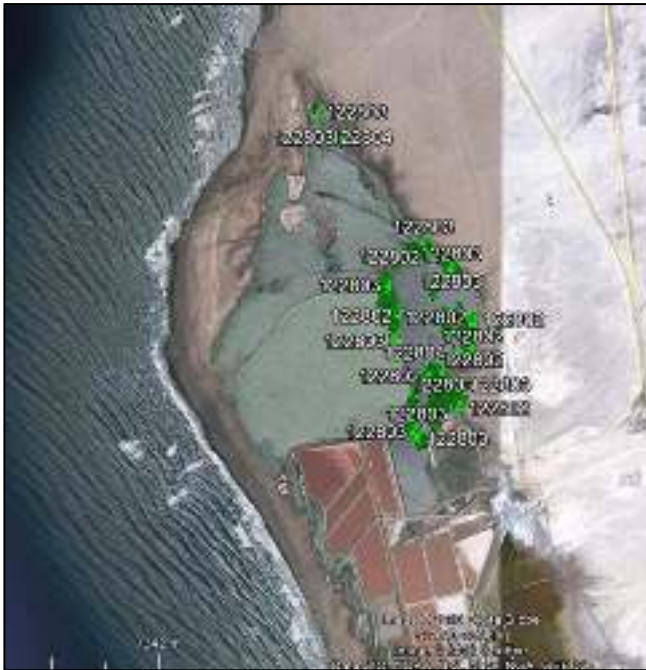
HOW DO WETLAND BIRDS FIND EPHEMERAL PANS SO SOON, AFTER THEY FILL UP AFTER RAIN?

Robert Simmons, Phoebe Barnard & Ian Jamieson (email Rob.Simmons@uct.ac.za)

ABSTRACT of an article published in 1998 (Ostrich 70(2): 145-148): What precipitates influxes of wetland birds to ephemeral pans in arid landscapes? Observations from Namibia.

The ability of wetland birds to rapidly find and exploit ephemeral pans is well known in arid lands, but the episodic nature of such events means that the methods employed are poorly understood. Birds may: (i) wander randomly until wetlands are found; (ii) predict rainfronts and rainfall using changes in pressure gradients as cues; or (iii) follow rainfronts directly and descend onto pans as they fill.

Observations from isolated pans in Namibia during the first rains indicate that wetland birds follow rainfronts and descend onto pans as they fill. In one 30 ha pan, 37 birds of five species had arrived one day after filling and in another 50 ha pan over 300 birds of 13 species were attracted within three days of filling. Wetland birds, like migratory raptors, therefore, follow rainfronts, and may wander locally thereafter. How species such as grebes and flamingos that exploit these pans for later breeding and intercontinental movements (respectively) time their flights to coincide with fully flooded pans remains unknown.



Above: Greater Flamingo (front left) fitted with a battery-powered satellite tracking device (photo Mark Boorman).
Below: Example of data obtained for three flamingos fitted with satellite tracking devices, showing their positions at Mile 4 Saltworks, Swakopmund (based on a Google map compiled by John Mendelsohn: Raison).



A huge influx of flamingos – mainly Lesser Flamingo – was reported by Wilferd Versfeld at Fischer's Pan in Etosha National Park on 31 January 2013. The estimated number is 50,000 – they must have started to arrive the previous week as staff had reported hearing them fly over at night at the time. About three weeks earlier one could see masses of pink birds on the main pan itself, but as the water receded with the lack of rain, the flamingos all moved to Fischer's Pan (photo Wilferd Versfeld).



NamPower/NNF Strategic Partnership



FLAMINGO FLIGHT PATHS –PROGRESS WITH GROUND TRACKING

Theresa Henschel

(email flamingo.flightpath.namibia@gmail.com)

Introduction

In the period June to December 2012, the first records were collected on flamingo flight paths, as reported here. The aim was to report the presence of flamingos at locations between the main wetlands.

Methods

Reports of sightings were solicited and received via the following media

- Email: flamingo.flightpath.Namibia@gmail.com
- Telephone: 081-8551456
- Radio talks
 - o Estelle Rubow (Henties Bay Municipality) on the Afrikaans radio on Friday, 20 July 2012
 - o Annemarie Brell on the German radio – mentioned several times
 - o Joh Henschel on German radio - Tuesday, 14 August 2012
- Newspaper and magazine articles.
 - o Namib Times on Tuesday, 24 July 2012
 - o Allgemeine Zeitung on Monday, 30 July 2012
 - o Flamingo (inflight magazine) for the September 2012 issue
- Circulars to members of different organisations
 - o Namibian Farmers Unions
 - o Fenata (Tourism Association)
 - o Municipalities (through Estelle Rubow)
 - o MET offices in Khorixas, Uis, Outjo, Cape Cross, and Windhoek
 - o NamPower
 - o Word of mouth

Reports received

The following reports of flying flamingos were received:

- Sightings near Mile 108 during the second week of June 2012
- Sightings in Henties Bay on Sunday, 22 July 2012 between 02:00 & 03:30
- Sightings in Henties Bay on Monday, 23 July 2012 between 02:00 & 06:00
- Sightings in Uis on Tuesday, 24 July 2012 at 01:00
- Uis Rest Camp confirmed that they have seen flamingos in their area – but did not supply further details on when, etc.



A flock of around 300 flamingos reported flying over Henties Bay on 10 February 2013 (photo Ronel Maritz)

- Brandberg White Lady Lodge confirmed that guests had heard flamingos flying over on Sunday, 15 July 2012 at 02:00. A Henties Bay resident responded that she heard them between 04:00 and 06:00 on that same day
- A stranded young flamingo was found on Farm Okamahapu in Hochfeld on Friday, 20 July 2012. The owners didn't hear any flamingos during the night and were surprised to see a single, very exhausted flamingo early in the morning. They were not aware of any flamingos ever flying over during previous years.
- A MET warden in Windhoek reported that he had seen flamingos in the Von Bach Dam some years ago.

In news articles the following reports were read:

- Sossusvlei – 11 September 2012 - one flamingo stranded
- Aus, 16 August 2012 – one flamingo stranded

Personal observations at Walvis Bay indicate the arrival of large numbers of Greater Flamingos at the end of June and early July 2012. On 5 and 6 January 2013, flocks of several hundred flamingos were seen flying up ever higher and heading inland.

Discussion

The above sightings are valuable records, but do not yet suffice to indicate favoured flight paths from the interior to the coast. None of the reports included estimates or counts of numbers or of flight heights.

Future plans

An alert will be sent to previous contacts and further persons and via the media for people to be on the lookout for flamingos flying from the coast to the interior in January/February. This information will be collated and mapped together with the previous records after the end of the current migration.

NAMPOWER WEAVER BIRDS PROJECT

Julia Amukwa [amukwajulia@yahoo.com]

One of the actions identified in the Partnership's Bird and Power Line Action Plan is to initiate research into interactions between Sociable Weavers and Red-billed Buffalo-Weavers on power lines, with a view to addressing the negative impacts of nesting on the power supply by developing/testing appropriate mitigation methods (see issue No, 7 and 9 of this newsletter). NamPower bursary student Julia Amukwa reports on progress on this important project in 2012.

The following possible mitigation methods problems caused by weaver nesting were identified and reviewed, with a brief explanation of why the methods were chosen:

1. Dummy snakes

No other enemy of the Sociable Weaver was found more influential in the birds' nesting behaviours than snakes. The study therefore assumes that any other scare device (such as scarecrows) will be less effective compared to dummy snakes.

2. Artificial trees and fake poles/pylons

One of the crucial factors in nest construction is the ability of the structure to support the nest. Therefore providing alternative support structures, such as artificial trees or fake poles, may reduce nesting on electrical poles and pylons.

TABLE 1: Project milestones.

Milestones	2012				2013				2014			
Literature review	■	■	■	■	■	■	■	■	■	■	■	■
Identify different mitigation options	■	■	■	■								
Field test the identified methods					■							
Data collection and monitor bird behaviour						■	■	■	■	■	■	■
Data analysis and write Master thesis									■	■	■	■
Reporting			■	■	■	■	■	■	■	■	■	■
Give recommendations												■

TABLE 2: Feasible combinations of mitigation measures.

	Artificial trees	Fake poles/pylons	Relocation of nests	Anti-nesting devices	Reflective features or laser beams	Invisible fog/haze	Netting	Sticky gums or jells	Ultrasonic devices
Dummy snakes	1	2	3	4	5	6	7	8	9
Artificial trees		10	11	12	13	14	15	16	17
Fake poles/pylons			18	19	20	21	22	23	24
Relocation of nests				25	26	27	28	29	30
Anti-nesting devices					31	32	33	34	35
Reflective features or laser beams						36	37	38	39
Invisible fog/haze							40	41	42
Netting								43	44
Sticky gums or jells									45
Ultrasonic devices									

3. Relocation of nests

In this case nests are moved away from distribution wires where they may pose a threat to power distribution, to the less sensitive parts of the poles/pylons. Relocation may also be from power lines to other support structures available/provided.

4. Anti-nesting devices

A Spanish electricity distribution company, Red Electrica, and a French company, Electricité de France (EDF) tested seven different anti-nesting devices on "cat-head"-type pylons. Some proved to be best as anti-nesting devices (such as the T-shaped, crossed and parallel designs).

5. Reflective features or laser beam technology

Reflective features include any device with an intense sunlight reflective surface (a nuisance to the birds) that is small enough to be fitted on and/or around electrical structures as anti-perching devices. These can be made at home or from recycled materials and are probably the cheapest option. Good examples would be CDs, cans and aluminium foil.

6. Bird control chemicals

The study identified four chemicals that can be possibly used to rid birds from poles and substations. These are 4-nitropyridine-N-oxide (Avitrol 100) or 4-aminopyridine (Avitrol 200), Methiocarb, Fenthion and Methyl anthranilate (MA). Although some of the above chemicals were proved to be naturally occurring and/or non-toxic, all chemicals should be used with caution.

7. Other measures (least recommended)

- i. Bird deterrent fog/haze devices
- ii. Netting
- iii. Sticky gums or jells
- iv. Ultrasonic devices

So far the study has found that no particular method is verified to be ultimately best. Therefore sound, visual, and tactile products will be combined to enhance each other's effectiveness since several senses of the bird are triggered at once (see Table 2 above for method combination).

2013 Brief plan

Study areas: Aranos and Rehoboth, Namibia



Sociable Weavers are cooperative breeders that produce huge, communal nests. Their nesting on power line structures may cause disruptions in the power supply, and finding suitable mitigation measures has been identified as a priority by the NamPower/NNF Strategic Partnership
(photo AC van Zyl)

Aim

To discover the most efficient and cost effective mitigation method(s) for bird nests on Namibian power lines

Main objectives

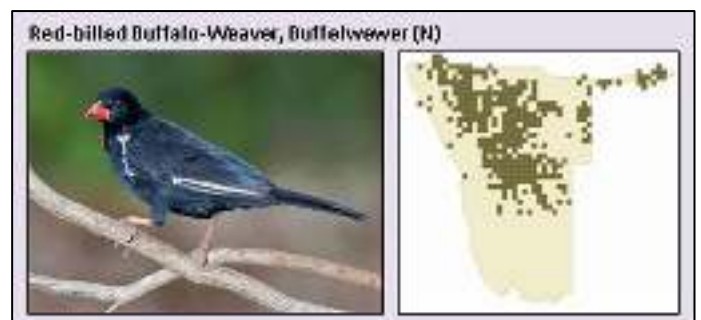
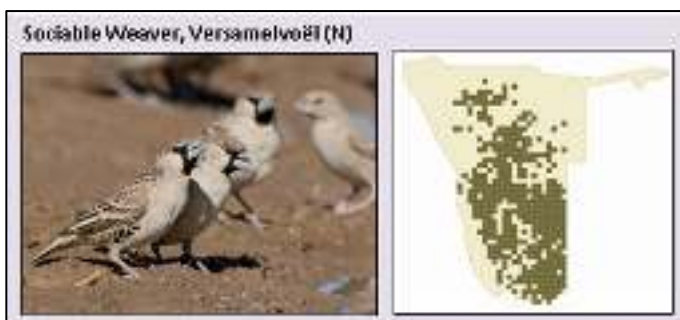
- Test mitigation methods in different environments and different seasons of the year
- Estimate costs involved in the implementation and maintenance of each method

Basic procedures:

1. Locate power lines with weaver nests
2. Remove the nest and apply mitigation method
3. Observe whether the birds build back on nest or not

Final remarks

Field data sheets have been designed for the **Bird nests and power lines in Namibia** project, which any stakeholder or the general public can fill in for their areas or wherever they are travelling. The aim is to develop a progressive database that will aid in understanding power line nesting better. There are two forms and a guide on how to fill them in. Please contact Julia for copies of the forms or any enquiries at amukwajulia@yahoo.com.



Birds that cause power supply problems through nesting on structures: Sociable Weaver/Versamelvoël (left) and Red-billed Buffalo-Weaver/Buffelwever (right) (photos Chris van Rooyen, atlas maps Alice Jarvis)

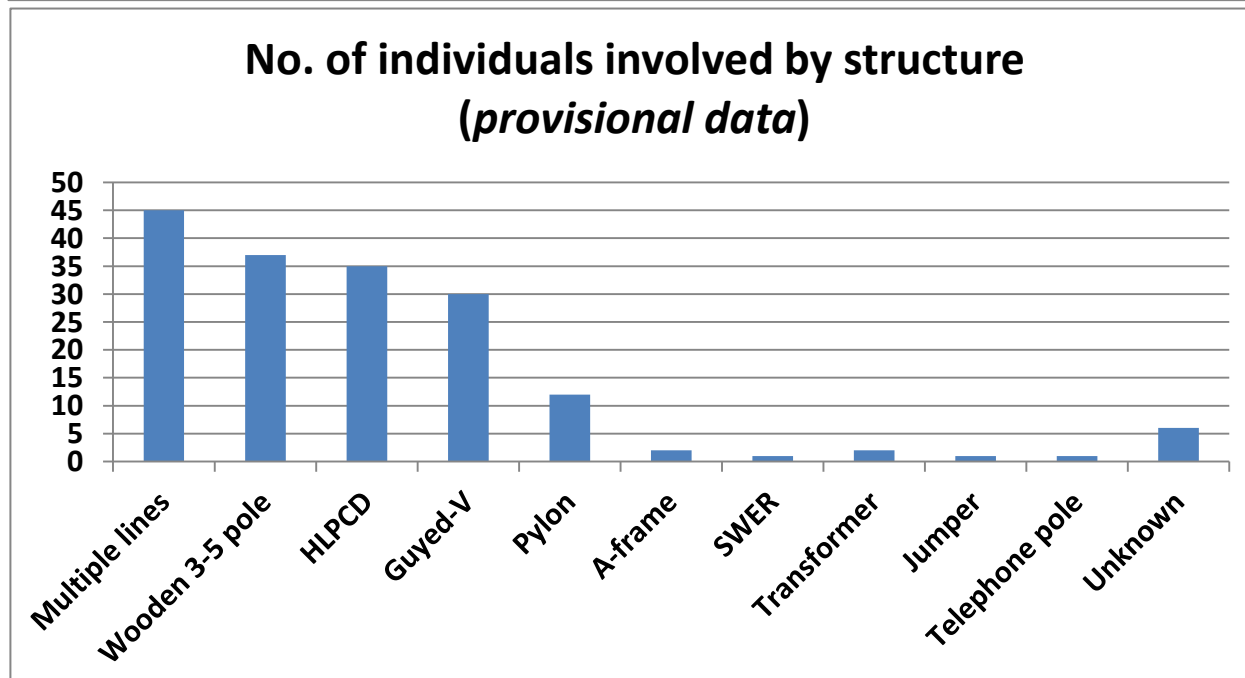
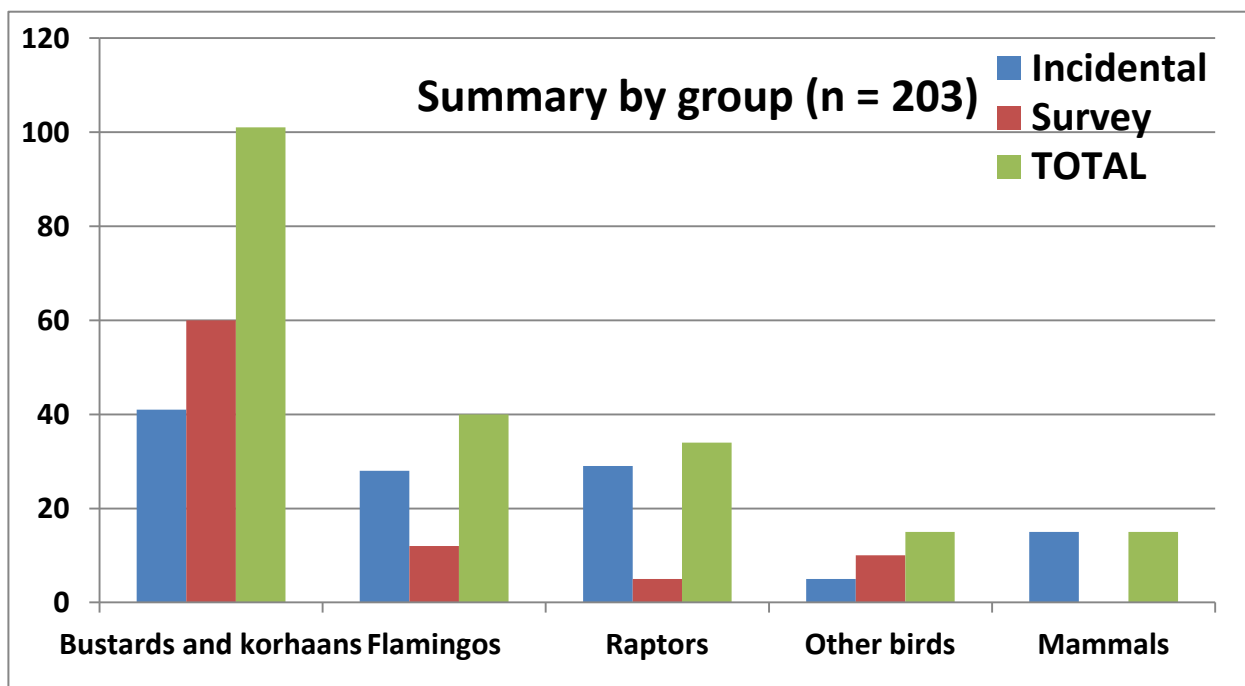
PROVISIONAL FEEDBACK ON OUR WILDLIFE AND POWER LINE INCIDENT DATABASE

To date just over 200 wildlife/power line incidents have been entered on our database. A provisional assessment (see Tables below) indicates that the group most impacted is the bustards (50%), followed by flamingos (20%) and raptors/birds of prey (17%). Amongst the mammals (8%), mainly genets are involved, as well as two giraffes. In terms of power line structures, many of the incidents have been recorded on double lines (e.g. steel pylons running parallel to wooden poles), as well as on single structures; this analysis is still in progress. Note that these records do not yet include the results of John Pallet's power line surveys (see previous issues of this newsletter).

A big thank you to all those who have contributed so many valuable records, which serve to guide our actions!



Large raptors such as this magnificent pair of Verreaux's/Black Eagles are at risk from power line interactions (photo Susann Kinghorn)



OSPREY MORTALITY ON NAMDEB POWER LINE

Jefta Ampueja, Wilfried Doedens and Pankratius Kondjamba
(Namdeb: email Jefta.Ampueja@namdeb.com)

Namdeb operations are supplied with a 66kv power line via a cross-border supply from ESKOM in South Africa, which is stepped down to 30kv and further to 6.6kv for mining operations. The "x-mas tree" power line configuration was used for 30kv and 66kv lines in the late 1990s and early 2000s but is now discontinued due to regular faults caused by birds flying into these types of lines. However, there are still two of these lines (operational) left in the Southern Coastal Mining (SCM) area.

The NamPower/NNF Strategic Partnership has launched a nation-wide campaign on wildlife interactions with power lines and has been educating and doing many awareness campaigns. It has targeted areas such as the Orange River Mouth for its unique birdlife and potential impacts on several threatened bird species.

The White Pelican *Pelecanus onocrotalus*, the Greater Glamingo *Phoenicopterus ruber* and the Lesser Flamingo *Poenicopterus minor* are all present in large numbers. These species are large, heavy and not very agile flyers. They are also Red Data species and particularly vulnerable to collisions with power lines. According to the latest information available, flamingo numbers have declined by 40% in the last 15 years due to breeding failure (with only three major breeding events in 40 years). They had never bred successfully in South Africa (Williams 1986) until an artificial breeding island was constructed at Kamfers Dam near Kimberley. Lesser and Greater Flamingos are classified as *Vulnerable* in the Namibian Red Data Book (Namibia holds 93% of the southern African population of Lesser Flamingos and 84% of the Greater Flamingo population). Flamingos often migrate at night, which further increases their vulnerability to colliding with power lines.

On 7 December 2012 an electrician, Wilfried Doedens was responding to a power black-out incident along the 30kv power line to the Namdeb waste management area, when he came across its cause: a dead bird. Upon first view, he immediately assumed it was a falcon, due its raptor-like features. He was also intrigued by this specific bird and immediately took cognisance of the unusual ring on one of its legs. He contacted the environmental office and reported this rather unique find.

Wilfried took the area GPS coordinates of the incident (S28° 28' 06; E016° 18' 29) and took pictures of the bird. We contacted Mike and Ann Scott, our bird enthusiasts and experts, working with the NAMPOWER/NNF project. The bird had burn marks, indicating an electrocution; this cause of mortality was probable, if it had perched on a pole of the x-mas tree configuration, given that the conductors are close to one another. However, as the bird was found midspan, rather than close to the pole, it is possible that collision was also involved.



Above (a and b): Juvenile Osprey at the power line impact site
Below: The Namdeb power line structures: 30kV "x-mas tree" configuration to waste management; in the background the 66kV line from ESKOM to the Namdeb substation.

Photos: Namdeb

The ring had a unique number on it, M-63002 (see photo below). This number had NAMDEB becoming part of the end of a bird ringing project initiated in Finland, Sweden. The finding on the ID and origin of the ringed bird some time later was very interesting. It came out that the electrocuted bird was a juvenile Osprey (Visvalk), a large raptor that was ringed as a chick in Finland (at 6127N 2404E) on 9 July 2012 – so it was about five months old, probably on its first migratory flight to the Southern Hemisphere. It had covered a distance of 10,022 km in 51 days! It was also Namibia's first record of an Osprey as a power line mortality, and also its first record of a ringed bird being involved in such an incident. According to one of our local birding experts, Mark Boorman, there have not been many ring resightings or recoveries (i.e. of dead birds) of this species on the West Coast of Africa, as you will see from looking at its distribution map



Trekopje-Wlotzka 132 kV

15 March 2013
 Near Desalination plant 22.371737S 14.452708E (approx.)
 Lesser Flamingo (fresh) – collision; this Red-listed species is VULNERABLE in Namibia, and also GLOBALLY THREATENED
 Reported by: Markus Pfaffenthaler

OTHER POWER LINE INCIDENTS/SURVEYS



Trekopje-Wlotzka 132 kV

13 February 2013
 Near Desalination plant (22 22 20.24 14 26 37.29)
 Black-necked Grebe (fresh) – collision; this Red-listed species is NEAR-THREATENED in Namibia
 Reported by: Helmut Ochurub and Richard Gurirab



Telephone pole

19 December 2012
 Maltahöhe D1088, 8.8 km before turnoff to B2
 Guineafowl caught in tree beneath telephone pole
 Reported by: Sue Roux

Trekopje-Wlotzka including Trekopje Bypass

Survey team: Kaarina Nkandi, Helmut Ochurub, Richard Gurirab
 Start & end: 68.5 km, walking 5 spans
4 February 2013: No incidents
19-20 March 2013 : No incidents