

Mabula Ground-Hornbill Project

Progress Report I

Reporting Period
October 2015 – March 2016



Summary: A total of eleven weeks were spent in the field to capture the last wild birds needed for completion of the genetic analyses. Every bird in the hand held an additional opportunity to learn more about basic blood parameters, parasite loads, group demographics, health in transformed habitat and to watch behaviours between group members in response to the decoys and food gifts. It also allowed for a better understanding of the social dynamics of the species in a human-dominated landscape, what beliefs systems are in place and was an opportunity to build conservation partnerships with land-owners. Other highlights included the successful return of a snared female back to the wild, a new group released and the existing groups doing well, the support for the planned hand-rearing centre growing with enough funds raised to start Phase 1 and new partnerships formed with the Tshwane University of Technology Industrial Design Department and the Keiskamma Arts Trust.

Executant: Lucy Kemp
Mabula Ground-Hornbill Project
(016-183 NPO & 13/00/00/723 PBO)

MISSION STATEMENT

The Mabula Ground Hornbill Project strives to halt and then reverse the decline of the Southern Ground-Hornbill. Our work is done in a multi-disciplinary, multi-pronged approach to ensure that, for such a long-lived and slow breeding species we are able to make an impact as quickly as possible.

HIGHLIGHTS OF THE PAST SIX MONTHS



RESCUE OF SNARED FEMALE

A young female ground-hornbill was found in a snare by community members outside Musina. They kept her in a cage and tried to feed her on mice and grasshoppers they had caught, but she was too injured and stressed. A local farmer alerted us and, through the local nature conservation official's intervention, we were able to get her to Montecasino Bird Gardens where Dr Koeppel and the aviculture team were able to operate. And two weeks later she was deemed ready to be released back into the wild.



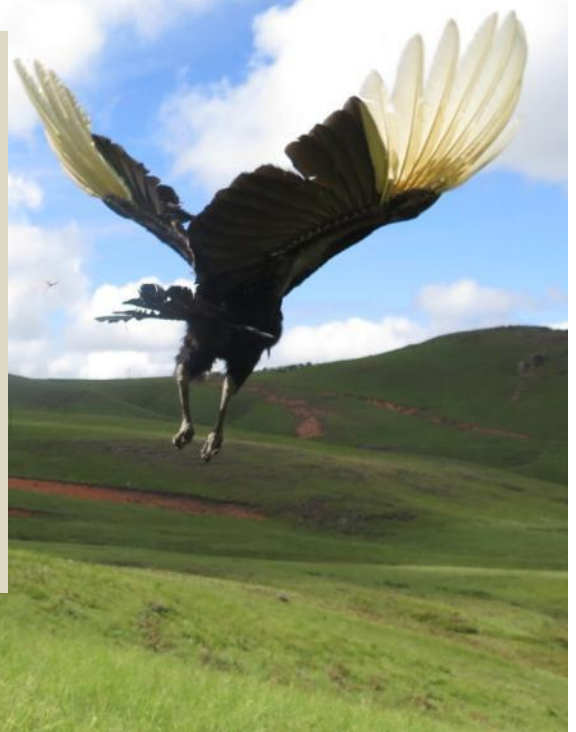
TRAINING IN INCUBATION & EMBRYO SEXING



San Diego Zoo supported the Project to attend an incubation course held at the SD Centre for Conservation Research. This was an incredible opportunity to learn new skills and improve the skills we need for growing the captive and reintroduction population. It was also an opportunity to engage with existing supporters of the project and reintroduction practitioners from Hawaii and the Galapagos, and to meet Kipling, an ambassador bird (above) and learn much more about the ground-hornbills held in facilities across the United States.

GENETIC SAMPLING COMPLETE

After nearly three months in the field, the sampling of wild birds is complete and analyses can get underway. It was an incredible time spent exploring new habitats in the hunt to find groups on which to attempt trapping, from the most southern tip of the range at Alexandria in the Eastern Cape, through KwaZulu-Natal and another attempt to increase the sample sizes of the Zimbabwean birds in the Matobo District. We discovered several threats to the populations, including the pending titanium strip mining in Pondoland, but also met many community members who, once they understood the status of the species, were happy to become Custodians. The next few months will be spent processing these samples, together with those collected from museums and captive populations around the world, and then the analysis of the phylogeography and diversity of the species can get underway.



FIELD LEAD ANALYSER, CENTRIFUGE & CANDLERS

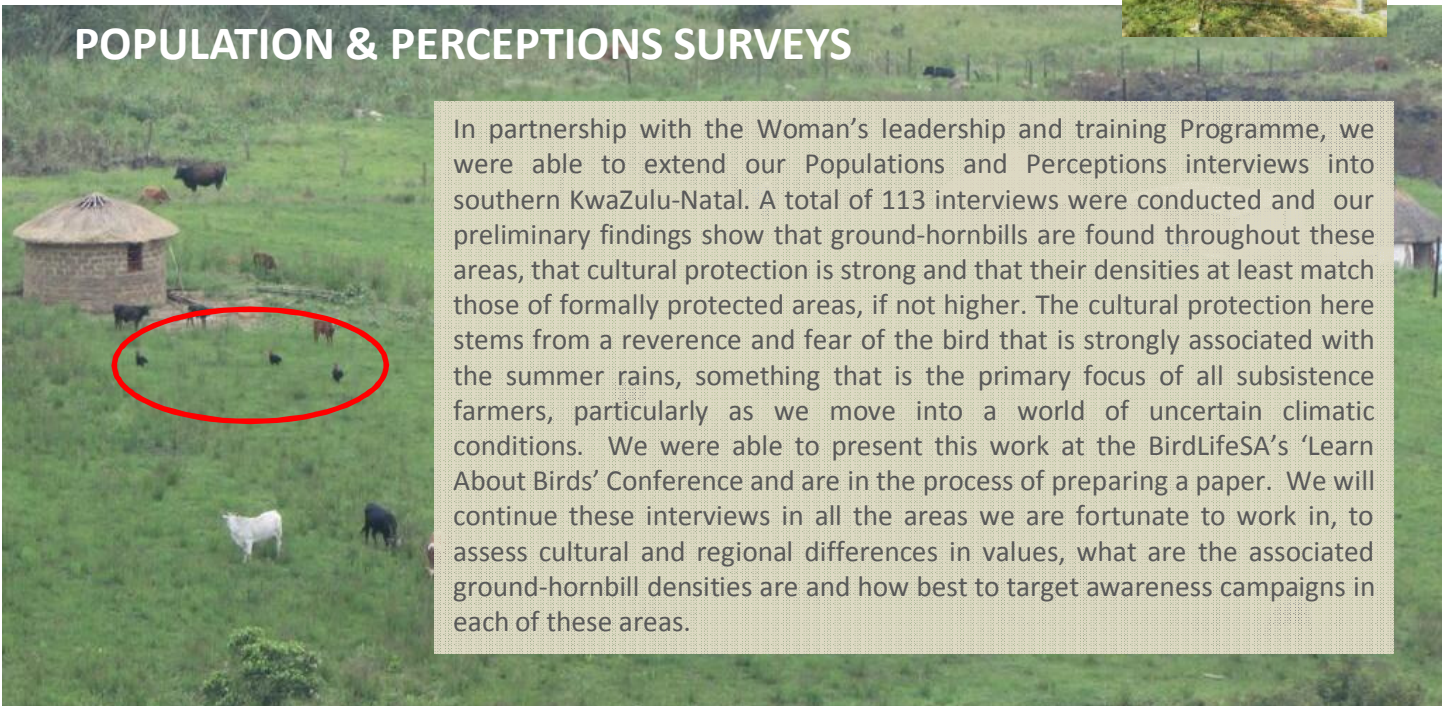
The past six months has allowed us access to using some amazing pieces of equipment. A field lead analyser allows us to assess blood lead levels whilst in the field and allows us to decide immediately if a bird needs chelation treatment. This will allow us to grow a database of lead levels and understand what land-uses are producing the highest environmental lead loads, so allowing us to better target awareness and other interventions. Being in the field for so long has meant that getting our blood samples to the laboratory in good condition has been difficult, but with a mobile centrifuge we are able to easily separate the serum and this time all of our samples were deemed in good condition. Lyons Technology has also developed a field candler, which we can't wait to put to good use in the field this coming breeding season.

MOBILE AVIARY

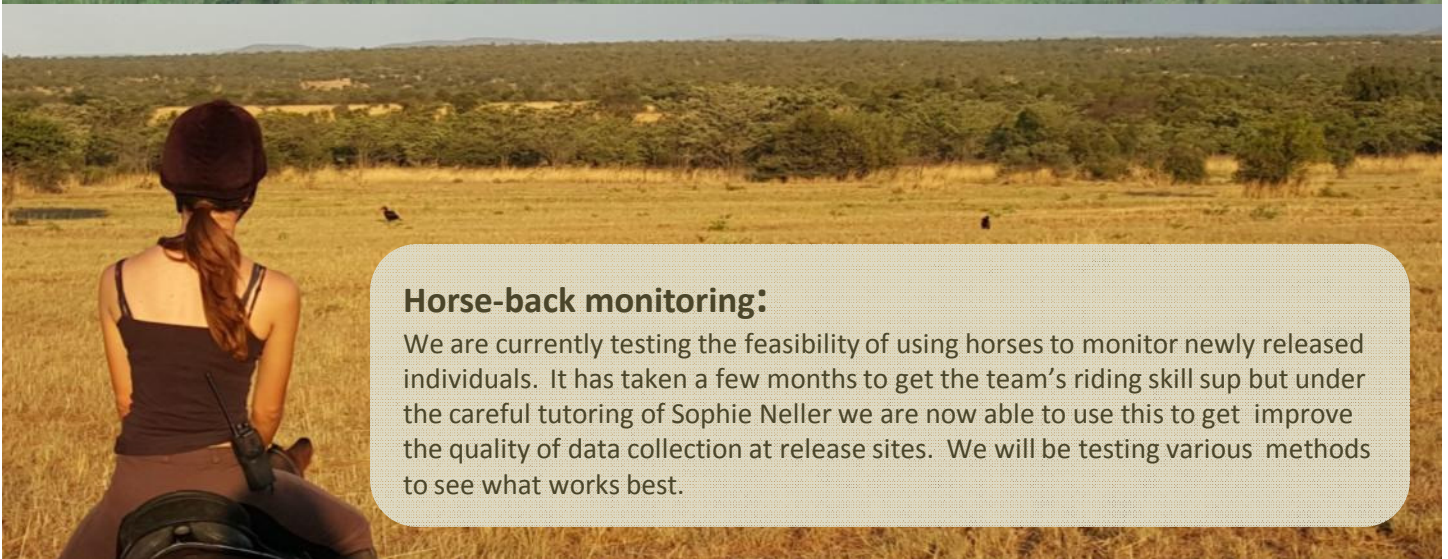
We were thrilled to see the collapsible aviary up and working. This is a big step towards reducing costs at release sites, and to making them more sustainable into the future. The birds seemed happy and it took just two days to put up the aviary. Once these birds are ready to be moved, the aviary can be dismantled and moved to the next site.



POPULATION & PERCEPTIONS SURVEYS



In partnership with the Woman's leadership and training Programme, we were able to extend our Populations and Perceptions interviews into southern KwaZulu-Natal. A total of 113 interviews were conducted and our preliminary findings show that ground-hornbills are found throughout these areas, that cultural protection is strong and that their densities at least match those of formally protected areas, if not higher. The cultural protection here stems from a reverence and fear of the bird that is strongly associated with the summer rains, something that is the primary focus of all subsistence farmers, particularly as we move into a world of uncertain climatic conditions. We were able to present this work at the BirdLifeSA's 'Learn About Birds' Conference and are in the process of preparing a paper. We will continue these interviews in all the areas we are fortunate to work in, to assess cultural and regional differences in values, what are the associated ground-hornbill densities are and how best to target awareness campaigns in each of these areas.



Horse-back monitoring:

We are currently testing the feasibility of using horses to monitor newly released individuals. It has taken a few months to get the team's riding skill sup but under the careful tutoring of Sophie Neller we are now able to use this to get improve the quality of data collection at release sites. We will be testing various methods to see what works best.

NEWS FROM CURRENT RELEASE SITES

THE ANCHOR IS WORKING: The latest release needed to test how we keep the birds we released on land that is deemed safe from all of the threats that caused the original extirpations. In the past, even though we secured areas as big as 50 000 ha, the birds are still inclined to wander off – the joys of reintroduction of flighted beasts versus those that can be fenced in. This led to losses to poisonings on neighbouring properties and so placement of artificial nests, which the birds are already conditioned to, have been employed. This has worked well and the new group has already been seen carrying nest lining. The more we understand what drives their territoriality, the better we will be able to manipulate their landscape and demographics to keep them safe. We will also experiment with territorial call-ups , captive birds and decoys.



We have new stock to promote the species and raise funds.



3D puzzles, laser cut earrings and much more....

NEWS FROM CURRENT RELEASE SITES

MABULA

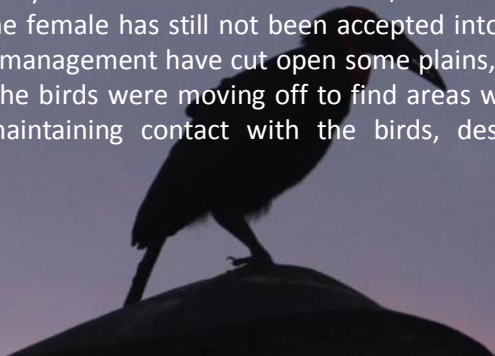
The group is doing well. The nest camera installation worked well, with the tiny camera invisible to the birds, and so they have not been able to destroy it. It was fascinating watching the build up to the breeding season, with copulation between Storm and Kapama seen for the first time on 27/11/15. However, the rains did not come until late December, and so the birds decided to skip this year. Since then, they have been using their territory widely and are now spending weeks at a time on neighbouring properties. During the breeding season the groups territorial aggression was profound and they broke many windows. They have also now learnt that if they break windows they can then enter the building to find more things to break - plasma screen TVs, original artworks and so on. The increase in ire from our neighbours has driven renewed attempts to find ways of keeping the birds away from these windows. A one and a half year old male, Juke, was introduced to the group. He arrived on 16 March and was released on 2 April. Unfortunately, he is showing signs of being heavily human-imprinted and is being returned to captivity.

THABA THOLO

On 6 January 2016, Makhudzi (female), HB10 (male aged 6) and RhinoRoad14 (male aged 2) were released, spending their first day at liberty around the boma then moving towards the fence line where the last group was poisoned. They were monitored very closely and we succeeded in implementing a supplementary feeding station and used that to pull them back to the core of the reserve and then, after a few days, the birds found the artificial nest box that had been installed. They have remained in that area ever since and have been seen carrying nest lining. The female has been seen feeding the juveniles.

LOSKOP

This release is also going well. The male group has had several forays off the reserve but has always returned to the area where it first settled in post-release. They all moulted their tail mounts, but we have managed to re-trap two birds to put on new transmitters. The female has still not been accepted into the group but is foraging well and is in good health. The reserve management have cut open some plains, as the tall thatch grass on the reserve was potentially the reason the birds were moving off to find areas with shorter grass. The two shepherds have been excellent in maintaining contact with the birds, despite the lack of transmitters.



LOWLIGHTS OF THE PAST SIX MONTHS

It is with great sadness that we learnt that Roelof van der Merwe and his mother, Miems, both passed away, just months apart. This is a tremendous loss to a family that has supported this project since its inception and has been a massive supporter of bird conservation in general. Both will be missed and our love to both Betsie and Willene.

Tanzania is unwilling to co-propose a CITES Appendix II submission for the CITES CoP in South Africa later this year – this sadly means that they are also unwilling to acknowledge that their quota of 400 birds a year is unlikely to be sustainable.

ACTIVE THREAT MITIGATION

Trade: Our proposal to the South African Department of Environmental Affairs to have the species listed as CITES Appendix II will not be taken forward to the Conference of Parties as Tanzania will not co-propose. We continue to source trade data where possible to include in further analyses.

Electrocution: No progress this quarter.

Poisoning: No progress this quarter.

Lead poisoning: The successful use of the lead analyser in the field will allow for swift diagnosis and treatment.

Disease: The next batch of Newcastle's Disease vaccine was developed for further testing.

Loss of nests: See below: the new partnership with Tshwane University of Technology has seen seven teams of students working on preliminary nest designs – these will then be taken forward by the lecturing team and a prototype developed in time for the pending breeding season.

Window-breaking: We tried life-size photos of caracal on windows to scare the hornbills away but these do not work - the birds still broke windows. Two new rolls of Contravision were acquired for use on rural schools. We are testing the use of sand-blasted vinyl for more upmarket establishments. In addition, we have ordered ultrasonic bird scaring devices to see if these will work on ground-hornbills.



Industrial design student staking up the artificial nest challenge

PLANS FOR THE NEXT FEW MONTHS

- The team has been working extraordinarily hard and much off time is owed, so we will be using this quiet period to allow everyone a chance to catch up.
- Lucy Kemp is on sabbatical to ensure that her PhD can be submitted by the end of the year, and so that all of the genetic analyses can be completed in time for the finalisation of the reintroduction plans and the planned Population and Habitat Viability Analysis in 2017.
- We will continue fund-raising and finalising plans for the hand-rearing centre. We hope to have sufficient to begin Phase 1 by the end of the year.
- We have two education and awareness campaigns planned for regions where wild groups still persist – in Limpopo River Valley and southern KwaZulu-Natal.
- We will continue attempts to get a young male augmented into the Mabula group and two more into the Thaba Tholo group, and start planning the first adjoining release at Mabula in order to test territory formation and movements in a re-colonising situation.
- Loskop release:** The birds will be continually monitored by the two on-site shepherds.
- Thaba Tholo release :** The birds will be continually monitored by the two on-site shepherds.
- Mabula release:** We will continue to monitor our home group.

EDUCATION & AWARENESS OVER THE PAST SIX MONTHS

*all sponsors and collaborators are acknowledged in presentations and reports

Print media:

WRSA magazine, AZA Connect magazine, Daily Dispatch newspaper x 2, Wild & Jag magazine

Online:

•Our Facebook page is reaching in excess of 20 000 people for some posts and we have launched a Twitter account. We also launched a crowd-funding initiative with Indiegogo.

Newsletters: December 2015 & March 2016

Presentations, meetings and workshops:

- Weekly Modjadji teas and hornbill drives.
- Two presentations in San Diego
- Tshwane University of Technology Design Students visited for the nest induction workshop.
- Two presentation at the BirdLifeSA/ PFAIO FLOCK 'Learn About Birds' in Skukuza.
- EKZN Symposium for Contemporary Conservation, presentation about provincial monitoring plan
- Wildlife Research Symposium (National Zoological Gardens and Onderstepoort Veterinary Faculty)
- CITES CoP 2016 Preparation Workshop

Land Owner & Community Engagement:

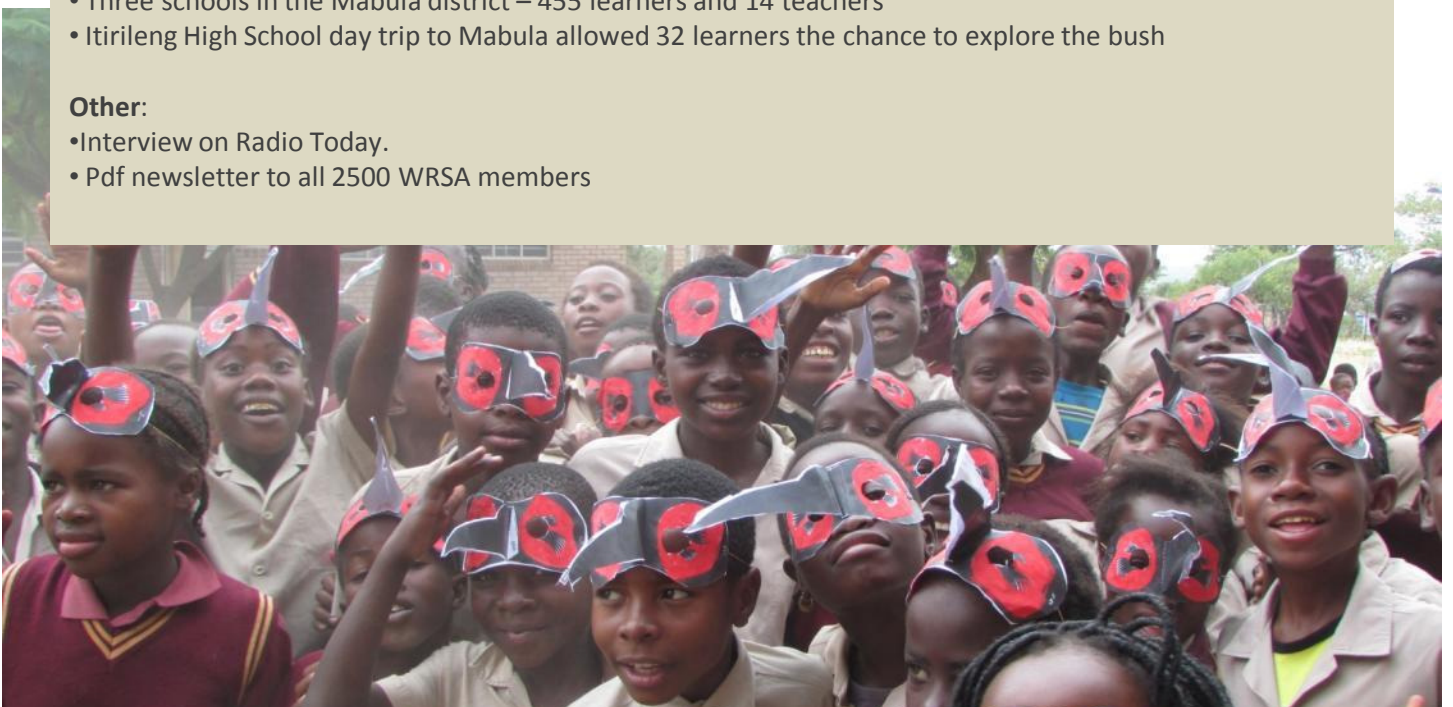
- Mafusa community – Loskop Dam area
- Mouste community – Loskop Dam area
- Centocow and Hlokozi, KZN, reaching members of 13 villages.
- Communities between Tsipise and Pafuri - Limpopo
- Farmers Meeting – Loskop Dam

Our reach with the youth:

- The Mabula Kidz Club
- Three schools in the Mabula district – 455 learners and 14 teachers
- Itirileng High School day trip to Mabula allowed 32 learners the chance to explore the bush

Other:

- Interview on Radio Today.
- Pdf newsletter to all 2500 WRSA members



SUMMARY FINANCIAL REPORT: SUSTAINABLE

The Mabula Ground Hornbill Project has one bank account from which we manage our running expenses. The hand-rearing facility funds are kept in a linked high interest account until we are ready to break ground. A detailed annual financial report is available on request.

TABLE 2: DETAILS OF SPONSORSHIP RECEIVED OVER THE LAST SIX MONTHS

SPONSORSHIP RECEIVED OVER THE PAST SIX MONTHS

Primary (>R100 000):

Mabula & Mokaikai Private Game Reserves.
Natural Encounters
Rufford Small Grants Booster Grant
Zoological Society of San Diego
Stichtings Prins Bernard
Disney Conservation Fund
Allen Hallett Sculptures



Another of the life-size bronze sculptures was successfully auctioned at the Wildlife Ranching South Africa gala dinner at Sun City.

Contributing:

Individuals (Jaques Prevost, Val Kupferberg, Richard Tudor-Owen)
Montecasino Bird Gardens
Kranspoort Bird Talk Donations
Bester Birds
PAAZA Keepers Conference Raffle
American Association of Zoo Keepers San Diego
Omaha's Henry Doorly Zoo and Aquarium
Natura Artis Magistra
Wildlife Ranching South Africa
Paultons Park UK
All the supporters of our Indiegogo Campaign



Patience Shito joins the team.

In-Kind:

Mabula Private Game Reserve (accommodation and hospitality support)
Dr Katja Koeppel (veterinary consultations – horses and hornbills).
Cell C (calls and phones).
IDEXX (blood samples).
National Zoological Gardens of South Africa (pathology & molecular laboratory).
Montecasino Bird Gardens Hospital (use of hospital).

We launched our first crowd-funding campaign for the hand-rearing centre. We did not reach our target but it was an excellent awareness tool in addition to raising funds.

SUMMARY OF SOME OF THE ACTIVITIES OF OUR LOCAL COLLABORATORS AND PARTNERS:

National Zoological Gardens of South Africa	Manages the PAAZA African Preservation Programme captive propagation programme, provides post-mortem support, nutritional & behavioural advice and undertakes all genetic analyses at their state-of-the-art laboratory.
Percy FitzPatrick Institute of African Ornithology	Undertakes APNR harvest, wild capture, research into spatial use of habitats and dispersal.
Mpumalanga Tourism and Parks Agency	MTPA is our partner on the hand-rearing centre, providing the land and logistical support. Delecia Gunn rears harvested chicks, continues education and awareness, and acts as the main advisor on hand-rearing and captive socialisation.
Johannesburg Zoo	Hosts captive birds, rearing harvested chicks, grow rearing capacity, continued education and awareness.
Endangered Wildlife Trust	Undertakes nest monitoring, harvest and ringing of fledglings in Kruger National Park, research into habitat use & dispersal.
Montecasino Bird Gardens	Hosts two breeding pairs, awareness campaign, fund-raising support, rears both harvested and captive-bred chicks.
Bester Birds	Hosts birds for the captive breeding programme.
Umgeni River Bird Park	Hosts a pair for captive breeding and is increasing awareness in KwaZulu-Natal.
Boscia Birds	Hosts a captive pair and young birds, and hand-rears harvested chicks.
Zaagkuilsdrift Bird Sanctuary	Hosts birds for the captive breeding programme.
Lory Park Zoo	Hosts birds for the captive breeding programme.
Hoedspruit Endangered Species Centre	Hosts birds for the captive breeding programme and provided a wild female for a release.
University of Pretoria Veterinary Facility, Onderstepoort	Provides veterinary care and advise, vaccine development and research support.
Deltamune	Provides vaccine development and provision and assist when a BLS 3 facility is required for inactivation of blood samples.



THANK YOU TO ALL OUR CURRENT SPONSORS

PRIMARY LOCAL CORPORATE SPONSORS:



IN-KIND SPONSORSHIP:



CONSERVATION GRANTS:



Thank you