



FitzPatrick Institute of
African Ornithology



UNIVERSITY OF CAPE TOWN
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APNR Southern Ground-Hornbill Research & Conservation Project

QUARTERLY REPORT

January 2025



A P N R
**GROUND
HORNBILL
PROJECT**

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ABOUT US

The APNR Southern Ground-Hornbill Project is dedicated to the research and conservation of Southern Ground-Hornbills in the Greater Kruger region of South Africa. Researchers from the FitzPatrick Institute of African Ornithology, UCT, have been at the forefront of critical research that informs conservation efforts by understanding the habitat use, reproductive success, and behaviour of these iconic birds. The project installs and monitors artificial nests which are vital to enhance their breeding success and allows for comprehensive studies of the birds in their natural environment.



WHAT WE ACHIEVED IN 2024

New nests designed

1 new natural nest found

11 artificial nests installed

365 nest checks conducted

Developed new leg-ring tracking device

1 sick bird treated and released back into APNR

342 sightings of birds recorded in APNR

5 chicks harvested for reintroductions



2024/2025 BREEDING SEASON

Following the late rains and a delayed start to the breeding season, a total of 11 groups decided to breed, which is comparable to the average of 11.4 groups that have bred annually since the project began in 2000. While the overall average lay date for ground hornbills in the APNR is November 4, this season's average lay date was November 28.

So far, there have been no egg failures or predation events, and although there are still a few months to go before the chicks fledge, it is a great start.

Active Nests

Balule PNR: 1) Olifants North

Klaserie PNR: 2) Ntoma, 3) Copenhagen

Thornybush PNR: 4) Thornybush central

Timbavati PNR: 5) Addger, 6) Caroline, 7) Tawane, 8) Lornay

Umbabat PNR: 9) N'tsiri, 10) Yankee Dam, 11) Ingwelala

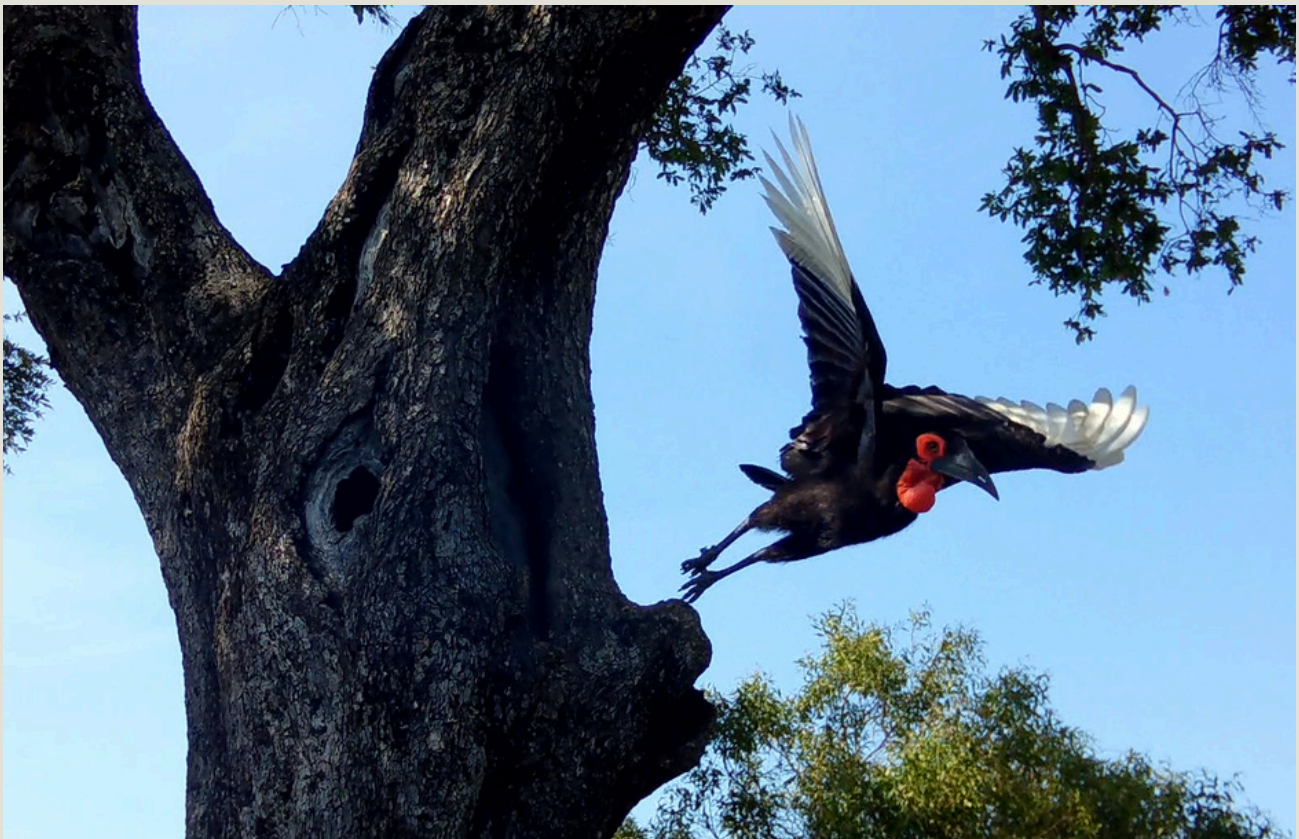


Figure 1. Camera trap footage of male flying from the Thornybush nest after feeding the incubating female.

RESEARCH

TRACKING BIRDS AND BODY CONDITION

As part of Kyle's post-doctoral research, he will be implementing newly developed tracking rings, specifically designed for ground-hornbills. These will help track the movements of the birds and gather data on their habitat use, movement patterns, behaviour, dispersal, and territory size.

The project is also collaborating with the engineering department at the University of Cape Town to develop automatic scales for our nest sites. These scales are currently used in the Kalahari as part of the Hot Birds Research Project where they have been developed for yellow-billed hornbills and fork-tailed drongos. For yellow-billed hornbills, the perch scales have been attached to the entrance of nest boxes so that each time a bird comes to the nest entrance their weight is logged and stored.

They have now been upscaled and adapted to be used for ground hornbills. This will enable us to monitor birds' body condition throughout the season, in conjunction with existing camera traps, while investigating the impact of climate change.

The combination of these factors will help us determine the environmental factors that influence the birds breeding decisions and outputs.



Fig. 2. Perch scale fitted at yellow billed hornbill nest box in the Kalahari. Photo: Ben Murphy, UCT

NEW RESEARCH ASSISTANT



In November we welcomed Ryan Forbes, our new field assistant for the season. Ryan obtained his Masters from Nelson Mandela University, where he looked at lion and leopard diet and dispersal in the Greater Kruger. He has previously worked with various species, from estuarine fishes to large mammals. Ryan has always been fond of ground-hornbills having spent many an hour enjoying them in Kruger. With a desire to broaden his expertise, he viewed the Ground Hornbill Project as the perfect opportunity to diversify his skill set and gain valuable experience in avian conservation.

Fig. 3. Ryan has now traded in his hi-vis gear from turtle monitoring for khakis as he immerses himself the bush

RESIGHTINGS

Through the course of the project, birds have been ringed with rings supplied by SAFring at the University of Cape Town. Each ring has a unique code that can allow for identification if the bird is recaptured. However, whilst the birds are moving through the bush, gaining a visual of these codes can be extremely challenging. This is why we are excited about recently obtaining photographs of two different birds where we were able to read the ring code.

The first bird was sighted on Birmingham property (TPNR) on January 1, 2025, just 6 km from where it was ringed as a chick in 2017. Now an adult at 8 years old, this individual came from a natural nest on Lillydale property and seems to have remained with its natal group that have shifted south.

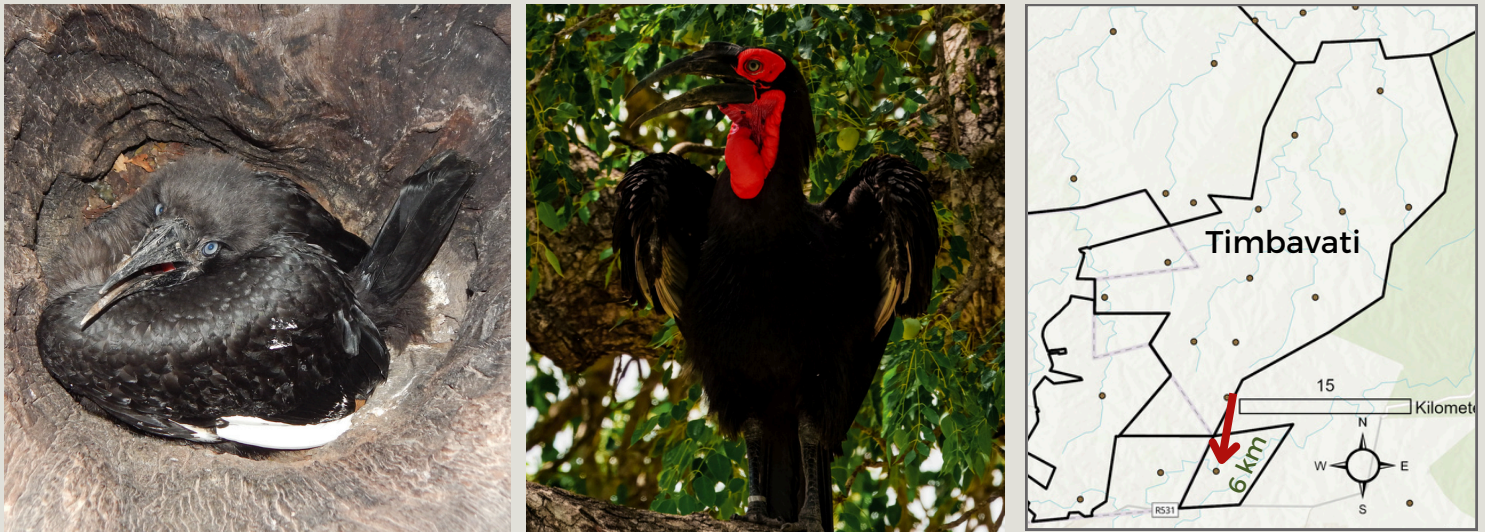


Fig 4. Chick in Lillydale nest before fledging in 2017 (left). Same individual 8 years later (middle, photo: Laurien Stubbe). Map showing group shift from Lillydale to Birmingham nest (right)

The second bird was sighted on Moditlo Estate, just south of Hoedspruit in December 2024, and is now part of a resident group that has been there for several years. As we are the only project that rings ground-hornbills in the area, we knew these ringed birds originated from the APNR, but we were unaware of their specific group or nest. Thanks to a photograph from a citizen scientist, we determined that this bird, ringed as a chick in 2010, is now an adult at 15 years old and dispersed approximately 42 km from Umbabat, where it fledged from the Yankee Dam nest. This provides valuable long-term dispersal data on the species.

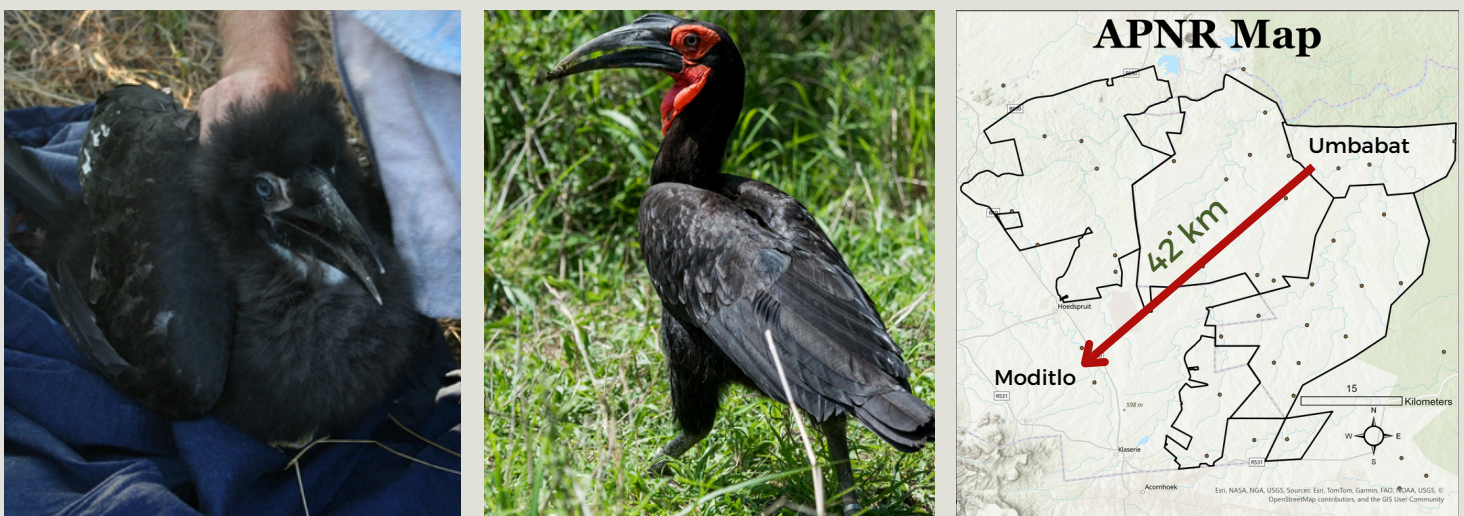


Fig 5. Chick being ringed at Yankee Dam nest in 2010 (left). Same individual 15 years later on Moditlo (middle, photo: Joy Scheepers). Map showing dispersal distance from Umbabat to Moditlo (right).

Recently, we have developed new rings that will aid in the identification process as they are coloured and have easier-to-see, large codes on them. Additionally, the new leg-ring tracking devices will also help gather this information.

REINTRODUCTION OF SICK BIRD

In October, we were contacted about a very sick bird in the northeastern section of Umbabat PNR. This bird was collected and taken initially to WildScapes Veterinary and Conservation Services, and then to Onderstepoort Veterinary Hospital where it was treated. After inspection of the site where it was found, it was suspected that the bird's condition may be as a result of it eating window putty.

After treatment, the bird was then taken to be rehabilitated at The Mabula Ground Hornbill Project's "Baobab" rearing facility at Loskop Dam Nature Reserve.

After several weeks in rehabilitation, once the bird had recovered its body condition, it was collected and driven back to Umbabat, where it was reintroduced back into the area in which it was found.

So far, there have been no resightings of this bird. It was fitted with one of the new colour rings for easier identification and if anyone sees it, please contact us as soon as possible.

We would like to thank all those involved in the care and rehabilitation of this bird, including WildScapes Veterinary and Conservation Services, Onderstepoort Veterinary Hospital, The Mabula Ground Hornbill Project, as well as Umbabat PNR for facilitating its reintroduction back into the reserve.

IMPORTANT NOTE: WE RECOMMEND THAT WINDOW PUTTY SHOULD NOT BE USED IN THE RESERVES AS GROUND-HORNIBILLS, AS WELL AS OTHER SPECIES, HAVE A TENDENCY TO APPROACH AND PECK AT WINDOWS. THIS POSES A SERIOUS HEALTH RISK TO THEM IF PUTTY IS INGESTED.

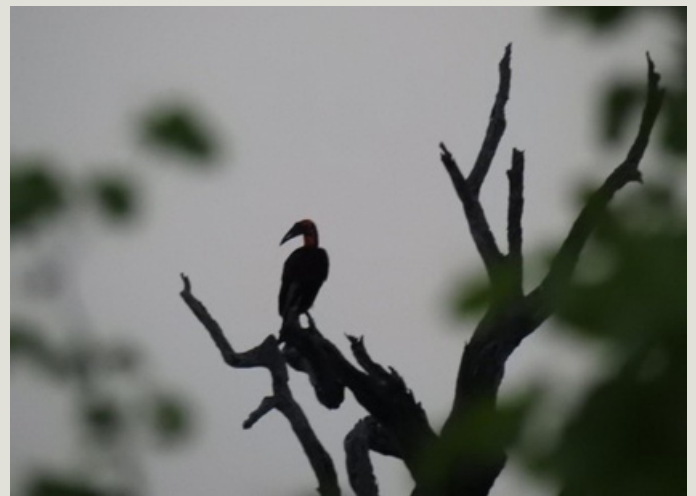


Fig 6. Hornbill being treated by WildScapes before being transported to OP (left). Post-release - taking a moment to preen ruffled feathers after a long journey back to the APNR (right, photo: Ryan Forbes).

NEW WEBSITE



The project has recently launched its new website, which provides comprehensive information about what we do. Visitors can easily access the latest reports, book presentations, submit sightings, and donate, ensuring that everyone stays informed and engaged with the project.

apnrgroundhornbillproject.com



HOW TO HELP



SUBMIT SIGHTINGS


We have set up WhatsApp groups for members of the APNR (guides, wardens, managers etc.) to log sightings of ground-hornbills.

This is an effective way to gather information on group movements and we encourage anyone who is interested in joining an already established WhatsApp group or would like to set one up for their area to get in touch with us.

Alternatively you can email sightings to: info@apnrhornbill.com or WhatsApp (+27) 72 345 6584 or submit on our website: apnrgroundhornbillproject.com





Info we require:


1. Location details, coordinates/
WhatsApp pin drop
2. Date and time of the sighting.
3. Group details; numbers, ages, sexes.
4. Photos/videos



Southern Ground-Hornbill ID

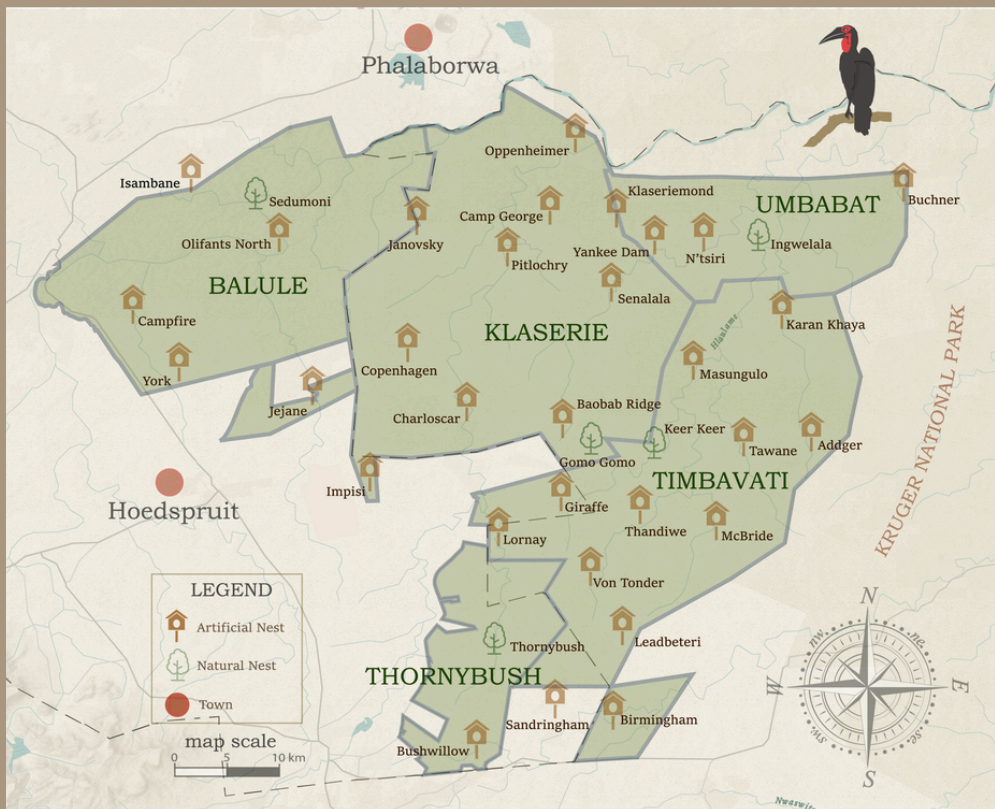
Submit sightings to: (+27) 072 345 6584

	
ADULT FEMALE: Facial skin red with violet below bill	ADULT MALE: Facial skin entirely red
	
SUB-ADULT: Transitioning - facial skin yellow/red	JUVENILE: Pale facial skin



Left: ADULT FEMALE, Middle: ADULT MALE, Right: JUVENILE

Photos: Jannie Nikola, Chad Cocking & Thiago de Paula Oliveira



Map of the APNR with all of the current viable known nesting site locations.

- Balule PNR - 6 nests
- Klaserie PNR - 11 nests
- Thornybush NR - 2 nests
- Timbavati PNR - 13 nests
- Umbabat PNR - 4 nests

SUPPORT

By purchasing one of our exclusive Ground-Hornbill paintings by renowned South African artist Mark Middleton, you not only acquire a beautiful piece of artwork, but also contribute to our research and conservation efforts.

Painting sizes: A1 or A3

Contact us if you would like to place an order

NOTE: Image is watermarked for display only



Please get in touch if you would like to **donate** to the project. Funding for ecology and conservation research is becoming increasingly hard to obtain, even as the critical need for these activities increases. This means that every donation to our research and conservation project is enormously welcomed and makes a positive impact on the conservation of the species.



R7500 can pay for a new artificial nest box + materials for repairing already installed nests.

R5000 can pay for a new camera trap, R200 can pay for a pack of batteries to power camera traps.



R9500 will pay for a new tracking ring for us to monitor fledgling movements and conduct research

R1700 can pay for a tank of fuel for us to carry out nest checks



R450 can pay for an aluminium colour ring to ID an individual



ACKNOWLEDGMENTS

We thank the APNR landowners and wardens for their continued support and permission to research the ground-hornbill groups on their properties.

Thanks to John Solomon & Caroline Buckway, Wild Wonderful World, Mesker Park Zoo and Botanic Garden, The Rufford Foundation, The Timothy Hancock Charitable Trust, Marc Solomon, Iron Man 4x4 Africa, Mary Oppenheimer & Daughters Foundation, Alan Whyte, Janovsky family, Clive Coetzee, Bateleurs Nest, African Born Safaris, BHS Safari Company & Warren Cary Wildlife Gallery for their generous donations and funding which supports the continuation of this long-term project.

Thanks to N'tsiri, The Royal Portfolio Foundation, Wild Wonderful World, Isambane Camp, René Vromans, Baobab Ridge, Julie McInnes, Dr Alexandra Schumann, Sandringham PNR, and Robert Price for their generous donations towards artificial nests.

Thanks to Timbavati, Klaserie, N'tsiri, Tanda Tula Safari Camp, Ndlopfu, and Peter Smelting for their ongoing support in fuel donations.

Thanks to the Mabula Ground Hornbill Project for support and assistance, Kyle Brand and JJ's Bones Of The Earth for designing and constructing artificial research nests. Thanks to all APNR members and staff who have been of great help, both logistically and by reporting ground-hornbill sightings.



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