ANNUAL REPORT

2023-2024



OUR MISSION

To reverse the decline of the Southern Ground-Hornbill (*Bucorvus leadbeateri*) population in its historical range in South Africa, and support conservation efforts in the rest of its range.

The Mabula Ground Hornbill Project was founded in 1999 and registered as a South African NPO in 2001 and has grown from a site-specific reintroduction project to leading ground-hornbill conservation in South Africa.

OUR HIGHLIGHTS



New estimate of 2796 – 3864 individuals in South Africa

Range-wide genetic assessment published

>3300 citizen scientists committed to sending valuable records

The Namibian conservation action plan, that we led, has been approved by the capable authorities.

CHAIRMAN'S REPORT

I am pleased to present the Chairman's Report for the financial year July 2023 - June 2024, highlighting our organization's continued dedication to the conservation of Southern Ground-hornbills. Our team continues to make significant strides in research, monitoring, threat mitigation, and conservation of the Southern Ground-hornbill, and I am proud of the team's commitment to our mission.

Research and Monitoring

Our research initiatives continue to expand both locally and internationally:

- We've strengthened our international collaborations, notably with WeForest in Zambia, Lion Landscapes in Kenya, and African Parks in Rwanda and Malawi, enhancing our data collection and monitoring capabilities.
- We've received ethics approval for testing new tracking devices on birds, opening new avenues for detailed movement studies.
- Our sightings database has grown impressively, showing strong engagement from our network of champions and citizen scientists.
- This in turn has made our first four-year monitoring plan a success, with 4,088 sightings recorded in 2024. These data are crucial for understanding the species' distribution, status and where to focus our conservation resources.
- We completed our 3-year monitoring programme in Kruger and Mapungubwe National Parks.
- We have seen two MSc students successfully through to graduation.

Conservation

Our conservation programmes have notable developments:

- The artificial nest installation programme continues, with new nests installed in key areas.
- The Lowveld Expansion Programme is progressing well, with multiple new reserves onboard.
- Our reintroduction efforts continue, with multiple groups being monitored across different sites, and three groups showing signs of breeding.
- Despite challenges in captive breeding success this season, the Baobab facility remains crucial to supplement the reintroduction program.

Threat Mitigation

We are making strides in addressing key threats to the species:

- We co-established an International Hornbill Trade Database with Mandai Nature and MONITOR to better track and combat this growing threat to all hornbills, especially ground-hornbills, on the African continent.
- We're actively addressing the issue of lead poisoning, participating in community-wide meetings to discuss its effects on human and wildlife health and share the efficacy of lead-free ammunition. This comes on the face of 7 cases of lead-poisoning this year in ground-hornbills, including on Mabula Game Reserve itself.

Education and Awareness

Our outreach efforts continue to grow:

- The team conduct multiple hornbill experience game drives per week.
- Our social media engagement is increasing, with growth across all platforms.
- A wonderful collaboration with the South African National Biodiversity Institute has led to an exponential increase in the number of South Africans we can reach with our outreach programme.

Looking Ahead

As we move forward, we will:

- Host and facilitate a global artificial nest workshop, in South Africa.
- Further develop and grow our reintroduction programme, learning from both successes and challenges.
- Increase our efforts to mitigate threats, particularly lead poisoning, through innovative education and Custodianship campaigns.
- Expand our education and awareness programmes to reach even more people.
- Publish more of our lessons learnt to support conservation of ground-hornbills elsewhere in their range.

In conclusion, while we face ongoing challenges, our dedicated team continues to make significant progress in conserving the Southern Ground-hornbill. Your continued support is crucial to our success, and we thank you for your commitment to this important cause.

Malcolm Cumming Chairman October 2024

MESSAGE FROM OUR FOUNDER

With a heart full of pride for the work so many do to help ground-hornbills to proliferate and maybe thrive, and to urge you onward and upward - as it is worth it.

Fifteen years ago, The Project set about collecting enough blood samples for a genetic study, starting in the Limpopo River Valley and the Maasai Mara, in Kenya. I wish I had time to describe the daunting mountain of difficulties and the adventures, memories and new friends worldwide that sprang from the intricacies that ensued.

It is with a happy heart that I see the final publication of this work, with samples added from every range state where these birds occur, a mammoth task to be sure.

The photo below if of our first wild capture in the Mara in Kenya... here Nick Theron and I are with vets, rangers and experts helping us on this adventure.



Que M. Your

Ann Turner Founder 1999 - 2010

OUR PUBLICATIONS



Global Ecology and Conservation

Volume 52, August 2024, e02963

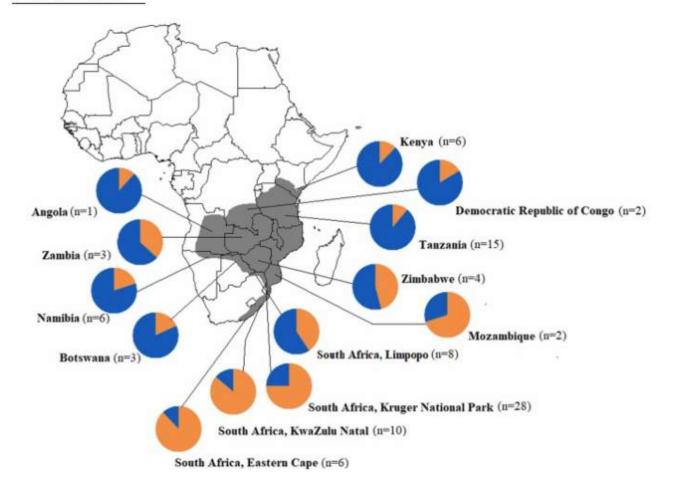


Broad-scale genetic assessment of Southern Ground-Hornbills (*Bucorvus leadbeateri*) to inform population management

Lucy Kemp ^{a b c} \nearrow \bowtie , Desiré L. Dalton ^{c d}, Monica Mwale ^c, J. Paul Grobler ^b,

M. Thabang Madisha ^e, Anna M. van Wyk ^f, Prudent S. Mokgokong ^g, Raymond Jansen ^h,

Antoinette Kotze ^{b c}



WE ARE A RELATIVELY SMALL PROJECT, WITH AMBITIOUS GOALS TO CONTRIBUTE TO BROADSCALE INTERNATIONAL BIODIVERSITY TARGETS



- Craft Development Initiative
- Employment of local monitors in areas where ground-hornbills are reintroduced



- Internships for local students to increase career readiness
- · Fully South African team
- Focus on local partnerships



- Protecting a culturally relevant species, safeguarding our heritage
- Advocating for the use of lead-free ammunition, impacting human and wildlife health



- · Women-led team
- Predominantly female team
- Supporting female students in science

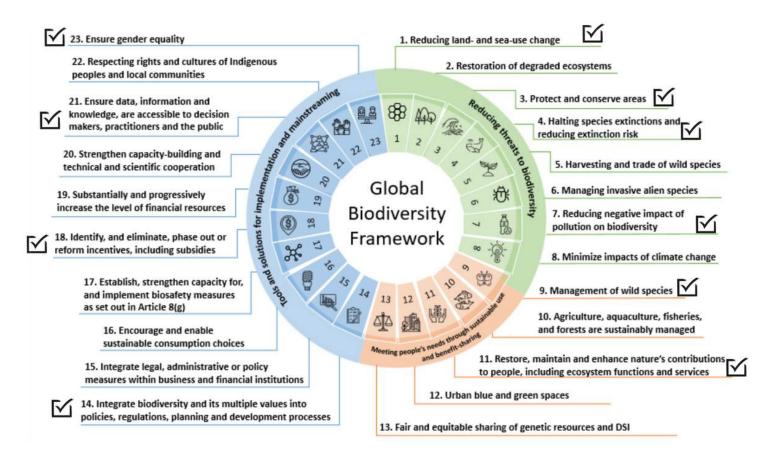


- Preventing the extinction of the Southern Groundhornbill
- Protecting a flagship and umbrella species, thus protecting a myriad of other species



- IUCN SSC Hornbill Specialist group
- Southern Groundhornbill Working Group
- · Thunderbird Task Team
- · Lead Task Team

OUR CONTRIBUTION TO MEETING THE 23 TARGETS IN THE KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK (COP15)



TOOL & SOLUTIONS FOR IMPLEMENTATION & MAINSTREAMING

- Extensive education programme in both urban and rural areas
- · Education presented in mother-tongue
- Supporting other range-states to join the fight
- · Scientific publications
- Protocols
- · Husbandry manual
- · Best-practice guidelines
- Publication of failed interventions
- Share data and information with ex-situ community
- National Biodiversity
 Management Plan
- IUCN CPSG Conservation Plan as part of Population and Habitat Viability Assessment
- Single Species Recovery Plan
- Woman-led team

REDUCING THREATS TO BIODIVERSITY

- Spread awareness of the SGH ecosystem function
- · Extra: Minimizing the use of lead ammunition
- Strengthening environmental avian impact assessment
- Developing species-specific guidelines for windfarms assessments

MEETING PEOPLE'S NEEDS THROUGH SUSTAINABLE USE AND BENEFIT-SHARING

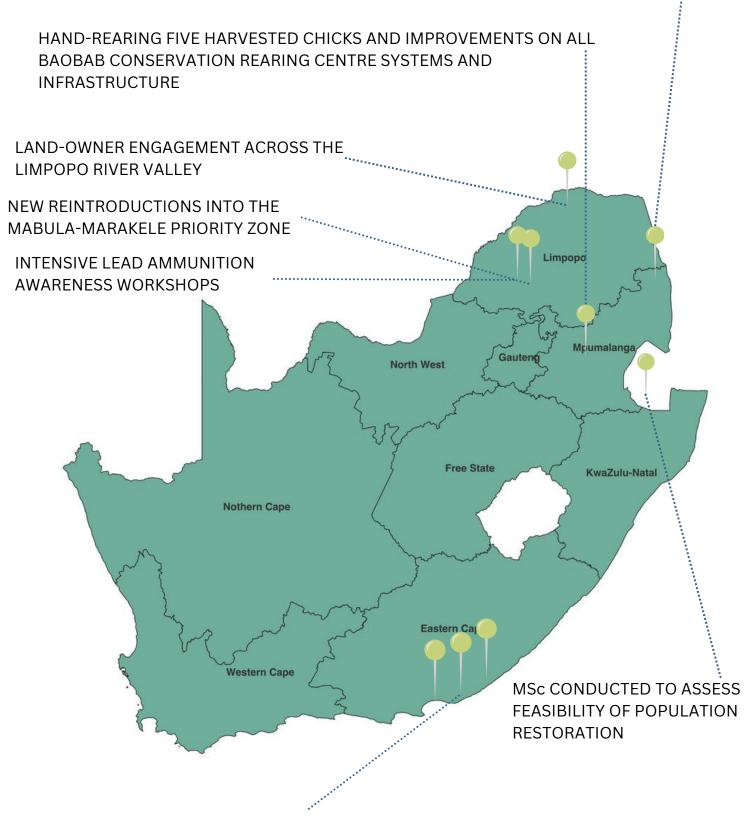
- · Custodianship programme
- Land-use best practice guidelines
- · Recognition of cultural importance
- Documentation and understanding on Indigenous Knowledge Systems
- Empowering rural communities in conservation skills
- Creating local pride and custodianship
- Bespoke conservation programmes developed together with communities

OUR JOURNEY THIS YEAR



OUR JOURNEY THIS YEAR

ANNUAL KRUGER NATIONAL PARK MONITORING AND EXTENDING LOWVELD CUSTODIANSHIP BEYOND THE APNR, INCLUDING MANY MORE RESERVES AND PRIVATE LAND-OWNERS.



EFFORTS TO INCREASE CITIZEN SCIENCE WITHIN THE EASTERN CAPE THROUGH FACE-TO-FACE MEETINGS, SOCIAL MEDIA, NEWSPAPERS AND LOCAL RADIO

GOVERNANCE

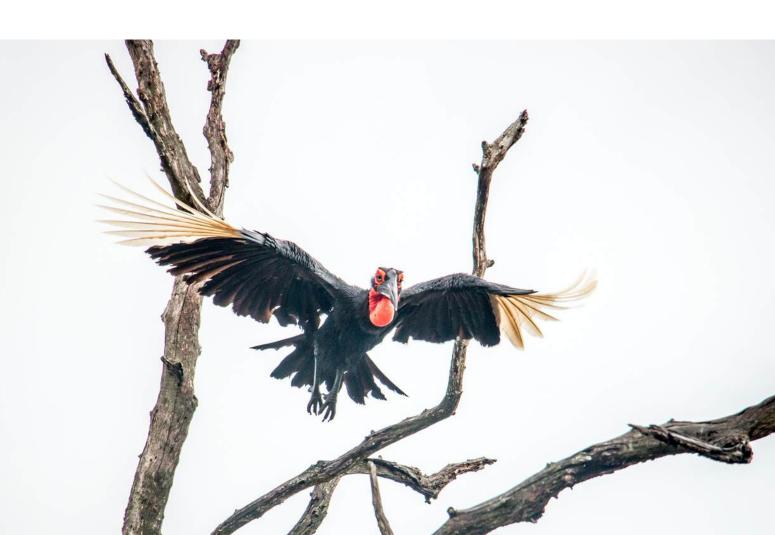
The Mabula Ground Hornbill Project has a multi-disciplinary Board of Directors. The Board meets regularly and provides support for key elements of governance, annual budget approval and financial management.

OUR BOARD OF DIRECTORS

Malcolm Cumming (Chair)
Dr Rob Little (Vice-Chair)
Mrs Elsa Taylor (Treasurer)
Prof Antoinette Kotze
Dr Hanneline Smit-Robinson
Mr Jaishankar Ramchandran
Mr Wouter Pienaar
Mr Leslie Mudimeli
Mr Ivan Killian
Dr Melissa Whitecross

LEGAL STATUS

The Mabula Ground Hornbill Project is a **Non-Profit Organisation** with registration number 016-183 and is sanctioned by the South African Revenue Service as **Public Benefit Organisation**, registration number PBO 13/00/00/723.

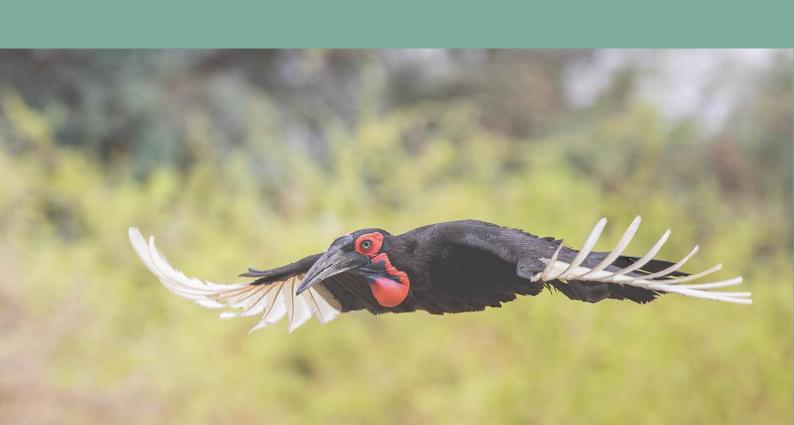


OUR THEORY OF CHANGE

LONG-TERM GOALS IMPACT Downlist Southern Ground-hornbill population from Endangered to Vulnerable in South Africa, by expanding and connecting populations through threat reduction and population bolstering to enable minimal conservation dependence in the future. Slow and then reverse the decline Enhanced understanding of Southern Ground-hornbills outside protected areas leads to evidence-based conservation interventions to soften inter-protected area matrix to prevent further population fragmentation. To use our decades of research and conservation experience to support and capacitate range states (where Southern Ground-hornbill populations require conservation interventions) to develop implementable national conservation action Support other range states plans and build a collaborative community of practise. Enhanced knowledge sharing, and stakeholders' engagement supports existing cultural protection, encourages active custodianship across all land-use types and develops conservation capacity within South Africa Increase value Southern Ground-hornbills are valued by South Africans as they have cultural significance and links to human family values and longevity. They are intelligent and are of tourism and natural interest. They are a top-order avian predator, and flagship The project has mentored students to become effective and empowered conservation, for hornbills, or retained within the conservation field Project launch pad for young African conservation biologists

The project maintains and develops world-class conservation and management

standards



Internationally recognised leader

OUR STRATEGY

All our activities are achieved in collaboration with local communities, collaborators and stakeholders with the intention of being a world-class conservation programme. Below are our three long-term goals:



To **secure** current ecologically stable Southern Ground-hornbill populations in South Africa, with no concomitant increase in persecution for windowbreaking. This will require reducing all current threats – poison, persecution, electrocution, trade and increasing community engagement.



To **rebuild**, through a trans-disciplinary reintroduction programme based on best-practice and sound peer-reviewed research, Southern Ground-hornbill populations in areas where they have become locally extinct. Focus will be on numerical targets that take into account the species complex social requirements in addition to being physiologically and genetically well chosen.



To use the Southern Ground-hornbill as a flagship species for all Savanna species. Any successful threat mitigations will be gains for species such as vultures and Secretary Birds. In addition, a locally relevant, sustainable environmental education and skills training program will enhance local landowner participation in conservation and continue to nurture conservation as a career option in these communities, ensuring Mabula Ground Hornbill Project is able to help grow conservation capacity in Africa.

Southern Ground-hornbills are no longer Endangered in Southern Africa, and people sharing their landscape see multiple benefits in safeguarding their natural cultural heritage.

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MONITOR	MITIGATE	RESTORE	RESEARCH	COMMUNITY	IMPROVE
CITIZEN SCIENTISTS	CUSTODIANSHIP	REINTRODUCTION	COLLABORATION	ENGAGEMENT	TRAINING
NESTS PRODUCTIVITY	LEGISLATION	CAPACITY	PUBLICATION	COMMUNITY-LED	BENCH MARKING
THREATS	AWARENESS	ARTIFICIAL NESTS	CONSERVATION FOCUS	SUPPORT	BEST PRACTISE

MANAGEMENT AND INFRASTRUCTURE **PLANNING INFRASTRUCTURE OUR PEOPLE SOUND GOVERNANCE**



To secure the current ground-hornbill population in South Africa by reducing all known threats.



To rebuild, through a trans-disciplinary reintroduction programme, groundhornbill populations in areas where they have become locally extinct.

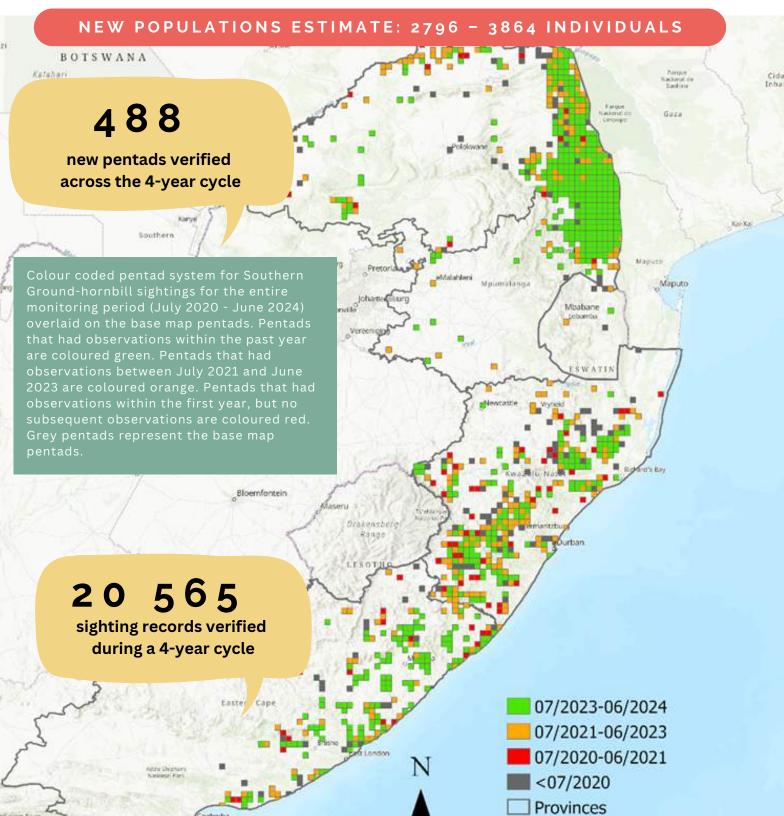


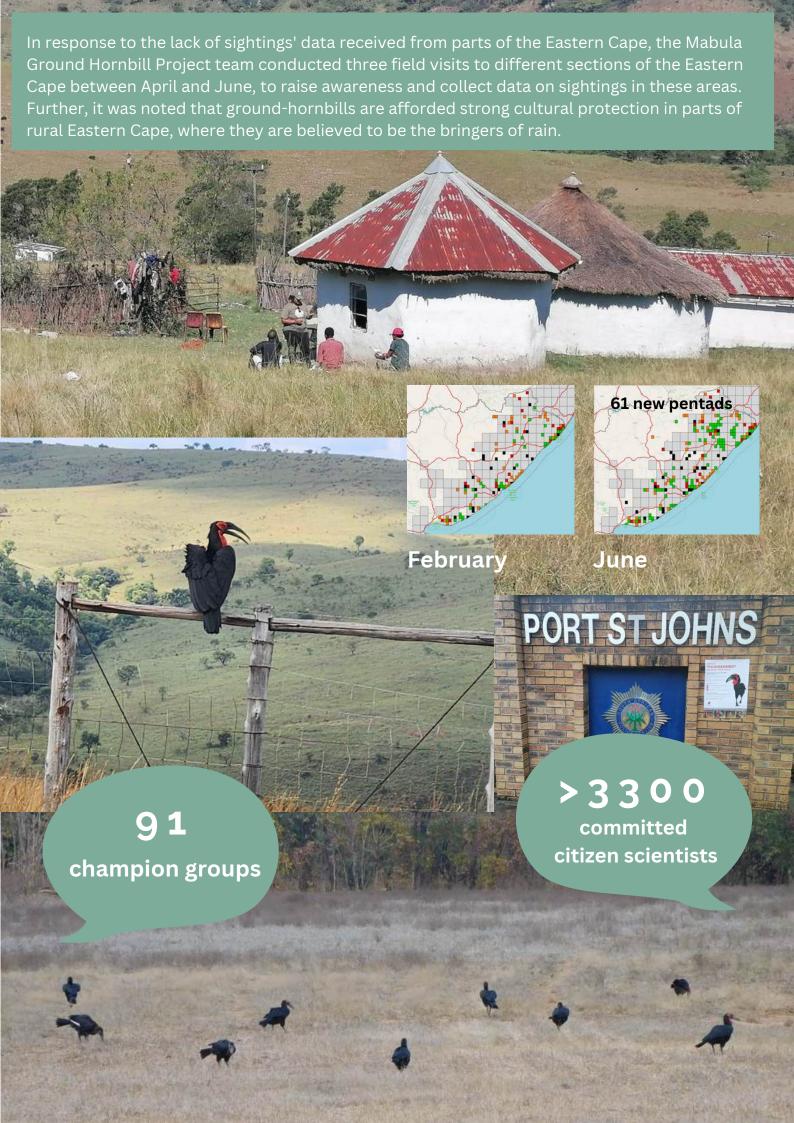
To use the ground-hornbill as flagship species for all savanna species so that successful threat mitigations will thus be beneficial for species such as vultures and Secretary Birds.



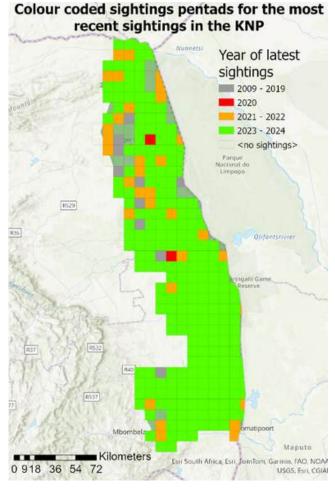
To use this project as a springboard for young African conservation biologists and educators to grow their skillsets, and to create a strong community-led conservation programme











In June, we submitted Kruger National Park's research report on Southern Ground-hornbills. The report shows positive results for the population of Southern Ground-hornbills.

- Our data show that 89% of the park has resident groups and that other than the pentad that contains Skukuza, it is likely that the park is at full capacity as the 'blank' pentads are all in wilderness areas (where no monitoring can be done).
- Citizen science yielded 25 new nests and over 15 000 localities.
- Recruitment of fledglings into groups is naturally low, at an estimated 17%, in line with 14% reported for Kemp and Kemp (1980).
- Dispersal opportunities limited as the park is at capacity. Community custodianship outside of the KNP is therefore vital for future of groundhornbills in the lowveld.



We work to reduce direct human impacts (abusive use of pesticides, lead poisoning, snaring, electrocution, trade) and reduce conflict (window-breaking) by developing and implementing sustainable and effective solutions in collaboration with local communities, NGOs, provincial and national conservation bodies.



WINDOW-BREAKING

Window-breaking continues to be a major issue, with at times fatal side effects of this human-wildlife conflict.

We are working in collaboration with the National Audobon Society to develop new aversion materials to test in the field. These include new types of perforated vinyl to reduce reflection.

We have also produced new awareness materials.

LEAD POISONING

This was a challenging year for lead poisoning, with seven birds treated, but we sadly lost two. This continues to be the biggest threat to the reintroduction programme as the overwhelming cause of failure to birds post-release.

We are working with the National Lead Task Team on education materials, documentaries and outreach, supported by both SA Hunters and Game Conservation and BirdLife South Africa.







Reintroduction of sufficient numbers of viable founder groups to build sustainable new subpopulations while ensuring existing populations maintain sufficient genetic diversity.



Six chicks were harvested from the Lowveld, of which three were flown from Hoedspruit to Groblersdal, in collaboration with the Bateleurs. One chick needed to sadly be euthanased because of a skull deformity. The sexing results of the harvested chicks indicated that four of the five birds were female.





The process, from the first weigh-in and receiving fluids before transport, through to the care by Elaine Reeve, supported by students Vuyisile Mathonsa, Silindokuhle Nkosi and volunteer Katherine Kemp, for the next three months until they fledge into their foster groups. They are then integrated into new introduction groups, so they can learn their bush skill set from older, experienced mentor ground-hornbills.

Advice and new ideas



We were thrilled to have both Hillary Hankey and Katie Pnewski from Avian Behaviour International to advise on improved husbandry and how to impact behaviours seen in both our foster groups and our reintroduced stock. Following closely on their heels we were thrilled to also have Ann Knutson (above right), the Association of Zoos and Aquariums ground-hornbill manager and extremely experienced hand-rearer, to add to that incredible resource of new ideas for us to work on and integrate into our protocols - we are better for it!

The African Conservation Programme (ACP) & Studbook

The annual Southern Ground Hornbill African Conservation Programme meeting was hosted at the Johannesburg Zoo. The meeting is facilitated by us and PAAZA, and focuses on the *ex-situ* aspect of this species' conservation in South Africa.

Among the speakers were the Project's veterinary advisor, Prof. Katja Koeppel who presented on the aggression of ground-hornbills in captivity in South Africa and Hillary Hankey from Avian Behaviour, who presented on basic avian behaviours and training and how ground-hornbills can be handled, trained and better managed in captivity.





Lead, collaborate in, support and encourage research into aspects of the ecology of the species relevant to their conservation management and ensure this information is easily available.

INDIANAPOLIS ZOO

TRAINING

We were thrilled to be able to train our Ghanian colleagues in all things ground-hornbills: observations, monitoring, nest check protocols, capture, biosampling, behaviours and so, so much more. It was great to have them join our team for a month, and we loved the Jollof rice. This was generously supported by the Indianapolis Zoo.













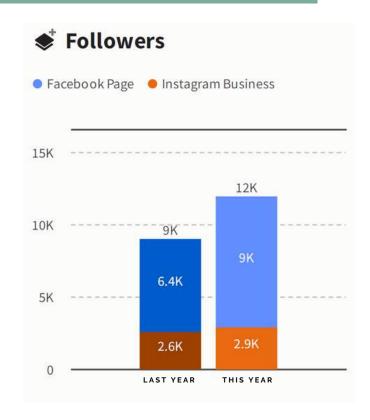
intended release zones and where the remaining wild populations occur outside protected areas





1749 hornbill safaris

3360 members of the public participating





Club's Environmental Education curriculum

and BirdLife South Africa



Bailey Meyer, one of our winners in the groundhornbill drawing competition

Our Mabula soccer team in their ground-hornbill kit does us proud in the region



Dr Lucy Kemp introducing the project to both Dallas and Fort Worth Zoos, two of eight presentations given this year

Beautiful ground-hornbill linocuts by Stefanie de Beer, celebrating Heritage Day at the Pretoria Old Boys Club fundraiser event







Improve and retain the capacity, efficiency and stability of the MGHP to ensure that it continues to make a long-term contribution to conservation in South Africa and beyond. Build local capacity nationally and regionally though provision of training, mentorship and, where possible, funding.

Capacity building

We have had the privilege of supporting Vuyisile Mathonsa, Sibusiso Mahlalela and Silindokuhle Nkosi with on-the-job experience for a year, growing their understanding of field conservation and hopefully providing them with the mentorship that will allow them to thrive in their careers. We hired Sibusiso because of his passion for environmental education and his ability to make people love ground-hornbills.



MEET OUR PHD STUDENTS



Selasi Dzitze

Selasi is doing his PhD in Ghana (Mole National Park) at the Kwame Nkrumah University of Science and Technology (KNUST), under the supervision of Prof William Oduro. He is investigating the biology of the Abysssinian Groundhornbill.



Natalie Molea

Natalie is doing her PhD, through the Montana Conservation Genomics Laboratory (MCGL) at the University of Montana (UM), in partnership with the South African National Biodiversity Institute. Her lead supervisor is Prof Gordon Luikhart. She is working to resolve African hornbill taxonomy and looking for genetic markers that can be used to tackle the trade in hornbills, both for aviculture and as body parts.

MEET OUR MASTERS STUDENTS



Patience Shito

Patience is growing our understanding of where rangeexpansion is possible with the Lowveld, from both an ecological and cultural perspective. She is registered with the University of the Witwatersrand and her supervisors are Prof Neville Pillay and Dr Louise Swemmer.



Shine Deladem:

Shine is doing his MSc in Ghana (Mole National Park) at KNUST, and under the co-supervision of Prof William Oduro. He is investigating the genetics and distribution of the Northern or Abyssinian Ground-hornbill across its range. He is also an esteemed poet.

MEET OUR RECENT MSC GRADUATES



Linda Balindile Mathola University of Eswatini, Eswatini

MSc Thesis title: Feasibility assessment for strengthening the population of Southern Ground-hornbills (*Bucorvus leadbeateri*) in Eswatini



Roos de Vries
Utrecht University, the Netherlands

MSc Thesis title: Egg Sex Ratio in the Southern Ground-hornbill (*Bucorvus leadbeateri*)

MEET OUR RECENT NAT CON GRADUATES



Vuyisile Mathonsi
University of Mpumalanga

Diploma in Nature Conservation



Sibusiso Mahlalela
University of Mpumalanga

Diploma in Nature Conservation

Northern or Abyssinian Ground-hornbills Bucorvus abyssincus

INDIANAPOLIS ZOO















The citizen scientist brochure was help elicit support for the project and grow a base of Ghanaian citizen-



Selasi working with the Bawauna community leaders about groundhornbills and what is possible for their conservation outside of protected areas such as Mole National Park.



ALF REWIN SCHOLARSHIP

Although the world sadly lost Alf Rewin, we are doing everything, together with his folks, Dee and Barrie, to create a legacy scholarship fund. This fund will enable us to support young African researchers in their academic dreams, and add to the knowledge base for this incredible bird that Alf loved so much.

THE ALF REWIN CONSERVATION FUND has been entered onto the United Kingdom Register of Charities with the **Registered Charity Number 1200084**. We are also registered with **Gift Aid**. Donating through Gift Aid means we can claim an extra 25p for every £1 you donate through ARC in the UK. It will not cost you anything extra.

WE REACHED OUR TARGET OF R1 MILLION

The interest generated from this fund will be able to sustain a student every year, into perpetuity. This is a fitting legacy for Alf who found peace in the African bush and was determined to continue his studies to ensure he could continue to make a difference. He was a staunch vegan and lived true to his principles, whilst still being the most fun. If you would like to help us grow this fund, to grow conservation capacity in South Africa, please contact us.

MEET THATO PLUTO MASHIGO THE FIRST RECIPIENT OF THE ALF REWIN SCHOLARSHIP FUND



She is from a small village called Shangaanhill in the Lowveld part of Mpumalanga, South Africa and we are thrilled to have her join the team as she pursues her PhD.

"Whilst I always knew I wanted to conserve animals, I did not yet have the words to describe this passion, nor did I understand how to turn it into a career. I was fortunate however to pursue tertiary education in the field of Biological Sciences through my pursuit and completion of a Bachelor's degree in Molecular and Life Sciences, an Honours degree in Zoology, and a Master's degree in Wildlife Management Engineering."

PROJECT TEAM



PROJECT MANAGER DR LUCY KEMP



SENIOR COORDINATOR DR KYLE-MARK MIDDLETON



OPERATIONS SANDISWA KULA



NTHABISENG MONAMA



ELAINE REEVE



ENVIRONMENTAL EDUCATION EX SITU COORDINATOR CONSERVATION COORDINATOR DANIELLA SKINNER



REINTRODUCTION MONITOR WINDERS CHAUKE



TECHNICIAN LERATO MAHLAELA



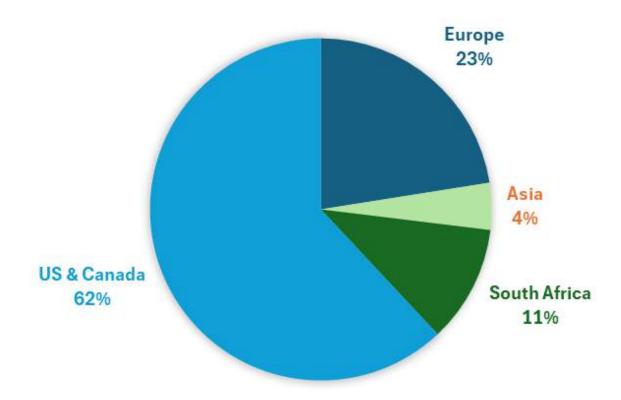
EDUCATION OFFICER SIBUSISO MAHLALELA

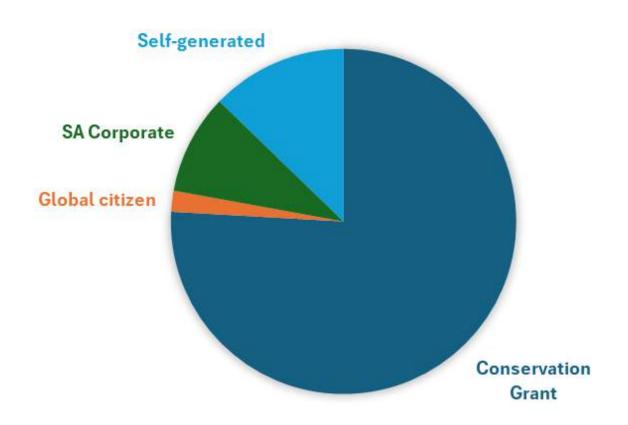


WORK INTEGRATED LEARNING INTERN **MXOLISI MCHUNU**

FINANCIAL REPORT

Please contact us if you would like to contribute funds for our operational reserve or donate to the ongoing conservation and community activities. **Dr Lucy Kemp | project@ground-hornbill.org.za**





ACKNOWLEDGEMENTS

The Mabula Ground Hornbill Project is incredibly grateful to several individuals, organisations and companies who supported us to the value of R1000 and above, either as financial support or as in-kind support during the financial year July 2023 – June 2024.



INDIANAPOLIS ZOO











MABULA A





















































INDIVIDUALS



Our supporters of the MySchools MyPlanet Programme; patrons of our weekly Modjadji Tea and Hornbill experience drives and supporters of our craft and skills development initiative.

We would also like to thank the following individuals: Thea Erasmus, A. Honkoop, Matt Williams, Matthew Price, Ida Hansen, Susan Stubbs, Sabra Zautke, Patrick & Janie Wagner, Ann Knutson and Jenny Francis.

IN-KIND









































HOW CAN YOU HELP

If you are a proud South African, then a financial donation to the Mabula Ground-Hornbill Project is tax deductible (reducing the amount of tax you pay) and is the most cost-effective way to support us. But there are many other ways you can get involved and support our work. We welcome any offers of support of building materials, office furniture or anything on our wish list.



ONCE-OFF DONATION

Your donation can be attributed to a specific objective of our work (monitor, mitigate, restore, educate, research or improve), or can be a general donation which allows us to allocate it to where it is needed most, for less sexy items such as vehicle maintenance, salaries, tyres and so forth. You can donate online or by direct deposit.

REGULAR DONATION

A regular and ongoing donation, such as a monthly gift, is easy for you because you can 'set and forget', and instead of donating a large sum each year, you can donate in smaller increments throughout the year. Regular donations allow us to plan ahead, knowing that we have a steady and predictable source of income.

FUNDRAISE

The Mabula Ground Hornbill Project enthusiastically supports individuals, groups or companies who wish to fundraise on our behalf. Simply pick a fundraising idea and we'll provide you with the assistance you need to make it a success.

CHARITABLE GIFTS IN WILLS

Many people do not have the means to leave a significant gift to conservation during their lifetimes. Leaving a gift for ground-hornbill conservation in your will is a powerful way of supporting our work and will ensure you leave an ongoing legacy for future generations.



scan to donate



CONNECT WITH US

DR LUCY KEMP

PROJECT MANAGER/ CO-CHAIR (AFRICA): IUCN SSC HORNBILL SPECIALIST GROUP

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