

# Southern Ground-Hornbill Research and Conservation Program Quarterly Report

October 2018



## Upcoming Breeding Season

It has been a slow start for the birds. So far, only three groups have begun to line the nest for breeding:

- Pitlochry
- Copenhagen (new nest)
- Charloscar (new nest)

Charloscar group have never successfully bred within the APNR. Their only attempt was in 2010 which failed for unknown reasons.

All the nests are still in usable condition apart from one, Hull nest (Copenhagen group), which has now got a hole in the floor. It was one of the oldest nests, being installed in 2002 and saw 6 chicks fledge from it. We have decided not to repair this nest as it is close to a newly created runway. The group have fully lined the new nest which was installed for them.



Figure 1. Charloscar female in new nest (left) and broken Hull nest with python (right)

## Baobab Rearing Facility

The rearing facility based at Loskop Nature Reserve is almost complete and will be officially opened within the next few weeks. This facility has five aviaries, in which pairs of captive birds will be placed. The harvested chicks will then be placed into these aviaries and raised by the paired birds. Each aviary has an observation station which will allow for the birds to be monitored with minimal human interaction.

When possible, harvested chicks will be placed straight into the nests within the aviaries, where the pairs will then raise the chick as their own from day one. The rest of the birds will be hand-reared until fledging age (80-90 days) and will then be released into the aviaries.



Figure 2. Construction of the new baobab rearing facility

## Harvest Plans

Plans have been made to harvest a maximum of five birds this season.

With the skewed sex ratio of wild groups, we still harvest with the hope of the birds being predominantly male, however, methods for sexing birds whilst still in the egg have been developed and it is on the horizon for the ground hornbills. The method involves drilling through the outer shell of the egg in order to take a DNA sample from the embryonic sac. The hole is then sealed back up.

Determining the hatch date is also a tricky task which is crucial towards the survival of the harvested chicks. To lower this error rate, egg candling is going to be used to provide a more accurate estimate of the eggs age whilst doing nest checks. This method was trialled last year and will be used this year. The example below shows two stages of the chick development within the egg.

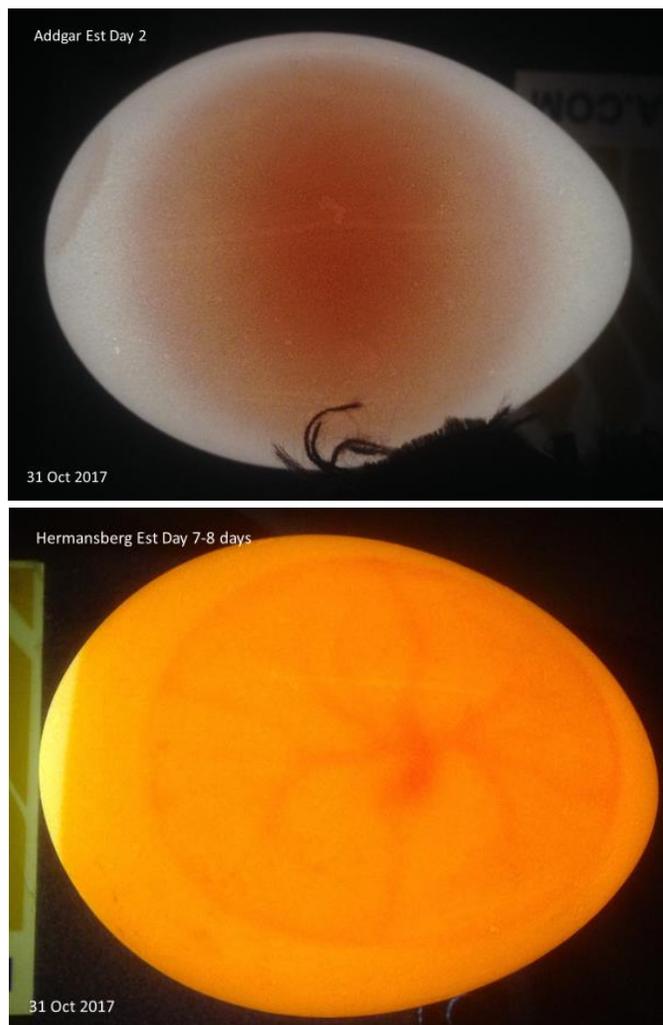


Figure 3. Egg candling of last years egg. Addgar  $\pm 2$  days old (above) and Hermansberg  $\pm 7$  days old (below)

## Research

The research planned for this season include the cameras up at the nests, along with playback experiments. The analysis of the recordings from last breeding season has also begun. These results will show if the different groups around the reserves have their own 'signature' calls.

The camera traps will be there to monitor the feeding contributions of individual birds to the incubating female and resulting chick. We currently have five camera traps which will be used; however, the more cameras we have, the better the footage we will get. If anyone has a camera which they are willing to let the project use for the season, it would be much appreciated and well looked after.

The playback experiments being done are to analyse to what extent the birds are able to recognise a neighbour group from a stranger group, as well as how they actually respond to these playbacks. The playbacks will be done during the period when the group is lining the nest, as well as when there is a chick in the nest. They will not be done during the incubation stage of the season.

**NB!** It is important that anyone reading this does not attempt to conduct a playback experiment themselves. Without knowledge of the stage of breeding, it could potentially cause the birds to abandon the nest. These experiments have been carefully designed to minimise the risk of this happening. Others performing playbacks would also have an impact on our results.



Figure 4. Java pair performing their chorus call from tree and while walking

## Acknowledgements

We thank the landowners and wardens of the APNR for their continued support and permission to work with the Ground-Hornbill groups on their properties. Special thanks to Timbavati PNR, Ntsiri, Tanda Tula and Peter Smelting for helping with fuel. Many APNR members and staff have been of great help, both logistically and by reporting ground-hornbill sightings. Finally, we thank the Rinsma family for their generous donation of a new ladder for the project. We thank one and all.

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