



Southern Ground-Hornbill Research and Conservation Program Quarterly Report



Between Breeding Seasons

After a relatively unsuccessful breeding season of the ground hornbills last year, we are hopeful that the upcoming year will be a good one. However, there is still work to be done prior to the breeding season. We have begun to analyse some of our results so far during my European trip and the preliminary results have been intriguing.

Injured Bird

Earlier in the year, we received reports of an injured bird on the Argyle road between Klaserie PNR and Timbavati PNR. There was concern that the injury was from an old outdated colour ring which had moved down over the foot, restricting its use from the inability to open it. We began investigating and after some help from reserve residents and staff, we managed to locate the bird and get a better look at its injury. From what we saw, this female bird was clearly harbouring an injury, however, there was no ring present which was restricting the movement of the foot. There is currently still a metal ring on the leg, however, it is still appropriately attached and is not restricting any movement. We are unsure about whether the injury was caused by a ring which has since fallen off, or if it was simply from natural means and only appeared to be the ring that is still currently attached. Regardless of what caused the injury, the bird is still foraging, flying and, crucially, perching.

It has been several months since the first reported sighting of the bird and from the reports we are receiving, it is generally remaining in the same area around the tar road, still with a limp. After analysing the location of the bird, it appears to be between two group territories, and it is suspected that passing vehicles have also been feeding it since it has become habituated to vehicles in a very short period of time. We will continue to monitor the bird, though it is likely that the injury will remain for quite some time as we have seen from birds with similar injuries. A recent observation from a veterinarian confirmed that the bird is in okay condition and that it will likely retain the limp.

Nests

We have ordered five new nests of the latest design which will be installed in new locations or replace old nests. Locations include:

- Balule (Olifants West) will be receiving a nest for the birds which have been in the area for several months now. The presence of birds in this area has been scarce in recent years and the hope is that this will keep them there and maybe allow them to breed.
- Ntoma will receive a new nest to replace the old nest which was removed in April. It was suspected that they might have a nest in Kruger, however, no one is sure and with a nest on Klaserie, we could potentially monitor this groups breeding.
- Lornay nest will be installed. The group currently has a nest which was installed in 2016, however, there has been no evidence of interest from the birds and has also fallen over. We will be installing the new nest closer to the location of their old natural nest which was frequently used.
- Vlak nest will be replaced. The current nest saw its first chick fledge from it, although it is questionable as to whether the nest will survive another season.

We are also planning to relocate the Java nest since we have been asked to move it further away from the nearby camps. The plan is to reuse the nest; however, we are not sure that it will remain intact once removed from the tree.



Figure 1. New nest design (top) that the Mabula group have favoured

Research

The results from the research is slowly starting to take shape following the trip to France and Portugal. We have been investigating whether individual birds contain signature calls which will allow for recognition. The current analyses are still underway, but we are seeing promising results with regards to both individuals and groups having 'signature' calls unique to them.

Camera trap footage acquired so far has allowed us to investigate the vocal repertoire of the birds around the nest and so far, we have identified 6 different calls which are used for different purposes. We are still trying to pinpoint the exact purpose of these vocalisations in relation to their behaviour.

We have also been investigating the feeding rates of birds through different temperatures and have obtained some preliminary results. So far, it appears that the feeding rates of groups decrease as temperatures increase. With a changing climate, this may potentially impact their ability to breed successfully as individuals will forego nestling feeding in order to thermoregulate and preserve their own body condition. Further data collection and analysis is ongoing.

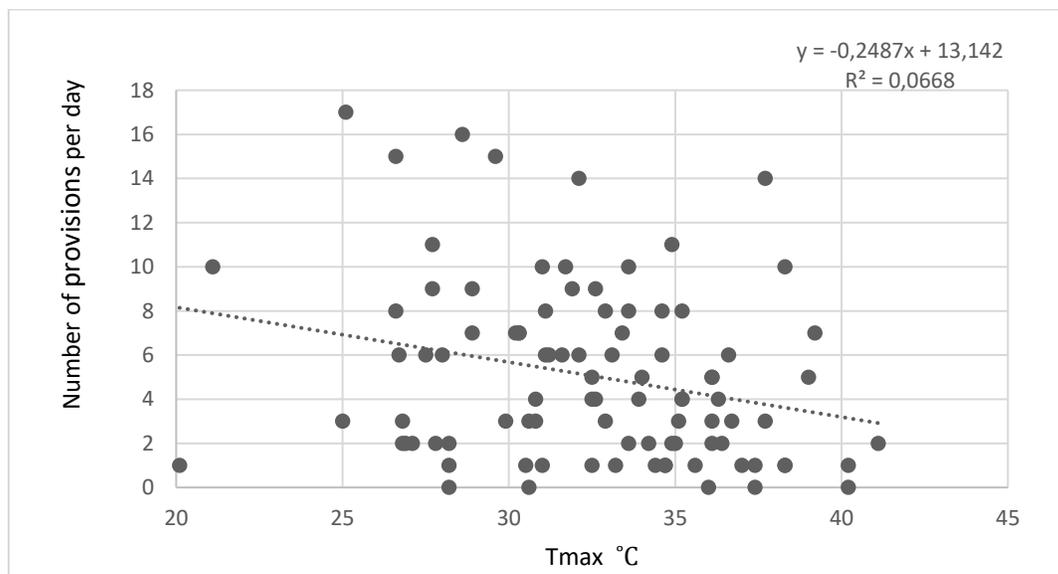


Figure 2. Graph showing decreasing feeding rates with an increase in temperature

In addition to this, we have obtained data on the food being provisioned at the nests. Invertebrates constitutes most of the food brought, with other items including reptiles, birds, mammals and amphibians.

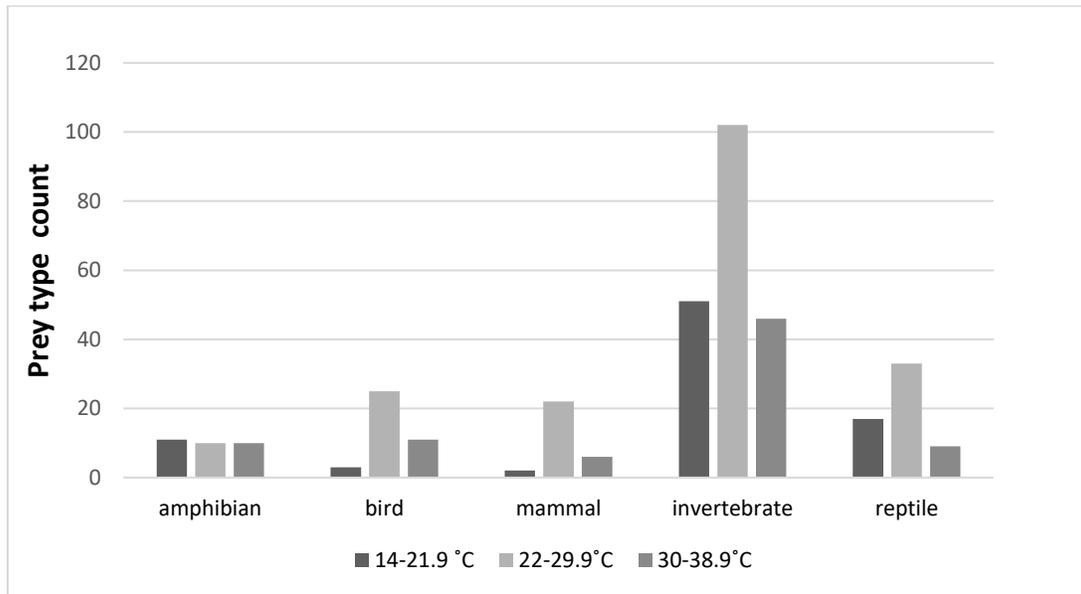


Figure 3. Graph showing the food provisioned towards the incubating female and nestling during the breeding season.

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