



Southern Ground-Hornbill Research and Conservation Project – June Report 2020

Breeding successes

This year has certainly brought some unusual and stressful times with the pandemic of COVID-19. Fortunately, there is some good news with the successful breeding season of the ground-hornbills of the APNR. Following the previous breeding season which only saw 5 attempts at breeding, this year saw 12 attempts, of which 8 of those were successful (67% success).

Nestlings from the successful attempts were ringed, weighed and measured at around 75 days old. This biometric data is vital in the ongoing research of the birds and as far as we know, these nestlings are all still alive and well thanks to the sightings being reported over the past few months. The successful groups:

Timbavati PNR: Karan Khaya, Rhino Road, Lornay and Johnniesdale

Klaserie PNR: Janovsky, Senalala,

Umbabat PNR: Ntsiri

Thornybush GR: Thornybush



Figure 1. Biometric data recorded from nestlings.



Figure 2. Johnniesdale nestling after ringing, in roomy new nest (above left), Karan Khaya nestling (below left), Kyle with Thornybush nestling during ringing (right).

Unsuccessful groups

Timbavati PNR: Hermansburg

Klaserie PNR: Copenhagen and Pitlochry

Balule NR: Jejane

Hermansburg failed at the incubation stage with the reason for failure being unknown, although after analysing camera trap footage, it appears that the incubating female was off the eggs for a large proportion of time. Both Copenhagen and Pitlochry group's nestlings fell victim to Leopard predation. Amazingly we caught this on our camera traps with both events occurring at around midday. Although unfortunate for the birds, it is a first for the project, and providing photographic proof on what we have always speculated in previous years. You may have seen the videos of this on our social media pages. Jejane also lost their nestling to which we presume was also predation after a sighting of a troop of baboons taking interest in the nest, however a camera trap was not up at the time. The predated chicks were all around 9 – 20 days old when they were predated. During this stage, they are still quite small and very vulnerable, and the female tends to join the group more often, leaving the nestling alone for longer periods.



Figure 3. Caught on camera! Camp George nest (Pitlochry group) on left, Copenhagen on right.

New nests

With the new season already approaching fast, we are hoping to replace some of the damaged and broken nests with the new design which are currently in production with The Mabula Ground Hornbill Project. Hopefully, these will go up in September in time for the coming season. Rhino Road (TPNR), Lillydale, (TPNR) Giraffe (TPNR), Strydom (KPNR) and Caroline (TPNR) groups all require new nests. Karan Khaya's (TPNR) nest is also starting to degrade quite badly but we are hoping it will last another season or two as this group have been successfully breeding every year since 2004!

The new nest design was a hit with the Johnniesdale group (TPNR) this season and we are hoping that they prove to withstand the battering's from the birds as well as the elements several years to come.



Figure 4. New nest design made from polystyrene and M1 composite

Research

The ongoing research continues, and Kyle is currently busy analysing some of the data which he has collected over the past few years. More precisely, he is analysing the effects of group size and composition on breeding success, as well as the individual signatures of ground-hornbill vocalisations.

Our playback experiments which we conducted back in February were successful. They provided us with great information on how the birds respond to the threat of intruding groups, and whether they can distinguish between different groups of birds. On hearing another groups' call, they tended to fly to a nearby tree and produce their territorial calls. Interestingly, the juveniles and sub adults rarely contributed to this group effort and remained hidden.

Carrie is collating her data for her MSc where she hopes to produce growth curves for the nestlings this past season. The mammoth task of all the camera trap analysis has been completed, thanks to lockdown providing us with no distractions.

We will be looking forward to returning to fieldwork in September!

Sightings

Over the past few months, we have been received an increasing number of sightings and have had several enquiries about the possibility of installing nests in different parts of the APNR.

Sightings from any area within the APNR is hugely useful to us, particularly in the more remote areas which we are not able to visit as frequently as we would like. It is near impossible for us to keep track of each group's composition changes and movements throughout the year and these sightings help fill gaps in our knowledge. Sightings outside of the APNR are also useful to us in trying to determine the areas which are currently being utilised by the birds.

If possible, reporting the sightings of juveniles within groups can help us determine a lot about a group and often plays a role in determining whether a nest can be installed or not. Juveniles in areas where there are no artificial nests are usually an indication that breeding is occurring in a natural nest, in which case we would not install any artificial nest. Natural nests are rare within the APNR (with only 3 viable ones left that we know of). These sightings also help us in determining the survival rate of young birds.

We encourage anyone with sightings of the birds to reach out to us and let us know any information on what you saw, particularly the location, number of birds, whether they have rings on the legs and the composition of females and males, as well as adults and immatures. Photos and videos are also welcomed.

We can be contacted via phone/WhatsApp on 071 235 8956 or email at nghututu@gmail.com.



Figure 5. Aging ground-hornbills. Top left: Juvenile with pale throat, brown feathers, and blue eyes. Top right: Immature sub-adult with blotchy throat, black feathers, and white on bill. Bottom left: Adult male with solid red throat, black feathers, and no white on bill. Bottom right: Adult female with blue and red throat, black feathers, and no white on bill.

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