



# Southern Ground-Hornbill Research and Conservation Program Quarterly Report

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## Artificial and natural nests in the APNR

In the winters of 2002 and 2003, the Fitz, together with APNR wardens, staff and landowners, installed 25 artificial nest boxes throughout the study site to increase the number of available suitable nesting sites to Southern Ground-Hornbills. A further six boxes were installed in subsequent years bringing the total number of boxes in the APNR to 31, in addition to the 12 known natural nesting sites. Below I present a very brief summary of our data on nest characteristics as well as nesting in natural and artificial nests.

### **Nest characteristics**

Two-thirds of the natural nesting sites occur in the Timbavati. Over half of the natural nests were found in Leadwood *Combretum imberbe* and Appleleaf *Philenoptera violacea*. Artificial nests were found to (1) have narrower entrances, (2) be higher off the ground, (c) have larger nest floors and (d) be shallower than natural nests. When comparing characteristics of used and unused nest boxes, used artificial nests were higher than those that remain unused by Ground-Hornbills.

### **Nest use**

Approximately one third of all nests (natural and artificial combined) were active each season. The number of chicks fledging from artificial nests quickly surpassed natural nests after they were installed, but this is not surprising given the higher number of artificial nests available. Groups in the APNR have a successful nesting attempt once every three years, but groups using natural nests take much longer between successful nesting attempts than those using artificial nests.

### **Nest predation**

Artificial and natural nests suffered similarly low predation levels. Low nests were no more susceptible to predation than high nests, as predation occurred in both the lowest and highest nests. The most common nest predators in both natural and artificial nests were the Small-spotted Genet *Genetta genetta* and Slender Mongoose *Galerella sanguine*, followed by the Rock Monitor *Varanus albigularis* and Chacma baboon *Papio ursinus*.

## Fine-scale movements and habitat use of Ground-Hornbills in the APNR

We at the Fitz would like to congratulate Blair Zoghby on completing his MSc research on fine-scale movements and habitat use of Ground-Hornbills in the APNR. His research complemented previous work done by William Wyness on seasonal habitat use of Ground-Hornbills in the APNR. Blair's study showed how, despite Ground-Hornbills using a much smaller area over the breeding season, groups travelled considerably further than during the drier winter months as groups were provisioning for the incubating female and chick. In winter, groups used the maximum extent of their home ranges, although travelling short distances each day. His study was the first to investigate patterns of roost site use, including how many were used per season and where these were located. His results show how, during the breeding season, groups tended to roost within 1 km of the nest and often utilised the same roost more than once. During this time they favoured roosts in riparian habitat, which corresponded also to foraging preferences. During the winter months, as groups were utilising a larger portion of their home range, groups seldom used the same roost and favoured roosting in combretum- and mopane-dominated habitats. Anyone interested in receiving a digital copy of his thesis is welcome to email the Project ([nghututu@gmail.com](mailto:nghututu@gmail.com)).

His paper "Seasonal changes in movement and habitat use by Southern Ground-Hornbills in the South African Lowveld" published in the South African Journal of Ornithology is available online.

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