

Ornithological Observations



An electronic journal published by the Animal Demography Unit at the University of Cape Town and BirdLife South Africa



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Editor: Arnold van der Westhuizen

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Recommended citation format:

Mullers RHE, Reid C 2014. Excitement and predation at Shoebill nests. *Ornithological Observations*, Vol 5: 349-351

URL: <http://oo.adu.org.za/content.php?id=147>

Published online: 09 August 2014

- ISSN 2219-0341 -



EXCITEMENT AND PREDATION AT SHOEBILL NESTS

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The Shoebill *Balaeniceps rex* is on many birders must-see list due to its pre-historic looks. Shoebills are endemic to central-eastern Africa and the world population is estimated to be between 5 000 and 8 000 individuals. The species is listed as *vulnerable* by IUCN (BirdLife International 2014).

Little is known about the species (Dodman 2013), mainly because they inhabit inaccessible swamps. Shoebill foraging behaviour has been described in relation to their morphology and habitat (Guillet 1979; Möller 1982) and all we know about their breeding behaviour is based on observations from one nest, which was filmed for the documentary *Almost a Dodo* (Anglia Television) in 1975 (Buxton *et al.*, 1978). To obtain a better understanding about their breeding behaviour, we deployed camera traps on six different nests during two breeding seasons (2012 and 2013) in the Bangweulu Wetlands in Zambia. Some interesting observations were made from the photographs taken.

Camera traps were placed at about 5 m from nests at about 1 m height. The cameras were programmed to take a photograph each time the sensor detected movement and the batteries lasted for about a week. Only a few other species than Shoebills were observed near the nests. On two occasions we saw a Sitatunga



Fig 1 – The parent Shoebill protects its chick from an attack of an African Fish Eagle. The Fish Eagle dive bombed the Shoebills without making physical contact.

Tragelaphus spekii passing by at night and once we witnessed an African Fish Eagle *Haliaeetus vocifer* dive bombing a Shoebill nest after the chick was fed by one of the parents (Fig 1). Most likely this was an opportunistic attempt to steal the prey (catfish) from the Shoebills, a behaviour that we also observed while making foraging observations on adult Shoebills in the field. We saw this behaviour three times in total, but the Fish Eagles never managed to steal prey from any of the Shoebills.



Fig 2 – Five minutes after the parent left the nest, the chick looked alarmed to the side of the nest. After the parent left, and up until this moment, the chick was lying down in the nest.



09-16-2012 13:51:21

Fig 3 – The chick is being pulled to the side of the nest. The predator must have approached through the tall and dense vegetation behind the nest, hidden from the camera trap.



Shoebills nest deep inside swampy areas and nest sites are sheltered by tall vegetation. Such sites provide protection from disturbance and potential predators. Nevertheless, on 16 September 2012, one of the chicks we monitored with a camera trap was taken by a predator. At 13:45:57 the parent was last seen on the nest. It appeared like something disturbed the bird and the adult left the nest. The chick was calmly lying in the nest, but after five minutes (13:50:50) the chick looked alarmed to the side of the nest (Fig 2). On the next photograph, 30 seconds later, something seemed to have grabbed the chick from behind, pulling it from the nest (Fig 3). The last photograph of the chick was taken at 13:51:34 when it was dragged off the nest, never to be seen again (Fig 4).

The predator must have been a threat to the adult as well, because it left the nest minutes before this predator took the chick. Long-lived species like shoebills normally would not jeopardize their survival for that of their young (Drent and Daan 1980). We have no clear photograph of the predator, because it remained hidden in the vegetation surrounding the nest (Fig 2-4). Most likely the predator was either an African Rock Python *Python sabaensis natalensis* or a Water Monitor *Varanus niloticus*. When the chick was predated, it was 33 days old, weighing about 3–3.5 kg, and up until that moment constantly attended by at least one parent.

Out of 11 nests that were monitored for breeding success, nine fledged successfully. One chick was predated and one nest was lost in a fire. Predation pressure thus is low for this species. In the year preceding our research, the main reason why chicks did not fledge successfully, was the illegal live bird trade. Because of their looks, shoebill chicks are popular with private collectors and stolen from nests (Ryan 2012).

In the Bangweulu Wetlands, a Shoebill Nest Protection Program has been implemented in which the local communities monitor and protect Shoebill nests. This ongoing conservation management initiative aims to increase breeding success and recruitment rates of shoebills to maintain a viable population in the Bangweulu Wetlands whilst providing livelihood opportunities for local communities.

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Acknowledgements

Thanks to Brighton and Elijah Mofya for their help in the field and Bangweulu Wetlands Management Board for providing logistical support. The research was funded by WWF Netherlands and RM received a DST/NRF Centre of Excellence post-doctoral fellowship at the Percy FitzPatrick Institute of African Ornithology.



Fig 4 – The last picture of the Shoebill chick. The chick is pulled from the nest into the tall vegetation. On the right side of the chick a black shape is visible, but it was not possible to determine which species took the chick.



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