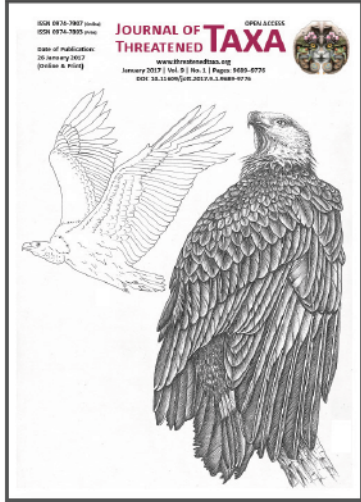


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### NOTE

**RECORD NUMBER OF YELLOW-BILLED OXPECKERS *BUPHAGUS AFRICANUS* LINNAEUS, 1766 (AVES: PASSERIFORMES: BUPHAGIDAE) FORAGING ON A SINGLE HOST**

Diogo Veríssimo, Jean-Christophe Cugnière, Suzanne Cugnière, Julien Cugnière, Géraldine Cugnière & Laure Cugnière

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The relationships between Oxpeckers *Buphagus* sp. and large body ungulates have been of interest to ecologists for more than half a century, given the birds status as the world's only obligate mammal gleaners (Dean & MacDonald 1981). One issue that has received particular attention, mostly across eastern and southern Africa, where ungulate biomass is higher, is the preference by Oxpeckers for certain host species. At least 18 wild ungulate species are known to be hosts to both Oxpecker species, ranging in size from the Impala *Aepyceros melampus* and Desert Warthog *Phacochoerus aethiopicus* to the White Rhinoceros *Ceratotherium simum* and African Elephant *Loxodonta africana* (Attwell 1966; Hustler 1987; Dale & Hustler 1991; Koenig 1997; Robertson & Jarvis 2000). Despite this wide range of potential host species, Oxpeckers have been found to prefer large-bodied and manned host species, with high levels of tolerance for their foraging activities (Koenig 1997). These few preferred host species are thus the only ones for which a few studies have reported average ratios of Oxpecker to host above parity (Grobler 1980; Stutterheim & Panagis 1985; Hustler 1987; Dale 1992; Ndlovu & Combrink 2015). Currently, the highest number of Oxpeckers registered on a single host record, was recorded in Hwange National Park, Zimbabwe, where a single Zebra was seen carrying approximately 40 Red-billed Oxpeckers *Buphagus erythrorhynchus* (Attwell 1966). This observation was, however, described to be unrelated to foraging, instead resulting

## RECORD NUMBER OF YELLOW-BILLED OXPECKERS *BUPHAGUS AFRICANUS* LINNAEUS, 1766 (AVES: PASSERIFORMES: BUPHAGIDAE) FORAGING ON A SINGLE HOST

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from the aggregation of several flocks of birds on a single host prior to departure (Attwell 1966). When it comes to foraging interactions, the highest numbers documented in the literature are from two observations of Red-billed Oxpeckers from Luangwa Valley, Zambia. One concerns, a male Common Eland *Tragelaphus oryx* carrying more than 20 Oxpeckers, while the other a Greater Kudu *Tragelaphus strepsiceros* carrying 16 (Attwell 1966).

On 24 June 2016, at approximately 16:00hr, we observed a single male Giraffe *Giraffa camelopardalis*, at Harvey's Pan (18°33'4.53"S & 24°4'54.66"E), in the Savuti area of Chobe National Park, Botswana (Fig. 1). A large group of Yellow-billed Oxpeckers *Buphagus africanus* was foraging on that Giraffe. Using two photos, one from each flank of the Giraffe, taken 20 seconds apart, we were able to count 56 Yellow-billed

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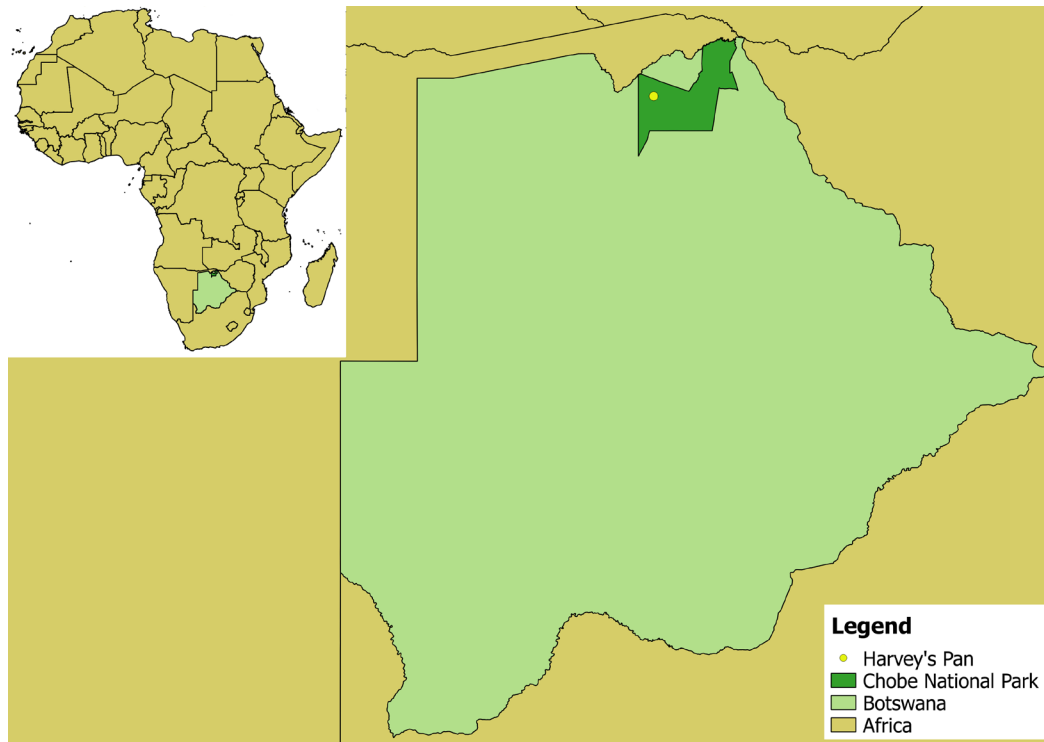


Figure 1. Location of Harvey's Pan, in the Savuti area of Chobe National Park, Botswana

Oxpeckers (Image 1). Given this estimate could be biased by the fast movement of the birds, we also considered the single photo where the most Oxpeckers appeared. This photo, taken a few minutes later, included 51 Yellow-billed Oxpeckers on the Giraffe, two in flight and seven on the ground (Image 2). Using this additional information, we can put the minimum and maximum number of Oxpeckers foraging on that individual host at 51 and 60, respectively. This lends credibility to our estimate of 56 Oxpeckers.

This photographic evidence makes it the largest number of Oxpeckers registered foraging on a single host. We observed the foraging by Oxpeckers for more than 12 minutes, which shows this concentration was not simply the aggregation of several flocks of birds on a single host prior to departure as described by Attwell (1966). While this difference makes this record an even more substantial increase in relation to the previous reports in the literature, this observation was theoretically expected. This is because Giraffes match more closely the host profile preferred by Oxpeckers (Koenig 1997) than the ungulate species previously recorded with the highest number of Oxpeckers. In this respect, Giraffes are potentially one of the most suitable host species, given their large body size, the existence of a mane and their very high tolerance to the

presence and foraging behaviour of Oxpeckers (Ndlovu & Combrink 2015). It is also worth highlighting that, in the context of the region, the number of Yellow-billed Oxpecker observed is of notice. Stutterheim & Panagis (1985) estimate that the neighbouring Caprivi region is home to 2,613 Yellow-billed Oxpeckers, which would make the Oxpeckers in that single Giraffe account for about 2% of the population in that region.

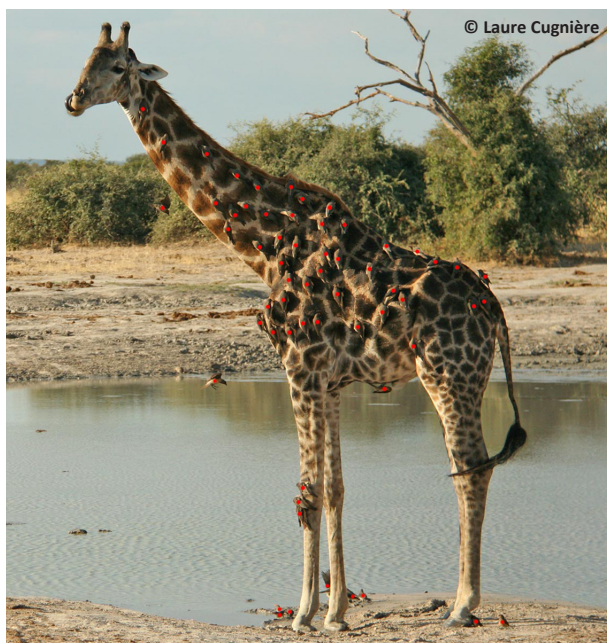
Although many studies on Oxpecker-ungulate relationships have been carried out in southern Africa, we could find no literature specific to Botswana. This gap, in the context of two of the most studied animal groups, highlights the need to improve our knowledge of the natural history of this country.

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**Image 1.** The two flanks of a male Giraffe observed in the Savuti area of Chobe National Park, Botswana. The two photos are 20 seconds apart. The right flank carries 36 Yellow-billed Oxpeckers, marked by red dots, while the left flank carries 20, making a total of 56 birds.



**Image 2.** Male Giraffe observed in the Savuti area of Chobe National Park, Botswana. A total of 51 Oxpeckers, marked by red dots, can be seen foraging on the ungulate, while two birds are flying and seven on the ground.

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