

THE PROCEEDINGS OF THE IV INTERNATIONAL SYMPOSIUM ON BREEDING BIRDS IN CAPTIVITY

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SEPTEMBER 12-16TH, 2007
TORONTO, ONTARIO, CANADA

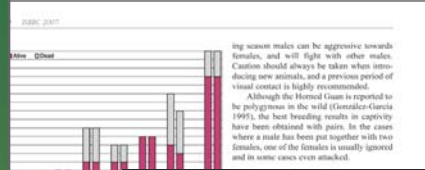
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DIETARY NUTRIENTS OFFERED AND CONSUMED BY HORNED GUANS IN AFRICAM SAFARI

	Offered	Consumed
Water %	76.0	74.0
Crude protein %	18.6*	8.5*
Crude fat %	10.3	17.2
Ash %	7.8	7.6
Crude fiber %	8.2	9.4
NDF %	62.9	37.1
K %	0.85	0.51
Na %	0.21	0.14
Ca %	0.65	0.46*
P %	0.33	0.23*
Cu:P	2.0:1	2.0:1
Mg %	0.19	0.11
Fe mg/kg	42,118	327,307
Mn mg/kg	60,09	47,014*
Cu mg/kg	3.8*	2.3*
Zn mg/kg	40.37	27.48

* Refer to the nutritional requirements of poultry (NRC, 2000). All concentrations (except water) reported on a dry matter basis. N = 3 pair.

by averting the intromittent organ of the males (Fig. 25). This technique has been proven successful at African Safari with birds as young as 9 years, and the maximum age is 19 for males and 14 for females.

Breeding age
The earliest breeding age is 6 years. It is feasible that it could be younger if we have observed active gonads at two years of age for the males and 19 for females and 14 for females.

Nesting
The nest of the Horned Guan is a depression on the epiphytic vine branches (Cissampelos) at African Safari they have used both, 60 cm and 30 cm deep) and raffia but, filled with moss, and with grasses. This last material is

ing scum males can be aggressive towards females, and will fight with other males. Caution should always be taken when introducing new animals, and a previous period of visual contact is highly recommended. Although the Horned Guan is reported to be polygamous in the wild (Gonzalez-Garcia 1996), the best breeding results in captivity have been obtained with pairs. In the cases where a male has been put together with two females, one of the females is usually ignored and in some cases even attacked.



Fig. 4. Part of African Safari's Horned Guan breeding complex.



Fig. 5. Photo captures from a CCTV recording of a breeding pair of Horned Guan in an elevated nest platform. In the first image, the female is on the left perching on the edge with the male digging in the substrate and passing his tail. The second image is of the female inspecting the inside of the nest with the male perched on the platform rim.

While these events take place, the male usually picks out pieces of nest material with his beak and offers them to the female, who usually accepts them.

Eggs
According to Gómez de Silva et al. (1999), the breeding season in the wild begins at the end of October and continues until May. At African Safari the earliest eggs are laid in December, the last in July, with a main peak in March (Fig. 8).

Horned Guan clutches consist of two eggs, laid with one day in between. The average measurements of 42 eggs are: 5.9 x 0.2 cm wide (max. 6.6 cm, min. 5.3) and a length of 8.7 x 0.2 cm (max. 9.3 cm, min. 8.3 cm). For 55 eggs the average fresh weight was 165.7 ± 9.9 gr (max. 189.8 gr, min. 139.3 gr). Fresh weight can be calculated as 0.552*length*width². If the first clutch is removed, a replacement clutch may be laid in an average of 34.2 ± 8.8 days later (max. 48 days, min. 16 days, n = 13).

With the goal of increasing productivity, pairs at African Safari are encouraged to double clutch, therefore, all eggs are removed soon after being laid. The maximum number of clutches per female in a single year obtained at African Safari has been four. Excluding the first year, the average fertility has been 74% (Fig. 11). At the beginning of the breeding program, artificial incubation was not successful. Although for last three years, and through a combination of artificial incubators (Gronbach) and Handmade pieces of nest material, 90% of viable eggs were successfully hatched (Fig. 10). Eggs were artificially incubated at 37.2°C. The average incubation time is 31.7 ± 1.0 days (max. 35, min. 32, n=25), with

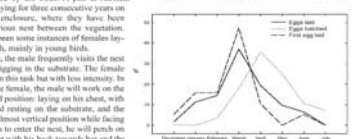


Fig. 8. Distribution of the Horned Guan (*Oreophaps derhami*) eggs laid (n = 42) and chicks hatched (n = 29) at African Safari from 2002 to 2007.

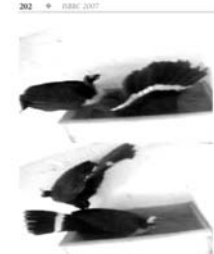


Fig. 5. Photo captures from a CCTV recording of a breeding pair of Horned Guan in an elevated nest platform. In the first image, the female is on the left perching on the edge with the male digging in the substrate and passing his tail. The second image is of the female inspecting the inside of the nest with the male perched on the platform rim.

nesting substrate, with a consistency more similar to the one found in nature. The best results have been obtained when the nest is placed high in the enclosure, in a corner under a shelter, but nests on branches have also been accepted by the birds. A pair at African Safari has been laying for three consecutive years on the floor of the enclosure, where they have been building a precarious nest between the vegetation. Also, there have been some instances of females laying from the perch, mainly in young birds.

Before laying, the male frequently visits the nest to prepare it by digging in the substrate. The female also participates in this task but with less intensity. In the presence of the female, the male will work on the nest in an inclined position, laying on his chest, with the neck and head resting on the substrate, and the tail fanned in an almost vertical position while facing her. If she decides to enter the nest, he will perch on the side of the nest with his back towards her and the tail fanned, sheltering her, and stays in this position for the duration of her work in the nest (Fig. 7).

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