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SOME NOTES ON THE PIPING HORNBILLS AT GUINATE TROPICAL PARK, LANZAROTE

by Andrés Marín and Ana Matesanz

The Piping Hornbill *Ceratogymna* or *Bycanistes fistulator* is an African species which ranges from Senegal (south of Gambia), Guinea-Bissau, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo and Benin to Nigeria west of the Niger River, in the case of the nominate form *C. f. fistulator*. There are two races, *C. f. sharpii* and *C. f. duboisi* found to the east of the Niger River, the latter of which ranges eastwards to western Uganda.

From Alan Kemp's (1995) book on hornbills, we know that this species inhabits forest lowlands, palm oil plantations, mangroves and forested savanna. Large flocks are unusual, with group of two or three birds being more common. They group together to roost, but at sunrise disperse again. They are basically frugivorous, but sometimes catch flying ants. Sweet corn and some types of greenfood are also taken. The breeding season varies from region to region and may extend from October-December or January-February, with some records for July.

The Piping Hornbill is common in the wild, but is rare in aviculture. David Hancock, who is undertaking a census of such birds, and Koen Brouwer, Chairman of the European EEP, could find no records of other captive pairs of this species. Koen Brouwer did, however, come up with a record of one which lived for eight years¹ in the early 1990s. Its rarity in aviculture encouraged us to obtain a pair, not because of the possibility of holding the only captive pair, but because of the wonderful opportunity to learn more about this fairly small hornbill, about which there is a lack of knowledge. The Piping Hornbill has few evident charms, its bill lacks a big casque like other *Ceratogymna* hornbills and the bright colours of some of the *Tockus* species and this, in our view, accounts for its rarity in aviculture. Our pair came from a dealer in Belgium. We had no previous interest in this species, but when the two birds were offered to us, decided to buy the pair. In June 1998, we were told that a Spanish dealer had one for sale, but could find out no more about it.

Character and Behaviour

When our Piping Hornbills arrived in December 1996, their feathers were badly damaged but their general health seemed good. It was surprising to us to see how when they were nervous or excited, each of them raised the feathers of the nape, so that the nape appeared to be twice its normal size. A lot of care had to be taken when entering their aviary, as they were very nervous and flew about in a panic and we were fearful they might injure themselves. Over two years later they are still easily frightened and do not seem to have become accustomed to their keeper. However, it has been noticed how when they hear the sound of the cart carrying the food dishes, they watch everything with interest as they wait for the moment when their aviary door is opened and their dish of food is placed in the aviary.



The male and female together

The pair have learnt to tolerate the presence of visitors and look alert only when they recognise someone. I (A.M.) am charged with their management and special care and any changes that may be necessary, but have a problem making notes about them, as if they see me and feel that I

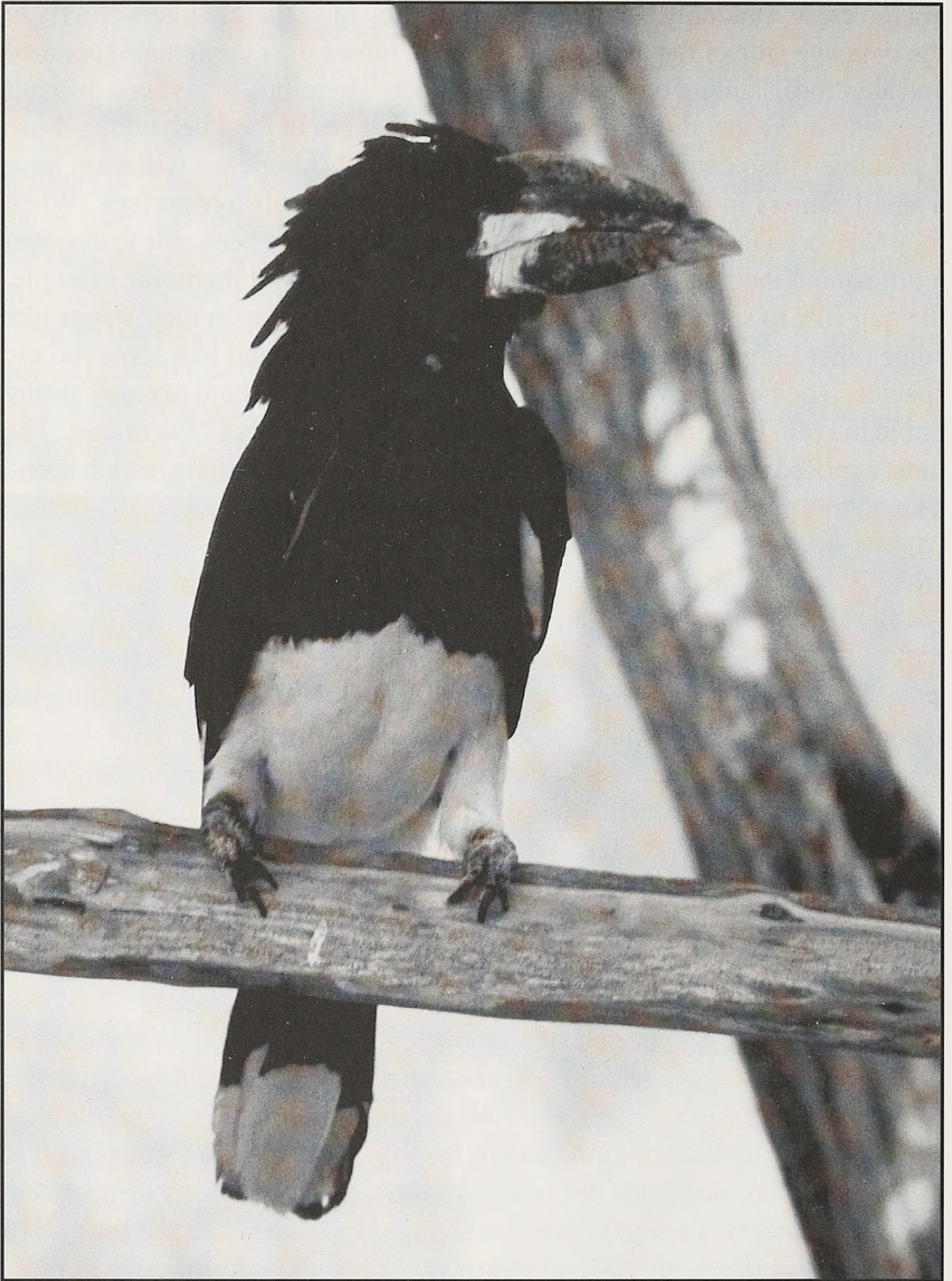
am too close, suddenly become very alert; they raise their feathers and fly to the opposite side of the aviary and the male jumps over the female (perched and alert too), landing on the other side of her. Therefore, it has been difficult for me to make any direct observations on changes in their behaviour. I use a portable video camera when the park is closed (I hope we will soon have a small camera in the aviary), but the views are not always perfect. When they have been feeling safe and secure, I have in this way been able to discover a little about their activities and make some notes about them; for example, the pair like to sunbathe, but have never been seen to open their wings like some other hornbills and never go down on to the ground like some Asiatic species. They have never been seen bathing and do not seem to enjoy sitting out in the rain like, for example, the Trumpeter Hornbills *C. bucinator*. The most exposed perches are favoured by the male and the female, which spend a lot of time preening themselves and always remain very close to one another.

Diet

On arriving they were given the standard diet for big hornbills in the park here at Guinate (see Appendix 1). At first only the grapes and soaked sultanas were eaten, then step by step they got into the habit of eating the other items as well. We have read that they eat berries in the wild, but our pair reject these. Sometimes we offer them *Tenebrium* sp and *Zophoba* sp. but they never seem very interested in these. They enjoy the minced meat which is offered twice a week. We give them sweet corn and chopped endive (as greenfood) and they especially like the latter. The approximate weight of food offered daily is 350g.

Housing

After a quarantine period of two months, the hornbills were placed in their permanent aviary which measures 4m x 4m x 2.5m high (approx. 13ft x 13ft x 8ft high). One side of the aviary is only half open to the public gaze to give these shy birds a more secure feeling. The nest-box was placed in this partly concealed area, but it was 10 days before the birds inspected it. At first the aviary was not as good as it might have been. At the time all of the park was undergoing radical improvements and our knowledge of these birds was not very good. There were not many perches or plants in the aviary, although there was a tree (*Cassia* sp.) growing in it. As it is impossible to find big tree trunks on Lanzarote, a wooden nest-box was made and covered with bark and branches, to make it look as natural as possible. It was an upright structure, with a square base and was about 2m (approx. 6ft 7in) high with an oval hole cut in the front about 1.5m (approx. 5ft) up from the floor. The hole allowed the birds access to the nest cavity, which was



Male Piping Hornbill

calculated to be about the size required by such birds and similar to that provided for other species. Concealed beneath it was a large bowl of water to help maintain the humidity in the nest-box, even on the driest days (on Lanzarote we get the Sirocco wind). The pair played at the entrance and even went inside to inspect the 'nest' but made no real attempt to seal the entrance hole.

In the summer of 1998 we made some improvements to the aviary. We provided some rocks along the most exposed side, planted some small and medium-sized shrubs, and provided a variety of natural branches for perching. In addition, the original nest-box was replaced by a convenient sized barrel, concealed by wicker screening. When the changes were completed, the birds were reintroduced in to the aviary and after a matter of minutes seemed even happier than before and behaved as so they had never been away. However, it was some hours before they visited the nesting area, which they use now as a shelter when they want to feel safe.

Breeding Behaviour

We have been unable to find any references to visual evidence of when this species is in breeding condition (similar to the colour change around the eyes of the Trumpeter Hornbill and the blue colour on the throats of some Asiatic species). Our only guide has been the sight of the male offering food to the female and her frequent visits to the nest-box (both the new one and the old one). However, we believe that, as with pairs of other species, such behaviour may not necessarily indicate an interest in breeding, but merely be a way of reinforcing the pair bond. We provided them with a large tray of our nest-sealing mixture (see Appendix II). This mixture has been well accepted and used by other African hornbills such as the Trumpeter and the Red-billed species *Tockus erythrorhynchus*, but the Piping Hornbills have so far shown no interest in it.

In November 1998, after a brief display together, a possible copulation was observed. Because the birds were partly hidden by a branch, we did not have a clear view, and so cannot be sure! The birds moved together along the branch with their wings open and the head feathers slightly raised. However, no further displays or interest in the nest were observed during the following days.

Conclusions

The pair now seem well accustomed to life in captivity in their re-designed aviary. They remain quite active and healthy, and their plumage has a nice gloss to it. No problems have been detected with their standard diet. I (A.M.) believe that the amount of space they have and their need to feel secure are very important.

They like to spend the warmest hours of the day sheltering from the sun. As the collection is housed on one of the Canary Islands, close to the coast of Africa, we are unable to say how they would tolerate cold weather. Here, the warm, dry weather is not a problem so long as they have sufficient shade. The lowest temperature recorded at Guinate during the winter is 10°C (50°F).

If we succeed in breeding this species it could be important, for as with other aspects of this hornbill's behaviour, very little has been recorded about its breeding cycle.

APPENDIX I

Piping Hornbill diet at Guinate Tropical Park

Mixed fruits (apple, melon, papaya, grapes, banana, tomato, soaked sultanas, wild berries and other sweet fruits when in season) cut into pieces

Boiled potato cut into pieces

Soaked dog chow (Eukanuba)

Pellets for frugivorous birds (Zeigler)

Insectivorous dry food (Zeigler) mixed with the fruit

Grated carrot (also mixed with the fruit)

Sweet corn

Chopped endive

Minced meat (twice weekly). As their preferred food it is used to help administer dietary supplements and medicines.

APPENDIX II

Mixture provided for sealing the nest hole

One part sphagnum moss

One part horse manure

One part clay

All three items are mixed with a small quantity of water into a muddy consistency and maintained like this by adding more water if necessary.

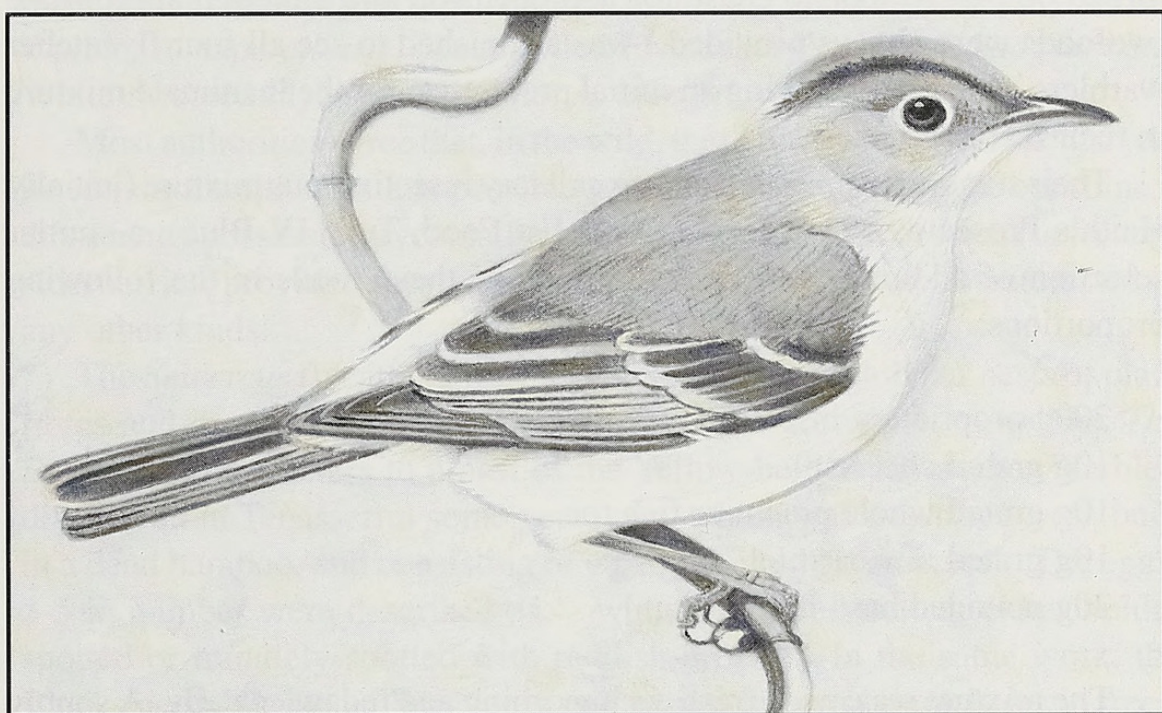
Andrés Marín and Ana Matesanz are the Curators of Guinate Tropical Park, Lanzarote, Canary Islands, Spain. Andrés is especially interested in hornbills and touracos.

¹ *When I started working in the Bird House at London Zoo in January 1956, among the first birds I looked after was a Piping Hornbill. According to the label on the aviary, the bird had arrived at the zoo in 1946, from the Gold Coast (now Ghana). However, Senior Curator, Simon Tonge, has checked the zoo records and according to them, the bird which arrived in 1946, was sent to Moscow Zoo in 1948. A second arrived in May 1951, probably from Sierra Leone, and died in January 1960 of arterial sclerosis, so lived there for approximately eight years nine months. These were the only two Piping Hornbills which have ever been kept at London Zoo - Ed.*

FLYCATCHER WARBLERS

by Frank Woolham

The seven species of flycatcher warblers, genus *Seicercus*, appear to be little known in aviculture. A further four species form the genus *Abroscopus*. All are closely related to the *Phylloscopus* warblers and kinglets (*Regulus*). A small number of Chestnut-headed Flycatcher Warblers *S. castaneiceps* were offered for sale in Britain during 1996 and I was able to obtain four examples. More recently others are reported to have been available in Europe, including the Black-faced Flycatcher Warbler *A. schisticeps*.



Malcolm Ellis

Chestnut-headed Flycatcher Warbler

The Chestnut-headed Flycatcher Warbler measures 4in (10cm) in length. The crown is chestnut, with a blackish streak extending from the base of the bill to the sides of the nape; the sides of the head are grey and there is a narrow white eye-ring. The remainder of the upper surfaces grey to grey-olive; the two wing bars are yellow and the rump and upper tail-coverts are also yellow. The tail is dark brown. The underparts are grey-white, with some yellow on the flanks. The sexes look similar.

The seven races range over an area extending from Tibet and Nepal to Burma, southern China, Thailand, Laos, Vietnam, Malaysia and Sumatra. Typical habitat includes forest, forest undergrowth, etc. In habits they are said to resemble leaf warblers and outside the breeding season are frequently found in company with these and other small insectivores.

All four birds were housed together in an indoor flight measuring 6ft x 2ft 6in x 1ft 8in deep (183cm x 76cm x 51cm deep). Furnishings consisted of natural (willow) branches - providing both horizontal perching and two or three more shrubby sections which, although initially treated with suspicion, eventually provided the means for a good deal of activity. They were immediately at home, although hyperactive and almost constantly on the move.

Bearing in mind their affinity with highly insectivorous species ranging from the Willow Warbler *P. trochilus* to the Goldcrest *R. regulus*, when they arrived I noted their slender, insect-eater's bill with some apprehension - and wondered what problems with their diet might lie ahead. As things turned out, there was no cause for apprehension and although appropriate livefoods were always provided I was astonished to see all four flycatcher warblers invariably showing an initial preference for the inanimate mixture in their feeding dishes.

Their staple diet consisted of a proprietary insectivorous mixture (initially Haith's Prosecto, subsequently Claus Fat Food, Type IV Blue); a similar selection of additives was added to each of these foods in the following proportions:

- 200g proprietary insectivorous mixture
- 10g grated cheese
- 10g grated whole prawn or fish roe
- 10g grated raw carrot
- 20g pounded hard-boiled egg

The mixture was made fresh each morning and fed twice daily. A supply of cheese was dried on paper towels for a couple of days (to reduce oil content) before being used. Prawns/fish roe were grated from frozen (for convenience). Eggs were blended into the mixture minus the shells. Vitamins/minerals, etc were not added to this diet.

I do not use standard-size mealworms for small insectivorous species since such birds often have difficulty digesting the tough cuticles. Mini mealworms are a better proposition, but even with these smaller larvae I prefer, whenever possible, to sift out those which are newly skinned. It is possible to keep an adequate supply going by investing in a quantity of mini mealworms and keeping them well fed (bran or one of the specially formulated diets) so growth is rapid and skin changes frequent. Waxworms were also provided at a rate of about half-a-dozen (six) per bird each day - as were crickets, although only on an occasional basis. The quick-moving flycatcher warblers had no difficulty capturing any which escaped from the container.

There were no aggressive interactions among the four birds, although mutual preening sessions eventually led to slight feather-plucking problems. Although in no sense noisy, they called frequently and I have referred elsewhere to their contact vocalisations sounding similar to those produced by foraging groups of *Aegithalos* tits.

In addition to the Chestnut-headed Flycatcher Warbler, the other species in the group are the Yellow-eyed Flycatcher Warbler *S. burkii*, Grey-headed Flycatcher Warbler *S. xanthoschista*, Allied Flycatcher Warbler *S. affinis*, Yellow-breasted Flycatcher Warbler *S. montis*, Grey-cheeked Flycatcher Warbler *S. poliogenys* and Sunda Flycatcher Warbler *S. grammiceps*.

Together with the aforementioned Black-faced Flycatcher Warbler, three other species make up the genus *Abroscopus* - the Yellow-bellied Flycatcher Warbler *A. superciliaris*, Broad-billed Flycatcher Warbler *A. hodgsoni* and White-throated Flycatcher Warbler *A. albogularis*.

Most authorities agree that, in the wild, these birds are almost exclusively insectivorous although it is possible some small berries may be consumed; those in my possession eventually took modest quantities of fresh (or frozen) elderberries, provided they were completely ripe, but were disinterested in any other kinds.

The *Seicercus* flycatcher warblers build domed or globular nests of plant fibres and moss with a softer lining. The eggs are white. Smythies *The Birds of Burma*, refers to a nest of the Yellow-bellied Flycatcher Warbler, discovered in Tenasserim some years ago, which was described as '...built in a dead bamboo, and consisting of a pad of felted green moss'. The eggs, 3-5 in number were described as '...white in ground-colour, either boldly spotted or minutely spotted with reddish-brown.' In the same work, the Black-faced Flycatcher Warbler is said to nest in bamboos or holes in trees.

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BREEDING THE WHISKERED LORIKEET

by Irene and Don Bardgett

We purchased a pair of recently imported Whiskered Lorikeets *Oreopsittacus arfaki* from a Lancashire bird dealer in October 1997. When we first saw them we were immediately impressed with their small size for as well as measuring only some 6in (15cm) in length, they are also very slightly built. Rosemary Low describes them as '...undoubtedly among the most difficult small parrots in aviculture', a description with which we would not disagree except to suggest that, in the wild, they must be more robust than they look for their alternative name is Arfak Alpine Lorikeet and they have been recorded at altitudes of up to 12,000ft (3,600m) in the mountains of New Guinea.

Despite searching diligently through as much avicultural literature as we could lay our hands on, we could find little in print about the species in the weeks immediately following their arrival. However, in January 1998, Rosemary Low, perhaps prompted by the previous year's importation, contributed some very useful notes in an article which appeared in the UK weekly publication *Cage & Aviary Birds*.

We housed the lorikeets in an all wire-cage measuring some 36in x 12in x 12in (91.5cm x 30.5cm x 30.5cm) in which we have previously bred various other small lorikeets, together with Vernal *Loriculus vernalis* and Blue-crowned Hanging Parrots *L. galgulus*. At first both birds were inclined to panic and take flight at the slightest provocation. However, they eventually settled down and were subsequently much less nervous. They were fed on the same Wysoy-based nectar mixture which we use for all our brush-tongued parrots. The mixture also includes brewer's yeast, bee pollen, white sugar and Farex. They also enjoyed sponge cake soaked in nectar but showed no interest in fruit. We had been told they like greenfood but the birds did no more than nibble at any of a variety of items they were offered.

Nearly eight months passed before we were provided with irrefutable evidence the pair might be in or approaching breeding condition. Because of their extreme nervousness, they had been provided with a nest-box from the time we brought them home. It was used for roosting and was obviously a welcome refuge for whenever they felt threatened they would both dive - literally - headlong through the entrance hole and remain hidden until they they deemed it safe to emerge. Because we had not seen evidence of display or other courtship interactions between the pair it came as something of a surprise when we found a single white egg in the nest-box on May 15th, 1998. We felt it would be unwise to further disturb the birds and left them to their own devices.



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