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Source: Journal of East African Natural History, 84(1) : 35-37

Published By: Nature Kenya/East African Natural History Society

URL: [https://doi.org/10.2982/0012-8317\(1995\)84\[35:ACISOT\]2.0.CO;2](https://doi.org/10.2982/0012-8317(1995)84[35:ACISOT]2.0.CO;2)

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## A CATALOGUED IMMATURE SPECIMEN OF THE PEMBA AFRICAN GOSHAWK IN THE NATIONAL MUSEUMS OF KENYA

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### ABSTRACT

An immature male of the isolated population of the small-sized Pemba African Goshawk *Accipiter tachiro pembaensis* is described: it has a speckled ventral side as have its closest relatives on the mainland, but its thighs are washed rufous, a characteristic announcing the brightly coloured adult plumage. This finding is interesting because the immature plumage is considered as a feature useful for the study of evolution in *Accipiter*.

### INTRODUCTION

Pemba Island, situated 40 km from the Tanzanian coast, has some remarkable endemics. Among the birds is a race of the polytypic (super)species African Goshawk *Accipiter tachiro* (Daudin). Its difference from the birds on the opposite mainland, which belong to the race *sparsimfasciatus* (Reichenow), was noted as long ago as 1929 by Vaughan, though it was only formally described as *pembaensis* much later (Benson & Elliott, 1975). The describers had at their disposal merely five adult specimens from the island, all collected ante 1929 and deposited in the (then) British Museum (Natural History). They remarked on the smallness and bright plumage colour of the adult (consisting especially of a pinkish or chestnut wash on the thighs and of the greyish upperside in the female—in contrast to the opposite mainland bird) and that the immature plumage was unknown. Likewise, Pakenham (1979) and Brown *et al.* (1982) were able to list only the same adult specimens.

### PLUMAGES

The genus *Accipiter* is among those interesting birds showing remarkable plumage in their isolated populations. In this general region, Louette *et al.* (1996) studied Frances's Sparrowhawk *Accipiter francesae* (Smith) on the Comoro Islands, and compared it to the 'mother population' on Madagascar. There, the immature plumage is generally brown, ventrally barred; it is very similar to the adult female one (the adult male being quite different, slate colour above, unbarred white below). All Comoro birds are smaller. On one Comoro island (Mayotte), both sexes are barred ventrally and generally brownish in all age and sex classes. Louette *et al.* (1996) interpreted this as a form of neoteny in plumage characteristics, assuming it would be effective in the social structure, enabling the bird to live at high density, a clear advantage for small populations on oceanic islands. Nevertheless, on the somewhat larger islands of Grand Comoro and Anjouan, both sexes are 'masculine' in adult plumage compared to Madagascar, but the immature is barred ventrally! It is far less abundant on those islands and decidedly a forest bird there.

Turning now to the African Goshawk, the East African race *sparsimfasciatus* (the most likely 'mother population' for Pemba) shows pronounced age and sex dimorphism in plumage

(specimens examined in RMCA). The adult male has an elaborate dress, greyish, barred underneath, with rusty flanks. The female is brownish above, barred brown ventrally. The immature is generally brown, with drop-shaped ventral speckles.

Elsewhere in Africa occur isolated forest races, with brightly coloured adults in both sexes, the adult female being quite 'masculine', and remarkable immatures, such as in *toussenelii* (J. & E. Verreaux) of the Lower Guinea forest, whose immature is nearly unmarked white ventrally (Louette, 1992). The immature of *unduliventer* (Rüppell) in Ethiopia and *macroscelides* (Hartlaub) in Upper Guinea has rufous thighs, rather similar to the adult.

The characteristics of bright plumage and low sexual dimorphism in plumage colour in the adult and also forest habitat hold true in Pemba. Indeed, Benson & Elliott (1975) suggested that the Pemba Goshawk is also a "forest bird", although Pakenham (1979) mentions it as occurring "throughout the island", but that "no nest has been found", del Hoyo *et al.* (1994) say that it was "common in the 1970s". This lets us presume at least some adaptation to degraded vegetation as in the case of *A. francesae* on Mayotte.

As said above, on Pemba, the adult female has a rather bright 'masculine' plumage, compared to the opposite continental *sparsimfasciatus* (besides being smaller). To complete the picture, the description of the immature plumage in the Pemba bird would be of considerable interest.

## THE NMK SPECIMEN

During a study visit in the National Museums of Kenya, I discovered an immature specimen of the Pemba Goshawk in the collection, with the following label data: Register number: B 673; locality: Pemba Island (Wete) 100 ft; date: 7 May, 1955; collector: J.G. Williams; sex: male (size of testicles drawn, only a few mm in diameter); colour of cere: greenish yellow, feet: lemon yellow, iris: grey brown, bill: dark slate, bluish at base; stomach contents: remains of gecko.

I measured the specimen as follows (mm): wing chord: 182; tail length: 158; tarsus length: 58; culmen feathers: 26.5; culmen from cere: 16; bill depth: 10.5; skull width: 26.5; centre toe length: 26.5; claw: 11.5; hind toe length: 14; claw 16. These measurements, when compared with those available for four males in Benson & Elliott (1975) mean of wing chord 194 mm, of tail length 152 mm confirm the bird as a male, with a somewhat shorter wing and a somewhat longer tail than the adult, as is usual in *Accipiter*.

Dorsally the specimen is dark brown, with rufous feather margins; on the head, the rufous is very expanded in the form of streaks. Ventrally the general colour is rusty buffish, a dark narrow streak of ca. 40 mm long is present on the throat; there are four rows of longitudinal streaks composed of brown drop-shaped spots, of variable size, the thighs are darker, almost rufous. The tail shows dorsally and ventrally three dark bands ca. 13 mm wide; the outermost rectrix however is almost unmarked. No moult was obvious.

## DISCUSSION

The plumage of the *A. t. pembaensis* immature specimen fits as follows in the picture of the (super)species: being speckled on the ventral side, it agrees with most races, but its thighs are rufous, which is not apparent in *sparsimfasciatus*, but is a characteristic of some stenotopic continental forest races. Nevertheless, the Pemba bird clearly derived from East African colonists. Their adult plumage changed (and the immature one changed to a small extent only).

It would be premature to conclude that plumage is a conservative feature. I will verify this by a general study of the genus (Louette, in prep.).

What we do see is that the African Goshawk colonists adapted in bright plumage and in small size to the forested isolated environment of Pemba, as in the Grand Comoro and Anjouan races of *Accipiter francesae*

#### ACKNOWLEDGEMENTS

I thank Dr L. Lens for permission to study the specimen in NMK, and two anonymous referees for corrections.

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