# Some comments on the identification of six Madagascar raptors

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L'article traite de deux problèmes d'identification auxquels les ornithologues visitant Madagascar se trouvent confrontés. Premièrement l'identification de la Buse de Madagascar *Buteo brachypterus* et du Gymnogène de Madagascar *Polyboroides radiatus*. Deuxièmement celle des trois *Accipiter* de l'île, l'Autour de Henst *Accipiter henstii*, l'Épervier de Madagascar *A. madagascariensis* et l'Épervier de Frances *A. francesiae*, ainsi que de celle du rare Aigle serpentaire malgache *Eutriorchis astur*. L'identification des *Accipiter* en particulier constitue un réel défi et certains sujets doivent être identifiés avec beaucoup de précaution, étant donné le peu de caractéristiques de plumage concluantes. L'information présentée dans cet article est basée sur des observations sur le terrain et l'examen de peaux, et provient du guide photographique des oiseaux de Madagascar que les auteurs ont récemment publié. Les photos sont également tirées de cet ouvrage.

The authors have recently published a new photographic guide to the birds of Madagascar. The information presented in this paper is taken from *Birds of Madagascar: a photographic guide* (Morris & Hawkins 1998) and is a result of several years of collective field studies by the authors, in addition to several weeks spent studying specimens in museums in Britain, France and Madagascar.

## Introduction

There are few major bird identification problems in Madagascar. Here, we provide information on two of the more testing challenges facing birders. Firstly the identification of Madagascar Buzzard *Buteo brachypterus* and Madagascar Cuckoo-Hawk *Aviceda madagascariensis* is discussed. The second part of the paper deals with the identification of the three species of accipiter and, to a lesser extent, the similar Madagascar Serpent-Eagle *Eutriorchis astur*. The accipiters in particular are an identification challenge and extreme care is needed to identify some individuals as there are few conclusive plumage features.

## 1. Identification of Madagascar Cuckoo-Hawk and Madagascar Buzzard

Madagascar Cuckoo-Hawk and Madagascar Buzzard are two very similar species which appear to display mimicry in plumage. The coverage of the identification of these species has been rather weak in the literature. On plumage criteria alone they are exceedingly difficult to identify: most visitors to Madagascar are faced with a very difficult identification challenge and little reference material to help. Both species are distributed widely. Madagascar Cuckoo-Hawk is found in all types of forest including evergreen, dry deciduous, spiny and secondary (including patches far from primary forest, such as those on the high plateau) throughout the country although it is generally scarce and seldom seen. It appears to be most common in southern forests, being rather rare in evergreen humid forest. It is found from sea-level to c1,600 m. Madagascar Buzzard occurs commonly in primary and secondary forest, areas of woodland and high rocky slopes throughout the island except on the largely deforested high plateau where it is rare. It is found from sea-level to 2,300 m.

Madagascar Cuckoo-Hawk is a medium-sized raptor (45–48 cm). The sexes and all known plumages are alike although there is considerable individual variation. The following description is of a typical individual: head brown with a short crest on the nape which is not usually visible in the field. The upperparts are uniform dark brown with darker feather centres. Throat usually brown with an indistinct darker mesial stripe. Rest of underparts typically bright white with variable rufous mottling on the breast and flanks, often forming an irregular broad dark band across the breast. Tail brown with three broad dark bands visible from the underside. In flight, shows relatively short broad wings which are held forward with noticeably bulging secondaries. The upperparts appear relatively uniform dark brown with three broad dark bars in the tail. When the tail is spread, two white bands formed by white inner webs to the tail feathers are visible. The underwings are conspicuously barred dark brown across the coverts and flight feathers. The iris is conspicuously large and yellowish in colour although darker in immatures. The bill is dark brown and the (shortish) legs and feet yellowish grey.

Madagascar Buzzard is a medium-large (48–51 cm), broad-winged and short-tailed *Buteo*. Sexes are alike although there is extensive plumage variation

between individuals. The following description is of a typical individual: head grey-brown, upperparts and upperside of wings uniform brown. Rump white or brown, tail grey-brown with around six indistinct narrow darker bands. Individuals with typical underparts have a white throat streaked brown, white breast irregularly marked with brown, brown lower breast and belly with some white on the lower belly and vent. When soaring, the wings are held above the horizontal in typical *Buteo* fashion. The underwings show weak barring on the flight feathers with a markedly darker tip, more prominent barring on the greater-coverts, a dark mark at the carpal joint and solidly brown lesser-coverts which usually appear as a dark band, striking in flight. The iris is pale yellow, duller in immatures, the cere bluish grey, the bill black and the rather long legs and feet yellowish white. There is wide individual variation in plumage in both adults and immatures, and atypical individuals may be substantially paler or darker.

The two species differ in habits providing one of the best initial clues to identification. Madagascar Cuckoo-Hawk is typically rather unobtrusive and often crepuscular. It generally hunts from a perch within the canopy. It feeds on small reptiles and insects in the foliage. It may rob nests. It is usually seen at the forest edge and around clearings and may be seen hunting in the canopy when it often appears to 'crash' into the foliage in pursuit of prey. It is sometimes seen soaring although the species is more often seen flying between forest blocks over open country with rather weak, wavering flight. The characteristic display consists of three or four flickering wing-beats undertaken while the bird turns with wings held vertically. It is a generally quiet species: the voice is unknown although a weak two-note whistle is thought to be given by this species (PM pers. obs.). By contrast, Madagascar Buzzard is a common, conspicuous and noisy species. It is usually seen alone or in pairs, often perching prominently and soaring over forest with wings held above the horizontal. The species feeds mainly on small vertebrates including reptiles, amphibians, rodents and small and medium-sized birds. The call is loud and frequently given, especially when soaring. It is best described as a loud mewing *meee-uuw* typical of the genus.

The two species are superficially very similar in appearance and must be separated with care using a number of subtle, although once learnt distinctive, features. Madagascar Cuckoo-Hawk is smaller, slimmer and longer-tailed than Madagascar Buzzard which appears stocky with long broad wings and a short tail. At rest, the rounded head (with a short crest which is not usually visible) and the unusually large bulging eyes of the Madagascar Cuckoo-Hawk give the species an appearance quite unlike Madagascar Buzzard which has the jizz of a typical *Buteo*. In addition the longish tail of Madagascar Cuckoo-Hawk is often held slightly open presenting a notched effect due to the large, rounded outertail feathers overlapping and the three broad dark bars on the tail may be apparent, whilst the long wings (with a noticeably large primary extension) nearly reach the tail tip. Madagascar Buzzard by comparison appears shorter tailed (usually appearing square) and shorter winged, and the tail usually shows 6–7 fine dark bars. In flight, the entire underwings of Madagascar Cuckoo-Hawk, and importantly the primaries, are heavily barred (blackish and white) lacking the contrasting darker tip to the primaries often shown by Madagascar Buzzard. This is the single best and most easily seen character for separating these species on the wing. In addition the lesser- and median-underwing-coverts lack the dark bar typically shown by Madagascar Buzzard and the differences in tail pattern are often apparent on flying birds. The patterning on the underparts of the two species also differs in many individuals. Madagascar Cuckoo-Hawk typically shows a band of rufous mottling across the breast and a white belly while the brownish throat often shows a more or less distinct darker mesial streak. By contrast, Madagascar Buzzard typically shows more extensive darker markings on the belly. This difference may, however, be difficult to assess in the field. In addition, when seen perched at close range, Madagascar Cuckoo-Hawk appears short-legged with little or no bare tarsus visible. Madagascar Buzzard usually appears longer legged with obvious bare tarsi.

## 2. Identification of Madagascar accipiters and Madagascar Serpent-Eagle

The three species of *Accipiter* occurring on Madagascar have never been treated in detail in the literature and consequently are frequently confused by visitors, leaving the impression that they are all easy to see. In reality, two are considerably rarer than the other one. The three species are Frances's Sparrowhawk *Accipiter francesi*, Madagascar Sparrowhawk *A. madagascariensis* and Henst's Goshawk *A. hensti*. All are present in western and eastern primary forests. Henst's Goshawk is scarce or absent from the south where Madagascar Sparrowhawk may be more common. Frances's Sparrowhawk is often common in secondary habitats, sometimes far from forest, but the other species are more restricted to primary forest and its environs. Frances's Sparrowhawk is the commonest, by a factor of ten in many areas. Madagascar Sparrowhawk is uncommon, except in some areas of the south although even here they are relatively scarce

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1 Adult Henst's Goshawk *Accipiter hensti* (Gavin & Val Thomson)

2 Adult Henst's Goshawk *Accipiter hensti* (Russell Thorstrom)

3 Adult Madagascar Cuckoo-hawk *Aviceda madagascariensis* in flight (Frank Hawkins)

4 Female Madagascar Buzzard *Buteo brachypterus* in flight (Simon Harrap)

5 Adult Madagascar Cukoo-hawk *Aviceda madagascariensis* (Pete Morris)

6 Female Madagascar Buzzard *Buteo brachypterus* (Pete Morris)

7 Female Frances's Sparrowhawk *Accipiter francesi* (Pete Morris)

8 Male Frances's Sparrowhawk *Accipiter francesi* (Jeff Blincow)

9 Adult Madagascar Serpent-eagle *Eutriorchis astur* (Russell Thorstrom)

10 Female Madagascar Sparrowhawk *Accipiter madagascariensis* (Russell Thorstrom)

11 Female Madagascar Sparrowhawk *Accipiter madagascariensis* (Russell Thorstrom)

Plates 1–11 are all reproduced with kind permission of *Pica Press*.

and difficult to see. Large female Henst's Goshawks are easy to separate purely on size (but are difficult to separate from Madagascar Serpent-Eagles—an identification challenge later treated here). Adult male Frances's Sparrowhawk is small with largely unmarked white (sometimes tinged pink) underparts with only faint rufous-orange barring rendering them immediately recognisable. All other plumages, sexes and ages are difficult to distinguish. This paper treats each species and discusses the key identification characters.

Frances's Sparrowhawk is a small *Accipiter* (28–35 cm), smaller than European Sparrowhawk *Accipiter nisus* and about the size of Sharp-shinned Hawk *A. striatus* of the New World. Young birds are brown above, with a pale mark in front of the eye and sometimes a narrow pale supercilium which may just join the pale spots on the back of the neck / nape. The underparts are whitish with rather wide mid-brown barring, individual bars often presenting the impression that they are darker at the margins than in the centre. There is a fairly conspicuous dark mesial stripe. The undertail-coverts show two or three narrow pale brown bars, less conspicuous than those on the breast. The uppersides of the central tail feathers are unbarred. Feathers of the upperparts show inconspicuous pale fringes which are difficult to discern in the field. The legs and feet are long but not markedly so. Adult female Frances's Sparrowhawk is similar to the immature but is tinged evenly grey on the head and nape, forming a slight grey hood, and usually lacks the pale spots in front of the eye and on the nape. It is typically rather darker brown on the back than the young bird (lacking the indistinct pale fringes), and the barring on the breast is darker and may appear narrower. The mesial stripe is more obscure but usually present; the throat is otherwise uniform off-white with a few indistinct, brown streaks. The undertail-coverts show barring similar to young birds.

Madagascar Sparrowhawk is a small to medium-sized *Accipiter* (29–40 cm) which shows great variation in size between sexes. Small males are not much bigger than male Frances's Sparrowhawk, whilst large females are almost the size of male Henst's Goshawk, but less powerfully built. Young Madagascar Sparrowhawk is typically dark earth-brown above, with a pale spot in front of the eye and pale white nape-spots. The underparts are streaked (rather than barred), some of the brown streaks on the breast widening into narrow ovals. Adult male and female Madagascar Sparrowhawks are very similar in plumage and are treated together here. They are rather dark grey-brown above, the male slightly darker, with a slight slate tinge in some lights (this may also be apparent in older (?) females). The breast is whitish barred narrowly darker, the bars being almost blackish. The throat is white with fine, blackish striations across its width, each streak having very narrow lateral extensions. The undertail-coverts are typically white. The feet are remarkably long and spindly, especially the central toe which projects almost a centimetre beyond the others. Overall, Madagascar Sparrowhawk is a relatively weakly built species, being rather small-headed, long-winged with long slender legs and a relatively fine bill.

Henst's Goshawk is almost identical in plumage to Madagascar Sparrowhawk in all plumages. However, they are very large and powerful accipiters, especially large females. The male is substantially smaller, however, and a small male may be little larger than a female Madagascar Sparrowhawk. The major differences between the plumages of Henst's Goshawk and Madagascar Sparrowhawk are that the throat of the former looks barred or mottled rather than streaked, with the lateral extensions on streaks mentioned on the throat pattern of Madagascar Sparrowhawk being more strongly marked in the streaks on Henst's, forming a barred or chequered pattern. Henst's Goshawk tends to show slightly paler upperparts than Madagascar Sparrowhawk and does not show the slate tinge to the upperparts present in some individuals of the latter species. In addition, the undertail-coverts of Henst's Goshawks show slight and variable barring. Henst's Goshawk has a very loud and characteristic call, an angry barking *angk-angk-angk-angk-angk-angk-angk*, which is often given in flight and has a similar quality to a small dog. This is the most frequent means of detecting the species.

When confronted by a medium-sized perched *Accipiter* with barred underparts, the following key points should be noted, in order of importance: (a) undertail-coverts pattern (barred, albeit slightly, in Frances's and Henst's, unbarred in Madagascar); (b) throat pattern (barred or mottled in Henst's, narrowly streaked in Madagascar and with a single more or less obvious dark central streak in Frances's); (c) the colour of the upperparts (often darkest in Madagascar, the only species likely to show a dark slate tone to the upperparts); (d) the pattern of barring and ground colour of the underparts (Frances's tends to show off-white underparts with relatively broad brown bars, especially in immatures, Madagascar shows the whitest underparts with crisp, narrow dark bars whilst the barring on Henst's tends to be slightly browner and closer than Madagascar); (e) relative length of the toes (relatively short in Frances's and Henst's, unusually long and spindly in Madagascar). For a streak-breasted

(immature) *Accipiter*, criterion (e) is the only one of any use, except that a Madagascar Sparrowhawk will generally look slim and small compared to the almost eagle-like proportions of Henst's Goshawk. Frances's Sparrowhawk shows barred underparts in all plumages (often indistinct in the adult male) and never shows the streak-breasted immature plumages of the other two species.

Madagascar Serpent-Eagle is similar to, although slightly larger than, Henst's Goshawk (the size difference is probably not easy to appreciate in the field) and this pair of species poses another serious identification challenge. The serpent-eagle is a rare resident in eastern and north-eastern forests, with most recent records coming from the Masoala peninsula. Madagascar Serpent-Eagle differs from adult Henst's Goshawk in the following ways: (a) it shows dark barring on the upperwing, especially on the primaries and tertials, whereas Henst's are more uniform; (b) overall, Madagascar Serpent-Eagle is rather warmer dark brown on the back, whereas Henst's Goshawk is dark grey-brown; (c) the head of Madagascar Serpent-Eagle is more massive than Henst's Goshawk, with a short, rather shaggy crest recalling a *Spilornis* eagle. The feathers of the rear crown and nape are often tipped white (more markedly in juveniles) with internal black barring; (d) Madagascar Serpent-Eagle's bill lacks the characteristic *Accipiter* notch; (e) Madagascar Serpent-Eagle is distinctly longer-tailed than Henst's Goshawk; (e) the underparts of the two species are rather similar, but the barring on the breast of Madagascar Serpent-Eagle is duller and paler brown and somewhat more widely spaced. In addition, in flight, Madagascar Serpent-Eagle has a rather floppy flight compared to the powerful direct progress of Henst's Goshawk, and the surprisingly long tail of the serpent-eagle is noticeable. The 'song' of Madagascar Serpent-Eagle is highly characteristic and is very different to the Henst's Goshawk calls described above. Usually delivered from a favoured perch or 'song tree', it is a slow sequence of three to ten loud barking *arnk* notes usually ending in a single lower note, *wugh*. Each note in the series is separated from the next by 1–1.5 s.

## Conclusion

It is hoped that careful application of the characters described above will permit the correct identification of a majority of individuals of these difficult species. However, it must be stressed that, to correctly identify some individuals exceptionally good views will be required and some individuals will always best remain unidentified. Finally, the authors would welcome comments from any readers which updates or corrects material presented here and in *Birds of Madagascar: a photographic guide*.


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