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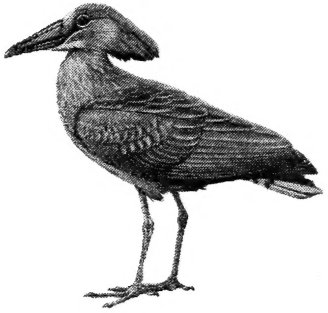
# *SCOPUS*



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# *SCOPUS*

Cover illustration from a gouache painting by Dr P.A. Clancey

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# SCOPUS

## RINGING AND RECAPTURE OF SPOTTED GROUND THRUSHES *TURDUS FISCHERI FISCHERI* AT GEDE, KENYA COAST: INDICATIONS OF SITE FIDELITY AND POPULATION SIZE STABILITY

L.A. Bennun

The Spotted Ground Thrush *Turdus fischeri* is a threatened bird, listed in the ICBP/IUCN Red Data Book for Africa (Collar & Stuart 1985). The nominate race is a seasonal visitor to coastal forests in Kenya from unknown breeding grounds (Britton & Rathbun 1978), and has been studied at Gede Ruins National Monument where ten birds were colour-ringed in July–August 1983 (Bennun 1985). Two years later, in August 1985, a colour-ringed bird was recorded at Gede by A.N.B. Masterson (*in litt.*), while in mid-October that year three birds, presumably on passage, were seen by M. Fisher in a garden at Watamu, about 6 km from Gede (D.A. Turner *in litt.*): two had colour rings. To follow up these records I revisited Gede in late July 1986.

### METHODS

Mist-nets were operated at nine sites within the forest (Fig. 1): at all five (A, C, E, F and H) where *T. fischeri* were captured in 1983 (see Bennun 1985) and at two new sites (J and M). Netting took place from 24 July to 1 August 1986, with between three and six net sessions (morning or evening) at each site. All net sites were surveyed and mapped. The net where each bird was captured was noted, for each species, and *T. fischeri* capture points were noted to the nearest half-metre along the net. New *T. fischeri* and all Red-capped Robin Chats *Cossypha natalensis* were colour-ringed with unique colour combinations. Patrick Gathu and E.K. Gachoya assisted throughout with mist-netting and ringing.

### SITE FIDELITY

Nine *T. fischeri* were caught in all, during 17 net sessions (versus ten in 23 sessions in 1983). Three of these were birds that had been ringed three years previously; no colour rings had been lost, although some were dirty and faded. Capture locations are shown in Fig. 1. With the exception of site E, all sites where the species had been trapped in 1983 again produced *T. fischeri*; birds were also caught at new sites J and M. At sites C, F and H unringed birds were caught in the former home ranges of 1983 birds.

In 1983, individual *T. fischeri* seemed very sedentary, moving within a small well-defined home range (Bennun 1985). Two of the birds recaptured in 1986 appeared to have returned to the same home ranges they had used three years before. R/DG was captured twice at site A, the first time 4 m and the second 3 m from the nearest points where it was located in 1983. This bird had been seen along the same stretch

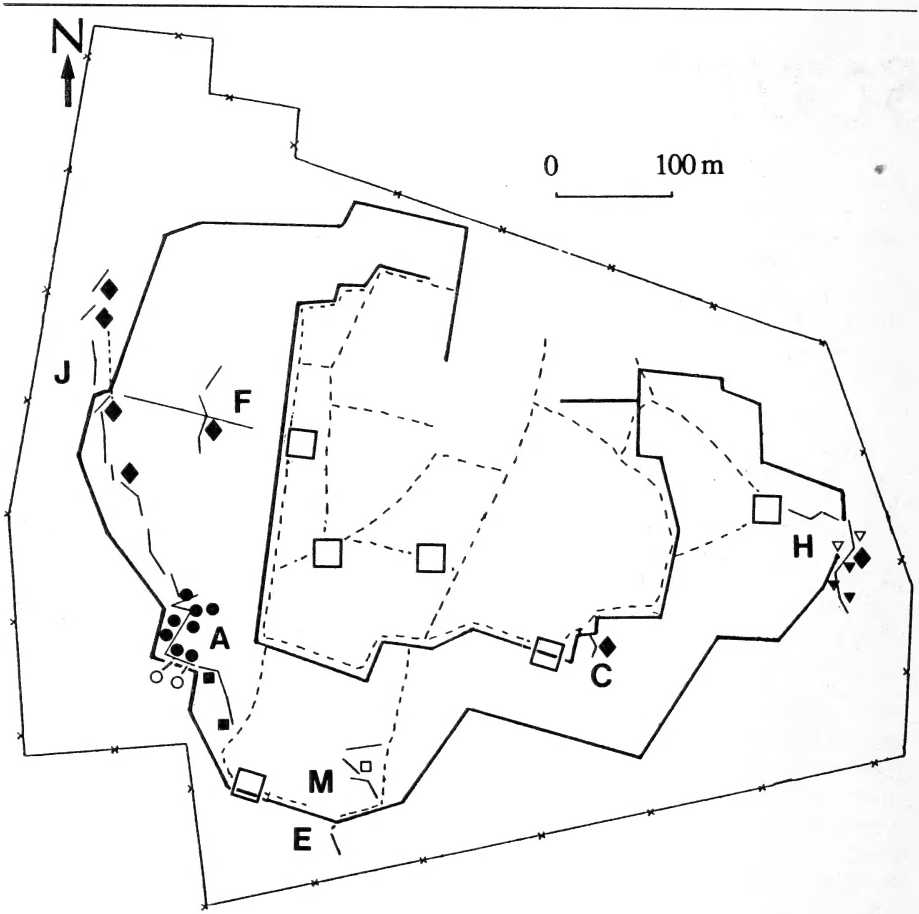


Fig. 1. Map of Gede Ruins National Monument (scale approximate).

Key: ---- path; ▭ ruined building; ⟷ forest edge;
▬ ruined wall

**A**, **C**, **E**, **F**, **H**, **J** and **M** are net sites (**A** and **H** redrawn since 1983);
—— position of net.

Ground Thrush location/capture points shown by the following symbols:

◆ new (unringed) bird in 1986 (dotted line joins points for one bird)

| | |
|---|---|
| ▼ W-W/DB/LG in 1983 | ▽ in 1986 |
| ■ R/W in 1983 | □ in 1986 |
| ● R/DG in 1983 | ○ in 1986 |

of path in 1985 (A.N.B. Masterson *in litt.*). Two capture points for W-W/DB/LG (formerly P/LG) at site H were 1 m and 16 m away from the nearest 1983 point.

The third recapture was of R/W at site M, 120 m away from its 1983 capture point at site A. This bird, the only one identified in 1983 as a sub-adult, also showed the greatest single movement (40 m) of any individual in that year (Bennun 1985): possibly it had not at that stage established a clear home range.

Of other birds ringed in 1983, one Pygmy Kingfisher *Ispidina picta* and four *Cossypha natalensis* were recaptured out of three and 37 ringed respectively; both species are also non-breeding visitors to Gede. The single kingfisher, trapped at site J, was approximately 100 m from its 1983 capture place at site F. The four *C. natalensis*, interestingly, appeared to have returned to the same areas of forest as in 1983: three were captured at the same net site where they were originally ringed, while the fourth was originally caught either at the same net site or at one 150 m away. Unfortunately, precise records of 1983 capture points for *C. natalensis* are lacking, although the species appeared considerably more mobile than *T. fischeri* (Bennun 1985). Six *C. natalensis* were trapped twice during the 1986 netting, and these showed mainly small movements: distances, measured between mid-points of capture nets, were 10 m (captures in same season, 2 h apart), 60 m (captures on same day, different sessions), 0 m, 0 m, 8 m, and 20 m (captures on different days). Home ranges for *C. natalensis* may be better defined than previously suspected, although probably larger than those of *T. fischeri*; relocations of some of the 32 individuals now with colour rings should help to resolve this.

## OVERLAPPING HOME RANGES

More circumstantial evidence that the home ranges of some *T. fischeri* might overlap can be added to that found in 1983. At site H an unringed bird was captured at precisely the same point where W-W/DB/LG had been caught the previous day. At site J an unringed bird was observed foraging, preening, then turning to face towards a net some 15 m away; standing quite still, it uttered a long series of thin *tswee* notes; these were not answered and after some minutes the bird resumed foraging and moved away. The net was inspected immediately afterwards and another unringed *T. fischeri* found caught. It is noteworthy that a century ago birds at Kipini were frequently in pairs (Fischer 1879, referred to by Collar & Stuart 1985).

## POPULATION SIZE STABILITY

The numbers of birds caught in 1983 and 1986 cannot be compared directly, but it is possible to examine the relative numbers of *T. fischeri* and two other ground-dwelling thrushes, *C. natalensis* and the resident Eastern Bearded Scrub Robin *Cercotrichas quadrivirgata*. The proportions found in 1983 are virtually unchanged three years later (Table 1). Clearly any change in numbers has at least affected all three species equally. Factors affecting their populations would not be identical, however; while *Cercotrichas quadrivirgata* should breed at Gede, *C. natalensis* and *T. fischeri* breed elsewhere, apparently at different times and probably in different places. The result can thus be taken as an indication of likely size stability in all three populations at Gede. While this is much more encouraging than any decline in relative *T. fischeri* numbers would have been, it cannot be taken as proof that the population of *T. f. fischeri* is remaining steady as a whole. Gede, an apparently optimal habitat for this species, could be fully occupied even while total numbers were declining.

**Table 1**

Totals and ratios of numbers caught for three ground-dwelling thrushes at Gede in 1983 (from Bennun 1985) and 1986

| | | 1983 | 1986 |
|---|---|---|---|
| Total: | *Cossypha natalensis* | 37 | 32 |
| | *Turdus fischeri* | 10 | 9 |
| | *Cercotrichas quadrivirgata* | 5 | 5 |
| Ratio: | *C. natalensis/T. fischeri* | 3.7 | 3.6 |
| | *T. fischeri/C. quadrivirgata* | 2.0 | 1.8 |

## SURVIVORSHIP

At least three out of ten *T. fischeri* were still alive three years after they were first recorded. If some of the remaining seven had shifted slightly from their 1983 home ranges, they may have been missed as there was no time to mount a thorough search for colour-ringed birds away from the net sites. The presence of unringed birds in several 1983 home ranges suggests that the original occupants had died, but their fate cannot be certainly established. The recaptures imply a *minimum* annual adult survivorship of $0.3^{1/3}$, i.e. 67 per cent, which is already among the higher values recorded elsewhere for African passerines (see Fry 1980, Brown & Britton 1984, Hanmer 1984a,b).

## AGEING

No *T. fischeri* caught could certainly be identified as sub-adult; all had completed or nearly completed wing moult and had fresh body plumage (although several were still moulting rectricies). Brownish-buff tips to the tertials and wing coverts do not indicate immaturity; they occurred on fresh feathers and on one (undoubtedly adult) bird retrapped from 1983. There was great individual variation in the extent to which these buff tips were present. The immature features described by Keith & Twomey (1968) from a specimen taken in May (duller spots below, rufous tips to crown feathers, rufous streaks in the centre of some wing coverts) may not be easily distinguishable by late July; this may be a simple explanation for the age structure found in 1983 (Bennun 1985).

## BEHAVIOURAL NOTES

Although no effort was made to observe *T. fischeri,* the species was much more conspicuous than in 1983; the leaf litter seemed drier and the rustling noise made as the birds moved over it made them easier to locate. One unringed bird was seen to displace a *Cossypha natalensis* that approached it. The bird was perched motionless on a fallen branch, watching me, when the *C. natalensis* flew down from the low canopy to a branch half a metre away. The *T. fischeri* flew at it and occupied the spot, while the *C.natalensis* moved off half a metre and perched again. The *T. fischeri* flew at it vigorously, this time loudly snapping its beak; the *C. natalensis* merely flew to the ground and began to forage. Shortly afterwards the *T. fischeri* did the same, as usual plunging its beak directly into the leaf litter and throwing up leaves and debris. After one plunge it came up with a large millipede, about 8 cm long. It flew at once with this into the low tangled bole of a tree, less than 1 m from the ground, and be-

gan directly—and with some difficulty—to swallow its prey. Afterwards it stood motionless and gaped for some time, then moved quietly away. From stomach contents millipedes *Prionopetalum* spp. are known to form a part of the species' diet (Britton & Rathbun 1978, Bennun 1985).

**ACKNOWLEDGEMENTS**

I am grateful to the Director of the National Museums of Kenya, Mr R.E. Leakey, for permitting this work at Gede, to A.N.B. Masterson and D.A. Turner for records of colour-ringed thrushes, and to G.C. Backhurst and P.B. Taylor for the loan of mist-nets and poles. Particular thanks are due to the following for invaluable assistance in various ways: Mr A. Mbwana, Clerk-in-Charge, and his staff at Gede Ruins National Monument; G. Gathu and E.K. Gachoya; and Mr and Mrs H. Steyn. Martin Kelsey kindly commented on an earlier draft and Graeme Backhurst assisted with the drawing of the map.

**REFERENCES**

BENNUN, L.A. 1985. The Spotted Ground Thrush *Turdus fischeri fischeri* at Gede in coastal Kenya. *Scopus* 9: 97–107.

BRITTON, P.L. & RATHBUN, G.B. 1978. Two migratory thrushes and the African Pitta in coastal Kenya. *Scopus* 2: 11–17.

BROWN, L.H. & POMEROY, D.E. 1984. The age structure of populations of wild birds in tropical Africa, as demonstrated by plumage characters and marking techniques. *Proceedings of the Fifth Pan-African Ornithological Congress 1980*: 97–119.

COLLAR, N.J. & STUART, S.N. 1985. *Threatened birds of Africa and related islands. The ICBP/IUCN Red Data Book, Part 1.* Cambridge: ICBP.

FISCHER, G.A. 1879. Briefliche Reiseberichte aus Ost-Afrika. IV. *Journal für Ornithologie* 27: 275–304.

FRY, C.H. 1980. Survival and longevity among tropical land birds. *Proceedings of the Fourth Pan-African Ornithological Congress, 1976*: 333–343.

HANMER, D.B. 1984a. The Brown-throated Golden Weaver *Ploceus xanthopterus* from Moçambique and Malawi. *Proceedings of the Fifth Pan-African Ornithological Congress 1980*: 121–148.

HANMER, D.B. 1984b. Life expectancy and productivity estimates for three species of bulbul from southern Malawi. *ibidem.* 149–161.

KEITH, S. & TWOMEY, A. 1968. New distributional records of some East African birds. *Ibis* 110: 537–548.

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## HUNTING TECHNIQUE OF THE AFRICAN GOSHAWK *ACCIPITER TACHIRO* AND ITS POSSIBLE RELATIONSHIP WITH OTHER *ACCIPITER* SPECIES

Brian Wood

There are only four records of the African Goshawk *Accipiter tachiro* from Somalia listed by Ash & Miskell (1983), all from the woodlands in the Jubba Valley. During August and September 1986 all the remaining gallery forest in the Middle Jubba, between Jilib and Bu'ale, was surveyed by the Somalia Research Project team from the University College London. We recorded African Goshawks at three separate sites. In the only two remaining sizeable blocks of gallery forest, which we studied intensively, this species was recorded almost daily, including an adult and an immature bird together in the largest forest block at Shoonto, south of the Hangoodle. Probably at least seven different individuals were recorded in total.

In closed-canopy forest it is often difficult to gain a true impression of the bird community, since many species are rarely seen due to their skulking behaviour or because they are most active high in the canopy. To supplement direct observations we used mist-nets to catch birds in the lower vegetation of the forest. About 500 birds were netted and marked with EANHS rings, including one adult female African Goshawk, which became entangled when it attempted to take a Red-capped Robin Chat *Cossypha natalensis* from the net. Whilst we also caught some individuals of species that typically forage high in the canopy, these were undoubtedly underrepresented, both in the netted sample and in sight records. Birds that were active above the canopy were even harder to record, except when they were occasionally glimpsed as they passed over gaps in the canopy.

During the course of our surveys we recorded Black Kites *Milvus migrans*, Harrier Hawks *Polyboroides radiatus* and Bateleurs *Terathopius ecaudatus* often flying above the forest, and on two occasions Beaudouin's Snake Eagle *Circaetus gallicus beaudouini* (possibly the same individual). We also frequently heard large birds diving into the upper canopy, although none of the above species was ever seen to behave in this manner. However, on 22 August, the species that was probably responsible for all of these records was identified when all four members of the team witnessed an attack that took place in a large opening in the forest adjacent to our camp. On that occasion, as previously, our attention was attracted by the noise of a large bird stooping towards the tree-tops. We were able to clearly see an African Goshawk enter the canopy, in a 45-degree dive, and emerge above the trees soon after, clutching a small bird in its talons. Judging from its size, the African Goshawk was a male, but the prey could not be specifically identified.

The hunting technique of African Goshawk that is normally recorded is that typical of all *Accipiter* spp. Prey is usually taken by surprise attack during rapid flight below the forest canopy or along woodland edges. Brown *et al.* (1982) record African Goshawks circling above forest during displays and occasionally flying down prey such as doves in open flight above forest canopy, but, as far as I am aware, stooping attacks on prey in the upper canopy have not been reported previously. In dense forest it could be a productive technique to employ, since several bird and mammal species commonly sit in prominent positions in the top of the canopy and would therefore be vulnerable to such attacks. In the Jubba gallery forest the species most

likely to be victims include Brown-breasted Barbet *Lybius melanopterus*, Retz's Helmet Shrike *Prionops retzii*, Black-breasted Glossy Starling *Lamprotornis corruscus*, Black-backed Puffback *Dryoscopus cubla*, Huet's Bush Squirrel *Paraxerus ochraceus* and possibly juveniles of the Blue Monkey *Cercopithecus mitis*, which is abundant.

## COMPETITION WITH OTHER SPECIES

Interspecific competition in birds seems often to be reduced by differences in body size. Size differences are particularly marked in active predators (Newton 1979) and in these species intraspecific competition may also be reduced by differences in the size of the sexes. This is correlated with intraspecific differences in habitat use by some species (Marquiss & Newton 1982). During our surveys of gallery forest we commonly recorded three *Accipiter* species, Little Sparrowhawk *A. minullus*, Shikra *A. badius* and African Goshawk. Their sizes are compared in Fig. 1. From this figure it can be seen that a graded sequence of *Accipiter* spp. occurs in gallery forest, with each sex of the three species differing significantly from all others, except for a clear overlap in size between female Shikra and male African Goshawk.

Both sexes of Little Sparrowhawk and Shikra were recorded in our surveys and were observed hunting below the canopy of the forest. The only African Goshawk that we netted was a female, indicating that these also hunt low-down. Although there are recorded differences in the prey-spectrum of African Goshawk and Shikra, with the latter particularly taking lizards as well as small birds and mammals, it is possible that considerable competition could occur between female Shikras and male African Goshawks hunting in the same area. The stooping technique of male African

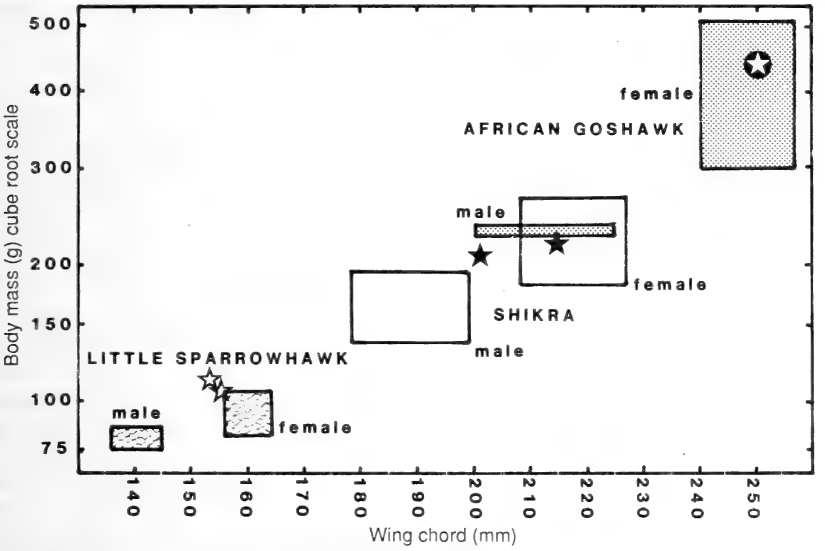


Fig. 1. A comparison between the sizes of males and females of *Accipiter* species found in gallery forest in Somalia. Boxes show the published ranges, and stars show values for individuals caught by the Somalia Research Project 1986. (Sources of published values: Cramp & Simmons 1980, Brown *et al.* 1982.)

Goshawks that is reported here would provide an effective means of reducing competition with Shikra by vertically zoning the activities of these two predators. It may therefore prove to be the usual hunting technique of male African Goshawks in forests where both species are common.

**ACKNOWLEDGEMENTS**

The work of the Somalia Research Project 1986 was only possible through the co-operation of the Ministry of Livestock, Forestry and Range. We received considerable logistical assistance from the Overseas Development Administration (UK) Forestry project in Somalia. Financial help came from many organizations and individuals and will be fully acknowledged in our final report.

**REFERENCES**

ASH, J.S. & MISKELL, J.E. 1983. Birds of Somalia their habitat, status and distribution. *Scopus* special supplement No. 1.

BROWN, L.H., URBAN, E.K. & NEWMAN, K. 1982. *The birds of Africa.* Vol I. London: Academic Press.

CRAMP, S. & SIMMONS, K.E.L. 1980. *The birds of the western Palearctic.* Vol. II. Oxford: Oxford University Press.

MARQUISS, M. & NEWTON, I. 1982. Habitat preference in male and female Sparrowhawks *Accipiter nisus. Ibis* 124: 324–328.

NEWTON, I. 1979. *Population ecology of raptors.* Berkhamsted: Poyser.

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## EDITORIAL NOTE

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*Ed.*

# MINZIRO FOREST RESERVE: AN ORNITHOLOGICAL NOTE INCLUDING SEVEN ADDITIONS TO THE TANZANIAN LIST

N.E. Baker and P. Hirslund

Minziro Forest reserve is a ground-water forest on the north bank of the Kagera River in northwest Tanzania and is contiguous with the Malamigambo Forest in southern Uganda. It is not listed in the gazetteer of the Birds of East Africa (Britton 1980) and is not mentioned in the text. It is, however, noted by Britton (1978, 1981) as a source of specimens collected by the late Thorkild Andersen. It seems certain that Andersen did not visit the forest personally but that his collector was there from 15 December 1953 to 5 January 1954 and again from 21 February to 17 March 1954. We were unable to trace any written evidence of the forest having been visited by an ornithologist. Sir Hugh Elliott (pers. comm.) visited the forest sawmill in 1939 on a tax-collecting mission but any records he made were destroyed by fire. John Williams (pers. comm.) walked through the forest in 1945 en route to Tabora but did not stop.

In conjunction with work on the Tanzania Bird Atlas, we visited the forest from 6 to 9 December 1984. The camp and net sites were situated at 1°06'S, 31°31'E at an altitude of 1150 m. The forest here retains the boundaries shown on the 1:50,000 map series Y742-3/1, c. 1961, and seemed in excellent condition despite some cutting of Podocarpus by poorly equipped local people. Further west, the situation closer to the sawmill is probably more serious. Rodgers (1981) recorded heavy logging as a threat to the population of Black and White Colobus *Colobus angolensis adolfifriederici*, and no doubt the pressures are similar to those in other quasi-protected forests in Tanzania.

This paper details those species deemed of special interest and lists, without comment, others recorded by ourselves and by Andersen. Some of his specimens from Minziro await positive identification. Their museum reference numbers are given at the end of this list. Five of the species listed here are previously unrecorded from Tanzania. However, they are all known from neighbouring Uganda and are therefore not significant extensions of range nor surprising additions to the Tanzania avifauna. Full details of the new species have been supplied to the East African Rarities Committee and are marked with an asterisk in the following list.

## SPECIES OF SPECIAL INTEREST

***Circaetus cinerascens* Banded Snake Eagle**
An adult was seen low over the forest. In Tanzania, Britton (1980) records this species from no nearer than Kibondo, 260 km to the south.

***Columba unicincta* Afep Pigeon**
This bird was seen several times in small numbers. Although it was not collected by Andersen, it is known from the Bukoba district of Tanzania.

***Psittacus erithacus* Grey Parrot**
A flock of 19 on 9 December was the only sight record.

***Caprimulgus tristigma* Freckled Nightjar**
A pair was observed calling around a grass-covered rocky hill within the forest.

***Indicator variegatus* Scaly-throated Honeyguide**
Seen on two occasions at the forest edge.

***Oriolus brachyrhynchus* Western Black-headed Oriole**
Recorded by us and by Andersen. Andersen's specimen, listed by Britton (1981), was the first record for the country.
***Remiz caroli* African Penduline Tit**
A pair observed mating close to a recently completed nest provides evidence of breeding outside the months indicated by Brown & Britton (1980).
****Trichastoma albipectus* Scaly-breasted Illadopsis**
An adult caught on 7 December. The olivaceous-brown tips to the feathers of the upper breast were distinctive in the hand. It was otherwise similar to the Pale-breasted Illadopsis *T. rufipennis puguensis* which we know well from ringing studies in the Pugu Hills.
****Bleda eximia* Green-tailed Bristlebill**
This distinctive species was netted on 7 December.
****Phyllastrephus xavieri* Xavier's Greenbul**
One caught in the forest had the following measurements: wing 86 mm, tail 81 mm, bill 22 mm, tarsus 21 mm; it therefore falls at the top end of the size range for males of this species as given by Chapin (1953), Mackworth-Praed & Grant (1973) and our own measurements of specimens in the British Museum (Nat. Hist.). The sympatric and very similar *P. icterinus* (Icterine Greenbul) can also be expected to occur in Minziro.
****Ixonotus guttatus* Spotted Greenbul**
We had several sightings of this conspicuous bird from the forest edge but, rather surprisingly, it is absent from Andersen's collection. Although the species is reported as common in Malabigambo (Britton 1980), it had not been recorded previously from Tanzania.
****Alethe diademata* Fire-crested Alethe**
An adult netted on 7 December.
***Alethe poliocephala* Brown-chested Alethe**
Two birds netted on 7 December were considered to have been of the race *carruthersi*, which occurs in Uganda (including Malabigambo) and western areas of Kenya, but has not hitherto been recorded from Tanzania.
****Sheppardia cyornithopsis* Akalat**
An adult netted on 7 December. The restricted amount of orange on the throat and upper breast helps to separate this species from the similar but montane *S. aequatorialis*. *S. cyornithopsis* is recorded as abundant in Malabigambo (Britton 1980).
***Stizorhina fraseri* Rufous Thrush**
This species was observed twice inside the forest. Hall & Moreau (1970) map a specimen record at Bukoba town, and Bukoba District is mentioned by Britton (1980). However, as the forests south of the Kagera River have virtually disappeared as fuel-wood for the local tea factory, Minziro may well be the only remaining refuge for this species in Tanzania.
***Apalis jacksoni* Black-throated Apalis and *Apalis rufogularis* Buff-throated Apalis**
Several sightings of these birds, often in mixed species flocks. Britton (1980) only records them from Tanzania in Bukoba District.
****Nesocharis ansorgei* White-collared Olive-back**
Two records of this distinctive species confirm the prediction by Britton (1980) of the range extending into northwestern Tanzania.

***Pyrenestes ostrinus* Black-bellied Seedcracker**
The only record of this species in Tanzania is the type of the race '*frommi*' Kothe, 1911, from Kitungulu in the southwest of the country, but there have been no subsequent records, although this form occurs in Zambia (Benson *et al.* 1971). Our sightings of this bird presumably refer to the nominate race which is locally common in adjoining areas of Uganda (Britton 1980).

## OTHER SPECIES RECORDED

The following species were collected by Andersen (TA) or seen by us (BH). Several of Andersen's specimens are of non-forest birds and may well have been collected some distance from the forest proper, his collector using 'Minziro' as the closest reference point.
Great Sparrowhawk *Accipiter melanoleucus* (TA, BH), African Goshawk *A. tachiro* (TA), Augur Buzzard *Buteo augur* (TA), Long-crested Eagle *Lophaetus occipitalis* (BH), White-spotted Pygmy Crake *Sarothrura pulchra* (TA), Black-bellied Bustard *Eupodotis melanogaster* (TA), Red-eyed Dove *Streptopelia semitorquata* (BH), Tambourine Dove *Turtur tympanistria* (BH), Green Pigeon *Treron australis* (TA, BH), Red-headed Lovebird *Agapornis pullaria* (TA), Black-billed Turaco *Tauraco schuetti* (TA, BH), Emerald Cuckoo *Chrysococcyx cupreus* (TA), Black Coucal *Centropus grillii* (TA), Spotted Eagle Owl *Bubo africanus* (BH), African Wood Owl *Ciccaba woodfordii* (BH), Speckled Mousebird *Colius striatus* (TA, BH), Blue-breasted Kingfisher *Halcyon malimbica* (BH), White-throated Bee-eater *Merops albicollis* (BH), Eurasian Bee-eater *M. apiaster* (BH), Blue-cheeked Bee-eater *Merops persicus* (BH), Little Bee-eater *M. pusillus* (TA), Blue-breasted Bee-eater *M. variegatus* (BH), Black and White Casqued Hornbill *Bycanistes subcylindricus* (BH), Crowned Hornbill *Tockus alboterminatus* (BH), Yellow-spotted Barbet *Buccanodon duchaillui* (TA, BH), Double-toothed Barbet *Lybius bidentatus* (TA, BH), Hairy-breasted Barbet *L. hirsutus* (TA), Spotted-flanked Barbet *L. lacrymosus* (TA), White-headed Barbet *L. leucocephalus* (TA), Yellow-rumped Tinkerbird *Pogoniulus bilineatus* (TA, BH), Red-throated Wryneck *Jynx ruficollis* (TA), Little Spotted Woodpecker *Campethera cailliautii* (TA), Brown-eared Woodpecker *C. caroli* (TA, BH), Buff-spotted Woodpecker *C. nivosa* (BH), Grey Woodpecker *Mesopicos goertae* (TA), Mosque Swallow *Hirundo senegalensis* (BH), White-headed Roughwing *Psalidoprocne albiceps* (BH), Purple-throated Cuckoo Shrike *Campephaga quiscalina* (TA, BH), Bristlebill *Bleda syndactyla* (TA), Yellow-throated Leaflove *Chlorocichla flavicollis* (TA), Nicator *Nicator chloris* (TA, BH), Brown-backed Scrub Robin *Cercotrichas barbata* (TA), White-browed Robin Chat *Cossypha heuglini* (TA), Snowy-headed Robin Chat *C. niveicapilla* (TA), Stonechat *Saxicola torquata* (TA, BH), Kurrichane Thrush *Turdus libonyanus* (TA), Masked Apalis *Apalis binotata* (TA), Black-faced Rufous Warbler *Bathmocercus cerviniventris* (TA, BH), Grey-backed Camaroptera *Camaroptera brachyura* (TA, BH), Red-faced Cisticola *Cisticola erythrops* (BH), Trilling Cisticola *C. woosnami* (BH), Grey-capped Warbler *Eminia lepida* (TA), Willow Warbler *Phylloscopus trochilus* (BH), White-chinned Prinia *Prinia leucopogon* (TA, BH), Tawny-flanked Prinia *P. subflava* (BH), Moustached Warbler *Sphenoeacus mentalis* (BH), Garden Warbler *Sylvia borin* (TA), Green Crombec *Sylvietta virens* (BH), Lead-coloured Flycatcher *Myioparus plumbeus* (BH), Chin-spot Batis *Batis molitor* (TA), Jameson's Wattle-eye *Platysteira blissetti* (TA, BH), Chestnut Wattle-eye *P. castanea* (TA), Wattle-eye *P. cyanea* (TA), Blue

Flycatcher *Erannornis longicauda* (TA), Red-bellied Paradise Flycatcher *Terpsiphone rufiventer* (TA, BH), Dusky Crested Flycatcher *Trochocercus nigromitratus* (TA, BH), Black-headed Gonolek *Laniarius barbarus* (TA), Tropical Boubou *L. ferrugineus* (TA, BH), Fiscal *Lanius collaris* (TA), Mackinnon's Shrike *L. mackinnoni* (TA, BH), Rüppell's Long-tailed Glossy Starling *Lamprotornis purpuropterus* (TA), Splendid Glossy Starling *L. splendidus* (TA, BH), Collared Sunbird *Anthreptes collaris* (TA), Olive-bellied Sunbird *Nectarinia chloropygia* (BH), Bronze Sunbird *N. kilimensis* (TA), Mariqua Sunbird *N. mariquensis* (TA), Olive Sunbird *N. olivacea* (TA, BH), Green-throated Sunbird *N. rubescens* (TA), Scarlet-chested Sunbird *N. senegalensis* (BH), Superb Sunbird *N. superba* (BH), Variable Sunbird *N. venusta* (TA), Green-headed Sunbird *N. verticalis* (TA, BH), Grosbeak Weaver *Amblyospiza albifrons* (BH), Red-headed Malimbe *Malimbus rubricollis* (BH), Yellow-backed Weaver *Ploceus melanocephalus* (TA), Vieillot's Black Weaver *P. nigerrimus* (TA, BH), Black-necked Weaver *P. nigricollis* (TA), Spectacled Weaver *P. ocularis* (TA), Slender-billed Weaver *P. pelzelni* (TA), Compact Weaver *P. superciliosus* (TA), Red-headed Quelea *Quelea erythrops* (BH), Waxbill *Estrilda astrild* (TA), Black-crowned Waxbill *E. nonnula* (TA), Fawn-breasted Waxbill *E. paludicola* (TA, BH), African Firefinch *Lagonosticta rubricata* (BH), Grey-headed Negrofinch *Nigrita canicapilla* (BH), Red-headed Bluebill *Spermophaga ruficapilla* (TA), Black and White Mannikin *Lonchura bicolor* (TA, BH), African Citril *Serinus citrinelloides* (BH), Yellow-fronted Canary *S. mozambicus* (TA).

In addition, T. Andersen collected the following birds (collector's numbers are given) which remain to be identified: *Alcippe* sp. 2156, 2160, *Andropadus* sp. 2161, 2162, flycatcher 2169, and *Neocossyphus* sp. 2173.

**ACKNOWLEDGEMENTS**

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**REFERENCES**

BRITTON, P.L. 1978. The Andersen collection from Tanzania. *Scopus* 2: 77–85.

BRITTON, P.L. 1981. Notes on the Andersen collection and other specimens from Tanzania housed in some West German museums. Scopus 5: 14–21.

CHAPIN, J.P. 1953. The birds of the Belgian Congo. Part 3. *Bulletin of the American Museum of Natural History*. 75A: 1–821.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1973. African handbook of birds. Series III, Vol. I, Birds of West Central and Western Africa. London: Longman.

RODGERS, W.A. 1981. The distribution and conservation status of colobus monkeys in Tanzania. Primates 22: 33–45.

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# MACKINDER'S EAGLE OWL *BUBO CAPENSIS MACKINDERI* BREEDING IN THE KENYAN RIFT VALLEY

P.B.Taylor

The Cape Eagle Owl *Bubo capensis* is an African endemic species with an eastern distribution from northern Ethiopia to Cape Province, South Africa (Snow 1978). Although it occurs at sea-level in coastal Cape Province it is essentially a montane species north of central coastal Natal, generally being associated with mountainous country and open rocky situations with grassland, sometimes in the vicinity of evergreen forest (Benson & Irwin 1967, Snow 1978). Of the three recognized races, *mackinderi* is the largest in size and occurs from Zimbabwe north to Kenya (Steyn & Tredgold 1977). In East Africa *mackinderi*, popularly known as Mackinder's Eagle Owl, is a locally common resident in montane areas of western and central Kenya at altitudes of 2400–4200 m a.s.l.; it may wander as low as 1800 m in central Kenya, generally in the vicinity of a higher land mass (Sessions 1972, Britton 1980). It is also known from two localities in Tanzania—Mt Luhoto at 1950 m and Olosirwa at 2700 m (Britton 1980)—but all breeding records are from Kenya, at 2400–4200 m (Britton 1980, Brown & Britton 1980).

In October 1985 I found a pair of *mackinderi* breeding at 1900 m a.s.l. in the Kenyan Rift Valley near Lake Elmenteita. The habitat, situation and altitude of the site are of interest when compared with known breeding sites in Kenya, while my observations also provide some behavioural information additional to that given in the two published accounts of the biology of this little-studied species (Sessions 1972, Steyn & Tredgold 1977).

## LOCALITY

Observations were made at the active diatomite mine at Kariandusi (0°27'S, 36°17'E) on the eastern scarp slope of the Rift Valley overlooking Lake Elmenteita. The mine is adjacent to the National Museums of Kenya Kariandusi Prehistoric Site and consists of a deep quarry, the vertical sides of which are stepped and have small tunnels (some of them no more than caves) quarried into the diatomite at various levels. The quarry is a breeding site for several bird species, including Horus Swifts *Apus horus* and Nyanza Swifts *A. niansae*.

## OBSERVATIONS

### 5 October 1985

On a visit to the quarry at 17:30 with the mine manager, Mr Ray Terry, to observe the swift colony, I noticed two large owlets sitting just inside a shallow cave in the cliff face. The floor of the cave was covered with fragments of diatomite and there was no trace of any nest material; a little debris towards the back of the cave possibly consisted of prey remains, pellets, etc. Close observation with a telescope revealed the birds to be young Mackinder's Eagle Owls, my identification later being confirmed by the arrival of an adult. The owlets were covered with long grey-brown mesoptile down, narrowly barred dark brown on the underparts and more broadly barred on the upperparts. The long fluffy down on the thighs was tawny-tinged, the tarsi and toes were creamy white. The remiges were partly grown, very dark brown with pale tawny spots. The birds had grey faces, slightly darker around the eyes, with

a narrow blackish border to the facial disc and a whitish patch at the base of the bill extending below and between the eyes. Short downy ear-tufts were visible. The bill and cere were dark grey, the eyes deep yellow. The owlets were quiet, sitting upright and leaning against one another while dozing. At about 18:50, 25 min after sunset, they became alert and moved around a little. An adult flew into the quarry at 19:00, circled around giving sharp barks before landing on a ledge close to us. As it was becoming too dark for further observations, we left the quarry.

**11–12 October 1985**

R. McVicker, C. Taylor, R. Terry and I visited the site at 18:00 on 11th. The owlets were noticeably larger than on 5 October but were still largely covered with mesoptile down although a few dark first-adult feathers were showing on the upperparts. The birds called at intervals from 18:30 (sunset), giving loud wheezing calls *cheeech* or *skeeer* which were sometimes quie staccato—almost wheezy barks. An adult briefly appeared at 19:00 giving no calls, and we then left the quarry.

R. McVicker and I returned at 23:00 but heard no calls or other evidence of activity before we left at midnight. We returned at 05:20 on 12th (about 55 min before sunrise), when the chicks were calling frequently. At 05:45 (first light) an adult flew into the quarry and landed on a cliff ledge out of sight. At 06:03, possibly the same adult returned with a small Rock Hyrax *Procavia johnstoni* in its talons; as it arrived it gave two barks followed by deep single and multiple hoots. It circled around the quarry giving grunts interspersed with barks and hoots, then it landed on a ledge about 150 m from us and began to dismember the prey; by this time the chicks were calling less frequently. At 06:45, when it had eaten more than half of the prey, the adult carried the remainder to the chicks (which had stopped calling) and fed it to them in small pieces. The adult then flew to a cliff ledge, where it roosted beneath some bushes. During these observations, calls were tape recorded by R. McVicker.

**20 October 1985**

When I visited the site at 08:15 both owlets were out of the nest-cave, one sitting on a ledge below the cave and the other on a ledge below the first, about 4 m above the floor of the quarry. They may have fluttered down to these positions. Both birds had well-feathered upperparts, including upperwing coverts, and one or two dark feathers on the breast, while the remiges were well-grown; there was still much mesoptile down on the head and the underparts and the facial discs were washed deep tawny. Their eyes were orange, paler and less fiery than those of the adult, their bills were almost black, their ceres and claws dark grey.

Both birds occasionally made wheezing calls. Although I examined likely roosting sites I could not locate the adults. I walked into the quarry and approached the lower owlet, which sat upright and watched me silently. I photographed the bird from a range of 11 m without disturbing it.

At 09:55 I returned to find the sun full on the cliff-face and both owlets out of sight. The upper bird had retreated along its ledge and into a shallow shady cave where it stood and leaned forward, with ruffled plumage (especially on the face) and with wings drooping and angled forward, stetching its neck forward and looking fixedly to its left: although the bird was obviously in some kind of threat posture I was unable to see anything towards which this display was directed. The lower bird had moved to the end of its ledge, where it was roosting behind small tufts of grass

in the deep shade afforded by a small shrub. I was unable to locate the adult owls.

## DISCUSSION

### Distribution

In Kenya, Mackinder's Eagle Owl is known to breed above 2400 m, from Mt Elgon east to the Mau Plateau and from the Aberdares to Mt Kenya (Britton 1980). Sessions (1972) states that its breeding range is interrupted by the Rift Valley but suggests that birds could travel between the breeding areas east and west of the Rift; the occasional Rift Valley sightings have been attributed to wanderers (Britton 1980).

Sessions (1972) proposes that altitude is a major factor governing the lowest limit of the breeding range, which he puts at about 2440 m near the equator. Kariandusi lies approximately midway between the known breeding areas on the Mau Plateau and the Aberdares, and is 500 m lower in altitude than any other known breeding site in East Africa. Situated towards the bottom of the scarp slope, it is not even as high as some of the hills rising from the floor of the Rift in the Naivasha, Nakuru and Elmenteita area. It is therefore possible that this species is not inhibited by altitude from breeding in the Rift Valley and that records in this area may not all refer to wanderers: breeding pairs may occur in suitable habitat, both on the escarpment and on the valley floor (see *Ecological Requirements*, p. 16).

### Habitat and nest site

On the Mau Plateau the preferred habitat appears to be grassland with valleys containing temporary or permanent streams; light timber and rocky places are favoured but are not essential features (Sessions 1972). Regardless of terrain, the feature common to all the Mau Plateau breeding sites known to Sessions (1972) was the presence of water, on which territories were centred and near which nests were located.

The Kariandusi quarry is in rocky country with mixed grassland and scrub and has no stream running very close to the nest site. A small (probably seasonal) stream runs, amid dense scrub and small trees, down a narrow gulley outside the quarry and the only other water is a small shallow pool on the quarry floor. There are a few sizeable trees in the quarry area but the woody vegetation within and beyond the quarry is mostly bushes, scrub and small trees. This area is therefore not markedly similar to the breeding sites described by Sessions (1972). However, the nest site itself closely resembles that of a pair of Mackinder's Eagle Owls observed at granite hills in Shangani District, Zimbabwe (Steyn & Tredgold 1977). This was in one of the solution caves in a narrow granite amphitheatre and the photograph of the site (plate 2b of Steyn & Tredgold 1977) shows an area of cliffs and caves very similar to that at Kariandusi. The Zimbabwe site is apparently typical of known sites in granite area of that country and the proximity of water to such sites is probably incidental; even if streams occur, they dry up during the dry season when the birds breed (Steyn & Tredgold 1977).

### Breeding dates

The owlets were aged, and the approximate laying date calculated, from information given by Sessions (1972) and Steyn & Tredgold (1977). The owlets were thought to be about six weeks old on 5 October (both birds were approximately the same size), and the subsequent development of the birds confirmed this estimate. Thus they were

hatched about 24 August and, taking the incubation period as 34–36 days, the eggs would have been laid about 16–18 July, well into the inter-rains period in the Rift Valley (Brown & Britton 1980).

Peak laying months at Mau Narok are in the dry season, from October to February, while there are too few records from other areas of Kenya to show a pattern the Kariandusi site, breeding also takes place in the dry season (Steyn & Tredgold 1977, Irwin 1981).

**Activity times and behaviour at the nest**

Steyn & Tredgold (1977) recorded adults feeding owlets only during the hours of darkness, although the adult female was active at the nest before dark. Sessions (1972) observed that in Kenya this species is not entirely nocturnal, often hunting before sunset and in the early morning, but he gives no indications of the times at which chicks are fed. My observations show that at six weeks of age chicks began to make their food-soliciting wheezing calls at sunset and that on two occasions an adult first appeared at the nest (without food) about 20 min after sunset. On 12 October the chicks were calling an hour before sunrise but were not fed until 30 min after sunrise, although an adult was in the quarry before sunrise and the female had returned with prey at first light.

*Bubo capensis* is a member of the Eagle Owl *B. bubo* superspecies (Snow 1978) and behaviour observed at Kariandusi resembles that given by Cramp (1985) for *B. bubo*. Young *B. bubo* start giving food-calls near sunset, and hunting by adults is essentially nocturnal. The female dismembers food for the young until they are at least one month old (the Kariandusi owlets were fed dismembered prey at six weeks of age). *B. bubo* chicks are fed at intervals throughout the night, as were the *B. capensis* chicks at Shangani (Steyn & Tredgold 1977).

It is perhaps unusual that the Kariandusi female once fed the chicks only after eating from the prey herself, even though the chicks were calling for food. This behaviour is not recorded by Steyn & Tredgold (1977) or for *B. bubo* by Cramp (1985). Possibly the female was inhibited from approaching the nest by the presence of observers, but it is more likely that the chicks had been fed before dawn; after eventually receiving a small meal they appeared quite satisfied.

At eight weeks old one Kariandusi owlet showed a threat posture very similar to the forward-threat posture described by Cramp (1985) for *B. bubo*. Sessions (1972) describes a similar threat posture adopted by a captive fully-fledged young *B. capensis* in response to attacks by a Peregrine Falcon *Falco peregrinus*.

**Roosting**

At Kariandusi an adult was seen to roost near the nest. When out of the nest the chicks sought shade from full mid-morning sun when roosting (see also Sessions 1972) and, like the adult, adopted an upright roosting posture with half-closed eyes, similar to that of *B. bubo* (Cramp 1985).

**Voice**

The wheezing food-call of the chicks is similar to that described by Cramp (1985) for *B. bubo* and, as in that species, it is audible for a considerable distance. Adults' calls were similar to those described by Sessions (1972).

**Ecological requirements**

Unlike the birds studied by Sessions (1972), but in common with the granite country Zimbabwe birds (Steyn & Tredgold 1977), the Kariandusi owls did not appear to be closely associated with water and it is unlikely that they obtained any

food at the nearest stream. This species tends to rely on one particular prey species (which varies according to locality) and occurs in areas where there is a super-abundance of this prey (Sessions 1972, Steyn & Tredgold 1977). At Kariandusi Rock Hyraxes are common and may have been a major prey item, as they are on Mt Kenya (Sessions 1972); such prey is widely available locally in Rift Valley areas which the bird could perhaps colonize (see Habitat and nest site, above).

Sessions believed that these birds require a relatively cool climate and suggests that this is one reason why they do not occur at lower altitudes near the equator. At 1900 m, Kariandusi is not cool and the quarry itself becomes very hot during the day, as no breeze circulates within it. The breeding and roosting caves probably remain cooler than the surrounding countryside during the day, but adults roosting on quarry ledges must be able to tolerate considerable heat. Thus high temperatures should not prevent this owl occurring at sites low on the escarpment and on the Rift Valley floor in this area, but it may require relatively cool nesting sites such as caves.

**Relationships with other large owls**

Sessions (1972) considered that Mackinder's Eagle Owl suffers little competition from other large owls at Mau Narok. No other large owl was seen at Kariandusi but both Verreaux's Eagle Owl *B. lacteus* and Spotted Eagle Owl *B. africanus* occur in the vicinity of Lake Elmenteita, only 2 km to the west, as does Marsh Owl *Asio capensis* rarely (pers. obs.). In such an area of potential overlap with other large owls, a study of relationships between these and Mackinder's Eagle Owl would be of value.

**Reactions to human presence**

One of the most surprising aspects of the birds' presence at Kariandusi was their tolerance of the considerable human activity at the mine and the adjacent prehistoric site. These owls are confiding and unafraid of man (Sessions 1972, Steyn & Tredgold 1977, pers. obs.) but in Zimbabwe they usually nest in areas remote from human habitation (Steyn & Tredgold 1977). Sessions (1972) does not mention the proximity of human activity to nests at Mau Narok. Before my observations in October 1985 the presence of the owls at the quarry had not been recorded; this is an excellent example of how easily the birds may be overlooked, even though in the breeding season they can be remarkably nosy and obvious (Sessions 1972). Thus it is quite possible that other pairs, hitherto undetected, may occur in this area.

**ACKNOWLEDGEMENTS**

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**REFERENCES**

BENSON, C.W. & IRWIN, M.P.S. 1967. The distribution and systematics of *Bubo capensis* Smith (Aves). *Arnoldia (Rhodesia)* 3(19): 1–19.

CRAMP, S. (ed.) 1985. *The birds of the western Palearctic*. Vol. IV. Oxford: Oxford University Press.

IRWIN, M.P.S. 1981. *The birds of Zimbabwe*. Harare: Quest Publishing.

STEYN, P. & TREDGOLD, D. 1977. Observations on the Cape Eagle Owl. *Bokmakierie* 29: 31–42.

SESSIONS, P.H.B. 1972. Observations on Mackinder's Eagle Owl *Bubo capensis mackinderi* Sharpe on a Kenya farm. *Journal of the East Africa Natural History Society and National Museum* 138: 1–20.

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## OSC PUBLICATIONS

**Birds of the Kampala area** *Scopus* Special Supplement Number 2, by Dr Margaret Carswell, is now published and is available from D.A. Turner, Box 48019, Nairobi.

The book is A5, soft-backed, of 94 pages and gives a wealth of information on the birds of the area around Uganda's capital. Surface mail costs are: KShs 85/- for *Scopus* subscribers in Kenya, £4.00 or US$6.00 for those in other countries. For non-subscribers the cost is KShs 100/-, £5.00 or US$7.50. All prices include postage. Airmail rates available on request from Mr Turner.

Copies of the first Special Supplement, *Birds of Somalia their habitat, status and distribution*, by J.S. Ash and J.E. Miskell are still available, as above and at the same prices as the Kampala book.

### Other publications

The first two titles mentioned below are available from D.A. Turner, Box 48019, Nairobi at the following surface postage-paid prices each:

KShs 20/- in Kenya, £1.00 or US$1.50 in all other countries.

***Check-list of the birds of Kenya,*** Second Edition, May 1986. A5, 31 pp.
An up-to-date and improved version of the best-selling list which was first produced in 1981 based on *Birds of East Africa*. In this new typeset edition seven boxes are provided for each species for checking off and species added to the Kenya list since *Birds of East Africa* are fully referenced in foot-notes.

***Check-list of the birds of Tanzania,*** A5, 34 pp.
A straight reprint, but on better quality paper, of this 34 pp. list. The first printing of February 1982 has sold out completely. Tanzanian residents please contact Neil Baker, Box 5272, Dar es Salaam, or telephone 23268 or 32059 to buy copies in Tanzanian shillings.

***Check-list of the birds of Uganda,*** A5, 36 pp.
The original November 1984 edition. Obtainable from Prof. Derek Pomeroy, Department of Zoology, Makerere University, Box 7062, Kampala, Uganda.

# SHORT COMMUNICATIONS

## Additional Marabou colony in Kenya

In his review of the status of the Marabou *Leptoptilos crumeniferus* in Kenya, Pomeroy (1986) stated that "...there could still be undiscovered colonies but they are likely to be small...". Such a colony was found in September 1986 on an island in the Tana River at Karura (0°42'S, 37°54'E).

The colony, in three or four tall trees bordering the river, contained at least 12 occupied nests. Whilst birds appeared to be still incubating on two nests, almost fully-fledged young stood on five nests. The colony composition on 20 September viewed from approximately 100 m appeared to be as follows:

| Number and stage of development of nestlings | Number of nests |
|---|---|
| Birds still incubating | 2 |
| Single downy chick | 2 |
| Two downy chicks | 2 |
| Single intermediately-developed chick | 1 |
| Single well-developed chick | 1 |
| Two well-developed chicks | 4 |

A pair of Palmnut Vultures *Gypohierax angolensis* were also of interest and were probably nesting in a palm within 50 m of the stork colony.

Unfortunately, this colony of Marabou—which the local people describe as having been there "as long as we can remember"—is no sooner discovered than it is doomed: the colony is located within the reservoir area for the new dam for the Kiambere hydro-electric scheme and bush-clearing is well advanced and has to be completed before impounding of the reservoir begins in 1987. It remains to be seen whether the colony will re-locate somewhere on the upper Tana.

**Reference**

POMEROY, D.E. 1986. The Marabou in Kenya. *Scopus* 10: 1–9.

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## Raptor counts in Kenya, 1973 and 1983

During bird watching trips in Kenya in 1973 and 1983, counts were made of raptors seen while travelling by car. A comparison of the data for the two years suggests that some marked changes in abundance of some species may have occurred. The results are presented here and comparison is made with data given by Brown (1970).

### Methods

Observations were made between 8 and 17 January 1973 and between 6 and 17 February 1983. Counts were made from moving vehicles by up to four observers in 1973 and up to three observers in 1983. Counts of vultures were not made consistently and have therefore been excluded from this analysis. Details of the routes over which counts were made are given in Appendix 1. The circumstances of the observations varied between relatively fast motoring on metalled roads (when it was sometimes impossible to stop to check identifications) to slow cruising in game

parks and slow and difficult negotiations of poor unmetalled roads. No data were kept on these factors, nor on the nature of the habitat traversed. These factors, together with inevitable variations in observer effort and other factors mentioned in Brown (*op. cit.*) render the data on their own unreliable as evidence of population changes. Where large variations have been noted, however, these may indicate that there have been real changes in numbers even though the extent of these cannot safely be measured from such counts.

**Results**

Details of the counts expressed in absolute terms and as the number of raptors seen per 100 km are given in Table 1 which also includes comparable data derived from Tables 6 and 7 in Brown (*op. cit.*). The latter relate to the years 1965–67. The most striking feature of Table 1 is the marked decline in the total number of raptors counted. Brown's counts totalled over 19 raptors per 100 km whereas the present counts totalled approximately 16 per 100 km in 1973 and only about 12.5 in 1983.

Counts of ten or more individuals in at least one of the years 1973 and 1983 are available for eight species and all but two of those show a decline, Black-shouldered Kite—scientific names are given in Table 1—nearly 80 per cent, Bateleur about 50 per cent, Pallid/Montagu's Harrier and Pale Chanting Goshawk about 65 per cent each, Augur Buzzard about 70 per cent, and Tawny/Steppe Eagle about 56 per cent. The two species/groups to show an increase are Black Kite (*c.* 45 per cent) and Kestrel/Lesser Kestrel (*c.* 400 per cent), but the latter was affected by a flock of 24 seen at Naro Moru in 1983. If that is excluded, the increase becomes 72 per cent.

Taking Brown's (*op. cit.*) figures into account, Tawny/Steppe Eagle and Augur Buzzard both show declines over all three series of counts, while Long-crested Eagle, which was recorded reasonably commonly by him, was seen much less frequently in the present study. The other six species referred to above all exhibit marked fluctuations over the three series of counts. Steppe Eagles have declined markedly in the western Palaearctic (Cramp & Simmons 1980) but Brown *et al.* (1982) imply no such decrease in Africa other than in South Africa and they state that numbers of Augur Buzzards are probably stable. Similarly, they refer to stable or increasing numbers of Black Kites and Long-crested Eagles. Of the other species reviewed here, and for which they commnet on changes in abundance, they refer to the Bateleur as having been much reduced and numbers of Black-shouldered Kites as varying by a factor of up to ten between one year and the next in a given area. There is thus no consistency between the general summaries given by those authors and the counts presented here which, for the reasons referred to at the beginning, cannot be taken as good evidence of population changes. Nevertheless, on a local basis they may provide corroborative evidence of changes if these should be revealed by other studies. At the very least, the implication of markedly reduced numbers of certain species and of the total numbers of raptors suggested by the data in Table 1 would be worth following up by further counts.

**Acknowledgements**

The observations on which this summary is based were made by (in addition to the author) J. Francis, J.G. Francis, D.C. May, G. Oliver, C.E. Wheeler and D. Wheeler.

**References**

BROWN, L. 1970. *African birds of prey.* London: Collins.

CRAMP, S. & SIMMONS, K.E.L. 1980. *The birds of the western Palearctic.* Vol. II. Oxford: Oxford University Press.

Table 1. Counts of raptors other than vultures in East Africa: a) derived from Brown 1970 (counts over 4845 km), b) present study over 1735 km and c) present study over 1607 km

| | 1965–67 a | 1973 b | | 1983 c | |
|---|---|---|---|---|---|
| | birds/ 100 km | total | birds/ 100 km | total | birds |
| Secretary Bird *Sagittarius serpentarius* | 0.47 | – | – | – | – |
| Marsh Harrier *Circus aeruginosus* | 0.10 | 2 | 0.12 | | |
| African Marsh Harrier *C. ranivorus* | 0.16 | 1 | 0.06 | 1 | 0.06 |
| Pallid/Montagu's Harrier *C. macrourus/pygargus* | 0.10 | 31 | 1.79 | 10 | 0.62 |
| Harrier Hawk *Polyboroides radiatus* | 0.06 | 1 | 0.06 | – | – |
| Brown Snake Eagle *Circaetus cinereus* | 0.18 | 5 | 0.29 | – | – |
| Black-breasted Snake Eagle *C. gallicus pectoralis* | 0.06 | – | – | 1 | 0.06 |
| Bateleur *Terathopius ecaudatus* | 1.32 | 29 | 1.67 | 13 | 0.81 |
| *Accipiter* sp. | – | 4 | 0.23 | 5 | 0.31 |
| Great Sparrowhawk *Accipiter melanoleucus* | 0.04 | – | – | – | – |
| Greater Spotted Eagle *Aquila clanga* | – | 1 | 0.06 | 1 | 0.06 |
| Steppe/Tawny Eagle *A. nipalensis/rapax* | 2.04 | 27 | 1.55 | 11 | 0.68 |
| Verreaux's Eagle *A. verreauxi* | 0.04 | 2 | 0.12 | – | – |
| Wahlberg's Eagle *A. wahlbergi* | 0.18 | 3 | 0.17 | 3 | 0.19 |
| Grasshopper Buzzard *Butastur rufipennis* | – | 2 | 0.12 | – | – |
| Augur Buzzard *Buteo augur* | 4.47 | 29 | 1.67 | 8 | 0.50 |
| Common Buzzard *Buteo buteo* | 0.12 | – | – | – | – |
| *Buteo* sp. | – | – | – | 2 | 0.12 |
| Booted Eagle *Hiraaetus pennatus* | – | 1 | 0.06 | – | – |

| | | | | | |
|---|---|---|---|---|---|
| Lizard Buzzzard | | | | | |
| *Kaupifalco monogrammicus* | – | 1 | 0.06 | 1 | 0.06 |
| Long-crested Eagle | | | | | |
| *Lophaetus occipitalis* | 0.58 | 4 | 0.24 | 6 | 0.37 |
| Gabar Goshawk | | | | | |
| *Melierax gabar* | 0.06 | – | – | – | – |
| Dark Chanting Goshawk | | | | | |
| *M. metabates* | 0.08 | – | – | – | – |
| Pale Chanting Goshawk | | | | | |
| *M. poliopterus* | 0.23 | 21 | 1.21 | 7 | 0.44 |
| Martial Eagle | | | | | |
| *Polemaetus bellicosus* | 0.04 | 1 | 0.06 | 3 | 0.19 |
| Crowned Eagle | | | | | |
| *Stephanoaetus coronatus* | 0.01 | – | – | – | – |
| Fish Eagle | | | | | |
| *Haliaeetus vocifer* | 0.30 | 4 | 0.24 | – | – |
| Black Kite | | | | | |
| *Milvus migrans* | 7.32 | 61 | 3.52 | 83 | 5.16 |
| Swallow-tailed Kite | | | | | |
| *Chelictinia riocourii* | 0.12 | – | – | – | – |
| Black-shouldered Kite | | | | | |
| *Elanus caeruleus* | 0.66 | 34 | 1.96 | 7 | 0.44 |
| Grey Kestrel | | | | | |
| *Falco ardosiaceus* | – | – | – | 1 | 0.06 |
| Lanner | | | | | |
| *F. biarmicus* | 0.10 | 1 | 0.06 | – | – |
| African Hobby | | | | | |
| *F. cuvierii* | – | 3 | 0.17 | – | – |
| White-eyed Kestrel | | | | | |
| *F. rupicoloides* | 0.04 | – | – | – | – |

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**Appendix 1**

The following is a summary of the routes traversed. Counts were made over the distances indicated which do not represent the total distance travelled.

1973, 1735 km

Nairobi, Amboseli, Tsavo East and West, Nairobi, Nakuru, Kisumu, Kaimosi, Nakuru, Naro Moru, Meru, Nanyuki,

1983, 1607 km

Mara, Kericho, Nakuru, Baringo, Naro Moru, Nyeri, Nairobi, Tsavo West, Mombasa, Watamu, Nairobi.

### Frugivorous pelicans: fish or fig?

At *c.* 09:00 on 8 February 1987, on the road between the Lake Manyara National Park entrance and Mto-wa-Mbu, northern Tanzania, I noticed several Pink-backed Pelicans *Pelecanus rufescens* in the crown of *c.* 25–30-m high fig tree *Ficus* sp. I suspected that they were nesting and watched them for several minutes in good light with 7 x 50 binoculars, but there were no signs of nests.

Each bird was deliberately and repeatedly picking individual ripe figs *c.* 1 cm in diameter, or occasionally a small bunch of figs, and apparently swallowing them. The action was very delicate with the figs in the bill tip; they were then tossed back into the pouch in an action very like that of *Bycanistes* hornbills. Sometimes the birds would walk along branches with no apparent difficulty to another batch of figs.

It seems reasonable to speculate that the habit started with chance encounters with ripe figs when the pelicans were collecting sticks for their nests.

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Received 30 March 1987

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## REVIEW

**The birds of Africa.** Volume II, edited by Emil K. Urban, C. Hilary Fry and Stuart Keith, 1986. London: Academic Press. Overall size 245 x 318 x 42 mm, pp. xvi + 552, 28 colour and 4 black and white plates, many line drawings and maps. UK price £65.00.

This eagerly-awaited second volume is a great improvement over Volume I and will become an indispensable reference for everyone interested in African birds. The book is strongly bound and generally well printed (in Hong Kong) on good paper. Species accounts have been written by a number of authors (including the Editors) who are listed on the Contents pages. The book is a cross between an old-style work (such as those by Bannerman on various areas) and modern handbooks; thus it uses a somewhat abbreviated English style to save space, but counters this by having extremely wide margins, lots of white space elsewhere on the pages, and largish, but easily readable type. A format similar to *Birds of the western Palearctic* would have been preferable in my view. Any comparison with *BWP* is specious, however, because so much more is known and recorded on the birds of the western Palaearctic, hence *BWP*'s much more thorough coverage. But, as with the size, it is a pity that the original plan of covering the whole of Africa—and not just the Afrotropics—has been maintained. However, the mould has been cast, and it would be surely impossible now for the Editors to change either the format or the coverage, even if they wanted to.

The colour plates by Martin Woodcock are first class, and all examples in both the review copy and my own are excellently printed. Plates often have smaller pictures of birds in flight and downy young included alongside the main illustrations. There are four black and white plates, also by Martin Woodcock, showing waders, gulls and terns in flight. Many useful line drawings in the text are by Ian Willis. The maps show much more information than those in the first volume and give an indication of abundance (breeding or non-breeding), migration range and routes, and isolated records; question marks show uncertain records and some species' maps have their own special shading, explained alongside the map.

The Editors have made a number of changes to English names so that "every African bird shall have a name that clearly distinguishes it from every other bird in the world." Although many ornithologists will have been under the impression that scientific names fulfilled this role, there seems to be no stopping this quest for unique English names, surely just to satisfy globe-trotting tickers (listers). The Editors are to be congratulated, therefore, on providing alternative names for many species. The English language has many regional differences, which, I suspect, most people would choose to maintain, as giving the language added interest and even amusement from time to time. Each species is also provided with a French name.

Scientific nomenclature and order are conventional. Races, which generally follow C.M.N. White's list, are given a range statement and brief notes on differentiating characters. (Whoever is responsible should note that subspecific (and specific) names can never begin with a capital letter, unless the whole word is set in capitals: article 28, *International code of zoological nomenclature*. Third edition, 1985. London: ITZN.)

The text for each species is divided under bold-type headings covering Range and Status, Description, Field Characters, Voice, General Habits, Food, Breeding Habits (nothing is given on breeding for species which do not nest within the continent) and References. Measurements, including weights if available, are given in the Description sections. These headings make looking up a particular point quick and easy; with the exception, that is, of anything on migration. Information on this subject will be found under 'Range and Status' and under 'General Habits'. I hope that in future volumes 'Migration' will be included as a bold heading. In addition, it would be helpful if, where there are no ringing recoveries of the species affecting the area, a sentence of three words could be added to that effect. There are mistakes in some sections dealing with ringing recoveries: in the account of the Great Sandplover *Charadrius leschenaultii* (p. 243) the one ringing recovery known to me is given as two. The bird was actually ringed in Sudan and recovered in Syria; the reference to one ringed in Nairobi and recovered in Sudan is erroneous. Similarly, on p. 227 under Little Ringed Plover *C. dubius*, Nairobi scheme recoveries are exaggerated: there have been only two recoveries, one from Lake Nakuru (Kenya) to the USSR and one from East Germany to southern Sudan; the other three given in the book affecting Kenya and Sudan are erroneous.

*The birds of Africa* (Volume II) is a large book weighing nearly 3 kg, so it is not for taking into the field. Everyone seriously interested in the birds of the immense area it covers will want a copy, and libraries throughout the continent should have it on their shelves for those individuals who cannot afford to buy a personal copy. Although the price is high, it is not outrageously so, especially considering that the book is published by AP. In spite of the criticisms I have made, the book represents a tremendous amount of work by the authors, Editors, artists, production team and printers. It will be a long time, if ever, before it is superseded.

*G.C. Backhurst*

form used in this issue. Names of periodicals must be given in full and, in the case of books, the town of publication and the publisher should be given. A number of works which are cited frequently should not be listed under 'References'; the name(s) of the author(s) and date(s) of the publication should be given in the text in the normal way.

Authors of 'papers' receive five copies of their contribution free of charge. Extra copies, which will be supplied at cost, must be ordered when the MS is submitted. All contributions should be sent to the Editor, G.C. Backhurst, Box 24702, Nairobi, Kenya, and they will be acknowledged.

**Works which should not be listed under 'References'**

BACKHURST, G.C., BRITTON, P.L. & MANN, C.F. 1973. The less common Palaearctic migrant birds of Kenya and Tanzania. *Journal of the East Africa Natural History Society and National Museum.* 140: 1–38, = Backhurst *et al.* 1973.

BENSON, C.W., BROOKE, R.K., DOWSETT, R.J., & IRWIN, M.P.S. 1971. *The birds of Zambia.* London: Collins, = Benson *et al.* 1971.

BRITTON, P.L. (ed.) 1980. *Birds of East Africa.* Nairobi: EANHS, = Britton 1980.

BROWN, L.H. & BRITTON, P.L. 1980. *The breeding seasons of East African birds.* Nairobi: EANHS, = Brown & Britton 1980.

BROWN, L.H., URBAN, E.K. & NEWMAN, K. 1982. *The birds of Africa*, Vol. I. London and New York: Academic Press, = Brown *et al.* 1982.

HALL, B.P. & MOREAU, R.E. 1970. *An atlas of speciation in African passerine birds.* London: British Museum (Nat. Hist.), = Hall & Moreau 1970.

JACKSON, F.J. 1938. *The birds of Kenya Colony and the Uganda Protectorate*, 3 vols. London: Gurney & Jackson, = Jackson 1938.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1957 and 1960. *African handbook of birds.* Series I, vols 1 and 2; *Birds of eastern and north eastern Africa*, 2nd edition. London: Longmans Green & Co., = Mackworth-Praed & Grant 1957 and/or 1960.

MOREAU, R.E. 1966. *The bird faunas of Africa and its islands.* London: Academic Press, = Moreau 1966.

MOREAU, R.E. 1972. *The Palaearctic-African bird migration systems.* London: Academic Press, = Moreau 1972.

SNOW, D.W. (ed.) 1978. *An atlas of speciation in African non-passerine birds.* London: British Museum (Nat. Hist.), = Snow 1978.

URBAN, E.K., FRY, C.H. & KEITH, S. 1986. *The birds of Africa*, Vol. II. London: Academic Press, = Urban *et al.* 1986.

**East African Bird Report**

This normally forms the fifth issue of *Scopus* and each report covers one calendar year and relates just to the birds of Kenya, Tanzania and Uganda. Records of Afrotropical and Oceanic birds should be sent to D.A. Turner, Box 48019, Nairobi; Palaearctic bird records should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Report. Sightings of rare birds may be telephoned through to any OSC member (numbers inside the front cover) in the hope that the bird(s) may be seen by others. Criteria covering the submission of Bird Report records are given in *Scopus* Supplement, June 1982, and copies may be obtained from D.A. Turner. Records of rare birds are vetted by the independent and internationally-based East African Rarities Committee.

*Scopus* 11 (1), 1987

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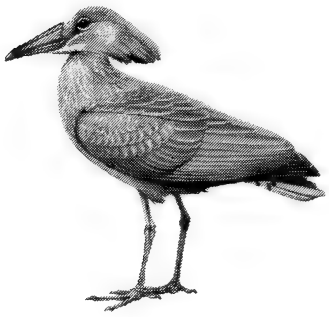
# *SCOPUS*



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*Edited by*
Graeme Backhurst

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# *SCOPUS*

Cover illustration from a gouache painting by Dr P.A. Clancey

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*Scopus* 11 (2): 25–32, September 1987

# ON THE DISTRIBUTION, ECOLOGY AND VOICE OF TWO *ALETHE* SPECIES IN MALAWI

*Françoise Dowsett-Lemaire*

Jensen *et al.* (1985) have recently presented data on the distribution and biology of the little-known White-chested Alethe *Alethe fuelleborni* in Tanzania. In Malawi, the White-chested Alethe is common in the northern montane forests, while a smaller species, the Thyolo (Cholo) Alethe *A. choloensis*, is endemic to a restricted area of mid-altitude forest in the south and in adjacent Mozambique. The ecology and behaviour of alethes were studied during a general survey of the evergreen forests of Malawi in 1979–83 (in the north) and 1983–84 (in the south). This paper describes the distribution, ecology and population densities of the two species, and compares their vocalizations with the help of sound spectrograms. In addition, some observations are reported on nest sites and nesting behaviour of *A. fuelleborni*.

## TAPE RECORDINGS AND ANALYSIS

Tape recordings were obtained with a Sony TC-150 cassette recorder, modified by Mineroff Electronics Inc., and a Beyer M69 dynamic microphone fitted into a Sony parabolic reflector of 40 cm diameter. The material was analysed with a Kay Electric Sonagraph 7029A at Liège University, using the wide-band setting.

## DISTRIBUTION, HABITAT AND POPULATION DENSITIES

*A. fuelleborni* is common from 1600 to 2200 m altitude in the Afromontane forests of the north, south to Nthungwa Forest on the South Viphya Plateau (Fig. 1). It is of rarer occurrence on the high Nyika, up to 2400 m. It inhabits the understorey of tall, close-canopied forest with sparse ground cover, where army ants (*Anomma* sp.) and their prey are easily accessible from logs and saplings.

The distribution in Malawi shows a continuum with that across Tanzania (Fig. 1 in Jensen *et al.* 1985). By contrast, the southernmost population on Gorongoza Mt in Mozambique (Clancey 1971) is isolated by a gap of 800 km. The forests of central and south-western Malawi—where this alethe presumably occurred in the past—do not appear today to offer much suitable habitat to *A. fuelleborni*: they are rather secondary, in a state of slow regeneration, with low or broken canopy. In Tanzania, *A. fuelleborni* is known as a resident over a much wider range of altitudes, down to 500–750 m locally (Jensen *et al.* 1985); mid-altitude forests are not well developed in northern Malawi, except on the steep eastern slopes of the Viphya Plateaux. Even there, forests spread mostly along streams, with discontinuous canopy and thick tangles in the understorey—a situation not favoured by alethes.

Sizes of breeding territories on the Nyika are given in Dowsett-Lemaire (1983) and can be as small as 0.5-ha forest patches. Overall, densities in larger forests are of the order of 5–6 pairs/25 ha in good habitat.

In $2^1/_2$ years of my residence on the Nyika Plateau, it was supspected from net-captures of ringed, sexed individuals, that some, especially females, moved out of the area in the winter months (from May to August). The species is most elusive at that time of year, and there is only one record of a specimen collected at a lower altitude: at 1370 m in the Misuku Hills in August, below the level of

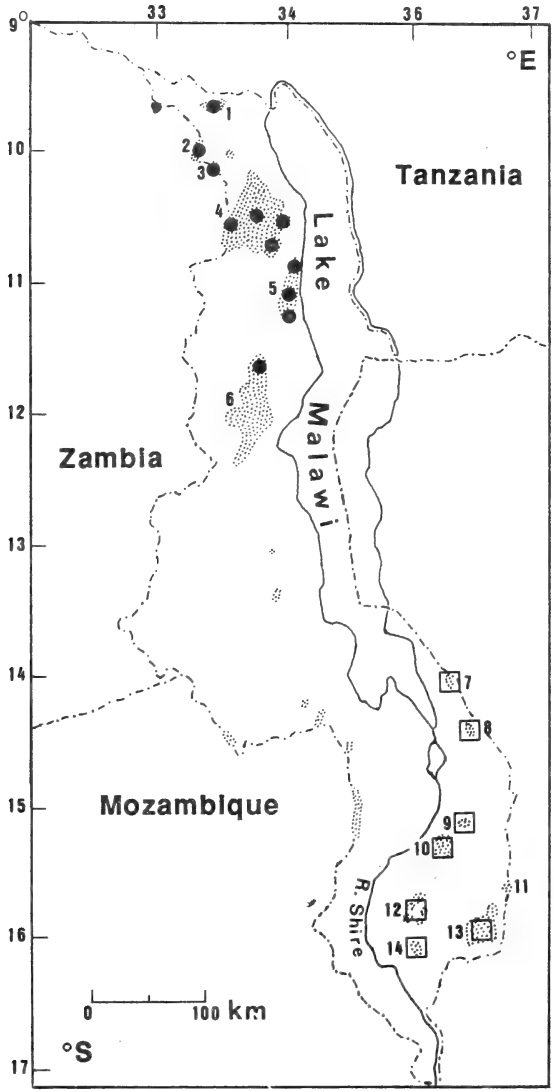


Fig. 1. *The distribution in Malawi of* Alethe fuelleborni *(dots) and* Alethe choloensis *(squares). Shaded areas show forested land above 1500 m north of 15°S, and above 1200 m southward. Numbered localities are: 1. Misuku Hills; 2. Mafinga Mts; 3. Jembya Plateau; 4. Nyika Plateau; 5. North Viphya Plateau; 6. South Viphya Plateau; 7. Namizimu Hills; 8. Mangoche Mt; 9. Chikala Hill; 10. Malosa and Zomba Mts; 11. Mauze Hill; 12. Shire Highlands (from north to south: Chiradzulu, Ndirande, Bangwe, Soche, and Malabvi); 13. Mulanje Mt (including Mchase); 14. Thyolo (Cholo) Mt*

the main forest (Benson & Benson 1977). There are some winter records at 250–400 m in Tanzania (Jensen *et al.* 1985) and similarly a June specimen from coastal forest in Mozambique (Clancey & Lawson 1969).

In southern Malawi east of the Rift, evergreen forests at intermediate altitudes are much better developed; the Thyolo Alethe is present in all forest localities from 1200 m (1000 m in the cooler gorge forests on Mulanje) to 1700 m (Fig. 1)—except that there is no record from Mauze Hill on the Mozambique border, which was not visited. It is generally absent from lowland forest (600–1150 m), but there may be a pair breeding at 700 m at Esperanza, Mulanje (N. Johnstone-Stewart *in litt.*, pers. obs.). In the summer months it ascends to 1800 m on the upper slopes of Mulanje Mt and 1900 m on

Zomba and Malosa Mts. It is the ecological vicariant of *A. fuelleborni* east of the Rift, and is almost endemic to southern Malawi, as it is otherwise known from only two mountains in adjacent Mozambique—Chiperone and Namuli (Collar & Stuart 1985).

It is not uncommon locally on Zomba and in the Shire Highlands near Blantyre, but its stronghold is in the larger and moist mid-altitude forests of Thyolo and Mulanje Mts. At the peak of singing activity, densities on Thyolo were calculated as *c.* 5 pairs/25 ha: these figures are similar to those obtained for *A. fuelleborni* in northern Malawi. In 1984, Thyolo Forest (10 km² in size) was estimated to hold about 200 pairs, and Mulanje (including Mchese) 1000 pairs, with about 300 elsewhere in Malawi (total near 1500 pairs). Forest clearance reduces this figure each year, particularly on Mulanje where deforestation is intensive. This situation justifies the status of 'endangered' species in the African Red Data Book (Collar & Stuart 1985).

*Alethe choloensis* undertakes limited seasonal movements, coming down to 700 m on Mulanje (e.g. Ruo River) in March–September (N. Johnstone-Stewart *in litt.*, pers. obs.).

## FEEDING BEHAVIOUR

Wherever army ants (*Anomma* sp.) swarm across their home range, alethes are invariably found in attendance, perched usually near the ground. They aim mainly at catching invertebrate prey flushed by the ants, and feeding techniques in both species are described in detail by Willis (1985). This dependence on ant activities is so strong that, in *A. fuelleborni* at least, breeding on the Nyika took place in territories, including an active ant-nest, and never in forest patches deserted or unoccupied by these insects (Dowsett-Lemaire 1983: 358). In the dry winter months, ant swarms become irregular and local—I have spent as long as three weeks without encountering a swarm in forest in that season. Alethes are then more elusive than ever, but sometimes may be found feeding alone, hopping on the ground or on logs and turning over dead leaves, or hunting from low perches.

Food taken includes a wide range of invertebrates, also small amphibians and fruits (Jensen *et al.* 1985, Willis 1985, pers. obs.).

The close association between alethes and army ants has been well described by Brosset & Erard (1986) in Gabon for two other species: the Fire-crested Alethe *A. diadematа* and the Brown-chested Alethe *A. poliocephala*. A fifth species in the genus, the Red-throated Alethe *A. poliophrys* from central Africa, is also an ant-follower, and its techniques at swarms are documented by Willis (1985).

## VOICE

### Advertising call

The main contact or advertising call (also used in situations of mild alarm) is more complex in *A. fuellebroni* than in *A. choloensis*: it is a loud whistle *fueeuu*, rising in the middle, of almost 0.5 s duration (Fig. 2A), and it carries some 200–300 m. In *choloensis* it is shorter (*c.* 0.3 s), with less carrying power, higher-pitched, and descending in frequency (*fuu*, Fig. 3A); it is occasionally a slurred *furr*. These characteristic calls are most often heard in September–December (as with the song), but also, occasionally, at all other seasons.

**Song**

The song in both species usually starts with the contact call (or a slurred variant of it), to which other whistles are added. In *A. fuelleborni* it consists very often of two notes, slightly modulated in pitch (the second can be descending or ascending), and either note is a pure whistle (Fig. 2B) or slurred. In a less frequent variant a short third note is inserted between the two main components (Fig. 2C). The whole song lasts about 2 s (main pitch at 2 kHz). In *A. choloensis* song motifs appear more varied, they are also softer and slightly higher-pitched (some notes reach 3 kHz). I occasionally heard a 2-note variant, lasting about 1.5 s (Fig 3B), but more often phrases of three or four notes, lasting 2 to 2.5 s (Fig. 3C). Most notes are slurred or quavered, and each is shorter than in *fuelleborni* songs. A 3-note song may sound like *fuurr-fuee-feeurr*, with the middle note higher-pitched. In 4-note songs there are various types of frequency modulation in the last three notes.

The song may differ in its functions in the two species. In *A. fuelleborni* it apparently has no strong territorial use. No countersinging takes place between neighbours. Playback of the song (which one can easily whistle) is effective only when presented close to a bird already singing, or within a short distance (10–20 m) of an occupied nest. The the male approaches the source of sound to within 2–3 m but he does not call back, merely flits the wings. The same inquisitive reaction was obtained with unmated birds singing while exploring an unoccupied patch of forest. When a territory is invaded by neighbouring alethes attracted to an ant swarm, the local birds attack and chase the intruders in short flights, and may call (rattles or subdued whistles and songs).

The full song of *fuelleborni* is highly seasonal and restricted to the breeding season. In 1980 on the Nyika I heard the first one on 27 September; in 1981 its occurrence was earlier—one bird singing on 18 August, several in September. Vocal activity peaks from October to early December, and egg-laying records are from late October to January (Dowsett & Dowsett-Lemaire 1984). Subdued singing continues intermittantly to April. The full song appears to have mainly a sexual function, linked with breeding activity; it is also uttered (mixed with rattle calls) in situations of strong alarm until February, rarely later (April), and sometimes is apparently provoked by thunder (November).

In *A. choloensis* the full song seems to have a stronger territorial meaning: playback of a tape in October–November induced not only searching behaviour but countersinging (Thyolo, n = 6). The song of *fuelleborni* was similarly tested in six *choloensis* territories on Thyolo, with 12 songs in each experiment, and provoked no reaction at all. Subdued singing has been heard in July, and full songs from the end of September to December. I have no observation for the period January–March.

**Rattle Calls**

When disturbed near a nest, or with fledglings, *A. fuelleborni* utters loud rattles of alarm, over a wide frequency range (1.5–2 to 8.5 kHz, Fig. 4A). Short rattles are also used while chasing intruders in the territory, mostly towards the end of breeding in March–April. *A. choloensis* has similar calls, but these were not tape recorded.

**Juvenile begging calls**

Dependent juvenile *A. fuelleborni* utter sharp and very high-pitched *srree* calls

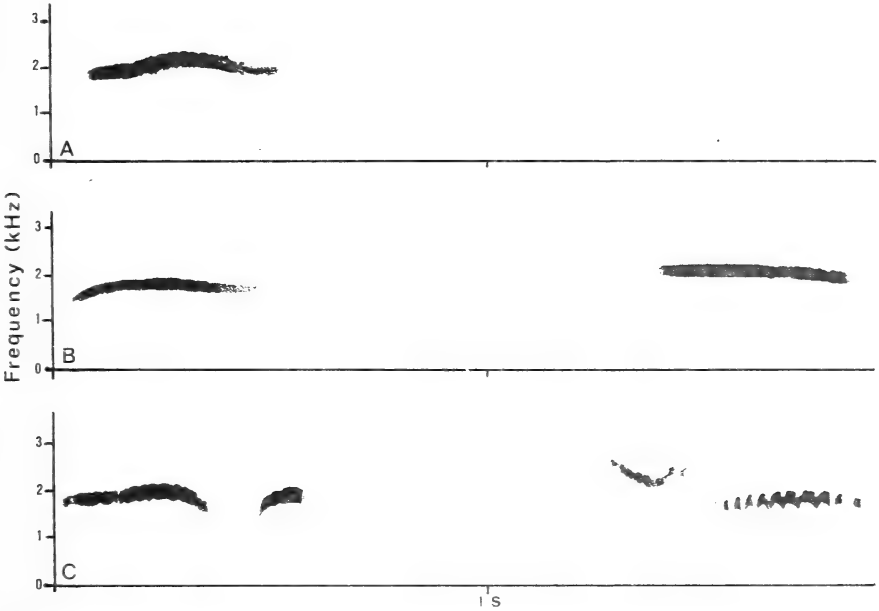


Fig. 2. *Sonograms illustrating the advertising call of* Alethe fuelleborni (A) *and two song-types (B & C)*

(7–8.5 kHz, Fig. 4B). These are not easily located by human observers.

**Conclusion**

*A. fuelleborni* and *A. choloensis* have similar call and song vocabularies. Despite some resemblance in motif structure, the songs are specifically distinct. Published recordings of the calls and songs of *A. diadematа* and *A. poliocephala* from West-Central Africa show the same purity of tone in whistles, and comparable song motifs in *diadematа*, with two to three notes (Chappuis 1975); by contrast, the song of *A. poliocephala* consists of a monotonous series of short *fu* in descending frequency.

## NEST SITES AND NESTING BEHAVIOUR OF *ALETHE FUELLEBORNI*

The first nest site in this species was discovered in Tanzania by Carter (1978), and another, containing two eggs, by Jensen *et al.* (1985). Both nests were located on top of a stump, at heights of 4–5 m and 1.8 m respectively.

Three nests were found on the Nyika Plateau in forest patches of 0.5, 0.5 and 4.0 ha in size. One (29 November 1979) was at a height of 6 m in a natural hollow where the vertical trunk of an *Aphloia theiformis* forked into three. While the male was singing nearby, the female was obviously upset by my presence (I was sitting 12 m away) but went back to brood for 35 min. Later checks showed the nest to have been abandoned or robbed. A month later, S. Fisher kindly climbed up the slippery trunk and detached the remnants: a thick and hollow mass of

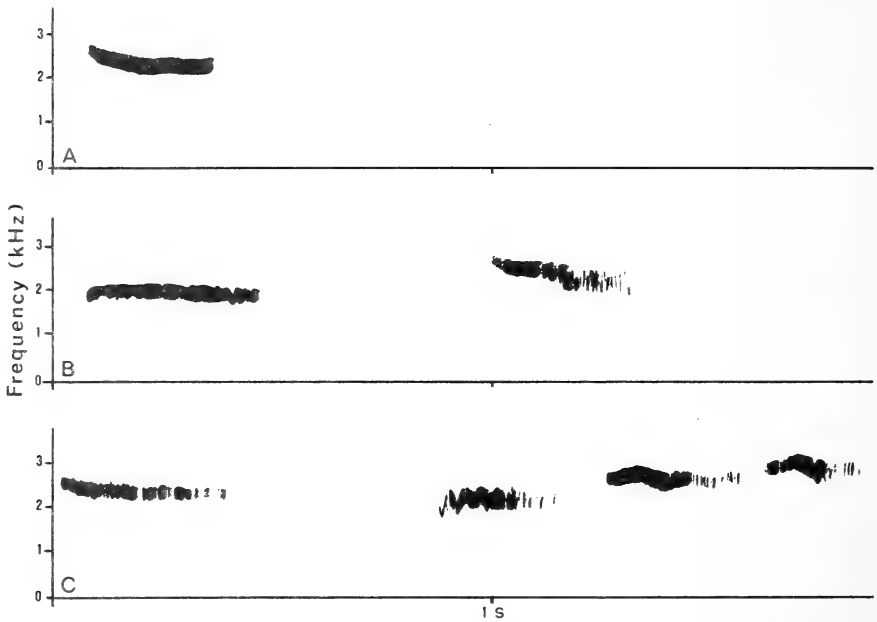


Fig. 3. *Sonagrams illustrating the advertising call of* Alethe choloensis *(A) and two song-types (B and C)*

green moss, with no lining—the lining may have disappeared with the contents. Two more nests were located in 1981. One was in the fork of a trunk of *Garcinia kingäensis* which divided into two at 4.5 m, and it was hidden in the base of a clump of the epiphytic fern *Asplenium aethiopicum*. The heads of two large chicks were visible when feeding took place (21 December). The other nest, also with young (22 December), was situated on the leaning trunk of a large *Hagenia abyssinica*, among a close mat of twining lianas, at a height of 3 m. Neither of these two nests could be reached later. Both parents took part in the feeding.

Green moss may be an important component in nests of *A. fuelleborni* (cf. Jensen *et al.* 1985). One nest of *A. choloensis* was found by Benson & Benson (1947) on Thyolo Mt in a 3-m tall cleft of a high tree. It contained one chick and two eggs (21 January), and was made of green moss lined with dry tendrils. In *A. poliocephala*, the basis of the nest is also of green moss, with a lining of rootlets (Brosset & Erard 1986).

On the Nyika Plateau, egg-laying in *A. fuelleborni* takes place from late October to January, with most records in November (19 of a total of 33: Dowsett & Dowsett-Lemaire 1984). Dependent young are fed for at least six weeks after leaving the nest. In one territory, one marked young bird was still present (at an ant swarm) two months after reaching independence.

The Thyolo Alethe breeds probably in the same months, in the summer rains

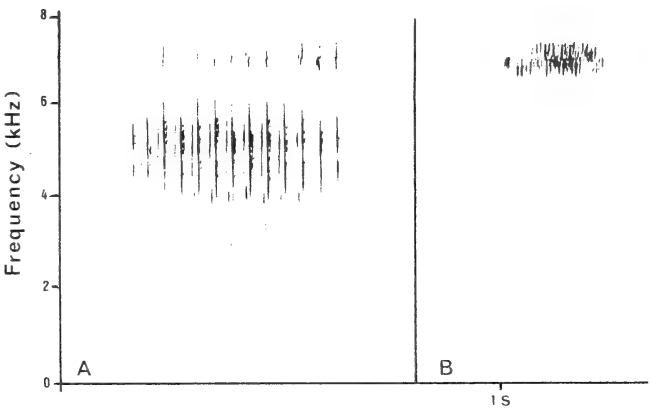


Fig. 4. *Sonagrams showing the rattle call of* Alethe fuelleborni *(A) and the juvenile begging call (B)*

(Benson & Benson (1947), and immatures seen from December to April by Johnstone-Stewart (1982)).

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**REFERENCES**

Benson, C.W. & Benson, F.M. 1947. Some breeding and other records from Nyasaland. *Ibis* 89: 279–290.

Benson, C.W. & Benson, F.M. 1977. *The birds of Malawi.* Limbe: Montfort Press.

Brosset, A. & Erard, C. 1986. *Les oiseaux des régions forestières du nord-east du Gabon.* Vol. 1. Paris: Société Nationale de Protection de la Nature.

Carter, C. 1978. First recorded nest site of *Alethe fuelleborni. Scopus* 2: 25.

Chappuis, C. (ed.) 1975. *Les oiseaux de l'Ouest africaine.* Disc 6, *Pycnonotidae and Turdidae.* Sound Supplement No. 6 to Alauda. One $33^1/_3$ rpm stereo disc. ALA 11. Paris.

Clancey, P.A. 1971. A handlist of the birds of southern Moçambique. Part II. *Memórias de Instituto de Investigaçáo Cientifica de Moçambique* 11, Série A: 1–167.

Clancey, P.A. & Lawson, W.J. 1969. A new race of White-breasted Alethe from Moçambique. *Bulletin of the British Ornithologists' Club* 89: 4–6.

Collar, N.J. & Stuart, S.N. 1985. *Threatened birds of Africa and related islands.* Cambridge: ICBP and IUCN.

Dowsett, R.J. & Dowsett-Lemaire, F. 1984. Breeding and moult cycles of some montane forest birds in south-central Africa. *Revue d'Ecologie (Terre et Vie)* 39: 89–111.

Dowsett-Lemaire, F. 1983. Ecological and territorial requirements of montane forest birds on the Nyika Plateau, south-central Africa. *Le Gerfaut* 73: 345–378.

JENSEN, F.P., BROGGER-JENSEN, S. & PETERSEN, G. 1985. The White-chested Alethe *Alethe fuelleborni* in Tanzania. *Scopus* 9: 127–132.
JOHSTONE-STEWART, N.G.B. 1982. Evergreen forest birds in Upper Thyolo. *Nyala* 8: 69–84.
WILLIS, E.O. 1985. East African Turdidae as safari ant followers. *Le Gerfaut* 75: 140-153.

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# DIETARY OVERLAP BETWEEN MOUNTAIN WAGTAILS *MOTACILLA CLARA*, GREY WAGTAILS *M. CINEREA* AND GREEN SANDPIPERS *TRINGA OCHROPUS* IN ETHIOPIA

*Stephanie J. Tyler and Stephen J. Ormerod*

The extent of competition between animal species has been widely debated (Pianka 1976, Wiens 1977, Diamond 1978, Schoener 1982). General indications are that con-generics occupy 'realized' niches which allow resource partitioning, whilst the co-occurrence of more distantly related groups can result in interference or exploitation competition (e.g. Eadie & Keast 1980, Hurlbert *et al.* 1986). Resource availability can, however, prevent competition except during 'lean' periods (Schoener 1982).

One particularly interesting case of animal co-existence involves birds migrating from the northern winter into the range of related species at more southern latitudes (Moreau 1972, Keast & Morton 1980). In a previous paper (Tyler & Ormerod 1986) we have discussed this phenomenon in wagtails *Motacilla* spp., particularly with respect to the resident Mountain Wagtail *M. clara* and the migrant Grey Wagtail *M. cinerea* in Ethiopia. These two species occupy rivers in the highlands of eastern Africa when the former is breeding, but show no inter-specific aggression and little mutual exclusion. Moreover, other riverine birds, such as sandpipers Tringinae, also share the same habitat.

In this paper we examine the diet and foraging ecology of the Mountain and Grey Wagtail, and the Green Sandpiper *Tringa ochropus* as observed during December 1986 to January 1987. In particular, we test the hypothesis that their co-existence is facilitated by food partitioning. These dietary data are the first available for these species of wagtail in eastern Africa.

## STUDY AREA AND METHODS

Observations were made of foraging behaviour and feeding rates of Grey and Mountain Wagtails on watercourses in two areas in highland Ethiopia in December 1986 and January 1987.

One river was situated on the eastern edge of Addis Ababa in Shewa province (9°02′N, 38°42′E, 2300 m), flowing through grassland and scrub, heavily used by grazing stock. Occasional fig trees *Ficus sycamorus* and mutilated *Acacia* grew by the river but trees had been cleared from most of the 3 km surveyed. Water levels were low and much of the river bed (5–10 m in width) was dry, the river being reduced to a series of deep pools with a narrow trickle of water flowing over algae-covered rocks; elsewhere the river was 3–4 m wide over a stoney bed. Casual inspections of the stones and rocks in the river indicated abundant invertebrates including mayfly nymphs (Ephemeroptera), caddis larvae (Trichoptera), dipteran larvae (Chironomidae and Simulidae), dragonflies (Odonata) and corixids. Amphibian tadpoles were also numerous. Clouds of midges hung over the river and were preyed upon by African Rock Martins *Hirundo fuligula*, Red-rumped Swallows *H. daurica* and African Sand Martins *Riparia paludicola*, which were nesting in riverside rocky cliffs and in banks. Other birds feeding in or over the river included Wattled Ibis *Bostrychia carunculata* and Sacred Ibis *Threskiornis aethiopica*, numerous Green Sandpipers, smaller numbers of Common Sandpipers *Actitis hypoleucos*, and two other

species of wagtail—*M. alba* the White Wagtail and *M. flava* the Yellow Wagtail. The river was heavily used by local people for washing clothes and watering stock.

The second area, at Wondo Genet (*c.* 2000 m) was on a steep, wooded escarpement south of Shashamanne (7°13′N, 38.33′E) in the Rift Valley. Here, two turbulant, rocky streams flowed down from a remnant of indigenous highland forest (*Podocarpus*), through small cultivated clearings. A series of hot springs fed into the river, and irrigation channels diverted water to crops. This resulted in areas of damp grassland adjacent to the rivers. A thick shrub and tree cover bordered, and often overhung, most of the 3–4 km surveyed. In addition to *M. clara* and *M. cinerea*, only one Green Sandpiper and a Half-collared Kingfisher *Alcedo semitorquata* were seen along these mountain rivers. Mayfly nymphs, freshwater limpets, freshwater shrimps *Gammarus*, large crustaceans (crabs) and whirligig beetles were numerous.

**Methods**

Visits were made on three mornings between 06:00 and 11:00 to the Addis Abab river, whereas the streams at Wondo Genet were visited in the evening and in the early morning on two consecutive days. The numbers of wagtails along survey stretches were noted. Any wagtail that was encountered was observed until it moved out of sight. Data were collected on feeding behaviour (picking from rocks in the river bed, aerial flycatching, etc.) and peck rates. Faecal material was also collected, mainly when it was possible to identify the species of bird from which it had originated, but some was collected from unidentified wagtails (*M. calra* or *M. cinerea*). Pellets regurgitated by Green Sandpipers were also collected along the Addis river and from a nearby concrete sewage lagoon, where the only visible invertebrates were mosquito larvae.

Faecal and regurgitated samples were preserved on-site in 70 per cent ethanol. Each was deflocculated for 4–8 h in 0·5M sodium hydroxide solution before examination at magnifications of x 40 to x 100. Aquatic invertebrates were identified to family and quantified by counting head capsules or mouthparts (i.e. two mandibles = 1 prey item), whilst adult insects were identified to order from recognizable parts of their wings, elytra or thoracic segments. Quantification was achieved by scoring key structures, such as sections of wing vein. Some items, such as worm chaetae or lepidopteran scales, were difficult to quantify and, where they occurred, it was assumed that one item had been ingested.

## RESULTS

**Density**

Similar numbers of *clara* and *cinerea* occurred on the rivers surveyed, although *cinerea* was less frequent than *clara* on one of the two streams at Wondo Genet. The Mountain Wagtails were in obvious pairs and males were heard singing.

Table 1. Abundances of *M. clara* and *M. cinerea* along two rivers

| River | km | *M. cinerea* | *M. clara* |
|---|---|---|---|
| Addis Ababa | 3 | 3–4 | 4 (2 pairs) |
| Wondo Genet | 3–4 | 3–4 | 7 (3 pairs) |

As previously noted (Tyler & Ormerod 1986), *M. cinerea* frequently fed within 1 m of *clara* with little sign of conflict. Only on one occasion was any aggression noted by *cinerea* towards *clara*: this incident occurred immediately after an *alba* chased the *clara*, and at the same time disturbed the *cinerea*.

**Foraging behaviour**

At Addis, both species of wagtail fed predominantly by walking or running, mostly along shingle or on rocks, but sometimes on the grassy river bank. Prey items were pecked from water and rock surfaces, or from amongst vegetation. Short flights were occasionally made to catch prey but true aerial fly-catching was rarely observed (Table 2). Grey Wagtails were also twice observed turning over leaves.

Pecking rates did not differ significantly between the two species (a mean of 15 pecks/min in *clara* and 14·8 pecks/min in *cinerea*; n >30 in both species); since both are similar in weight and hence energy requirements, we infer that prey sizes were also similar.

Table 2. Feeding methods in *M. clara* and *M. cinerea*

| Species | Total | Picking | Jumping | Aerial | s |
|---|---|---|---|---|---|
| *M. cinerea* | 402 | 393 | 1 | 8 | 1630 |
| *M. clara* | 422 | 417 | 1 | 4 | 1715 |

At Wondo Genet both species fed predominantly from rocks in the river; *clara* picked insects from overhanging leafy branches as *cinerea* does in its breeding areas (pers. obs.), whereas *cinerea* sometimes fed up to 100 m away from the river corridor on wet grassland 'lawns' and tracks.

**Diet**

Foraging locations and apparent prey size indicated that simuliids or chironomids formed a major part of the diet. Faecal analysis confirmed that adult dipterans were the most common prey of both *clara* and *cinerea*. Mayfly nymphs and adults also figured prominently (Table 3). Scales of a lepidopteran were found in one faecal pellet of a *clara*, and a *cinerea* was observed catching an orange pierid butterfly *Pholotis* sp. The diet of *cinerea* also included crustacea.

Green Sandpiper pellets included Ephemeropterans and Trichopterans as the most abundant prey (Table 4). Pellets from the sewage lagoon contained only remains from mosquito larvae.

Although these data are few and were collected over a very limited time, the results indicate a great similarity in the foraging behaviour and diet of the resident Mountain and the migrant Grey Wagtails on highland rivers in Ethiopia. The limited aggression would also suggest that there is little or no interference competition between them (Tyler & Ormerod 1986). One possibility is that these species can coexist during the northern winter because this period in the highlands of Ethiopia is characterized by a super-abundance of food (Schoener 1982). However, other possibilities include niche segregation (e.g. Alatalo *et al.* 1987) with the highly flexible *cinerea* foraging outside the river corridor (pers. obs.). Alternatively, competition could occur in ways not directly

Table 3. Numbers of prey items (percentage in parentheses) taken by Mountain and Grey Wagtails as shown by faecal analysis during December 1986 and January 1987

| Prey | *M. clara* | *M. cinerea* | Mixed |
|---|---|---|---|
| Trichoptera (Hydropsychidae) | 10 (3·3) | 4 (2·1) | |
| Ephemeroptera nymphs | | | |
| Ecdyonuridae | 2 (0·6) | | |
| Ephemeerellidae? | 6 (2·0) | 34 (19·2) | 46 (10·7) |
| Baetidae | 54 (17·7) | 18 (10·1) | 60 (13·9) |
| Ephemeroptera adults | | | |
| Caenidae | 20 (6·6) | 10 (5·6) | 14 (3·3) |
| Plecoptera (Perlidae) | 6 (2·0) | 2 (1·1) | |
| Diptera larvae | | | |
| Simuliidae | 10 (3·3) | 16 (9·0) | |
| Chironomidae | 2 ((0·6) | 4 (2·2) | |
| Diptera adults* | 160 (52·6) | 60 (33·8) | 241 (56·1) |
| Lepidoptera | 2 (0·6) | | |
| Coleoptera larvae | 4 (1·3) | 8 (4·1) | 20 (4·6) |
| Coleoptera adults | 28 (9·2) | 20 (11·2) | 48 (11·1) |
| Crustaceans (*Gammarus*?) | | | 1 (0·6) |
| Total no. of prey items | 304 | 177 | 429 |

*including Chironomidae and Empididae; 'mixed' refers to *Motacilla* faecal pellets of uncertain origin

Table 4. Prey items taken by Green Sandpipers as shown by analysis of regurgitated pellets

| Prey item | | No. in river[1] |
|---|---|---|
| Trichoptera: Hydropsychidae? | | 66 (25·21) |
| Ephemeroptera: Ephemerellidae | | 64 (24·4) |
| | Baetidae | 88 (33·6) |
| Hemiptera: Corixidae | | 12 (4·6) |
| Coleoptera | | 6 (2·3) |
| Plecoptera | | 1 (0·4) |
| Odonata | | 1 (0·4) |
| Diptera: | Simuliidae | 14 (5·4) |
| | adults | 2 (0·8) |
| Mollusca (Planorbidae) | | 8 (3·0) |
| Total number of items | | 262 |

[1]From sewage, no recognizable items other than sclerites from Culicidae were found

obvious during this study. For example, Gustafsson (1987) showed that interspecific competition between tits and Collared Flycatchers *Ficedula albicollis* resulted in impaired reproductive success. *M. clara* breeds during the time that *M. cinerea* is present in Ethiopia and it is possible that if any competition occurs between the two this may be manifest in reduced brood size or chick growth, and a consequent depression of the population of *clara* by *cinerea*.

Clearly, more data are required on these aspects of motacillid ecology, in the absence of which we are unable to support any of these hypotheses. More radically, it may not be necessary to invoke competition in influencing the ecology of migrant and resident birds in Africa: their population dynamics could be affected by predation or other environmental factors. The same conclusions could apply to interactions between motacillids and other riverine birds such as Green Sandpipers, although at least in this case dietary segregation appears to be sufficient to offset any likelihood of competition.

## REFERENCES


Alatalo, R.V., Eriksson, D., Gustafsson, L. & Larsson, K. 1987. Exploitation competition influences the use of foraging sites by tits: experimental evidence. *Ecology* 68: 284–290.

Diamond, J.M. 1978. Niche shifts and the rediscovery of interspecific competition. *American Scientist* 66: 322–331.

Eadie, J. McA. & Keast, A. 1982. Do Goldeneye and Perch compete for food? *Oecologia (Berlin)* 55: 225–230.

Gustaffson, L. 1987. Interspecific competition lowers fitness in Collared Flycatchers *Ficedula albicollis*: an experimental demonstration. *Ecology* 68: 291–296.

Hurlbert, S.H., Loayza, W. & Moreno, T. 1986. Fish–flamingo–plankton interactions in the Peruvian Andes. *Limnology and Oceanography* 31: 457–468.

Keast, A. & Morton, E.S. 1980. (Eds) *Migrant birds in the Neotropics.* Washington: Smithsonian Institute.

Pianka, E.R. 1976. Competition and niche theory. pp. 114–141 *in Theoretical ecology* (Ed. R.M. May). Philadelphia: Saunders.

Schoener, T.W. 1982. The controversy over interspecific competition. *American Scientist* 70: 585–595.

Tyler, S.J. & Ormerod, S.J. 1986. Interactions between resident and migratory wagtails *Motacilla* spp. in Ethiopia—an ecological conundrum. *Scopus* 10: 10–19.

Wiens, J.A. 1977. On competition and variable environments. *American Scientist* 65: 590–597.


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## SHORT COMMUNICATIONS

**The attraction of Palaearctic migrants to lights at Kiambere, Kenya**

Large numbers of night migrants are regularly attracted to lights situated on a ridge at Ngulia Lodge, south-eastern Kenya, during misty nights in November and December, and the southward passerine migration has been extensively studied there (Pearson & Backhurst 1976a, Backhurst & Pearson 1977, 1984). A similar phenomenon was also demonstrated in November in the nearby Chyulu Hills (Nikolaus 1980). Since mist is unusual at Ngulia during April, large falls have only occasionally been seen there then (Britton & Britton 1977, Pearson 1980), and spring Palaearctic passage in Kenya has been studied mainly near Nairobi at sites where local insect abundances have been an important attracting factor (see, for example, Pearson & Backhurst 1976b). Spring falls are occasionally reported after heavy rain from other isolated lighted sites such as Samburu Lodge (T. Stevenson, pers. comm.) and Mtito Andei, Pearson (1981). Further south, night falls at an elevated lighted site at Mufindi, southern Tanzania, during the wet, misty late April–early May period have involved mainly crakes Rallidae, Harlequin Quails *Coturnix delegourguei* and African Pittas *Pitta angolensis* (Beakbane & Boswell 1986). This note reports observations of Palaearctic migrants grounded, especially during April and May, below floodlight towers at a dam construction site on the upper Tana River.

The construction of the latest hydroelectric scheme on the Tana River at Kiambere (0° 42'S, 37° 47'E), with its 'around the clock' working has allowed observations on migration to be made when wet overnight conditions have produced falls around lighted areas. While attractions were noted at several of the work sites in the project area, and even at some of the well-illuminated existing power stations nearby, the observations recorded here in detail were made at the main Kiambere dam site. This site was located in a deep gorge on the Tana, and the earth-filled dam was constructed during 1986–87. Illumination for the works was provided by two floodlight towers on either bank of the gorge. The axis of the dam was approximately NW–SE and the installed towers each held fifteen 1 kW floodlights, all directed down into the gorge to illuminate the extensive dam foundations. The area immediately adjacent to each tower base was located outside the construction area on the steep rocky hillside and contained a few bushes which provided some cover in what was generally a cleared area. This resulted in some concentration of attracted birds and allowed an assessment of the species and numbers involved. The area at the base of one of the towers, which involved 30–40 per cent of the available cover, was surveyed each day. Each survey was carried out during a 30-min to 1-h period 'before work'. Time was inevitably spent in searching for 'new' species and in identifying difficult species rather than securing the most comprehensive coverage of the total attraction.

Most falls were noted during the northward passage period. Numbers counted during April–May 1986 and during more sporadic coverage in April–May 1987 are summarized in Table 1. Falls were larger during small-moon than large-moon periods, especially after rain. The main species involved was the Whitethroat *Sylvia communis*, with Red-backed Shrikes *Lanius collu-*

Table 1. Spring falls of Palaearctic migrants at Kiambere. Numbers of birds counted in cover around the base of one floodlight tower at dawn. Nights with rain are indicated with an asterisk

| | 1986 (new moon 7 Apr and 6 May) | | | | | | | | | | | | | | | | | | | | | | | | | | 1987 (new 25 Apr) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | APRIL | | | | | | | | | | | | | | | | | MAY | | | | | | | | | | APR | | | | |
| Species | 11 | 12 | 13 | *14 | 15 | *16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | *24 | *28 | 29 | 30 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 14 | 15 | 7 | 9 | 10 | 23 | 2 |
| *Caprimulgus europaeus* | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Cercotrichas galactotes* | | | | 1 | 2 | 2 | | 2 | | | | | | | | | | | | | | | | | | | 4 | | | | |
| *Irania gutturalis* | | 1 | | 2 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| *Luscinia luscinia* | | 2 | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 3 | | 1 |
| *Monticola saxatilis* | 2 | 4 | 1 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| *Oenanthe oenanthe* | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *O. pleschanka* | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Acrocephalus arundinaceus* | | 2 | 1 | | 2 | 4 | 1 | 4 | 1 | | 1 | | 1 | 1 | | | | | 1 | 1 | | | | | | | | | 1 | 2 | |
| *A. griseldis* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| *A. scirpaceus/palustris* | | | | 2 | | 2 | 1 | 1 | | | | | | | | | | | | 1 | | 1 | 1 | 1 | | | | | | | |
| *A. schoenobaenus* | | | 1 | 1 | | 3 | 1 | 2 | 1 | | | | 1 | 1 | | | | 3 | 4 | 2 | | 1 | 2 | 2 | | 1 | | | | 3 | 4 |
| *Hippolais languida* | | | | 2 | 2 | | | 2 | 4 | | | | | 1 | | | | 2 | 3 | | | | | | | | | | | 2 | |
| *H. olivetorum* | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *H. pallida* | | | | 2 | | | 4 | 2 | 1 | | | | 1 | 1 | | | | 2 | 3 | 2 | | | 1 | | | 1 | | | | | 1 |
| *Phylloscopus trochilus* | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | 10 | | | | 4 |
| *Sylvia communis* | 5 | 40 | 20 | 100 | 30 | 30 | 40 | 50 | 10 | | 6 | | 1 | 2 | 3 | | 5 | 20 | 20 | 10 | | 10 | 10 | 10 | 2 | 5 | 20 | 1 | | 30 | 15 |
| *S. nisoria* | | | | 1 | 1 | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| *Muscicapa striata* | | 2 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| *Lanius collurio* | 20 | 20 | 6 | 20 | 10 | 6 | 20 | 6 | 6 | | 2 | | 2 | 3 | 1 | | | 5 | 4 | 2 | | 1 | 1 | | | | 4 | | 10 | 5 | 9 |
| *L. isabellinus* | 5 | 5 | 3 | 2 | 2 | 1 | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| *L. minor* | | 6 | 6 | 20 | | | 3 | 1 | | | | | | | | | | 1 | 1 | | | | | | | | 1 | 8 | 10 | 1 | 8 |
| *Motacilla flava* | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*rio*, Lesser Grey Shrikes *L. minor*, Sedge Warblers *Acrocephalus schoenobaenus*, Great Reed Warblers *A. arundinaceus*, Upcher's Warblers *Hippolais languida* and Olivaceous Warblers *H. pallida*, featuring regularly. Iranias *Irania gutturalis*, Sprossers *Luscinia luscinia*, Rufous Bush Chats *Cercotrichas galactotes*, Rock Thrushes *Monticola saxatilis* and Red-tailed Shrikes *Lanius isabellinus* were confined practically to the early–mid April period. Comparing the April–May species at Kiambere with those prominent on northward passage at Nairobi (Pearson & Backhurst 1976b) it is interesting to note the absence of Garden Warblers *Sylvia borin* and the low numbers of Willow Warblers *Phylloscopus trochilus*.

Some very late migrant observations were made. Thus, in 1986, Red-tailed Shrike and Upcher's Warbler were seen at the beginning of May, with Olivaceous Warbler and Sedge Warbler present to 14th and five Whitethroats on 15th. In 1987, a Basra Reed Warbler *Acrocephalus griseldis* on 23 April, and a Rock Thrush, a Northern Wheatear *Oenanthe oenanthe* and a Barred Warbler *Sylvia nisoria* on 2 May were especially noteworthy.

Falls seemed to occur less often in autumn, the main occasions being on 5 November and after moonless, heavily overcast nights on 29–30 November 1986. Counts made on these dates are given in Table 2. The species composition was rather different from that in April. Thus many Northern Wheatears were present on 5 November, and many Marsh Warblers *Acrocephalus palustris* and a few Sprossers, Nightingales *Luscinia megarhynchos* and Iranias on 29–30th. There were no Sedge Warblers and only two shrikes; one of the latter was a Lesser Grey, a species rare in Kenya in autumn. The River Warbler *Locustella fluviatilis*, a species prominent in November movements at Ngulia (Pearson & Backhurst 1976a) was not encountered.

Table 2. Falls of Palaearctic migrants at Kiambere in November 1986. Numbers counted below one floodlight tower at dawn

| Species | Date: November 5 | 29 | 30 |
|---|---|---|---|
| *Cercotrichas galactotes* | | 3 | 2 |
| *Irania gutturalis* | | 2 | |
| *Luscinia luscinia* | | 4 | 5 |
| *L. megarhynchos* | | 1 | 4 |
| *Monticola saxatilis* | 3 | | |
| *Oenanthe oenanthe* | 50 | 40 | 20 |
| *O. pleschanka* | 1 | | 1 |
| *Acrocephalus arundinaceus* | | 2 | |
| *A. griseldis* | | 2 | |
| *A. palustris* | | 20 | |
| *Hippolais languida/pallida* | | 30 | 20 |
| *Phylloscopus trochilus* | | 1 | |
| *Sylvia communis* | | 40 | 30 |
| *S. nisoria* | | 4 | 2 |
| *Muscicapa striata* | 1 | | |
| *Lanius collurio* | | 1 | |
| *L. minor* | | 1 | |

**References**

Backhurst, G.C. & Pearson, D.J. 1977. Southward migration at Ngulia, Tsavo, Kenya, 1976–77. *Scopus* 1: 12–16.

Backhurst, G.C. & Pearson, D.J. 1984. The timing of southward night migration of Palaearctic birds over Ngulia, southeast Kenya. *Proceedings of the Fifth Pan-African Ornithological Congress:* 361–369.

Beakbane, A.K. & Boswall, E.M. 1986. Nocturnal Afrotropical migrants at Mufindi, southern Tanzania. *Scopus* 8: 124–127.

Britton, P.L. & Britton, H.A. 1977. An April fall of Palaearctic migrants at Ngulia. *Scopus* 1: 109–110.

Pearson, D.J. 1980. Northward spring passage of Palaearctic passerines across Tsavo. *Scopus* 4: 25–28.

Pearson, D.J. 1981. Spring falls of Palaearctic passerines at Mtito Andei, Kenya. *Scopus* 5: 80.

Pearson, D.J. & Backhurst, G.C. 1976a. The southward migration of Palaearctic birds over Ngulia, Kenya. *Ibis* 118: 78–105.

Pearson, D.J. & Backhurst, G.C. 1976b. Palaearctic passerine migration at Kariobangi, Nairobi. *EANHS Bulletin* 1976: 23–28.

Nikolaus, G. 1980. An experiment to attract migrating birds with car headlights in the Chyulu Hills, Kenya. *Scopus* 4: 45–46.

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*Scopus* 11: 38–41, September 1987 Received 20 July 1987

## Some summer records from north-west Somalia

In 1986 I spent five weeks (21 July to 24 August) in northern Somalia based in Hargeisa. Thirteen field trips were made into the surrounding countryside, of which some were repeat visits, but all, with the exception of one trip to Berbera on the coast, were within 65 km of Hargeisa.

The landscape in the Hareisa area is undulating to hilly arid bush, and the river and stream beds were dry in August. Denser shrubs and trees occur along the river and stream courses. The recent increase in bunding to prevent rapid run-off and to aid soil infiltration has resulted in an increase in the growth of maize as fodder for livestock. Accompanying the bunding programme is the provision of water points for livestock and humans. This increase in available water is providing new habitats for wetland species such as the Sacred Ibis Threskiornis *aethiopica*, Redhank *Tringa totanus*, Greenshank *T. nebularia* and Avocet *Recurvirostra avosetta* . Unfortunately some of these water points dry out towards the end of the dry season.

Ash & Miskell (1983)—hereafter referred to as A&M, Williams & Arlott (1980) and Mackworth-Praed & Grant (1980) were used for identification, but Volume 2 of the last work did not arrive in time to aid identification of many of the smaller passerines.

A total of 118 species was identified, the majority of which have already been

record by A&M or Clarke (1985). Only species of interest and new distributional data are recorded here. The atlas form of $^1/_2$ x $^1/_2$-degree squares used by A&M has been followed, as has the method of presenting the data. The species number refers to the bird's number in A&M and the status as shown by these authors is given in parentheses after each of my records.

24. ***Ardea melanocephala*** **Black-headed Heron** Two by a roadside water-hole near Botor and a third flying over, 17 August. 18b. (Scarce visitor to the NW with only three previous records in that area.)

27. ***Ardeola ralloides*** **Squacco Heron** One in a maize field near Botor, 19 August. 18b. (Rare in NW west of 46°E.)

34. ***Egretta intermedia*** **Yellow-billed Egret** One well outside its usual range by a water-hole at Botor, 17 August. 18b. Yellow bill, black legs and feet and size confirm identification, but not seen again on two subsequent visits. (Locally numerous non-breeding visitor to southern inland wetlands south of 40°N.)

69. ***Sagittarius serpentarius*** **Secretry Bird** Pair on nest at Aburin Farm, 5 August. 18d. (Uncommon resident in north above 8°N.)

173. ***Vanellus melanopterus*** **Black-winged Plover** Ten in a flock at Botor, 19 August. 18b. (Rare non-breeding visitor with only two previous records in February and May.)

185. ***Tringa totanus*** **Redshank** Two by a water-hole near Hargeisa, 12 August. 19a. One at a water-hole at Botor, 19 August. 18b. (Only four inland records for the whole of Somalia.)

203. ***Recurvirostra avosetta*** **Avocet** One by a water-hole near Hargeisa, 12 August. 19a. (Irregular rare non-breeding visitor of unknown origin. Recorded on nine occasions in two areas in NW and SE in Nov–May.)

209. ***Cursorius cursor*** **Cream-coloured Courser** Two near Ged Deeble, 8 August and two there on 16th. 19a. One adult with two young at Botor, 18 August. 18b. (Widely recorded.)

264. ***Treron waalia*** **Bruce's Green Pigeon** Pair feeding two large young in *Ficus* sp. near Ged Deeble on 16 August. 18b. (Common widespread resident in N above 8°N, but only three previous breeding records—A&M and Clarke 1985.)

281. ***Tyto alba*** **Barn Owl** One in a barn at Aburin Experimental Farm, 5 August. 18d. (Rare with only one previous record in NW.)

324. ***Merops apiaster*** **Eurasian Bee-eater** One near Botor, 17 August. 18d. One positvely identified 20 August in Hargeisa (19a) at a time when flocks of 15–20 unidentified bee-eaters were in the area. (Seldom recorded Palaearctic passage migrant seen three times in August in NW in 19a.)

346. ***Bucorvus abyssinicus*** **Abyssinian Ground Hornbill** Two seen from Botor Road on 17 August. 18b. (Rare and local, presumed resident in open country in NW west of 48°E. Clarke (1985) has added a few more records.)

370. ***Eremopterix leucotis*** **Chestnut-backed Sparrow Lark** One on farmland near Ged Deeble, 18 August. 18b. (Only recorded in grassy areas and cultivated

land along the border in the NW.)

506. ***Batis orientalis* Grey-headed Batis** Pair seen with four young in bushes at side of stream bed near Hargeisa on 31 July and 10 August. 19a.

554. ***Creatophora cinerea* Wattled Starling** Large flocks included young still being fed by parents near Hargeisa on 6 August suggesting local breeding. 19 a. (There are no breeding records in Somalia.)

585. ***Euplectes franciscanus* Northern Red Bishop** Very common 10, 16, 18 August in agricultural area of Heedho (18a) and Botor (18b) where males were displaying. (Recorded as uncommon resident in NW above 9°N.)

615. ***Vidua macroura* Pin-tailed Whydah** One male near Ged Deeble on 8 August. 19a. (Not recorded in NW.)

635. ***Serinus donaldsoni* Grosbeak Canary** Three separate individuals in bush scrub at Botot, 19 August. 18b. (The first record for the NW area.)

**Additional new square data**
2. *Tachybaptus ruficollis* Little Grebe 18b.
22. *Ardea cinerea* Grey Heron 18b.
38. *Ciconia abdimii* Abdim's Stork 11c.
167. *Charadrius tricollaris* Three-banded Plover 18b.
182. *Tringa nebularia* Greenshank 18b.
202. *Himantopus himantopus* Black-winged Stilt 18bd.
206. *Burhinus capensis* Spotted Thicknee 18d.
373. *Galerida cristata* Crested Lark 18d.
529. *Laniarius ferrugineus* Tropical Boubou 19a.

**Acknowledgements**
I would like to thank Dr J.S. Ash for his assistance and for commenting on the first draft and without whose encouragement this would not have been publsihed. Also many thanks are due to K.R.S. Proud for his transport and map references.

**Gazetteer**

| | | |
|---|---|---|
| Aburin Farm | 9°29′N 43°48′E | 18d |
| Berbera | 10°26′N 45°02′E | 11c |
| Botor | 9°41′N 43°31′E | 18b |
| Ged Deeble | 9°41′N 44°06′E | 19a |
| Hargeisa | 9°33′N 44°04′E | 19a |

**Referecnes**

Ash, J.S. & Miskell, J.E. 1983. *Birds of Somalia, their habitat, status and distribution. Scopus Special Supplement* No. 1.

Clarke, G. 1985. Bird observations from Northwest Somalia. *Scopus* 9: 24–42.

Williams, J.G. & Arlott, N. 1980. *A field guide to the birds of East Africa.* London: Collins.

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### A Kenya record of the Shy Albatross *Diomedea cauta*

An albatross caught by fishermen a few kilometres off Mombasa Island in late October 1986 was brought ashore alive (but unable to fly) and taken to Professor M. Hyder in Mombasa. Although maintained for several days on a fish diet it continued to weaken. It was moved to Nairobi where it died and was brought in to the National Museum. We examined the bird before it was skinned and identified it as an immature Shy Albatross *Diomedea cauta* of the nominate race. The following description and measurements were taken:

Sides of face and hindcrown to nape pale grey; narrow line from base of forehead back to eye blackish; rest of head white. Hindneck deeper grey, extending as a narrow collar around sides of neck and continuous in colour with mantle. Above, mantle and scapulars dark grey, contrasting with white runp and uppertail coverts; tail dark grey; upperwing blackish grey, darkest on flight feathers. Underparts wholly white; underwing white with narrow dark leading and trailing margins and small dark tip, dark grey mark present at base of forewing. Legs flesh; bill large with thick base, grey with a pinkish horn tinge, tips to both mandibles blackish.

Wing 605 mm, tail 215 mm, tarsus 97 mm, culmen 135 mm, middle toe including claw 141 mm; wing-span 246 cm.

The bird appeared to be in juvenile or young immature plumage. The Shy Albatross breeds in Australasia and disperses throughout the southern oceans (Harrison 1983). It visits the Cape and Natal coasts of South Africa in reasonable numbers (Clancey 1980). The only other report from further north on the coast of eastern Africa is of a bird caught by fishermen off Lindi in south-eastern Tanzania in 1986; this bird was photographed and the record is still under review.

**References**

Clancey, P. A. (ed.)1980. *Checklist of Southern African birds.* SAOS: Johannesburg.

Harrison, P. 1983. *Seabirds, an identification guide.* Beckenham: Croom Helm.

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### Rock-loving Cisticola *Cisticola aberrans* near Kichwa Tembo, Maasai Mara, south-western Kenya

On 20 November 1986, on the rocky slopes of the Siria Escarpment behind Kichwa Tembo Camp on the edge of the Maasai Mara Game Reserve in south-western Kenya, the author and Nick Glaysher heard a loud, mournful two-syllabled note. It was reminiscent of the mournful call of a Fiscal Shrike *Lanius collaris* but definitely a double *pee-yu* rising on the first note and dropping

slightly on the second. Two birds were calling to each other, but the source was ventriloqual and difficult to pin-point. A few metres on two small birds got up and flew low and directly into a group of boulders beneath a shrub. The mournful piping ceased at this point; the call now given by the birds was a nasal *zeer,* when perched and also in flight. They clambered inquisitively up into the low shrub, but soon dropped into rocks and disappeared again. They were flushed several more times and some excellent views were obtained as they scurried over rock faces or perched openly on flat slabs under overhangs. They were located again and watched over about 2 h the following day. They were identified as *Cisticola aberrans* and the following details were noted.

The birds in some ways resembled Trilling Cisticolas *C. woosnami* and Tabora Cisticolas *C. fulvicapilla.* The upperparts were dull greyish brown, with no contrast between back and primaries, but distinct from the warm brown of *woosnami* or the slaty colour of *fulvicapilla.* The crown was redder than in *woosnami* but not as bright or extensive as in *fulvicapilla.* The constantly cocked tail was proportionately longer than in *woosnami* but not nearly as long as in *fulvicapilla.* It was brownish with no white visible on the upper surface, though in flight there appeared to be a paler tip. The rufous cap was bordered by a long creamy stripe extending from the base of the bill over the eye to the sides of the nape. The sides of the face were also creamy, with darker ear coverts, giving the impression of a buffy ring encircling the conspicuously dark eye. This was very different from the short pale supercillium of *woosnami* or the situation in *fulvicapilla* where the rufous cap extends down to the eye. The underparts of one individual were creamy although the throat was whitish; the undertail coverts were richer buff and there was a greyish wash down the flanks. The second bird lacked the creamy wash and was whitish below with greyer flanks. The bill was noticeably blackish, as was the interior of the mouth of one bird. The fleshy pink legs were rather long and strong.

Calls were varied. The piping call (heard only on the first day) and the *zeer* alarm note are referred to above. Other notes recorded on the second day included a double squeak uttered by one bird (the male?), with the second note lower, answered by a note halfway between from the other bird; also a three-note airy squeak. The song was a complex jumble of sweet and harsh notes interspersed with churring. Flight was usually fast and direct, straight into piles of large rocks. The birds often bounded around on rocks and perched in full view with the tail cocked, flicking their wings. They foraged right into small crevices and seemed to favour small caves with surrounding vegetation. They readily climbed up into small shrubs to scold noisily in full view. All the time they kept to a line of boulders running down the face of the escarpment, and on reaching the end they would double back, so that it seemed that they were holding a territory. The boulders were piled on each other and the whole area was very rocky with sparse grass and scattered shrubs and only the occasional larger tree.

The same birds were subsequently located a number of times in late November and early December, and were photographed and tape-recorded. Further birds were found nearby, and a minimum of six pairs was located on a 2-km walk along the escarpment on 6 December.

These would appear to be the first records of the species from this part of Kenya. The race *emini* is known from Tanzania, the nearest locality being Mwanza (Britton 1980); there is one report from Limuru (Britton 1980), but this

seems to be controversal (D.A. Turner, pes. comm.). Elsewhere in Kenya the race *teitensis* occurs in the Voi/Tsavo area, but it has not been reported for over fifteeen years. The Mara birds would presumably be referrable to *emini*.

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## Stripe-cheeked Greenbul *Andropadus milanjensis* in Mbulu District, northern Tanzania

One of us (RS) has had doubts about the identity of a bulbul he tape-recorded in the Marang Forest (3°30'S, 35°40'E), Mbulu, northern Tanzania in December 1978. FD-L has examined the tape, and finds it to be of the song of the Stripe-cheeked Greenbul *Andropadus milanjensis*.

Britton (1980) does not record this species from northern Tanzania west of Arusha National Park, in which general area Dowsett (1974) mentions specimens (race *striifacies*) from Monduli Mt. Marang Forest represents an extension westwards of known range, being about 130 km southwest of Monduli. Bennun *et al.* (1986) have recently captured this bulbul in Kenya, on Ol Doinyo Orok—a northward extension from the Kilimanjaro area of some 65 km. The Stripe-cheeked Greenbul may be uncommon in Mbulu, as Moreau & Sclater (1937) do not record it.

**Acknowledgements**
We thank R.J. Dowsett for help in preparing this note.

**References**

Bennun, L.A., Gichuki, C., Darlington, J. & Ng'weno, F. 1986. The avifauna of Ol Doinyo Orok, a forest island: initial findings. *Scopus* 10: 83–86.

Dowsett, R.J. 1974. Geographical variation in iris colour in the bulbul *Andropadus milanjensis*. *Bulletin of the British Ornithologists' Club* 94: 102–104.

Moreau, R.E. & Sclater, W.L. 1937. The avifauna of the mountains along the Rift Valley in north central Tanganyika Territory (Mbulu District). *Ibis* (14) 1: 760–786.

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**Observations on Denham's Bustard *Neotis denhami* at Maralal, Kenya**

Jackson's Bustard, the East African race of Denham's Bustard *Neotis denhami*, now occurs only very locally in Kenya. One of its population centres in Kenya is the high country on the eastern edge of the Rift Valley near Maralal. As a result of the illegal export of bustards from East Africa to Arab nations desiring them as targets in falconry, interest in local populations has increased. The objectives of this short study were to determine the number of Jackson's Bustards in the Maralal population and gather notes on their display.

**Study area**

The study was conducted 3 km south of Poror, located 20 km north of Maralal, in north-central Kenya. Observations were made in an area of low rolling hills about 4 km east to west and 6 km north to south, at an elevation of approximately 2500 m. The western border of the study area is the Rift Valley escarpment, and a road leads east to west across the north end of the study area to the spectacular Rift Valley view-point known as Losiolo. The lands are owned by the Samburu tribe who graze cattle, sheep and goats over the entire area. A farmer has leased much of these lands from the tribe and about 50 per cent of the area, the relatively flat part, has been ploughed and planted with wheat. During the study (late April and early May) these fields were ploughed or harvested and bare, but sowing, I was told, was to occur soon. Many fields had been burned, others had been ploughed this year for the first time. Rocky soils and steeper slopes in the study area remain unploughed and are vegetated by wild grasses and low scrub. Narrow, forested ravines cut through the area.

**Methods**

The study, conducted on 26 and 27 March, and 6 and 7 April 1986, amounted to 25·5 observation hours and included three dawns and three dusks. Observations were made with 7 x 35 binoculars and a 20 x 60 spotting 'scope, generally from over 200 m away. Most observation effort was concentrated in the northeast corner of the area within view of the wheat farm headquarters. Nearly 60 per cent of this time was spent observing the easternmost male (male E) and any other bustards that were visible from my vantage point near him.

**Results and discussion**

*Population*

During an earlier visit to the area on 5 March 1986 (at 17:00), eleven Jackson's Bustards were counted in the study area. They included a group of six birds, two pairs and a single. None was displaying. This concentration of eleven birds in a small area suggested that the bustards were still in non-breeding flocks at this time. During the study reported here the maximum number noted at one time was seven, with these scattered in groups of five or less. The impresssion was that over 15 birds used the study area; four displaying males were found. Individuals could be differentiated by carefully noting the pattern of black and white on the wings (Fig. 1). This could be done accurately only when a bird was observed from about 150 m or closer and for long periods. Five individuals were identified in this way, including three of the displaying males. Their distinctive wing patterns probably enable Jackson's Bustards to recognize individuals, and this would seem advantageous to members of a long-lived species with delayed

maturity and a dominance system related to longevity. Without such recognition more energy would be expended in dominance re-establishment each breeding season.

*Displaying males*

Males exhibited two different displays. A 'balloon display', as it is generally referred to in bustards, was common and appears to function in attracting females and also probably in advertising territory and dominance to other males. The second display type observed I call the 'boundary display.' It was seen only twice, both times between the same two males.

The ballon display was performed each morning and evening by some (and probably all) of the four displaying males. Upon my arrival at first light (at 06:21, 06:22 and 06:51) on the three mornings, male E was already 'in balloon.' Morning display frequency declined gradually after about 08:00 and ended for male E at 08:38, 09:04 and 09:14 respectively on the three mornings. In the afternoons, males were discovered already in display on five occasions, all between 16:45 and 17:45. Male E was still displaying when I left the area at 18:30, 18:32 and 19:12 on the three evenings in question. Outside the morning and evening display periods, males would usually disperse by flying or walking out of their display territories.

The balloon display was performed even when there appeared to be no other bustards within view of the male, which was most of the time. Male E had one primary display area where he spent nearly half of the morning and evening periods. His primary display area was an unploughed grassy 'island', 150 m x 150 m, surrounded by ploughed fields and a road and situated on a slight east-facing slope so that, when displaying, he was easily visible to the northeast, east and south. From his primary area male E strutted in balloon display up to 1000 m to the east, 400 m to the west and 300 m to the south, but did not wander north. Within this territory, displays were also concentrated in unploughed patches at the east end and in the southwest, but some displaying occurred throughout the territory, including ploughed areas.

Movement between the three areas of concentrated display was usually rapid, with the bird in 'balloon.' The distance from the primary area of male E to that of the next nearest male was some 1700 m. The balloon display varied greatly in intensity and often lasted for hours with only short pauses. About 90 per cent of male E's morning and evening periods were occupied by the balloon display, with the greatest activity very early and very late in the day. Between display bouts the male would relax his feathers and stand, walk or forage. A male in the balloon display has his white foreneck, chest and belly feathers erected and his orange nape fanned wide into an oblong. The head is tilted slightly upward and the wings are drooped (Fig. 1). In this posture males walk slowly or quickly, occasionally forage for short periods, or stand still, sometimes for five minutes or more. This typical display is interrupted by bouts of more intense 'display struts', which generally last 10 to 20 minutes and occupy about 30 per cent of the daily display period. These display struts often occur when no other birds are in view, but are disproportionately frequent and more rapid when other birds are present. A display strut begins with the male ballooning more fully, the neck, chest and upper belly feathers lifted even higher than in the typical 'balloon.' The male then struts straight forward for about 15 to 30 m. The average

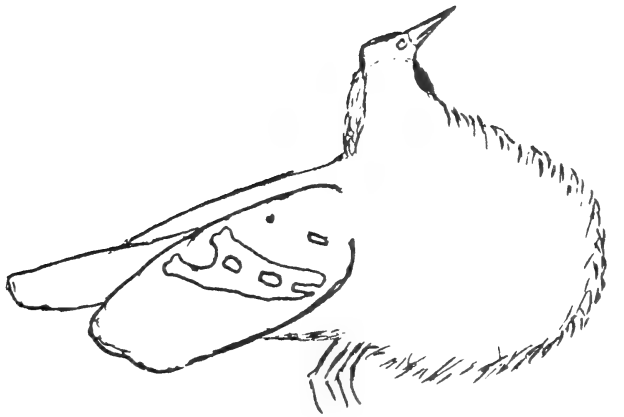

Fig. 1. *Jackson's Bustard in balloon display*

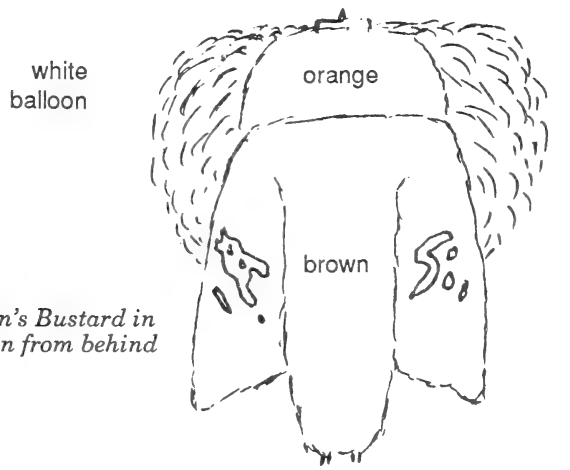


Fig. 2. *Male Jackson's Bustard in vertical display, seen from behind*

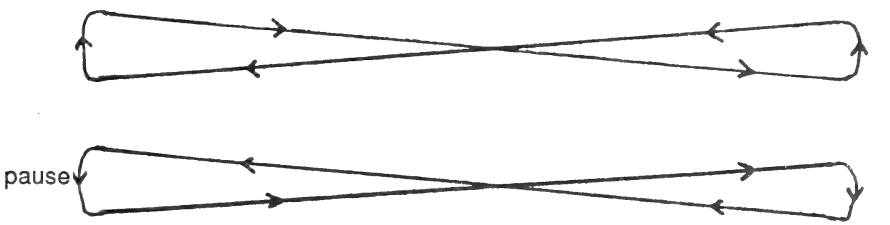


Fig. 3. *Configuration of the boundary display. Arrows represent the direction walked by the displaying males*

duration of 20 timed struts was 28 s, with the longest 63 s, the shortest 11 s.

Usually, at the end of a strut, the male begins a 'vertical display', so that the body is nearly vertical (Fig. 2). In this posture the white balloon and orange nape lift higher, so as to nearly conceal the head. It appears that the flared oblong of nape orange is aimed at the object of the display. After 7 to 8 s the upper body shudders and there is a quick, slight bloating of the throat and opening of the mouth, suggesting that some call has been made. Due to the wind I was never able to hear this vocalization, which others report is made by Denham's Bustard. After the shudder the male remains erect for about 14 to 17 s, and sometimes rotates slowly around, displaying in other directions. Twenty timed vertical displays averaged 21 s with the longest 40 s and the shortest 9 s.

On coming down from a vertical display, males usually immediately begin another display strut, typically in the same direction, but often turning so as to remain in one of the relatively small display areas. Each day, single birds and groups of up to five (males and females) flew and walked into male E's display territory where they foraged, often for an hour or more. In most cases these birds treated male E with indifference, but their frequent appearance suggests that they came to interact. These visiting groups varied in size and individual composition. There was little overt interaction between members of these groups, although on one occasion a male approached a female directly and she lowered her outstretched head to the ground, opened her wings for 2 s and then walked quickly away. The male did not follow. The groups usually flew or walked from male E's territory before 09:00.

Flying bustards seemed to elicit flight in other bustards, even birds over a kilometre away. The black and white wing pattern is striking in flight. When bustards were in his territory, male E usually increased the frequency of his display struts and directed more displays in the direction of the visitors. In most cases there was no difference in the way he behaved towards non-breeding males (which have less intense nape orange) and females. On one occasion male E was observed courting a group for 28 min until dusk. As he approached the female his struts became shorter (8 to 14 s, and about 10 m) and the vertical display after the shudder was held longer (up to 30 s). His struts were towards or sideways to her and during each vertical display he turned to face the flared rufous nape at the female. The female appeared interested and walked towards the male, but also continued to forage.

The boundary display was observed only twice, both times at the same location between male E and his neighbour to the west. The location of the display was the most westerly point that male E was observed and probably represented the extreme of his territory. The two males paced parallel to each other, mostly about 2 to 5 m apart, with their orange napes lifted but not flared horizontally as in the baloon display. The 'balloon' was not distended. The mouth was held slightly open part of the time. After pacing thus for 5–25 m, they faced away from each other slowly, pausing for a few seconds with the napes directed towards each other, then slowly turned back and again paced parallel in the opposite direction (Fig. 3). Each pace-and-turn varied in duration, but the average time was about one minute. The two boundary displays lasted 18 and 6 min, the second ending when a Tawny Eagle *Aquila rapax* chased the two birds apart.

**Habitat, foraging and other activities**

Jackson's Bustards spent most time in ploughed fields and less in grasslands and areas of low bush. This use pattern corresponds with the relative availability of habitats in the study area. Birds were not seen in the forested ravines. Foraging was noted at all times of day. Most mornings and evening were spent watching displaying males, which fed little. Females and non-breeding males may feed more during morning and evening, but this was not determined. Food items were small and, due to the distance of observation, none was positively identified. In most cases of foraging, a bird would walk along slowly, picking at the ground about every 10 s. Occasionally several ground-picking motions would be made rapidly in succession. In the barren and sometimes burned ploughed fields, wheat chaff and occasional seeds were available. The slow and rapid picking motions of birds in such fields suggest that they were eating this wheat. In grasslands, birds picked at the heads of grasses and herbs on a few occasions. Once a bird picked juniper beries, working its way round a small tree. Drinking was never noted. A small reservoir near the centre of the study area was the only known permanent water.

During the middle of the day, from 11:00 to 16:00, few bustards were noted, suggesting that they may sit or enter bush and ravines at this time. One bird was watched sitting for 44 min and was still sitting in a 30 to 40-km/h wind when I left—the brown back and wing coverts blending perfectly with the bare sod.

**Predators and disturbances**

Samburu herders with livestock and pedestrians travelling to and from the settlement of Poror constantly moved across the study area. Bustards flew or walked to the side of these people and in no instance did I see people pay any attention to them. Tawny Eagles twice flushed bustards but adults are probably too large for this eagle to prey on. Troops of baboons *Papio* sp. frequently crossed the area and these could be a threat to eggs and chicks. Golden Jackals *Canis aureaus* were seen three times in the area, including one that came within 30 m of a displaying bustard causing the bird to stop his display. A Steinbok *Raphicerus campestris* was seen foraging within 3 m of a bustard with both animals paying no apparent attention to each other.

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*Scopus* 11: 47–51, September 1987 Received 17 December 1986

**Display of Black-bellied Bustard *Eupodotis melanogaster***

On 23 April 1986, late on a dull cloudy afternoon after a heavy shower of rain on the slopes of Menengai, 0°15'S, 36°03'E, near Nakuru, Kenya, a male Black-bellied Bustard *Eupodotis melanogaster* took off from the ground and flew vigorously, flapping its wings, in irregular circles, both left and right handed, until it gained a height of at least 500 m above the ground. It did not make use of thermals, of which there were probably none at that time. It then descended to about 300 m, also in irregular circles, with its wings held stiffly horizontal, and allowing its white primaries to flutter, causing a fairly considerable noise. The process was then repeated several times but it was not observed to conclusion.

Again, on 6 June 1986, on a similar cloudy evening after a heavy shower of rain at the same site, a bird was seen flying vigorously so high as to make identification impossible with the naked eye. With the use of x 10 binoculars it was confirmed that this was again a male Black-bellied Bustard. Soon it made the same descent that had been observed in April, holding its wings horizontal and allowing the primaries to flutter, but it was also observed that the tail was spread in delta formation. It was too far off to hear any sound, but it was possible to see the termination of the descent, again at an estimated 300 m above the ground. Finally, when the rigid wings were folded, the bird also briefly bent its tail forward and its neck backwards over its back in a typical bustard 'rocketing' position. It then resumed the vigorous circling flight to regain height and to repeat the performance.

The bustard continued this display many times, one of which was timed when the assent started at 18:52, and maximum altitude was gained at 18:57, five minutes later. The descent took approximately half a minute. Finally, at 19:03, it stopped, 20 min after sundown, when it glided down to approxinmately the same place that the bird had been seen taking off from in April, indicating that it was probably the same bird on the same territory.

Allowing $5^1/_2$ min for each performance would mean that it had repeated the display some eight or nine times since it was first seen—already performing—at 18:15. The amount of energy expended must have been considerable.

The *whoo-it...cluck* call which is made during the neck-bending/stretching display was frequently heard during these months from this bustard's territory.

*M.A.C. Coverdale, Soysambu, Private Bag, Nakuru*

Scopus 11: 52, September 1987 Received 20 November 1986

**Numbers of Dwarf Bitterns *Ixobrychus sturmii* displaying**

On 3 April 1985 between 12:30 and 13:30 at a small dam on Kulalu Ranch at 3°13'S, 39°25'E, Coast Province, Kenya, several Dwarf Bitterns *Ixobrychus sturmii* were seen displaying. The dam covered about a hectare with shallow flooded edges through which tall grass and small trees with sparse foliage protruded. The Dwarf Bitterns flew repeatedly at about 2 m above the flooded grass, and then perched in prominent positions in the small trees. Their legs and

feet were bright orange in colour. It was impossible to accurately estimate the numbers present, but there were probably at least six and possibly many more. There was a continuous low note call, the source of which was impossible to identify. Also present were a few other herons, egrets, ducks, geese and approximately 50 Open-billed Storks *Anastomus lamelligerus*.

On 20 April 1985 this dam was again visited at mid-day. No display flights were seen, but three or four Dwarf Bitterns were flushed from the flooded grass. Only one of these birds had orange legs and feet, the others were yellow. A heron-like *squaak* was heard, but again, the source could not be identified. Unfortunately later observation to check if breeding had taken place was impossible.

*M.A.C. Coverdale, Soysambu, Private Bag, Nakuru*

Scopus 11: 52–53, September 1987 Received 20 November 1986

**Black mamba takes Northern Crombec from mobbing bird group**

On reading Ginn's (1986) account of a boomslang *Dispholidus typus* striking out at members of a mobbing group of birds, we were reminded of an episode involving a mobbing bird group and a snake—a black mamba *Dendroaspis angusticeps*—in Kenya. Ginn wondered whether the boomslang was attempting to scare off the birds by striking at them, or was perhaps attemting to catch one; in any event, it failed to obtain prey in this case.

On 8 December 1981, north-east of Koru, western Kenya, at 1560 m, we were examining a stump used for roosting by Yellow-billed Barbets *Trachyphonus purpuratus* when our attention was attracted by calling birds, especially Placid [Olive Mountain] Greenbuls *Phyllastrephus placidus* and Northern Crombecs *Sylvietta brachyura*, but also including two White-browed Robin Chats *Cossypha heuglini* and two Chin-spot Batises *Batis molitor*. The birds were mobbing a black mamba coiled partly around a sharply angled tree that had fallen somewhat but that was still alive. Small twigs and leaves largely obscured the snake, which was about 2 m in length. Most of the calling birds sporadically darted over the back of the coiled snake which moved slowly. We saw the snake's head come round the tree, then go behind it, as the mamba very slowly moved its coiled body while the birds called continuously and occasionally darted at it. As one crombec swooped by the snake's back and went below the tree, we saw the snake strike out at it from the lower side of the tree; the crombec had flown from above to below the snake at about 15 cm from it, and the bird was hit and fell into dense undergrowth below the tree. The mamba immediately released its hold and dropped from the tree straight down to the undergrowth below. The other birds scattered but continued to call at a greater (5–10 m) distance from the tree.

About a minute later the mamba reappeared carrying the crombec, barely visible in its mouth. The snake climbed up another small leaning tree, but then detected us, or was otherwise frightened; at any rate it rapidly slid down the tree and moved downslope and speedily away, feathers of the crombec still visible at the edge of its mouth.

This example illustrates the hazards of mobbing, and indicates that snakes may take advantage of mobbing birds (which presumably interact to some extent with, and have to watch each other as well as the predator), by striking at the birds whenever they can. Snakes must infrequently obtain prey in this way. As a possible hunting technique it would appear to be a poor one, as the snake is occasionally pecked and thus could be injured by the mobbing birds (pers. obs.).

**Reference**

GINN, P.J. 1986. Birds and the hunting strategy of Boomslang. *The Honeyguide* 32: 45.

*Lester L. Short, American Museum of Natural History, New York, NY 10024-5192, U.S.A.* and *Jennifer F.M. Horne, National Museums of Kenya, Box 40658, Nairobi*

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## *Ficedula* species in Ethiopia

The Collared Flycatcher *Ficedula albicollis* is generally uncommon in eastern Africa. Britton (1980a) stated that it was a regular visitor to parts of western Tanzania, and Vande weghe (1979) has noted it frequently on passage in Rwanda. There are few records, however, from Uganda and Kenya (Britton 1980a, East African Bird Reports for 1980–85 in *Scopus*). The great majority of the East African and Rwandan records refer to the eastern race *semitorquata*. There are also two records of *semitorquata* from northern Somalia (16 August and 1 September 1905, J.S. Ash, pers. comm.) and four from southern Sudan (Nikolaus, in press). Nikolaus (1983) netted a *semitorquata* in early October 1982 near the Sudan Red Sea coast, and Hogg *et al.* (1984) mention an older September occurrence of the species in north-western Sudan. Britton (1980a) pointed out that there were no satisfactory records of the Pied Flycatcher *F. hypoleuca* for East Africa, and Pearson (1981) has re-examined two Kenya specimens previously ascribed to this species and concluded that both were *semitorquata*. There are no good records of *hypoleuca* from southern Sudan either (Nikolaus, in press), though this species is said to have occurred in the northern part of the country (Hogg *et al.* 1984) and two were recorded in August from the Red Sea coast (Nikolaus 1987).

In Ethiopia, Urban & Brown (1971) noted that the status of the *Ficedula* species was uncertain, but that *F. a. semitorquata* occurred in highland forests in Eritrea. This was based on Smith's (1957) records between 5 August and late September in woodland above 1200 m. C.S. Clapham also recorded *semitorquata* in Eritrea in 1962 (J.S. Ash, pers. comm.). Elsewhere in Ethiopia, *Ficedula* flycatchers are apparently rare. Among over 56,000 birds ringed from 1969 to 1977, Ash (1977) noted only four 'Pied' Flycatchers. Three of these were recorded by Hugh Pain on the western edge of Addis Ababa during August (Pain 1975, 1976). Unfortunately, no full descriptions were taken, but photographs are available. One of these photographs is certainly of *semitorquata* but the other

two appear to be of species other than *Ficedula*. The fourth bird was caught by me on 6 April 1976 in a patch of woodland by a dry tributary of the Ubela River in lowland Gambela in Gemu Goffa province, near the Sudanese border (Tyler 1976). This bird was ringed, photographed and identified as a female *semitorquata*.

Clearly more data are required to assess the status of *F. a. semitorquata* in Ethiopia, but the Gambela record indicates that it is a spring as well as an autumn passage migrant. There appear to be no satisfactory Ethiopian records of either nominate *albicollis* or *hypoleuca*.

**References**

Ash, J.S. 1977. Bird ringing report for Ethiopia. No. 7, 1–16. Duplicated.
Britton, P.L. 1980a. *Ficedula* flycatchers in East Africa. *Scopus* 4: 21–22.
Hogg, P., Dare, P.J. & Rintoul, J.V. 1984. Palaearctic migrants in the central Sudan. *Ibis* 126: 307–331.
Nikolaus, G. 1983. An important passerine ringing site near the Sudan Red Sea coast. *Scopus* 7: 15–18.
Nikolaus, G. 1987. Distribution atlas of Sudan's birds with notes on habitat and status. *Bonner zoologische Monographien* 25: 1–322.
Nikolaus, G. in press. *The birds of the south Sudan. Scopus* Special Supplement No. 3.
Pain, H. 1975, 1976. *Ethiopian Wildlife and Natural History Society Newsletter* Nos. 101, 104, 113.
Pearson, D.J. 1981. The identity of two *Ficedula* flycatchers recently collected in Kenya. *Scopus* 5: 59–60.
Smith, K.D. 1957. An annotated check list of the birds of Eritrea [2nd part]. *Ibis* 99: 307–337.
Tyler, S.J. 1976. *Ethiopian Wildlife and Natural History Society Newsletter* No. 109.
Urban, E.K. & Brown, L.H. 1971. *A checklist of the birds of Ethiopia.* Addis Ababa: Haile Sellassie I University.
Vande weghe, J-P. 1979. The wintering and migration of Palaearctic passerines in Rwanda. *Le Gerfaut* 69: 29–43.

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*Scopus* 11: 54–55, September 1987 Received 15 July 1987

I would like to thank Dr David Pearson for a great deal of editorial assistance in the preparation of this issue.

*Graeme Backhurst*

## XX CONGRESSUS INTERNATIONALIS ORNITHOLOGICUS

Christchurch, New Zealand, 2–9 December 1990

PRELIMINARY NOTICE No. 1

The XX International Ornithological Congress will take place in Christchurch, New Zealand from 2–9 December 1990. Professor Charles G. Sibley (USA) is President and Dr Ben D. Bell (NZ) is Secretarty-General. The anticipated Congress programme will include plenary lectures, symposia, contributed papers (spoken and posters), workshops, discussion groups and films. There will be a mid-Congress excursion day. Pre- and post-Congress excursions are planned to interesting ornithological sites in New Zealand and adjacent regions. Requests for the First Circular and suggestions regarding the Congress organization should be addressed to:

Dr Ben D. Bell
Secretary General
XX International Ornithological Congress
Department of Zoology
Victoria University of Wellington
Private Bag, Wellington
New Zealand

form used in this issue. Names of periodicals must be given in full and, in the case of books, the town of publication and the publisher should be given. A number of works which are cited frequently should not be listed under 'References'; the name(s) of the author(s) and date(s) of the publication should be given in the text in the normal way.

Authors of 'papers' over ten pages in length receive five copies of their contribution free of charge. Extra copies, which will be supplied at cost, must be ordered when the MS is submitted. All contributions should be sent to the Editor, G.C. Backhurst, Box 24702, Nairobi, Kenya; they will be acknowledged.

**Works which should not be listed under 'References'**

BACKHURST, G.C., BRITTON, P.L. & MANN, C.F. 1973. The less common Palaearctic migrant birds of Kenya and Tanzania. *Journal of the East Africa Natural History Society and National Museum.* 140: 1–38, = Backhurst *et al.* 1973.

BENSON, C.W., BROOKE, R.K., DOWSETT, R.J., & IRWIN, M.P.S. 1971. *The birds of Zambia.* London: Collins, = Benson *et al.* 1971.

BRITTON, P.L. (ed.) 1980. *Birds of East Africa.* Nairobi: EANHS, = Britton 1980.

BROWN, L.H. & BRITTON, P.L. 1980. *The breeding seasons of East African birds.* Nairobi: EANHS, = Brown & Britton 1980.

BROWN, L.H., URBAN, E.K. & NEWMAN, K. 1982. *The birds of Africa*, Vol. I. London and New York: Academic Press, = Brown *et al.* 1982.

HALL, B.P. & MOREAU, R.E. 1970. *An atlas of speciation in African passerine birds.* London: British Museum (Nat. Hist.), = Hall & Moreau 1970.

JACKSON, F.J. 1938. *The birds of Kenya Colony and the Uganda Protectorate*, 3 vols. London: Gurney & Jackson, = Jackson 1938.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1957 and 1960. *African handbook of birds.* Series I, vols 1 and 2; *Birds of eastern and north eastern Africa*, 2nd edition. London: Longmans Green & Co., = Mackworth-Praed & Grant 1957 and/or 1960.

MOREAU, R.E. 1966. *The bird faunas of Africa and its islands.* London: Academic Press, = Moreau 1966.

MOREAU, R.E. 1972. *The Palaearctic-African bird migration systems.* London: Academic Press, = Moreau 1972.

SNOW, D.W. (ed.) 1978. *An atlas of speciation in African non-passerine birds.* London: British Museum (Nat. Hist.), = Snow 1978.

URBAN, E.K., FRY, C.H. & KEITH, S. 1986. *The birds of Africa*, Vol. II. London: Academic Press, = Urban *et al.* 1986.

**East African Bird Report**

This normally forms the fifth issue of *Scopus* and each report covers one calendar year and relates just to the birds of Kenya, Tanzania and Uganda. Records of Afrotropical and Oceanic birds should be sent to D.A. Turner, Box 48019, Nairobi; Palaearctic bird records should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Report. Sightings of rare birds may be telephoned through to any OSC member (numbers inside the front cover) in the hope that the bird(s) may be seen by others. Criteria covering the submission of Bird Report records are given in *Scopus* Supplement, June 1982, and copies may be obtained from D.A. Turner. Records of rare birds are vetted by the independent and internationally-based East African Rarities Committee.

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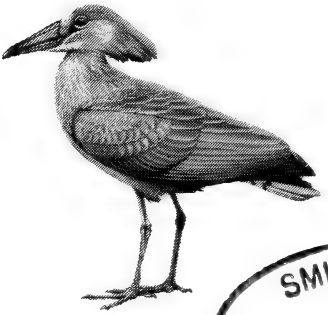



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*Edited by*
Graeme Backhurst

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# *SCOPUS*

Cover illustration from a gouache painting by Dr P.A. Clancey

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*Scopus* welcomes original contributions on all aspects of the ornithology of eastern Africa. Contributions will be assessed by members of the OSC and/or by independent referees. The material published is divided into 'papers' and 'short communications', the latter will usually be less than two pages in length.

Contributions should be typed in 1.5 or double spacing on one side of the paper only, with wide margins all round, and should be sent in duplicate. Hand-written MSS will also be considered but they must be clearly written, and sent in duplicate too. Both English and scientific names of birds should be given when the species is first mentioned, thereafter only one name should be used; they should be those of *Birds of East Africa* unless the species does not occur in that work. Tables, which should be numbered, should appear in the typescript, not grouped together on separate sheets at the end. Metric units should be used. Contributions will be welcomed on floppy disk—please contact the Editor for details.

Illustrations should be on good quality white paper or tracing material, in line, and should not be larger than 19 x 23 cm. Unless the author can provide professional quality lettering, it should be done lightly in pencil. Each illustration should be numbered (Fig. 1, etc.) and be provided with a legend typed on a separate sheet of paper. Photographs will be considered and should be good quality black and white.

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*Scopus* 11(3/4): 57–78, March 1988

# OBSERVATIONS ON BIRDS IN SOMALIA IN 1978–1982, TOGETHER WITH A BIBLIOGRAPHY OF RECENT LITERATURE

*J.S. Ash* and *J.E. Miskell*

Observations on birds in Somalia during the period of our residence there from August 1978 to January 1982 have been summarized already and included in Ash & Miskell (1983). Further details supporting the identification of some 50 species previously unrecorded in the country are given in Ash (1983). The purposes of the present paper are severalfold:

a. To provide more information, particularly with regard to localities and dates, for many other species which previously have been recorded rarely (rarely recorded species are those for which there are ten or fewer records);
b. To record other miscellaneous, significantly interesting, observations, particularly regarding extension of range;
c. To collect together in one place the scattered references to all papers and notes resulting from studies during this period. Included in the bibliography (Appendix 2) are references to papers concerning at least 33 other species which we have discussed elsewhere and which would otherwise have earned inclusion here (e.g. Obbia Lark *Calandrella obbiensis*, Somali Short-billed Crombec *Sylvietta philippae*, Warsangeli Linnet *Acanthis johannis*). All references known to the authors since 1943 to the present day are also included to complete a modern bibliography to the birds of Somalia.

A comprehensive bibliography has been published already (Moltoni 1936a) covering the earlier ornithological literature of southern (ex Italian) Somalia, and Archer & Godman (1937, 1961) have summarized the literature from northern (ex British) Somalia. We have not repeated here the listing of the earlier literature. In order to avoid multiple repetition of the same references, a sequential reference number is used in lieu of the author's name and date of publication, and is quoted in the species section of the paper; however, in cases where the author's name and date are given in the text the relevant reference will be found in the bibliography (i.e. Appendix 2).

Details of 'rarely recorded species' prior to our own observations can be traced through the literature cited under each species. Sequence and nomenclature follow that of the check-list (Ash & Miskell 1983) and as an aid in cross-referencing, its species' numbers are used. Specimens in the National Museum, Nairobi collected in Somalia (mostly by M.E.W. North) are referred to as 'NNM'. Birds flying in northerly or southerly directions over the sea are shown as the numbers counted followed respectively by the suffix N or S. A gazetteer is given in Appendix 1 to localities mentioned in the text which are additional to those listed in Ash (1983), together with distribution map square numbers and geographical co-ordinates.

## NOTES ON SPECIES

3 ***Bulweria fallax* Jouanin's Petrel** At sea off Mait, 4, 20 May 79. Gezira: [12S probably this species, 22 Aug 79]; 13N, 3 Jul 80; 1N, 16 Jul 81. Mallable, 2N, 1 Jul 81. Six previous records (Refs: 1, 2. The single record in Archer & Godman (1937) is 1000 km offshore!).

9 ***Phaethon aetherus*** **Red-billed Tropicbird** Mallable, oiled immature found dead, 15 Dec 78. Gezira, 1S on 17 Jul and 22 Sep 81. No previous records from the south.

17 ***Phalacrocorax nigrogularis*** **Socotran Cormorant** Mait Is., 1, 20 May 79. Ras Hafun, 3+, 28 Apr 80. Habo, 73E + 1, 2 May 80. Tohen, 1 corpse, 3 May 80. Alula, 35E, 5 May 80. Las Khoreh, 1, 9 May 80. Four previous records (Ref: 2. Also Alula, 1, 24 Apr 43 (NNM: coll. M.E.W. North)).

19 ***Fregata ariel*** **Lesser Frigatebird** Gezira, 1, 1 Nov 78 and 8 Aug 79; 2, 24 Jul 80; 1, 12 Nov 81; 3, 16 Nov 81. Mallable, 1, 16 Oct 81. All were immatures, of which seven were judged at the time to be *ariel*, based on characters which are now known to be invalid for this species. Their specific identification must therefore remain in doubt. One other record has now been shown to be *minor* (Ash 1985b). One previous definite record of *ariel* (Ref: 1).

20 ***Ixobrychus minutus*** **Little Bittern** Iskushuban, 1 male *I. m. minutus* in wadi pool, 30 Apr 80. The only definite record of the Palaearctic race in Somalia.

42 ***Leptoptilos crumeniferus*** **Marabou** Large concentrations: Hawaala Buray, 500 at Wuelea colony, 30 Dec 78. Hargeisa dam, *c.* 1000, 4 May 79; 1244, 5 May 79.

56 ***Anas clypeata*** **Shoveler** Libsoma, 1, 16 and 21 Jan 80. Dannow, 9, 4 and 19 Feb 80. Mogadishu, 14, 24 Nov 80. Mallable, 1, 21 Nov 81. One previous record (Ref: 1).

57 ***Anas crecca*** **Teal** Libsoma, 3, 21 Jan 80. Dannow, 3, 3 Feb 80; 55, 4 Feb 80; 10, 19 Feb 80. Dhay Tubako, 3, 22 Feb 80. Dhonde, 1, 26 Feb 80. Two previous records (Ref: 1. Also Lake Sinadogo, 27 Oct 71 (R.G. Allan pers. comm.)).

60 ***Anas penelope*** **Wigeon** Dannow, 1, 18 Jan 80. Near Adale, 3, 16 Apr 80. Gezira, 3, 16 Nov 81. Two previous records (Ref: 1. Also Eil, 1, 22 Dec 44 (NNM: coll. M.E.W. North)).

61 ***Anas querquedula*** **Garganey** Near Og, 1, 23 May 79. Lake Sinadogo, 1, 29 Apr 79. Two previous records only north of 8°N (Ref: 1).

65 ***Netta erythrophthalma*** **Southern Pochard** Dannow, 1, 3 Jul 78; 6, 28 Jul 79. Near Jiohar, 4, 25 May 79; 1, 28 May 79. Dhay Tubako, 1, 22 Feb 80. Near Uarmahan, pair, 7 Jul 81. One previous record (Refs: 18, 19).

80 ***Polyboroides radiatus*** **Harrier Hawk** Hawaala Buray, immature, 21 Dec 78. Marerei, 1, 29 Sep 79. Belet Uen, immature, 14 Jan 81. Four previous records (Refs: 9, 11, 14, 18; also Snow 1978).

82 ***Circaetus fasciolatus*** **Southern Banded Snake Eagle** Manane, 1, 11 Oct 78. Fanole, 1, 15 Sep 79. Marerei, pair displaying, 30 Sep 79; 2 at another site, 1 Oct 79. One previous record (Refs: 9, 14, 18).

83 ***Circaetus gallicus*** **Short-toed Snake Eagle** Birds were frequently seen in Somalia with characters indicating that they should be *C. g. gallicus* and probably *C. g. beaudouini*, but they were eventually identified as immature,

probably in 2nd-year plumage, *C. g. pectoralis*, from the presence on some of a few juvenile/immature feathers on the underparts. This intermediate plumage does not seem to have been described (L.H. Brown *in litt.*).

86 ***Accipiter melanoleucus* Great Sparrowhawk** Yemen, 1, 9 Oct 78. One previous record (Ref: 1).

89 ***Accipiter tachiro* African Goshawk** At 33 km south of Lugh, 1, 6 Oct 79. Gelib, 1, 23 Feb 80. Qardhale, 1, 27 Feb 80. One previous record (Refs: 9, 14, 18).

93 ***Aquila wahlbergi* Wahlberg's Eagle** Near Kolbio, 1, 17 Sep 79. At 16 km east of Kolbio, 1, 26 Sep 79. 24 km east of Badade, 1, 26 Sep 79. Lake Radidi, 1, 27 Feb 80. One previous record (Ref: 6).

98 ***Hieraaetus dubius* Ayres' Hawk Eagle** Gelib, 1, 23 Feb 80. Two previous records (Refs: 9, 14, 18, 36, 40).

102 ***Lophaetus occipitalis* Long-crested Eagle** Genale, 1, 6 Dec 78. Afgoi, 1, 15 Jan and 3 Feb 79. Two previous records (Refs: 1, 17, 18).

105 ***Melierax poliopterus* Pale Chanting Goshawk** Adults and immatures catch *Tadarida* bats at their cave roosting sites at Gezira, occasionally during the day, but mostly at dusk as the bats are leaving. One was perched on a camel's hump on a plain near Dalale on 17 May 80 where the only other perch would have been the ground.

110 ***Chelictinia riocourii* Swallow-tailed Kite** Mallable, 2, 3 Nov 78. Bergadid area, 7, 28 Apr 79. Near Modun, 1, 14 Sep 79. Far Sarei, 2, 20 Feb 80. Fanole, 1+, 23 Feb 80. Dannow, 1+, 6 Mar 81. Two previous records (Refs: 1, 0, 14. Also Erigavo, 1, NNM: coll. M.E.W. North).

112 ***Macheiramphus alcinus* Bat Hawk** Gelib, 1, 12 Oct 78. One previous record (Refs: 1, 18, 25).

113 ***Pandion haliaetus* Osprey** Oversummering records: May (2), Jun (8), Jul (4) in all years. Mallable, 1 carrying large branch, 11 Nov 78.

114 ***Falco amurensis* Eastern Red-footed Falcon** Near Gezira, 9, 24 Nov 78. Between 13 km north of Balad and 11 km south of Jiohar, 150–200, 13 Apr 79. 11 km north of Balad, 10, 17 Apr 81. One previous record (Refs: 17, 18. Also Ash & Miskell in prep. c).

117 ***Falco concolor* Sooty Falcon** Hargeisa Dam, 1, 5 May 79. 10 km northwest of Jirjir, 1, 7 May 79. Seven previous records (Refs: 1, 9, 18).

119 ***Falco naumanni* Lesser Kestrel** Gezira, 1, 8 Dec 78. Near Balad, *c.* 14, 13 Apr 79. 36 km north of Halgan, 1, 28 Apr 79. One previous record (Ref: 1).

124 ***Falco tinnunculus* Kestrel** Gezira, 1 hunting in the light of refinery flame at night, 12 Apr 90.

134 ***Numida meleagris* Helmeted Guineafowl** 18 km east of Lugh, 15, 6 Oct 79. It apparently only just reaches southern Somalia here.

140 ***Porphyrio alleni*** **Allen's Gallinule** Dannow, 1, 4 Dec 78 and 4, 13 Aug 80. One previous record (Refs: 10, 18).

147 ***Podica senegalensis*** **Finfoot** Shongolo, 1, 11 Jan 80. Also seen by Dr C.C.H. Elliott. One previous record (Ref: 38 (Dakatch, mid-Jubba)).

148 ***Eupodotis hartlaubii*** **Hartlaub's Bustard** Far Sarei, 1, 19 Feb 80. Four previous records (Refs: 1, 7, 17, 18; in addition, a bird formerly identified as *E. melanogaster* is reidentified as this species in Hilgert (1908)).

154 ***Otis arabs*** **Arabian Bustard** 9 km north of Jire, 1, 8 May 79. Two + previous records (Refs: 1, 9, 14).

160 ***Charadrius asiaticus*** **Caspian Plover** Near Uarsheij, 15, 8 Jun 79. The only record between 22 Apr and 2 Sep.

161 ***Charadrius dubius*** **Little Ringed Plover** Hawaala Buray, 84, 31 Dec 78.

162 ***Charadrius hiaticula*** **Ringed Plover** Very common inland especially along roads: Sablalle, hundreds on grassy plain, 13 Oct 78. Southern Somalia, 'very common inland, mostly along roads', 2–14 Oct 78. Near Marerei, *c.* 500 on road, 29 Sep 79. Jelib, 'many flocks along road', 1 Oct 79. Southern Somalia, 'very common inland, especially on roads', 13 Sep–8 Oct 79.

167 ***Charadrius tricollaris*** **Three-banded Plover** Hawaala Buray, 1, 9 Jan 79. Fan Weyn Duur, 2, 4 Oct 79. No previous records south of 8°N.

169 ***Pluvialis squatarola*** **Grey Plover** Bula Hadji, 2, 8 Oct 78. Far Sarei, 1, 21 Feb 80. No previous inland records.

173 ***Vanellus melanopterus*** **Black-winged Plover** Tuf Wajale, *c.* 10, 6–7 May 79. One previous record (Refs: 1, 9, 14).

181 ***Tringa glareola*** **Wood Sandpiper** Hargeisa Dam, *c.* 800, 5 May 79. These, together with *c.* 300 Little Stints *Calidris minuta*, at one hour before sunset left in batches, rising high and watched out of sight through binoculars heading 40° (*c.* NE) by compass.

184 ***Tringa stagnatilis*** **Marsh Sandpiper** Nowadays fairly common in the south, Aug–Mar; also 1–3 on four occasions, 1–22 Jul. Hawaala Buray, 53, 31 Dec 78. Four previous records (Refs: 1, 18, 26).

185 ***Tringa totanus*** **Redshank** Gelib, 1, 5 Oct 78. Galboy, 1, 7 Dec 78. Libsoma, 1, 25 Dec 79. Dannow, 1, 18 Jan 80. No previous inland records.

186 ***Xenus cinereus*** **Terek Sandpiper** Bula Hadji, 1, 8 Oct 78. No previous inland record.

187 ***Gallinago gallinago*** **Common Snipe** Near Uarmahan, 1, 7 Jul 81. The only record between 27 Feb and 5 Oct.

196 ***Calidris temminckii*** **Temminck's Stint** Hargeisa Dam, 1, 5 May 81. Near Og, 1, 23 May 81. Only one previous record from the north (Ref: 1).

201 ***Arenaria interpres*** **Turnstone** Gelib, 1, 5 Oct 78. Sablalle, 2, 13 Oct 78. Marerei, 1 on road, 28 Sep 79. The only inland records.

203 ***Recurvirostra avosetta*** **Avocet** Gezira, 3, 1 Nov 78; singly 13 Nov 78, 26 Feb 79, 20 Mar 79. Shalambot, 3, 2 Mar 79. Mallable, 1 flew north with migrating flock of 200 Whimbrel *Numenius phaeopus*. Two previous records (Ref: 1).

204 ***Phalaropus lobatus*** **Red-necked Phalarope** Mogadishu area, especially Gezira, hundreds on the sea, 26 Mar–9 Apr 81, with 3–4 large flocks on 26 Mar and over 540 on 2 Apr; up to 72, 22 Oct–18 Nov 81. Shalambot, 1, 16 Mar 79. Libsoma, 1, 25 Dec 79 (both inland sites). Alula, 1, 3 May 80. Gezira, 1, 7 May 81. Three previous records (Refs: 2, 4. Also see Schiemann 1986 for subsequent records).

207 ***Burhinus oedicnemus*** **Stone Curlew** Mogadishu, 1 *B. o. saharae* dead on road in town at dawn, 21 Dec 78. One previous record (Refs: 1, 28).

209 ***Cursorius cursor*** **Cream-coloured Courser** Gezira, 2 *C. c. cursor*, associating with 4 local *C. c. littoralis*, 12 Dec 81. It is tempting to link this occurrence with the arrival of a number of Short-toed Larks *Calandrella brachydactyla* in the same area at the same time. Two previous records of nominate birds in north-western Somalia (Ref: 1).

225 ***Larus ridibundus*** **Black-headed Gull** Mogadishu area, 41 on 18 days, 9 Dec–10 Feb, 1978–81. Afgoi area, 1, 28 Nov 78 and 7 Dec 78. Shonde, 1, 26 Feb 80. Lake Radidi, 1, 27 Feb 80. Gezira, 1, 14 Jun 79. Two previous records (from north-west) (Ref: 1. Also Lake Sinadogo, 1, 6 Feb 72 (R.G. Allan, pers. comm.)).

236 ***Sterna bergii*** **Crested Tern** *S. b. thalassina*: Gezira area, 2+, 1 Jun 80; 1, 4 Jun 80; 10+, 16 Jun 80; 1, 4 Jul 80. No previous records of this race.

237 ***Sterna caspia*** **Caspian Tern** Mogadishu area, 34 on 17 days, 22 Sep–27 Apr, 1978–81. Gezira, 1, 15 Jun 80. Aibat Is., 1, 10 May 79. Sabawanak, 1, 13 May 79. Bulhar, 1, 13 May 79. Ras Kiamboni area, 4 on 3 days, 20–23 Sep 79. Stambul–Kismayu, 4, 28 Sep 79. Kismayu, 3, 23 Feb 80; 16, 6 Feb 81. Alula, 1, 3 May 80. Four previous records (Refs: 1, 2, 18, 23).

248 ***Pterocles senegallus*** **Spotted Sandgrouse** Eil, 2, 24 Apr 80. 16 km north-east of Dan Goreio, 10, 25 Apr 80. 53 km north-east of Gardo, 1, 26 Apr 80. 54 km north of Garoe, 32, 14 May 80, and 20 more at 15 km north. These records indicate significant extension of known range southwards and eastwards to the Indian Ocean.

261 ***Streptopelia turtur*** **Turtle Dove** Gezira, 1, 24 Nov 78. Takoshe, 1, 11 May 79. Three previous records (Ref: 4).

268 ***Tauraco fischeri*** **Fischer's Turaco** Shongolo, 1–2, 1–2 Oct 79. Gola, 4+, 3 Oct 79. Seven previous records (Refs: 9, 14, 18, 21, 26, 34, 36).

271 ***Clamator glandarius*** **Great Spotted Cuckoo** Aaw Kulay Muday, 1, 7 Dec 78. Mogadishu, singly at two localities, 8 Feb 79. Previously unrecorded south of 9°N.

274 ***Cuculus canorus*** **Eurasian Cuckoo** Near Meregur, 2, 30 Apr 79. Mallable, 1, 5 Nov 78. Gezira, singles, 22 Oct 79, 26 Oct 81, 13 Nov 81. Previously unrecorded south of 8°N.

275 ***Cuculus gularis*** **African Cuckoo** Afgoi, 1, 19 Nov 78. Sadeh Higlo, 1, 24 May 79. Six previous records (Refs: 1, 17, 18, 21, 27).

281 ***Tyto alba*** **Barn Owl** Hawaala Buray, 1, 28 Dec 78. Afgoi, 1 dead, 3 Apr 79. Hal Hambo, 1 netted in sea cave, 3 Aug 79. Dannow, 2, 3–4 Feb 80. Two previous records (Refs: 1, 12, 20, 21).

285 ***Ciccaba woodfordii*** **African Wood Owl** Shongolo, 1, 1 Oct 79; 1, 24 Feb and 2, 25 Feb 80. Shonde, 2, 26 Feb 80. One previous record (Refs: 9, 14, 18, 21, 40).

286 ***Glaucidium capense*** **Barred Owlet** Manane, 1+, 11 Oct 78. Shongolo, 3, 1 Oct 79; 1–3 daily 14–26 Feb 80. Gola, 1, 2 Oct 79. Shonde, 1, 26 Feb 80. One previous record (Ref: 31a).

288 ***Otus leucotis*** **White-faced Scops Owl** Takoshe, 1, 11 May 79. Near El Dere, 1, 16 May 80. Eight previous records (Refs: 1, 5, 18, 21, 28, 32, 38a).

304 ***Apus caffer*** **White-rumped Swift** Badade, 6, 16 Sep 79. Kismayu, 10+, 28 Sep and 5, 29 Sep 79. Masha Aled, 1, 5 Oct 80. The last bird is far outside its normal range. Three previous records (Refs: 20, 21, 29).

311 ***Colius striatus*** **Speckled Mousebird** Frequently 20–30 collect together in a bush in a tight group about the size of a football, a behaviour only noted once in the Blue-naped Mousebird *Urocolius macrourus*.

316 ***Alcedo cristata*** **Malachite Kingfisher** Iskushuban, 1, 30 Apr 80. Previously unknown north of 3°N.

320 ***Halcyon chloris*** **White-collared Kingfisher** Saad-al-Din Is., 2+, 10 May 79. Two previous records (Refs: 1, 13). The two localities in southern Somalia in Snow (1978) are apparently erroneous.

324 ***Merops apiaster*** **Eurasian Bee-eater** Afgoi, 2+ flew NE, 17 Feb, and a party flew NE, 18 Feb 79; 2, 3 Mar 80. Mogadishu, 1 party, 27 Feb 79. Three previous records (Ref: 4).

336 ***Upupa epops*** **Hoopoe** *U. e. africana*: Badade, 2, 17 and 26 Sep 79. Bacad, 1, 14 Jan 81. This race was previously unrecorded.

346 ***Bucorvus abyssinicus*** **Abyssinian Ground Hornbill** Jifa Uri, pair, 7 May 79. Three previous records (Ref: 1. Also Dillo, 3, 24 Jul 71 (R.G. Allan, pers. comm.)).

355 ***Indicator variegatus*** **Scaly-throated Honeyguide** 40 km south of Kolbio, 2, 24 Sep 79. Marerei, 1, 30 Sep 79. Six previous records (Refs: 9, 14, 18, 21, 22, 30, 31a, 37).

359 ***Campethera cailliautii*** **Little Spotted Woodpecker** 28 km south of Kolbio, 1, 17 Sep 79. Shongolo, 1, 25 Feb 80. Five previous records (Refs: 9, 14, 18, 21, 34).

364 ***Alaemon hamertoni*** **Lesser Hoopoe Lark** Distribution extends far down the east coast to nearly 2°N, e.g. 27 km north of Uarsheik, 3, 30 Mar 79. 35 km north of Adale, 1, 16 Apr 80. 29 km north of Uarsheik, 2, 10 Jul 81. It has been found now in the north-east right across to the coast, but the race of these birds is unknown east of 49°E.

366 ***Calandrella brachydactyla*** **Short-toed Lark** [Hal Hambo, 7–10, 7 Feb 81, probably this species.] Gezira/Hal Hambo area, 30 Nov 81 to 10 Jan 82, 5 from 8 Dec, 38 at two sites on 12 Dec, 10+ on 26 Dec, 15+ on 7 Jan, 13+ on 10 Jan. Mallable, 5, 12 Dec 81. Presumably two races occurred, with up to 5 reddish-cinnamon nominate *brachydactyla*, and the remainder variable stone-grey through dark brown, of which the paler at least were *longipennis*. One previous record in the north-west (Ref: 1).

373 ***Galerida cristata*** **Crested Lark** 43 km north of Baran, 2 (1 collected), 12 May 80. An easterly extension of range.

374 ***Galerida fremantlii*** **Short-tailed Lark** 82 km north of Obbia, 45, 20 Apr 80. Godob Giran, hundreds in a small area, 22 Apr 80. 76 km north of Garoe, 60, 13 May 80. Large flocks are unusual.

377 ***Mirafra africanoides*** **Fawn-coloured Lark** 38 km south of Lugh, 1, 6 Oct 79. Presumably *M. a. intercedens*, a race previously unknown in Somalia.

379 ***Mirafra cantillans*** **Singing Bush Lark** [Ionte, 1, 6 Oct 78, probably this species.] New distributional data include: near War Gandi, several large flocks, 17 Apr 80. 21 km north of Musa Gaway, several large flocks, 18 Apr 80. Near Harardere, several large flocks, 19 Apr 80. [Eribé, 3, 22 Jun 81, but Northern White-tailed Bush Lark *M. albicauda* not ruled out.]

387 ***Delichon urbica*** **House Martin** Afgoi, 10+, 4 Feb 79; several 11 Feb 79; 5+, 18 Feb 79; 5, 19 Mar 79. 19 km west of Wajit, 1 flew south, 7 Oct 79. Dannow, 1, 28 Dec 79. One previous record (Ref: 4).

390 ***Hirundo daurica*** **Red-rumped Swallow** Afgoi, 1 *H. d. ?emini*, 4 Feb 79. Daloh, 4–5, 17–18 May 79. Ragad, 4, 11 May 80. Merce, 2, 11 May 80. 9 km south-east of Hawash Awal, 1, 11 May 80. One previous record (Ref: 4).

399 ***Oriolus auratus*** **African Golden Oriole** Gelib, 2, 5 Oct, and several 7 Oct 78. Near Ionte, 1+, 7 Oct 78. Three previous records (Refs: 31a, 36).

401 ***Oriolus oriolus*** **Golden Oriole** Shongolo, 4, 2 Oct 79. Fan Weyn Duur, 2, 5 Oct 79. Afgoi, 1, 12 Oct 79. No previous records south of 8°N.

413 ***Campephaga flava*** **Black Cuckoo Shrike** Gelib, 1, 5 Oct 78. Yemen, 1, 9 Oct 78. Manane, 3, 11 Oct 78. Bula Hadji, pair at 29 km south-west, 16 Sep 79. Sadeh Lugod, 2, 26 Sep 79. Marerei, 1, 29 Sep 79. Four previous records (Refs: 9, 14, 18, 36).

416 ***Nicator chloris*** **Nicator** Manane, 2, 11 Oct 78. Dibi Jilabe Forest, common at 30–40 km south of Kolbio, 18–19 and 24–25 Sep 79. 36 km south of Sako, 1, 3 Oct 79. Shongolo, 2, 25 Feb 80. Four previous records (Refs: 9, 11, 14, 18, 34, 36).

419 ***Phyllastrephus terrestris*** **Brownbul** 14 km south of Kurton, 5+, 28 Feb 80. Two previous records (Refs: 9, 14, 18).

427 ***Cercotrichas quadrivirgata*** **Eastern Bearded Scrub Robin** 15+ recorded on seven days in Feb, Sep and Oct in 1978–80 in the south at Manane, Shongolo, Shonde, 35–40 km south of Kolbio, and 36 km south of Sako, indicate that the species is fairly common. There are eight previous records (Refs: 9, 14, 36).

429 ***Cossypha heuglini*** **White-browed Robin Chat** 1–3 recorded on seven days in Feb, Oct and Dec along the Jubba and Webi Shebelle at Manane, Gelib, Afgoi and Shongolo. There are six previous records (Refs: 9, 14, 18, 31a, 36).

433 ***Luscinia megarhynchos*** **Nightingale** Near Moccoidumis, 1, 14 Oct 78. Dannow, singles, 3 Dec 78, 1 Apr 79, Afgoi, up to 5 often at 38–40 km south, 2–22 Mar 79 and 26 Oct 79 to 15 Mar 80. Far Sarei, 4+, 21 Feb 80. Shonde, *c.* 10, 27 Feb 80. Jiohar, 3, 20 Nov 81. The possibility that some of these birds may have been Sprossers *L. luscinia* cannot be dismissed entirely. Two previous records (Refs: 1, 5).

440 ***Oenanthe lugens*** **Mourning Wheatear** 6 km north of Erigavo, 1, 17 May 79. Daloh, fairly common, 17–19 May 79. Hawash Awal/Musha Aled/Ragad area and over the escarpment at 1300–1800 m, common, 10–12 May 80. Eight previous records (Refs: 1, 4, 15, 16).

441 ***Oenanthe oenanthe*** **Northern Wheatear** Many records in south where sometimes abundant. Only three records in north: 9 km west of Tukaraq, 1, 2 May 79. Near Hargeisa, 1, 4 May 79. Luk Haiyah, 1, 12 May 79. Six previous records (Refs: 1, 5, 6, 11, 18, 38a).

446 ***Phoenicurus phoenicurus*** **Redstart** Jirjir, 1, 7 May 79. Giriyaad, 1, 8 May 79. Takoshe, 1, 9 May 79. All females. Two previous records (Refs: 18, 36).

447 ***Saxicola rubetra*** **Whinchat** Borama, 2 at 13 km south, 7 May 79. Zeila, 1 at 4 km south and 1 at 51 km east, 12 May 79. Five previous records (Ref: 1).

451 ***Acrocephalus arundinaceus*** **Great Reed Warbler** Jiohar, 2 at 10 km south, 13 Apr 79. Hargeisa Dam, 1, 5 May 79. Two previous records (Refs: 1, 5, 18, 36, 37).

452 ***Acrocephalus baeticatus*** **African Reed Warbler** *A. b. cinnamomeus*: Dannow, 1, 31 Mar 79; 3, 1 Apr 79 (in *Typha* in water). Birds in mangroves on the north coast are being discussed elsewhere (Ash *et al.*, in prep.). One previous record (Refs: 9, 14).

456 ***Acrocephalus schoenobaenus*** **Sedge Warbler** Dannow, 1–6 on 5 dates, 2 Mar to 20 Apr 79. Shalambot, 4, 20 Apr 79. Og, 25+ on 3 May and 1 on 23 May 79. Bijendula, 1, 14 May 79. Sheikh, 1, 14 May 79. Near Waridad, 1, 16 May 79. Daloh, 1 in highland juniper forest, 18 May 79. Musha Aled, 3, 10 May 80. Five previous records (Refs: 1, 5, 7, 9, 14, 18).

457 ***Acrocephalus scirpaceus*** **Reed Warbler** Dannow, 1–4 on 2 Mar 79, 31 Mar 79, 1 Apr 79, 3 Feb 80, 4 Feb 80. Takoshe, 2, 11 May 79. 35 km west of Tohen,

1, 3 May 80. One previous record (Ref: 38).

460 ***Apalis melanocephala*** **Black-headed Apalis** 30–35 km south of Kolbio, 3, 17 Sep and 2, 18 Sep 79. Marerei, 4+, 30 Sep 79. Shongolo, 1, 2 Oct 79. Three previous records (Refs: 9, 14, 18).

468 ***Cisticola galactotes*** **Winding Cisticola** Dannow, 212 netted at a communal roost in *Typha*, 31 Mar 79.

475 ***Hippolais languida*** **Upcher's Warbler** Waridad, 1, 15 May 79 (the only record in the north-west 3–20 May 79, but 34 on nine days in the north-east, 22 Apr to 6 May 80, suggesting that passage is nearly over by early May or that it is more easterly in Somalia). Afgoi area, singly on three days 28 Feb to 26 Mar 79 and on 24 Mar 80. Lugh/Wajit area, 10, 7 Oct 79. 13 km south of Kismayu, 1, 24 Feb 80. Eight previous records (Refs: 1, 5, 7, 18, 28, 40).

479 ***Phylloscopus collybita*** **Chiffchaff** El Hamurre, 1, 22 Apr 80 in Acacia round a well. Alula, 1, 3 May 80 in mangroves. Eight previous records (Refs: 1, 24, 28. Also NNM).

481 ***Phylloscopus trochilus*** **Willow Warbler** It was abundant over a wide area in the north-west 3–20 May 79, when hundreds were seen. In the north-east there were only 9 on four days, 8–13 May 80, so passage is probably more westerly in northern Somalia. The following provide comments on some of the above birds, as well as additional records from the south: Afgoi, 1, 11 Feb and 26 and 28 Mar 79. Bergadid, 1, 28 Apr 79. Zeila, *c.* 200 in small group of wispy acacias on edge of beach in town, 9 May 79; from a distance of several hundred metres these looked like a swarm of bees as they continually flew out, apparently looking for other cover. Takoshe, hundreds, 9 May 79; at 30 min before sunset these birds ascended into the taller vegetation and all left ENE into the wind. Aibat Is., *c.* 10 in sparse scrub on beach, 10 May 79. Saad-al-Din Is., 50+ in mangroves, 10 May 79. Daloh, 1 with low weight of 8.5 g in juniper forest at 1850 m, 18 May 79. Mait Is., 1 *Phylloscopus*, presumably this species, 20 May 79. Unknown elsewhere in the country. One previous record (Ref: 1).

482 ***Phylloscopus umbrovirens*** **Brown Woodland Warbler** Daloh, common, 17–19 May 79. Musha Aled, 2, 10 May 80. Five previous records (Refs: 1, 5, 33).

487 ***Sylvia atricapilla*** **Blackcap** Takoshe, 1, 9 May 79. Daloh, 1, 18 May 79. Musha Aled, 1, 10 May 80. Moon, 1, 11 May 80. All males. Three previous records (Refs: 1, 5, 24).

489 ***Sylvia communis*** **Whitethroat** north-west, 19 on 11 days, 2–14 May 79. North-east, 9 on five days, 3–13 May 80. Mogadishu, 1 at dawn in shrubby weeds on coastal rocks, 16 Apr 81. Three previous records (all in north) (Refs: 1, 5, 28, 33).

494 ***Sylvia nisoria*** **Barred Warbler** Shalambot, 1, 16 Mar 79. 25 km north of Balad, 1, 11 Apr 80. Two previous records (Refs: 18, 24, 36).

504 ***Muscicapa striata*** **Spotted Flycatcher** north-west, 81 on 12 days, 2–13

May 79, including: Saad-al-Din Is., 10+ in mangroves, 10 May 79; Takoshe, 20+, 9 and 11 May 79. North-east, 17 on seven days, 23 Apr to 8 May 80, of which 10 were in the Cape Guardafui area. Six previous records (Refs: 1, 5, 11). It is difficult to understand how this species and other Palaearctic migrants were overlooked in the past, especially in the north.

509 ***Erythrocercus holochlorus*** **Little Yellow Flycatcher** 35 km south of Kolbio, 1, 19 Sep 79. About 40 km south of Kolbio, 8 in two areas, 24 Sep 79. Four previous records (Refs: 8, 9, 14, 18).

511 ***Trochocercus cyanomelas*** **Crested Flycatcher** Manane, pair, 11 Oct 78. Seven previous records (Refs: 9, 14, 18, 34).

512 ***Anthus campestris*** **Tawny Pipit** 37 km west of Waridad, 1 male with advanced gonads (testes 7 mm long), 15 May 79. Specimen in British Museum.

513 ***Anthus cervinus*** **Red-throated Pipit** Hawaala Buray, 2, 9 Jan 79. Shalambot, 10+, 16 Mar 79. Lake Sinadogo, 1, 29 Apr 79. Libsoma, 3, 30 Dec and 1, 25 Dec 79. Only one previous record south of 5°N (NNM, coll. Phillips: Mogadishu), but very common passage migrant in north.

518 ***Anthus trivialis*** **Tree Pipit** Mait Is., Gulf of Aden, remains of 1 dead, 20 May 79. Specimen in Smithsonian Institution.

529 ***Laniarius ferrugineus*** **Tropical Boubou** *L. f. sublacteus* of Tanzania and Kenya extends north into southernmost Somalia at 35–40 km south of Kolbio, where very common, Apr 79.

542 ***Lanius excubitor*** **Grey Shrike** 5 km south-east and 1 km north-west of El Ubah, 1, 8 May 79. 40 km south-east of Zeila, 1, 8 May 79. Takoshe, 4+ daily, 9–11 May 79. All apparently *L. e. aucheri.* Seven previous records of this race (Refs: 1, 9, 14).

551 ***Prionops scopifrons*** **Chestnut-fronted Helmet Shrike** Between 32–40 km south of Kolbio, 30+, 18 Sep, common 19 Sep and 24–25 Sep 79. Three previous records (Refs: 30, 31a).

555 ***Lamprotornis chalybaeus*** **Blue-eared Glossy Starling** Gardo, 1 at 39 km north-east, 25 Apr 80. Previously unrecorded in north-east.

569 ***Anthreptes platurus*** **Pygmy Sunbird** 113 km north-east of Gardo, 6, 26 Apr 80. Tohen, common, 4 May 80. Belo Cad, *c.* 50, 1 May 80. Indicates distribution extends across northern Somalia to the Indian Ocean.

576 ***Nectarinia olivacea*** **Olive Sunbird** Shongolo, 3, 2 Oct 79; 1, 25 Feb 80. Sako, 3 at 36 km south, 3 Oct 79. Shonde, 1, 26 Feb 80. Five previous records (Refs: 9, 14, 18, 29, 35).

579 ***Nectarinia veroxii*** **Mouse-coloured Sunbird** Afgoi, 1, 13 Dec 78. Ras Kiamboni, 2 at 28 km north, 10 Nov 79. Shongolo, 2, 2 Oct 79; 1, 25 Feb 80. One previous record.

584 ***Euplectes diadematus*** **Fire-fronted Bishop** Halo Bacad, several, 25 May 79, indicating extension of range.

606 ***Passer eminibey*** **Chestnut Sparrow** Dr C.C. H. Elliott (*in litt.*) saw *c.* 400 at Afmadu on 15 Jul 80. Two previous records (Refs: 17, 18, 30).

612 ***Hypochera chalybeata*** **Red-billed Firefinch Indigobird** Genale, 1, 21 Aug 78. Afgoi, 2, 25 Sep and 5, 27 Sep 78. Balad, 2, 23 Dec 79. Three previous records (Refs: 8, 14, 18, 20, 40).

614 ***Vidua hypocherina*** **Steel-blue Whydah** Badade, 12, 27 Sep 79. Ten previous records (Refs: 1, 3, 9, 12, 14, 17, 18, 36).

617 ***Estrilda astrild*** **Waxbill** Dannow, 7, 31 Mar to 1 Apr; 4, 20 Apr; 2, 26 Oct; 40, 28 Dec 79. Three previous records (Refs: 9, 11, 34).

619 ***Estrilda rhodopyga*** **Crimson-rumped Waxbill** Jifa Uri, 2, 7 May 79. Although more frequent in the south, there are only two previous records from the north (Refs: 1, 7, 12. Also L.H. Brown *in litt.*: 16 Sep 77).

624 ***Uraeginthus bengalus*** **Red-cheeked Cordonbleu** Recorded in three areas south of the equator, but only square numbers recorded. Five previous records (Refs: 1, 9, 14, 18, 30, 31a, 38).

625 ***Uraeginthus cyanocephalus*** **Blue-capped Cordonbleu** Afgoi, 5, 19 Nov 78; 1, 28 Feb 79. Uarmahan, pair, 17 Apr 79. Dinsor, 2, at 14 km north, 29 Feb 80. Five previous records (Refs: 9, 14, 38, 40).

628 ***Lonchura bicolor*** **Black and White Mannikin** Gelib, 20, 12 Oct 78; 1 party, 15 Sep 79. Kolbio, *c.* 15, 18 Sep 79. One previous record (Refs: 9, 14, 18).

## REFERENCES


1 Archer, G.F. & Godman, E.M. 1937. *The birds of British Somaliland and the Gulf of Aden.* Vols 1 and 2. London: Gurney & Jackson.

1 Archer, G.F. & Godman, E.M. 1961. *The birds of British Somaliland and the Gulf of Aden.* Vols 3 and 4. Edinburgh & London: Oliver & Boyd.

2 Bailey, R. 1971. Sea-bird observations off Somalia. *Ibis* 113: 29–41.

3 Baird, D.A. 1951. *Some common birds of Hargeisa.* Special mimeographed report, Haile Sellassie I University.

4 Baird, D.A. 1979. Twenty-eight additions to Archer & Godman's 'Birds of British Somaliland and the Gulf of Aden'. *Bulletin of the British Ornithologists' Club* 99: 6–9.

5 Bannerman, D.A. 1910. On a collection of birds made in Northern Somaliland by Mr. G.W. Bury. *Ibis* 1910: 291–327.

6 Brown, L.H. 1978a. Wahlberg's Eagle in northeastern Africa and the first record for Somalia. *Scopus* 2: 19–20.

7 Elliott, D.G. 1897. Catalogue of a collection of birds obtained by the recent expedition into Somaliland, authorised and equipped by the Field Columbian Museum, with descriptions of new species. *Field Columbian Museum Publication 17, Ornithological Series*, 1 (2): 29–67.

8 Erlanger, C. Fr. 1901. Einige neue Arten aus Nordost-Afrika. *Ornithologische Monatsschrift* 9: 181–183.

9 Erlanger, C. Fr. 1904–1907. Beiträge zur Vogelfauna Nordostafrikas. *Journal für Ornithologie* 1904: 137–244; 1905: 42–158, 433–499, 670–756; 1907: 1–58.

10 Fischer, G.A. 1885. Uebersicht der in Ostafrika gesammelten Vogelarten, mit Angabe der verschiedenen Fundorte. *Journal für Ornithologie* 113: 142.

11 Haslam, J.M. 1980. Somalia bird observations and list (south of Mogadishu) during 1979. *Duplicated report*, pp. 14.

12 Hawker, R. McD. 1899. On the results of a collecting-tour of three months in Somali-land. *Ibis* 1899: 52–81.

13 Heuglin, T. von. 1859. XXXIII. List of birds observed and collected during a voyage in the Red Sea. Edited and translated by Dr. G. Hartlaub. *Ibis* 4: 337–352.

14 Hilgert, C. 1908. *Katalog der Collection von Erlanger in Nieder-Ingelheim a. Rh.* Berlin: Friedländer & Sohn.

15 Kreuger, R. 1958. Hitherto undescribed nests and eggs from British Somaliland. *Ibis* 100: 278–279.

16 Meinertzhagen, R. 1949. *Oenanthe lugens vauriei. Bulletin of the British Ornithologists' Club* 69: 107.

17 Moltoni, E. 1935. Contributo alla conoscenza degli uccelli della Somalia Italiana. *Atti della Societa italiana di scienze naturali, e del Museo civile di storia naturale in Milano* 74: 333–371.

18 Moltoni, E. 1936a. Gli uccelli fino ad oggi notificati per la Somalia italiana. *Atti della Societa italiana di scienze naturali, e del Museo civile di storia naturale in Milano* 75: 307–389.

19 Moltoni, E. 1936b. Spedizione Zoologica del Marchese Saverio Patrizi nel Basso Giuba e nell'Oltregiuba. *Annali del Museo Civico di Storia Naturale di Genova* 58: 85–101.

20 Moltoni, E. 1941. Uccelli raccolti dal Sig. Ermanno Ciferri al Villagio Duca Degli Abruzzi (Somalia) della fine di aprilo alla fine di Iuglio 1939. *Rivista italiana di ornitologia* 11: 85–115.

21 Moltoni, E. & Ruscone, G.G. 1940. *Gli uccelli dell'Africa Orientale Italiana.* Vols 1–4. Milano: Tip. Fusi, Pavia.

22 Neumann, O. 1908. New Indicator. *Bulletin of the British Ornithologists' Club* 21: 97.

23 North, M.E.W. 1944. Notes on the sea-birds of Brava. *Journal of the East Africa Natural History Society* 18: 32–40.

24 Ogilvie-Grant, W.R. & Reid, J. 1901. On the birds collected during an expedition through Somaliland and Southern Abyssinia to Lake Zwai, with field notes by the collector, Mr. Alfred E. Pease. *Ibis* 1901: 607–699.

25 Oustalet, E. 1886. Catalogue des oiseaux rapportés par M.G. Révoil de son deuxième voyage aux Pays des Çomalis. *Bibliotèque de l'École des Hautes-Études. Section des Sciences Naturelles* 31 (10): 1–14.

26 Patrizi, S. 1935. See Moltoni, E (1936b).

27 Phillips, E.L. 1896. On birds in the Goolis Mountains in Northern Somaliland. *Ibis* 1896: 62–87.

28 Phillips, E.L. 1898. Narrative of a visit to Somaliland in 1897, with field-notes on the birds obtained during the expedition. *Ibis* 1898: 382–425.

29 Roche, J. 1966. Recherches écologiques et systématiques sur les oiseaux de la République de Somalie (partie ex-italienne). *Monitore Zoologico Italiano (Supplemento)* 74: 44–79.

30 Roche, J. 1975. Recherches ornithologiques en République de Somalie. Résultats de la Mission de 1964. *Monitore Zoologico italiano. N.S. Supplemento* 6 (6): 103–140.

31 Roche, J. 1977. Recherches ornitologiques en République de Somalie. Résultats des Missions italiennes de 1968 et 1969. *Monitore Zoologico italiano. N.S. Supplemento* 9 (9): 201–231.

31a Roche, J. & Poggesi, M. 1978. Recherches ornitologiques en République de Somalie. Résultats de la Mission italiennes de 1970 en Somalie meridionale. *Monitore Zoologico italiano. N.S. Supplemento* 11 (7): 173–187.

32 Salvadori, T. 1894. Uccelli del Somali raccolti da D. Eugenio dei Principi Ruspoli. *Memorie R. Accademia Scienze Torina, Series II*, 44: 547–564.

32a Schiemann, H. Red-necked Phalaropes *Phalaropus lobatus* off the coast of Somalia and Kenya. *Scopus* 10: 42–44.

33 Sharpe, R.B. 1901. On a collection of birds made by Dr. Donaldson Smith in Northern Somali-land. *Proceedings of the Zoological Society of London* 298–316.

34 Toschi, A. 1936. Uccelli del Giuba. *Rivista italiana Ornitologia* (2) 14: 173–200.

35 van Someren, V.G.L. 1922. Notes on the birds of East Africa. *Novitates Zoologicae* 29: 1–246.

36 van Someren, V.G.L. 1929. Notes on the birds of Jubaland and the Northern Frontier. *Journal of the East Africa and Uganda Natural History Society* 35: 25–70.

37 van Someren, V.G.L. 1932. Birds of Kenya and Uganda, being addenda and corrigenda to my previous paper in Nov. Zoologicae 29, 1922. *Novitates Zoologicae* 37: 252–380.

38 van Someren, V.G.L. [undated]. List of specimens in Van Someren collection. National Museum, Nairobi (*unpublished MS.*).

38a Witherby, H.F. & Hamerton, A.E. 1905. On a collection of birds from Somaliland. *Ibis* 5 (8): 509–524.

39 Zedlitz, O. 1912. Beitrag zur Systematik afrikanischer Vogelformen. *Ornithologische Monatsschrift* 20: 74–79.

40 Zedlitz, O. 1914–1916. Das Süd-Somaliland als zoogeographisches Gebiet. Eine ornithologische Studie. *Journal für Ornithologie* 62: 608–678; 63: 1–69; 64: 1–121.

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*Scopus* 11: 57–78, March 1988 Received 9 March 1988

**APPENDIX 1. Gazetteer of localities, excluding those listed in Ash (1983)**

| Locality | Map square | Co-ordinates (degrees, minutes) |
|---|---|---|
| Aaw Kulay Muday | 62b | *c.* 2.50N, 44.53E |
| Afmadu | 71a | 0.31N, 42.04E |
| Aibat Is. | 2ac | 11.30N, 43.27E |
| Bacad | 48a | *c.* 4.45N, 45.05E |
| Baran | 14a | 10.43N, 48.20E |
| Belo Cad | 6c | 11.01N, 50.26E |
| Bergadid | 40c | 5.04N, 45.20E |
| Borama | 18a | 9.56N, 43.11E |
| Bula Hadji | 73d | 0.38N, 41.59E |
| Bulhar | 10c | 10.23N, 44.25E |
| Dakatch | 71b | mid-Jubba |
| Dalale | 57d | 3.06N, 46.41E |
| Daloh | 13a | 10.45N, 47.18E |
| Dan Goreio | 31a | 8.44N, 49.20E |
| Dinsor | 60d | 2.24N, 42.58E |
| El Ubah | 2c | 11.05N, 43.28E |
| Fan Weyn Duur | 60a | 2.54N, 42.17E |
| Gardo | 24a | 9.30N, 49.05E |
| Garoe | 30c | 8.24N, 48.29E |
| Giriyaad | 9a | 10.51N, 43.16E |
| Godob Giran | 35a | 7.31N, 49.25E |
| Halgan | 48d | 4.12N, 45.34E |
| Halo Bacad | 48a | 4.34N, 45.16E |
| Harardere | 50b | 4.39N, 47.51E |
| Hargeisa Dam | 19a | 9.33N, 44.09E |
| Hawash Awal | 4c/14a | 11.00N, 48.19E |
| Jelib (=Gelib) | 71d | 0.29N, 42.47E |
| Jifa Uri | 18a | 9.43N, 43.24E |
| Jire | 9a | 10.37N, 43.04E |
| Jirjir | 9c | 10.02N, 43.01E |
| Kurton (=Gurtum) | 66b | 1.41N, 42.58E |
| Las Khoreh | 4c | 11.09N, 48.12E |

| | | |
|---|---|---|
| Luk Haiyah | 9b | 10.41N, 43.56E |
| Manane | 71b | 0.50N, 42.39E |
| Maregur | 41b | 5.45N, 46.31E |
| Merce | 4cd/14ab | 11.00N, 48.30E |
| Modun | 67d | 1.10N, 43.59E |
| Musa Gaway | 58a | 3.42N, 47.01E |
| Musha Aled | 4c | 11.00N, 48.18E |
| Qardhale | 66d | 1.07N, 42.36E |
| Ragad | 14b | 10.59N, 48.32E |
| Savlalle | 67d | 1.18N, 43.53E |
| Sadeh Higlo | 37c | 6.30N, 47.06E |
| Sadeh Lugod | 75b | 1.08N, 41.39E |
| Sako | 66a | 1.38N, 42.27E |
| Tug Wajale | 18a | 9.37N, 43.17E |
| Tukaraq | 29b | 8.32N, 49.50E |
| Wajit | 54a | 3.48N, 43.15E |
| War Gandi | 57d | 3.12N, 46.34E |
| Waridad | 21c | 9.17N, 46.15E |
| Yemen | 74c | 0.48S, 42.03E |

## APPENDIX 2: A bibliography of the recent ornithological literature of Somalia, 1943–1987*


Archer, G. & Godman, E.M. 1961. *The birds of British Somaliland and the Gulf of Aden.* Vols 3 and 4. Edinburgh & London: Oliver & Boyd.

Ash, J.S. 1980a. Common and Lesser Noddy *Anous stolidus* and *tenuirostris* in Somalia. *Scopus* 4: 6–9.

Ash, J.S. 1980b. The Lesser Golden Plover *Pluvialis dominica* in northeast Africa and the Red Sea. *Scopus* 4: 64–66.

Ash, J.S. 1981a. Field description of the Obbia Lark *Calandrella obbiensis*, its breeding and distribution. *Bulletin of the British Ornithologists' Club* 101: 379–383.

Ash, J.S. 1981b. A new race of the Scaly Babbler *Turdoides squamulatus* from Somalia. *Bulletin of the British Ornithologists' Club* 101: 399–403.

Ash, J.S. 1981c. Qualitative and quantitative assessments of bird pests in Eastern Africa: Somalia. *Proceedings of the 3rd Technical Meeting of the FAO/UNDP Regional Project*: 94–98.

Ash, J.S. 1981d. 'Bird-pests in Somalia' *in* Mitchell, G. & Nur, A. *Crop Pest Handbook.* London: Centre for Overseas Pest Research.

Ash, J.S. 1981e. Desert Wheatear *Oenanthe deserti* in Ethiopia and Somalia. *Scopus* 5: 35–36.

Ash, J.S. 1981f. Ayres' Hawk Eagle *Hieraaetus dubius* in Ethiopia and Somalia. *Scopus* 5: 54–56.

Ash, J.S. 1981g. Spring passage of Whimbrel *Numenius phaeopus* and other waders off the coast of Somalia. *Scopus* 5: 71–76.

Ash, J.S. 1982a. Wilson's Petrels *Oceanites oceanicus* off Somalia. *Scopus* 6: 38–39.


*Contains two March 1988 references

Ash, J.S. 1982b. Ash, J.S. Major extension in distribution of the Stripe-backed Prinia *Prinia gracilis* in Somalia. *Bulletin of the British Ornithologists' Club* 102: 2–5.

Ash, J.S. 1982c. The Somali Short-billed Crombec *Sylvietta philippae* in Somalia and Ethiopia. *Bulletin of the British Ornithologists' Club* 102: 89–92.

Ash, J.S. 1983. Over fifty additions of birds to the Somali list including two hybrids, together with notes from Ethiopia and Kenya. *Scopus* 7: 54–79.

Ash, J.S. 1984. The past and present distribution of bustards in Ethiopia and Somalia. *International Symposium on Bustards, Dubai, November 1984.* pp. 26.

Ash, J.S. 1985a. The status of the White Stork *Ciconia ciconia* in Ethiopia, Somalia and Djibouti. *ICBP/Vogelpark Walsrode Internationales Storch-Symposium. Walsrode, October 1985.* pp. 18.

Ash, J.S. 1985b. Two further additions to the Somali list: Greater Frigatebird *Fregata minor* and Indian House Crow *Corvus splendens. Scopus* 9: 108–110.

Ash, J.S. In prep. a. Breeding data from Somalia: 1978–1982.

Ash, J.S. In Prep. b. Breeding of Forbes-Watson's Swift *Apus berliozi* in Somalia.

Ash, J.S. In prep. c. Apparent nocturnal migration of terns at high altitude.

Ash, J.S. & Ash, J.W. 1983. Sooty Terns *Sterna fuscata* in Somalia, with inland occurrences. *Scopus* 7: 80–83.

Ash, J.S. & Bruggers, R.L. 1979. Crop damage by birds in Somalia. *Proceedings 1st Technical Meeting of the FAO/UNDP Regional Quelea Project*, pp. 7.

Ash, J.S. & Colston, P.R. 1981. A House x Somali Sparrow *Passer domesticus* x *P. castanopterus* hybrid. *Bulletin of the British Ornithologists' Club* 101: 291–294.

Ash, J.S. & Karani, A.A. 1981. Roseate and Sooty Terns *Sterna dougallii* and *fuscata* breeding on islets in southern Somalia. *Scopus* 5: 22–27.

Ash, J.S. & Miskell, J.E. 1980. A mass-migration of Rollers *Coracias garrulus* in Somalia. *Bulletin of the British Ornithologists' Club* 100: 216–218.

Ash, J.S. & Miskell, J.E. 1981a. The Dunlin *Calidris alpina* in Ethiopia and Somalia. *Scopus* 5: 32–33.

Ash, J.S. & Miskell, J.E. 1981b. Basra Reed Warblers *Acrocephalus griseldis* overwintering in Somalia. *Scopus* 5: 81–82.

Ash, J.S. & Miskell, J.E. 1981c. Present abundance of the Warsangli Linnet *Acanthis johannis. Bulletin of the British Ornithologists' Club* 101: 396–398.

Ash, J.S. & Miskell, J.E. 1983a. A migration of (Eurasian) Nightjars *Caprimulgus* (*europaeus*) at Cape Guardafui, Somalia. *Bulletin of the British Ornithologists' Club* 103: 107–110.

Ash, J.S. & Miskell, J.E. 1983b. Birds of Somalia, their habitat, status and distribution. *Scopus* Special Supplement No. 1, pp. 97.

Ash, J.S. & Miskell, J.E. 1988. House Sparrows *Passer domesticus* in Somalia. *Scopus* 11: 96–97.

Ash, J.S. & Miskell, J.E. In prep. a. Madagascar Pratincoles *Glareola ocularis* and other pratincoles in Somalia.

Ash, J.S. & Miskell, J.E. In prep. b. Eastern Red-footed Falcons *Falco amurensis* and Red-footed Falcon *F. vespertinus* in Somalia and Ethiopia.

Ash, J.S., Miskell, J.E. & Murshid, A.A. 1980. Arabian Golden Sparrow *Passer euchlorus* in Somalia and Djibouti. *Scopus* 4: 22–24.

Ash, J.S. & Mussa, H. 1980. Quantitative and qualitative assessment of bird damage in Somalia. *Proceedings of the 2nd Technical Meeting of the FAO/UNDP Regional Project*, 142–144.

Ash, J.S., Pearson, D.J., Nikolaus, G. & Colston, P.R. In prep. The mangrove reed warblers of the Red Sea and Gulf of Aden coasts—description of a new subspecies of the African Reed Warbler *Acrocephalus baeticatus.*

Ash, J.S. & Pomeroy, D.E. 1981. Mapping schemes in the Afrotropical Region. *Ibis* 123: 552–553; *Scopus* 5: 36–38.

Baccetti, N. 1983. Heronries of Somalia: a preliminary report. *Monitore zoologico italiano. N.S. Supplemento* 18 No. 6: 173–185.

Bailey, R.S. 1968. The pelagic distribution of sea-birds in the western Indian Ocean. *Ibis* 110: 493–519.

Bailey, R.S. 1971. Sea-bird observations off Somalia. *Ibis* 113: 29–41.

Bailey, R.S., Pocklington, R. &Willis, P.R. 1968. Storm Petrels *Oceanodroma* spp. in the Indian Ocean. *Ibis* 110: 27–34.

Baird, D.A. 1951. Some common birds of Hargeisa. *Special Mimeo Report, Haile Sellassie I University.*

Baird, D.A. 1979. Twenty-eight additions to Archer & Godman's 'Birds of British Somaliland and the Gulf of Aden'. *Bulletin of the British Ornithologists' Club* 99: 6–9.

Bally, P.R. O. 1964. Recent floristic and faunistic changes in the Somalia Republic, with particular reference to specialised desert forms. *Bulletin of the International Union for the Conservation of Nature, April/June 1964.*

[Belcher, C.F. 1949. Eggs from Somalia. *Oologists' Record* 23: 35–41. (All records are from Ogaden, Ethiopia.)]

Benson, C.W. 1978. The Madagascar Pratincole *Glareola ocularis* in Somalia. *Scopus* 2: 21.

Berlioz, J. & Roche, J. 1963. Étude d'une collection d'oiseaux de la Somalie. *Bulletin du Muséum National d'Histoire Naturelle*, 2e serie, 35 (6): 580–592.

Berlioz, J. & Roche, J. 1970. Note sur le *Cercomela spectatrix* Clarke et description d'une sous-espèce nouvelle. *Monitore Zoologico Italiana. N.S. Supplemento* 3. No. 12: 267–271.

Bourne, W.R.P. 1961. Notes on observations of sea-birds received during 1960. *Sea Swallow* 14: 7–27.

Brichetti, P. & Conci, C. 1980. Bibliografia del Dr. Edgardo Moltoni. *Atti della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano.* 121 (4): 415–435.

Britton, P.L. 1977a. Status and identification of East African terns. *Scopus* 1: 29–34.

Britton, P.L. 1977b. The Madagascar Pratincole *Glareola ocularis* in Africa. *Scopus* 1: 94–97.

Brooke, R.K. 1966. The Bat-like Spinetail *Chaetura boehmi* Schalow (Aves). *Arnoldia* 2: 1–17.

Brooke, R.K. 1969. *Apus berliozi* Ripley, its races and siblings. *Bulletin of the British Ornithologists' Club* 89: 11–16.

Brooke, R.K. 1970. Geographical variation and distribution in *Apus barbatus*, *A. bradfieldi* and *A. niansae* (Aves: Apodidae). *Durban Museum Novitates* 8: 363–374.

Brooke, R.K. 1971. Breeding of swifts in Ethiopian Africa and adjacent islands. *Ostrich* 42: 5–36.

Brooke, R.K. 1972. On the breeding and migratory status of *Apus berliozi bensoni*. *Bulletin of the British Ornithologists' Club* 92: 114.

Brown, L.H. 1978a. Wahlberg's Eagle in northeastern Africa and the first record for Somalia. *Scopus* 2: 19–20.

Brown, L.H. 1978b.[unpublished] Birds seen by LHB at Hargeisa Club February–March 1977. MS., pp.2.

Bruggers, R.L. 1980. The situation of grain-eating birds in Somalia. *Proceedings of the 9th Vertebrate Pest Conference*: 5–16.

Bryson, A.G.S. 1949. *Oceanites oceanicus* in the Gulf of Aden. *Journal of the Bombay Natural History Society* 48: 362–364.

Clancey, P.A. 1956. *Phylloscopus umbrovirens williamsi*. *Bulletin of the British Ornithologists' Club* 76: 10.

Clarke, G. 1956. Rüppell's Long-tailed Glossy Starling. *The Somaliland Journal* 1: 178–181.

Clarke, G. 1968. Somali bird notes. Unpublished MS., pp. 130.

Clarke, G. 1985a. Bird observations from northwest Somalia. *Scopus* 9: 24–42.

Clarke, G. 1985b. Leucistic Somali birds. *Scopus* 9: 54–55.

Clarke, G. 1986a. Notes on the Speckled Pigeon *Columba guinea* in NW Somalia. *Scopus* 10: 47–49.

Clarke, G. 1986b. A weaver roost at Hargeisa, Somalia. *Scopus* 10: 51–54.

Collar, N.J. & Stuart, S.N. 1985. *Threatened birds of Africa and related islands. The ICBP/IUCN Red Data Book, Part 1.* Cambridge: ICBP & IUCN.

Collar, N.J. & Violani, C.G. 1984. Specimens of *Calandrella obbiensis* and *Sarothrura ayresi* in Milan Museum. *Bulletin of the British Ornithologists' Club* 104: 113–114.

Colston, P.R. 1982. A new species of *Mirafra* (Alaudidae) and new races of the Somali Long-billed Lark *Mirafra somalica*, Thekla Lark *Galerida malabarica* and Malindi Pipit *Anthus melindae* from southern coastal Somalia. *Bulletin of the British Ornithologists' Club* 102: 106–114.

Colston, P.R. 1987. A new name for *Anthus melindae pallidus* Colston (1982). *Bulletin of the British Ornithologists' Club* 107: 92.

Conci, C. 1980. Edgardo Moltoni (1896–1980). *Atti della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano* 121: 397–414.

Douthwaite, R.J. 1984. Vanishing bird-life of the Shabeelle valley. *Somalia Range Bulletin.*

Douthwaite, R.J. 1985. *Environmental aspects of Tsetse Fly eradication.* London: Tropical Development and Research Institute, pp. 90.

Durrette-Desset, M.C. & Denke, M. 1978. Descriptions de nouveaux nématodes parasites. *Bulletin du Musée national d'Histoire Naturelle Paris (Zoologique)* 354: 331–347.

Elliott, H. F. 1952. Off-season sea-bird distribution on the Suez route to East Africa. *Ibis* 94: 526–528.

Erard, C. 1975. Variation geographique de *Mirafra gilletti* Sharpre. Description d'une espèce jumelle. *L'Oiseau et la Revue Française d'Ornithologie* 45: 293–312.

FOOD AND AGRICULTURE ORGANISATION 1982. *Development of bird control units. Somalia. Rome*: UNDP/FAO, pp. 17.

FAO/UNDP [undated]. An assessment of the bird pest problem in Sudan, Ethiopia, Somalia, Kenya, Tanzania. *FAO/UNDP Regional Quelea Project RAF/77/042*, pp. 30.

FUNAIOLI, U. 1957. *Fauna e caccia in Somalia.* Mogadiscio: Governo della Somalia. Ministero per gli Affari economici. Dipartimento Agricoltura e Zootecnia.

GOODWIN, D. 1970. *Pigeons and doves of the world.* 2nd edition. London: Trustees of the British Museum (Natural History).

GRANT, C.H.B. & MACKWORTH-PRAED, C.W. 1946. Notes on Eastern African birds. *Bulletin of the British Ornithologists' Club* 66: 74–81.

GRANT, C.H.B. & MACKWORTH-PRAED, C.W. 1947. Notes on Eastern African birds. *Bulletin of the British Ornithologists' Club* 67: 55–63.

GRANT, C. [H.B.] & MACKWORTH-PRAED, C.W. 1951. *Lanius excubitor dubarensis. Bulletin of the British Ornithologists' Club* 71: 55.

HALL, B.P. & MOREAU, R.E. 1962. A study of the rare birds of Africa. *Bulletin of the British Museum (Natural History) Zoology* Vol. 8, No. 7: 315–378.

HALL, B.P. & MOREAU, R.E. 1970. *An atlas of speciation in African passerine birds.* London: British Museum (natural History).

HARRISON, C.J.O. 1963. Eggs of the Great Sand Plover, *Charadrius leschenaultii* Lesson, from Somaliland. *Bulletin of the British Ornithologists' Club* 83: 158–159.

HARRISON, C.J.O. & WALTERS, M.P. 1971. Some errors concerning eggs of Somalia birds. *Bulletin of the British Ornithologists' Club* 91: 12–14.

HASLAM, J.M. 1980. Somalia bird observations and list (south of Magadishu) during 1979. *Unpublished duplicated report*, pp. 14.

HIRSCH, U. 1980. Der Waldrapp *Geronticus eremita*, ein Beitrag zur Situation in seinem östlichen Verbreitungsgebiet. *Vogelwelt* 101: 219–236.

HOLCOMB, L.C. 1977. *Euplectes diadematus* and *Coliuspasser axillaris* breeding in Somalia. *Bulletin of the British Ornithologists' Club* 97: 15–17.

HUNT, J.A. 1961. *A general survey of the Somaliland Protectorate 1944–1950.* H.M. Government Report (C.D. & W. Scheme D. 484).

JAEGER, M.M., ELLIOTT, C.C.H., LENTON, G., ALLAN, R.G., BASHIR, E.A. & ASH, J.S. 1981. Monitoring of *Quelea quelea* in Eastern Africa. I. Mask index and the distribution of Quelea. *Proceedings of the 3rd Technical Meeting of the FAO/UNDP Regional Project*: 22–34.

KREUGER, R. 1958. Hitherto undescribed nests and eggs from British Somaliland. *Ibis* 100: 278–279.

LACK, D. 1956. The species of *Apus*. *Ibis* 98: 34–62.

LYNN-ALLEN, B.G. 1952. Some field notes on the birds of Mogadishu. *Journal of the East Africa Natural History Society* 21: 57–66.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1952–1955. *Birds of Eastern and North Eastern Africa.* Series 1. Vols. 1–2, 1st edition. London: Longmans, Green.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1957–1960. *Birds of Eastern and North-Eastern Africa.* 2nd edition. London: Longman.

MADGWICK, J., MAUNDER, M., VARTY, N. & WOOD, B. 1986. An ecological study of the

remaining areas of riverine forest in the Jubba Valley, southern Somalia. *Somalia Research Project Preliminary Report, University College London*, pp. 17.

Meiklejohn, M.F. 1951. The breeding of African sea-birds. *Ibis* 93: 142.

Meinertzhagen, R. 1948–1949. Diary, volume 58 (76 vols. held in Rhodes House Library, Oxford).

Meinertzhagen, R. 1949. *Oenanthe lugens vauriei* (Erigavo). *Bulletin of the British Ornithologists' Club* 69: 107.

Meinertzhagen, R. 1951. (*Calandrella obbiensis*). *Proceedings of the Zoological Society of London* 121: 89–100.

Miskell, J.E. & Ash, J.S. 1985. Gillett's Lark *Mirafra gilletti* new to Kenya. *Scopus* 9: 53–54.

Moltoni, E. & Ruscone, G.G. 1940–1944. *Gli uccelli dell'Africa Orientale Italiana.* Vols. 1–4. Milano: Museo Civico di Storia Naturale.

Moreau, R.E. 1950. The breeding seasons of African birds—1. Land birds. *Ibis* 92: 223–267.

Moreau, R.E. 1966. *The bird faunas of Africa and its islands.* London & New York: Academic Press.

Moreau, R.E. 1969. The Sooty Falcon *Falco concolor* Temminck. *Bulletin of the British Ornithologists' Club* 89: 62–67.

Moreau, R.E. 1972. *The Palaearctic–African bird migration systems.* London & New York: Academic Press.

National Museum Nairobi [undated]. List of skins from Somalia in Nairobi Museum.

Norris, C.E. 1952. Oceanic and other birds seen on two recent trips between Colombo and Aden in 1951. *Journal of the Bombay Natural History Society* 50: 671–674.

North, M.E.W. 1944. Notes on the sea-birds of Brava. *Journal of the East Africa Natural History Society* 18: 32–40.

North, M.E.W. 1946. Mait Island—a bird rock in the Gulf of Aden. *Ibis* 88: 478–501.

North, M.E.W. 1951. Tropic-birds at Ras Hafun. *Ibis* 93: 466.

North, M.E.W. 1964. *In litt.* to D. Goodwin (letter re *Columba olivae* held in the British Museum (Natural History)).

Pardi, L. 1976. L'attività del "Centro di Studio per la Faunistica ed Ecologia Tropicali" del Consiglio Nazionale delle Ricerche nel quinquennio 1971–1976. *Monitore Zoologico Italiano (N.S.) Supplemento* 7: 195–269.

Pardi, L. 1977. Le ricerche sul litorale della Somalia del Centro di Studio per la faunistica ed ecologia tropicali del C.N.R. *Bollettino Zoologico* 44: 51–85.

Parker, S.A. 1963. Eggs of *Francolinus africanus lorti* and *Creatophora cinerea* from Somaliland. *Oologists' Record* 37 (3): 41–42.

Phillips, W.W.A. 1950. Wilson's storm-petrels, shearwaters and other sea-birds in the Gulf of Aden and Indian Ocean. *Journal of the Bombay Natural History Society* 49: 503–508.

Phillips, W.W.A. 1954. Petrels, shearwaters and other oceanic birds in the northern Indian Ocean. *Journal of the Bombay Natural History Society* 52: 334–348.

Pitman, C.R.S. 1960. The egg of the Somaliland Pigeon *Columba olivae* Clarke. *Bulletin of the British Ornithologists' Club* 80: 88.

Pitman, C.R. [S.] 1962–1964. Comments on some breeding records in "The birds of British Somaliland and the Gulf of Aden" in Vols. III and IV, by Sir Geoffrey Archer and Eva M. Godman. *Oologists' Record* 36: 22–27, 40–46, 61–67; 37: 1–5, 18–23, 33–36, 49–54; 38: 17–20.

Proud, A. 1987. Some summer records from north-west Somalia. *Scopus* 11: 41–43.

Roche, J. 1966. Recherches écologiques et systématiques sur les oiseaux de la République de Somalie (partie ex-italienne). *Monitore Zoologico Italiano (Supplemento)* 74: 44–79.

Roche, J. 1975. Recherches ornithologiques en République de Somalie. Résultats de la Mission de 1964. *Monitore Zoologico Italiano N.S. Supplemento* 6 (6): 103–140.

Roche, J. 1977. Recherches ornithologiques en République de Somalie. Résultats des missions italiennes de 1968 et 1969. *Monitore Zoologico Italiano N.S. Supplemento* 9 (9): 201–231.

Roche, J. 1983. Recherches ornithologiques en République de Somalie. Résultats de la mission italienne de 1973 en Somalie septenrionale. *Monitore Zoologico Italiano* 18 (2): 95–110.

Roche, J. 1985a. Recherches ornithologiques en République de Somalie. Étude de la collection d'oiseaux rassemblée par Monsieur Ruggero Tozzi. *Monitore Zoologico Italiano N.S. Supplemento* 20 (13): 269–297.

Roche, J. 1985b. Ash, (J.S.) et Miskell (J.E.) Birds of Somalia, their habitat, status and distribution. [Review] *L'Oiseau et la Revue Française d'Ornithologie* 55: 255–256.

Roche, J. & Poggesi, M. 1978. Recherches ornithologiques en République de Somalie. Resultats de la mission italienne de 1970 en Somalie méridionale. *Monitore Zoologico Italiano. N.S. Supplemento* 11 (7): 173–187.

Sawada, I. 1971. Two new avian cestodes, *Raillietina* (*Rallietina*) *somalensis* and *Cotuguia sohohoi* from *Acryllium vulturinum* in Somalia. *Japanese Journal of Zoology* 16: 131–134.

Scaramella, D. 1981. Brevi note eco-etologiche tra l'uomo ed it Marabu (*Leptopidos* [*sic*] *crumeniferus*, Lesson) lungo il basso corso del fiume Scebeli in Somalia. Alcune segnalazioni sulla fauna ittica della zona. *Il Bollettino scientifico della Facoltà di Zootecnia e Veterinaria, Università Nazionale Somala*: 91–99.

Schiemann, H. 1986. Red-necked Phalaropes *Phalaropus lobatus* off the coast of Somalia and Kenya. *Scopus* 10: 42–44.

Schifter, H. 1975. Unterartgliederung und Verbreitung des Blaunackenmausvogels *Urocolius macrourus* (Coliiformes, Aves). *Annalen Naturhistorisches Museum Wien* 79: 109–182.

Serle, W. 1943. Notes on east African birds. *Ibis* 85: 55–82.

Snow, D.W. 1978. *An atlas of speciation in African non-passerine birds.* London: Trustees of the British Museum (Natural History).

Taylor, P.B. 1081. First East African record of the Red-necked Stint *Calidris ruficollis. Scopus* 5: 126–128.

Toschi, A. 1948. Annotazioni su alcuni uccelli somali. *Rivista Italiana di Ornitologia* 18: 18–31.

Toschi, A. 1954. Note ornitologiche dalla Migiurtina. *Rivista Italiana di Ornitologia* (2) 24: 187–189.

Traylor, M.A. 1970. East African *Bradornis*. *Ibis* 112: 513–531.

Tye, A. 1986. Plumage stages, moults, sexual dimorphism and systematic position of the Somali Wheatear *Oenanthe phillipsi*. *Bulletin of the British Ornithologists' Club* 106: 104–111.

Vincent, J. 1966–1971. *Red data book, 2. Aves.* Morges: IUCN.

Violani, C. 1985. Review: Ash, J.S. & Miskell, J.E. 1983. Birds of Somalia, their habitat, status and distribution. Supplemento speciale N. 1 della Rivista Scopus, E.A.N.H.S. Ornithological Sub-Committee, Nairobi, pagg. 97. *Rivista Italiana di Ornitologia* 55: 111.

Violani, C., Capocaccia, L. & Arbocco, G. 1979. The bird collections of Genoa Museum Natural History "Giacomo Doria": an historical outline. *Atti della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano* 120: 27–30.

Ward, P. 1971. The migration patterns of *Quelea quelea* in Africa. *Ibis* 113: 275–297.

Warham, J. 1964. Land-birds over the Indian Ocean. *Ibis* 106: 260–261.

White, C.M.N. 1955. *Calandrella rufescens vulpecula* (10 miles W of Bohotleh). *Bulletin of the British Ornithologists' Club* 75: 3.

White, C.M.N. 1958. (*Calandrella obbiensis*). *Bulletin of the British Ornithologists' Club* 78: 80.

White, C.M.N. 1960. A check list list of the Ethiopian Muscicapidae (Sylviinae) Part I. *Occasional papers of the National Museums of Southern Rhodesia* 3 (24B): 399–430.

White, C.M.N. 1961. *A revised check list of African broadbills, pittas, larks, swallows, wagtails and pipits.* Lusaka: Government Printer.

White, C.M.N. 1962a. A check list of the Ethiopian Muscicapidae (Sylviinae) Parts II and III. *Occasional papers of the National Museums of Southern Rhodesia* 3 (26B): 653–738.

White, C.M.N. 1962b. *A revised check list of African shrikes, orioles, drongos, starlings, crows, waxwings, cuckoo-shrikes, bulbuls, accentors, thrushes and babblers.* Lusaka: Government Printer.

White, C.M.N. 1963. *A revised check list of African flycatchers, tits, tree creepers, sunbirds, white-eyes, honey eaters, buntings, finches, weavers and waxbills.* Lusaka: Government Printer.

White, C.M.N. 1965. *A revised check list of African Non-Passerine birds.* Lusaka: Government Printer.

Williams, J.G. A new species of *Sylvietta* from Italian Somaliland. *Ibis* 97: 582–583.

Williams, J.G. 1956. The rediscovery of *Warsanglia johannis*. *Ibis* 98: 531–532.

Williams, J.G. 1957. The juvenile plumage of *Warsanglia johannis*. *Bulletin of the British Ornithologists' Club* 77: 157.

Wood, B. 1988. Roadside bird counts from southern Somalia. *Scopus* 11: 88–94.

## ON THE BREEDING BEHAVIOUR OF THREE MONTANE SUNBIRDS *NECTARINIA* SPP. IN NORTHERN MALAWI

*Françoise Dowsett-Lemaire*

This paper presents observations on the breeding behaviour and voice of three montane sunbirds—the Greater Double-collared Sunbird *Nectarinia afra*, Bronze Sunbird *N. kilimensis* and the Scarlet-tufted Malachite Sunbird *N. johnstoni*—and complements a study of the annual cycle and food plants of these and other sunbird species of upland Malawi (Dowsett-Lemaire in press). Little is known of the breeding biology of *N. johnstoni*, apart from descriptions of nests and eggs (Williams 1951, Chapin 1954, Coe 1961). The breeding behaviour of *N. kilimensis* is better documented (van Someren 1956, Chapin 1959, 1978, Löhrl 1979, Gardiner & Meikle 1985). In *N. afra*, only the nominate race of South Africa has been fairly well studied (Skead 1967), and there are some ecological notes and nest descriptions for the Central African races (Chapin 1954).

### TAPE RECORDINGS AND ANALYSIS

Tape recordings were obtained with a Sony TC-150 cassette recorder, modified by Mineroff Electronics Inc., and a Beyer M69 dynamic microphone fitted into a Sony parabolic reflector of 40 cm diameter. The material was analysed with a Kay Electric Sonograph 7029A at Liège University, using the wide-band setting.

### STUDY AREA

The Nyika Plateau lies between 10° and 11°S and is the largest montane complex in Malawi. It consists of rolling montane grassland scattered about with patches of evergreeen forest and locally extensive areas of secondary growth (see Dowsett-Lemaire 1983). Observations were made mostly at an altitude of 2100–2200 m, near the border with Zambia, during 1981–82, covering all months overall. Several *N. afra* and one female *N. kilimensis* had individual combinations of colour rings.

### *NECTARINIA AFRA*

The population living on the Nyika Plateau is very isolated—its nearest neighbour being in eastern Zaïre—and belongs to the endemic race *whytei*. Clancey & Irwin (1978) separated the montane forms of *N. afra* (from Angola, Central Africa and the Nyika) from the southern African ones as a species *N. ludovicensis*, mostly on characters of bill length and colour of the belly. Having had field experience of both nominate *afra* of the Cape and *whytei*, I prefer to keep them in the same species; they are also very close in voice.

Above an altitude of 1900 m on the Nyika, Greater Double-collared Sunbirds are very common in scrub and secondary growth 1.5 to 3–4 m tall, and feed also on the nectar of several forest-edge plants—but they never penetrate forest (*contra* Hall & Moreau 1970). Observations on breeding behaviour involved two pairs holding territories in clumps of *Tecomaria capensis* bushes on the edge of forest, and another two in *Kotschya–Philippia* scrub among rocky outcrops (on Chowo Rocks, on the Malawi side of the international border). In the present account these are called pairs 1 to 4 respectively.

Breeding records overall are detailed in Table 1. Pairs 1 and 2 were double-brooded (eggs laid in February and April, one female colour-ringed), and pairs 3 and 4 triple-brooded (eggs laid in April, June and August). Female 1 built her

Table 1. Breeding records (i.e. months of egg-laying) in *Nectarinia afra, N. kilimensis* and *N. johnstoni* on the Nyika Plateau (Malawi–Zambia)

| Species | J | F | M | A | M | J | J | A | S | O | N | D | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *N. afra* | - | 6 | 1 | 7 | 1 | 3 | 1 | 2 | - | - | - | - | 21 |
| *N. kilimensis* | - | 1 | 4 | - | - | - | 1 | - | - | - | - | 1 | 7 |
| *N. johnstoni* | 3 | - | - | - | - | - | - | - | - | 2 | - | 2 | 7 |

first nest on the outside of a *Hagenia abyssinica* tree, suspended from the rachis of a leaf at a height of 1.8 m. The single chick left it on 31 March or 1 April and the second clutch (one egg) was laid, rather surprisingly, in the same nest on 2 April. The following year (February 1982) she built in the same tree, at a height of 5 m.

Pair 2 had its nest in a *Buddleja salviifolia* at a height of 2 m and re-used it for a second clutch. The female of pair 3 built all three nests in neighbouring tree healths *Philippia benguelensis*, suspending them from thin, arched branches, at heights of 2, 1.5 and 2.5 m. Two of the nests overhung rocks. The last nest was made almost entirely with material torn from the first two. Female 4 placed her first two nests in *Philippia* (each at a height of 2 m), and built the third one in a thick clump of *Rhus longipes* (2.5 m high) by tearing away the material of the first two. In pair 3, the first and third breeding attempts were successful, the outcome of the second one is unknown. In yet another territory, a nest was found lodged in the dense foliage of an *Anthospermum* at a height of 1.5 m.

Sizes of clutch/brood are always of one egg/chick in this species (n = two clutches and four broods). All nest-building and brooding of egg and chick were carried out solely by females. Males sang from prominent perches, followed the females, and chased conspecifics intruding into their territories. They took a small share in feeding the nestling (for example, male 2 came once to the nest in an hour while his mate fed the young 20 times). In pair 1 the male was feeding the chick from the day of hatching.

After the chick leaves the nest, the role of the male parent increases. In pair 1, the male took sole charge of the young (of the first brood) for at least 19 days. The second clutch hatched on 16 or 17 April (after an incubation period of 14 or 15 days); on 18 April the male was feeding the new chick at the nest while the older one was begging nearby. Food brought to the young consists of an amalgam of small insects.

Colour-ringed territorial males remained in the same area all year round and showed no sign of an eclipse plumage in the non-breeding season.

The song of *N. afra whytei* is a sharp, dry, nervous strophe, usually lasting from 2 to 2.5 s (Fig. 1). It is often preceded by one or two sharp *tsic* sounds. Territories are not very large (0.1–0.5 ha) and songs are clearly heard by neighbours. By contrast, the song of its forest sibling the Eastern Double-collared Sunbird *N. mediocris* is more mellow and musical. It is a melodious warble (often preceded by *tsee* calls) with much frequency modulation, and lasting for several seconds (often 5 to 7). The call vocabulary of both species is

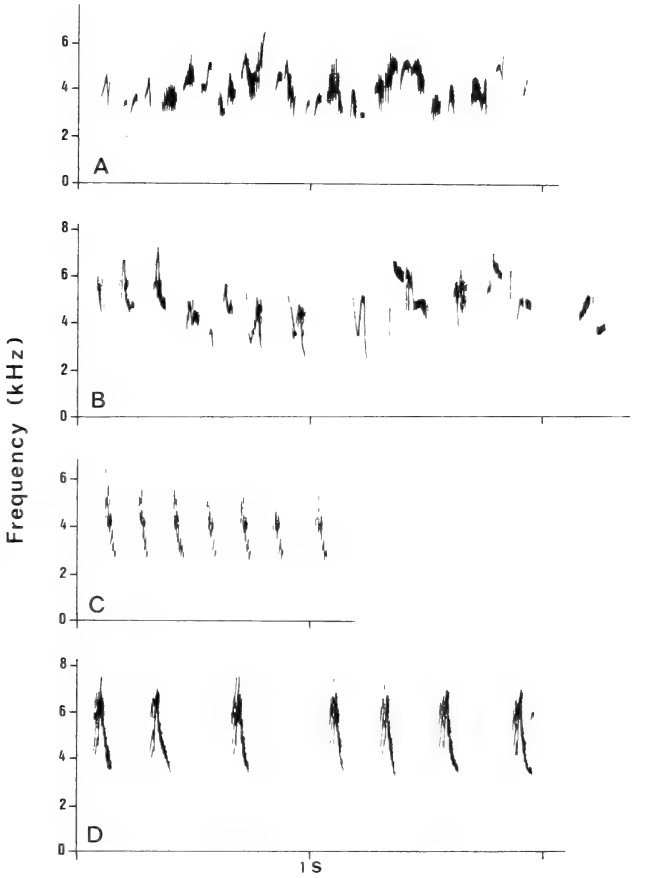


Fig. 1. *Sonograms illustrating songs of (A)* Nectarinia afra *and (B)* N. mediocris; *main alarm calls of (C)* N. afra *and (D)* N. mediocris—*all from the Nyika Plateau*

varied; a common type of alarm and aggressive call consists of fast series of *tchep tschep tchep tchep*... which again shows differences between the two species (Fig. 1). Songs of *N. afra* on the Nyika were heard from January–February until August.

### *NECTARINIA KILIMENSIS*

Bronze Sunbirds feed in secondary growth and scrub, and on the edge of forest. Their breeding territories (out of which they chase all species of sunbird) are separated from those of *afra* and most of them include large clumps of *Leonotis* spp. (Dowsett-Lemaire in press). Breeding on the Nyika was recorded from

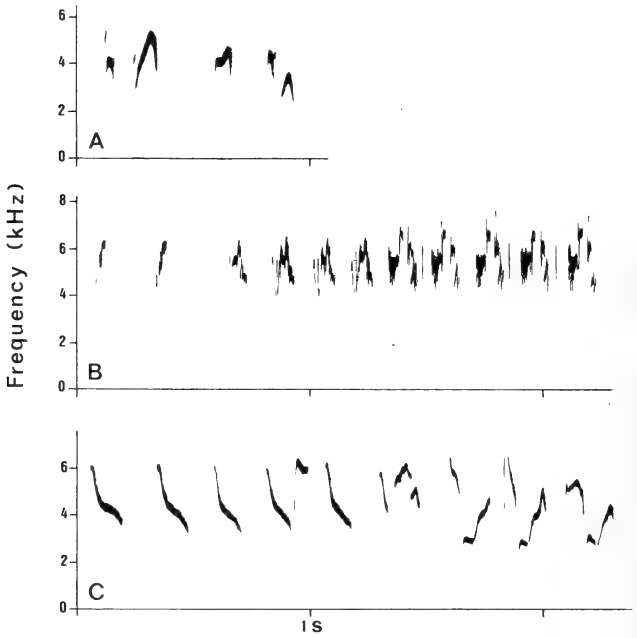


Fig. 2. *Sonograms illustrating: (A) the advertising calls of* Nectarinia kilimensis; *the songs of (B)* N. johnstoni *and (C)* N. famosa—*all from the Nyika Plateau*

February to July (Table 1), with one old record in December by C.J. Vernon (in Benson & Pitman 1966). A pair that had bred in February–March (the female was colour-ringed) was still defending its territory in July. Observations were discontinued but it is likely that they had a second brood, as after breeding the birds disperse and the sexes become separated.

In four *Leonotis* territories, nests were situated in the following sites: in a bush of *Hypericum revolutum* (1.7 m; this one was robbed), in the outer branches of a prickly *Maytenus heterophylla* (2 m), suspended from the tip of a branch of *Buddleja salviifolia* arching over a marsh 4 m below, and on two prickly stems of *Cirsium* sp. (0.8 m, abandoned with laying). Females alone build nests and brood eggs/chicks. In one territory where nesting was successful, the male was seen to participate in feeding the nestling. On 15 April the chick was brooded for a total of 53 minutes in two hours and fed 15 times (three times by the male). On 18 April it was fed 12 times in one hour (seven by the male) and brooded for 28 minutes. The male often arrived when the female was in the nest, in which case she withdrew to the side to let the chick be fed directly. Both parents brought insects on all trips (taken by hawking, or gleening in low scrub) and it is not known whether they carried nectar. Each time she left the nest, the female fed

first on *Leonotis* nectar then spent a few minutes catching insects before returning to the chick. Nests were inaccesssible and clutch sizes could not be checked.

### *NECTARINIA JOHNSTONI*

The population on the Nyika Plateau (2000–2450 m) is represented by the race *nyikensis*, which possibly also occurs on the Livingstone Mountains of southwest Tanzania (Britton 1980). The Nyika is not high enough to have an Alpine zone (i.e. with giant lobelias and senecios) and, unlike the populations from Central and East Africa, *N. johnstoni* here feeds mostly on *Protea* spp. and secondarily on *Leonotis* spp. (Dowsett-Lemaire in press). Pairs establish breeding territories in *Protea* grassland, and the tall *Kotschya–Philippia* scrub of rocky outcrops, where the main *Protea* species is *P. welwitschii*.

Most observations of breeding were made in two territories on the Malawi side of Chowo Rocks. In this area, pairs nested in the summer rains, with egg-laying taking place in December or January (Table 1); there are three old (1948) records for October (Benson 1951, Peters & Loveridge 1953). In the 1981–82 season, pair 1 was present from October, and the male had made regular appearances in the territory since July (then for part of the day at noon and some of the afternoon). He sang from prominent perches and chased other sunbirds—conspecifics and also *N. afra* and the Yellow-tufted Malachite Sunbird *N. famosa*. The female built a nest in the depths of a *Philippia* bush at a height of 2 m. The male divided his time between singing, displaying (see Coe 1961), chasing intruders, diving at the female and feeding her on occasion—she took the posture of a chick, vibrating her wings. She laid in mid December, as soon as the nest was completed. Two chicks hatched on 31 December, and left the nest on 22 January after spending 22 days in it. Brooding and feeding was entirely the female's job. Feeding was at a rate of five visits per hour on day one, again five per hour on day nine, and 12 per hour on day 15. After each visit, the female fed first on several flowers of *Protea welwitschii*, then hunted for insects and spiders, often hovering and hawking low between bushes and above grass tussocks.

She brooded the chicks for 10 min $h^{-1}$ on day one, not on days nine or 15 (one-hour watches). She continued to feed the fledglings alone, for exactly two weeks after they left the nest. The chicks were failrly mobile in that period, often taking nectar on their own from *Protea* flowers. The male kept his usual watch on the most prominent tree, but on occasions flew at the young aggresively. They reacted to that by a vigorous begging posture and calls *seep, seep*; the male merely moved off, and never fed either chick. In the previous season, however, a family of two chicks was raised in the same territory, and the male fed one chick continuously whenever watched (on 11, 13 and 14 February) and sometimes also the other chick.

Pair 2 had its nest in a similar situation (*Philippia* heath at 1.8 m) and reared a single chick (from a clutch of one egg). The male was never seen to feed it.

Each year, the adults deserted the territory a few days after the young became independent. There are no records for the months of May and June on the Nyika and it is not known whether males have an eclipse plumage there. Adult males were in full dress in all months from July to April.

Benson (1941) remarked, rightly, that the voice of *N. johnstoni* is much harsher than that of its sibling *N. famosa*. Williams (1951) described the song of nominate *johnstoni* from Kenya as having a rising trill preceded by some sharp, metallic notes. The song of *nyikensis* is even more simple and consists of an accelarated repitition of dry *tserrep tserrep tserrep* notes following a few detached metallic *tsec* notes (Fig. 2). It usually lasts from 1.3 to 2 s. The song of *N. famosa* is a pleasant motif of fine whistles, often with an alteration of high and lower-pitched notes (Fig. 2), sounding like *pesui pesui pesui* and introduced by notes similar to the contact call (a fluid *tseuu, tseuu*). It may last from 1.5 to 2.5 s. Songs of *N. johnstoni* were heard from the beginning of territorial occupation (July) until the end of breeding (February).

## DISCUSSION

Sunbirds are so far known to be monogamous and territorial, but the participation of males in breeding duties is reduced (e.g. Skead 1967). Exceptionally, the Seychelles Sunbird *N. dussumieri* was reported to take a small part in the early nest building (Greig-Smith 1980). This has yet to be seen in African mainland species. Courtship feeding of the female by *N. johnstoni* on the Nyika appears to be exceptional. The extent to which the male feeds the chick is variable. In *N. kilimensis* for instance, Löhrl (1979) did not see the male feed at one nest, nor did van Someren (1956), but this was recorded by Gardiner & Meikle (1985). Similarly in *N. famosa*, Wolf & Wolf (1976) saw the males take part, but van Someren (1956) and Skead (1967) did not. The variability of such behaviour is well exemplified in the one territory of *N. johnstoni* on the Nyika, where the male fed the fledglings one year but not during the next season. Possibly these variations are due to different levels of pressure on the male from territorial intruders—the most important role of male sunbirds would seem to be to keep the territory free as a food reserve for the family.

The re-use of old nests (seen in *N. afra*) is occasionally reported in other species (Skead 1967, also van Someren 1956 for *N. kilimensis*), as well as the utilization of material from old nests (Skead 1967).

Pairs of *N. johnstoni* are single-brooded and, by contrast, *N. afra* raises single broods. The length of the breeding season is related to fluctuations in the food supply (Dowsett-Lemaire in press). Several species are assumed to be multiple-brooded in South Africa, including *N. afra* (Skead 1967) for which I have firm evidence from a colour-ringed pair (pers. obs.). Elsewhere, there is also evidence from colour-ringed *N. kilimensis* (Chapin 1959, 1978).

Clutch sizes of sunbirds near the equator are normally of one egg, except in *N. famosa* where they often consist of two (Williams 1951, Chapin 1954, van Someren 1956, Coe 1961). The same is true of the Nyika sunbirds except for some of the *johnstoni* clutches which have two eggs (see also Benson 1951). In southern Africa, most sunbirds lay two eggs (Benson *et al.* 1964, Skead 1967).

The nestling period of 22 days in *N. johnstoni* is above the average of two weeks in many species (van Someren 1956, Skead 1967, Wolf & Wolf 1976), but there is one period of 22 days recorded for *N. kilimensis* by Gardiner & Meikle (1985).

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**REFERENCES**

Benson, C.W. 1941. Further notes on Nyasaland birds (with particular reference to those of the Northern Province). *Ibis* 5 (14th series): 1–55.

Benson, C.W. 1951. Breeding and other notes from Nyasaland and the Lundazi District of Northern Rhodesia. *Bulletin of the Museum of Comparative Zoology* 106: 69–114.

Benson, C.W., Brooke, R.K. & Vernon, C.J. 1964. Bird breeding data for the Rhodesias and Nyasaland. *Occasional Papers of the National Museum of Southern Rhodesia* 27B: 30–105.

Benson, C.W. & Pitman, C.R.S. 1966. Further breeding records from Zambia (formerly Northern Rhodesia) (No. 5). *Bulletin of the British Ornithologists' Club* 86: 21–33.

Chapin, J.P. 1954. The birds of the Belgian Congo. Part 4. *Bulletin of the American Museum of Natural History* 75B: 1–846.

Chapin, J.P. 1959. Breeding cycles of *Nectarinia purpureiventris* and some other Kivu birds. *Ostrich Supplement* No. 3: 222–229.

Chapin, R.T. 1978. Breeding behaviour of the Bronzy Sunbird *Nectarinia kilimensis*. *EANHS Bulletin* 1978: 52–55.

Clancey, P.A. & Irwin, M.P.S. 1978. Species limits in the *Nectarinia afra*/*N. chalybea* complex of African Doublecollared Sunbirds. *Durban Museum Novitates* 11: 331–351.

Coe, M.J. 1961. Notes on *Nectarinia johnstoni johnstoni* on Mt Kenya. *Ostrich* 32: 101–103.

Dowsett-Lemaire, F. 1983. Ecological and territorial requirements of montane forest birds on the Nyika Plateau, south-central Africa. *Le Gerfaut* 73: 345–378.

Dowsett-Lemaire, F. (in press). Food plants and the annual cycle in a montane community of sunbirds (*Nectarinia* spp.) in northern Malawi. *Tauraco*.

Gardiner, J. & Meikle, J. 1985. Note on the breeding habits of the Bronze Sunbird. *Honeyguide* 31: 58–59.

Greig-Smith, P.W. 1980. Foraging, seasonality and nesting of the Seychelles Sunbirds *Nectarinia dussumieri*. *Ibis* 122: 307–321.

Löhrl, H. 1979. Tagesaktivität, Nestbaumethode und Brutverhalten der Honigsaugers *Nectarinia* (*Aidemonia*) *kilimensis* in Zentralafrika. *Journal für Ornithologie* 120: 140–450.

Peters, J.L. & Loveridge, A. 1953. Zoological results of a fifth expedition to East Africa. II. Birds from Nyasaland and Tete. *Bulletin of the Museum of Comparative Zoology* 110: 85–139.

Skead, C.J. 1967. *Sunbirds of southern Africa*. Cape Town and Amsterdam: A.A. Belkema.

VAN SOMEREN, V.G.L. 1956. Days with birds. Studies of habits of some East African species. *Fieldiana, Zoology* 38: 1–520.

WILLIAMS, J.G. 1951. *Nectarinia johnstoni*: a revision of the species, together with data on plumages, moults and habits. *Ibis* 93: 579–595.

WOLF, L.L. & WOLF, J.S. 1976. Mating system and reproductive biology of Malachite Sunbirds. *Condor* 78: 27–39.

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*Scopus* 11: 79–86, March 1988 Received 23 October 1987

## Notice

**Birds of Prey: an identification guide to the raptors of the world**

This book, due for completion in 1988, is to be published by Christopher Helm Ltd in the same series as *Seabirds, Shorebirds* and *Wildfowl*. The 112 colour plates will show all birds of prey in all main plumages, perched and in flight. Illustrating the underwings and some other fine details is, however, a problem for certain species where museum skins, published photographs and our field notes are all inadequate. We are therefore now asking for photographs (particularly showing birds in flight or in the hand) of any of the following:

The Afro-Malagasy cuckoo-hawks *Aviceda cuculoides* and *A. madagascariensis*; the honey buzzards *Henicopernis longicauda*, *H. infuscata* and *Pernis celebensis*; the African banded snake eagles *Circaetus fasciolatus* and *C. cinerascens*; any island (not mainland) species or race of Asiatic serpent eagles *Spilornis*; the Afro-Malagasy serpent eagles *Dryotriorchis* and *Eutriorchis*; any species of *Accipiter* (in which we include *Erythrotriorchis* and *Megatriorchis*) except for *tachiro*, *novaehollandiae* (Australian nominate race), *nisus*, *rufiventris*, *striatus*, *bicolor*, *cooperii* and *gentilis*; the Old World hawks *Butastur* (all species); the African Long-tailed Hawk *Urotriorchis macrourus*; the New World hawks *Leucopternis* (all species) and *Buteogallus subtilis*; the two Central and South American solitary eagles *Harpyhaliaetus*; the buzzards/hawks *Buteo ridgwayi*, *B. exsul*, *B. solitarius*, *B. ventralis*, *B. oreophilus*, *B. brachypterus*, *B. regalis* (dark adult and juvenile) and *B. auguralis*; the Crested Eagle *Morphnus guianensis* and the harpy eagles *Harpia* and *Harpyopsis*; the Indian Black Eagle *Ictinaetus malayensis*; Wahlberg's Eagle *Aquila wahlbergi*; Gurney's Eagle *A. gurneyi*; the hawk eagles *Hieraaetus dubius*, *H. kienerii*, *Spizastur melanoleucus*, *Spizaetus africanus*, *S. cirrhatus* (race *floris*), *S. nanus* (race *stresemanni*), *S. tyrannus*, *S. bartelsi* and *S. philippensis*; and Isidor's Eagle *Oroaetus isidori*.

We have tried to keep this list reasonably short, but should like to see any other photographs that show points of special interest. For example, until recently we would have added *Accipiter badius* and *A. brevipes* to the list of accipiters excluded, but it is now clear that some Shikras are more easily confused in the field with Levant Sparrowhawks than previously recognized.

All photographs should be sent as soon as possible to Dr P.J. K. Burton, British Museum (Natural History), Akeman Street, Hertfordshire HP23 6AP, England. They will be acknowledged, and later returned, by the individual artists.

*James Ferguson-Lees, Philip Burton, Kim Franklin and David Mead*

# ROADSIDE BIRD COUNTS FROM SOUTHERN SOMALIA

*Brian Wood*

Changes to natural and semi-natural areas as a consequence of 'development' usually have a profound effect on their bird communities. Unfortunately, it is rarely possible to quantify these changes since data are seldom available from unaltered habitats. Species lists may be compiled, but little is usually known about the absolute density or even the relative abundance of species and how these may change seasonally. Consequently, it is usually possible to assess the effects of development in only very general terms and subjective impressions of changes are nototiously unreliable. As long as this situation persists, it will remain difficult to convince development agencies that they may be initiating profound alterations to the natural communities; nor will we know if the remnants that may be preserved in reserves and national parks are indicative of those that formerly existed in the area.

Detailed studies are needed to provide the substantial evidence needed for comparison between sites. However, even casual records, if collected in a standardized way, can demonstrate the magnitude of population changes within a site or contribute significantly to our understanding of migratory movements (e.g. Fry 1970). The most valuable records are always those collected prior to development, as visits by ornithologists are then less frequent than they may become after access has been improved.

This paper presents some data on the relative abundance of birds recorded along a roadside in southern Somalia. The data were easily obtained and the future collection of comparable data from the same site could lead to a substantial increase in our understanding of the ornithology of the region. Although developments have already taken place in this area, they are slight compared to the changes that may occur in the near future as a consequence of the planned construction of a major dam, new roads and the extension of irrigation agriculture. They are presented here in order to encourage the collection of similar data from this site and elsewhere in Africa.

## STUDY SITE AND METHODS

During late July 1986 the Somalia Research Project team from Unversity College London, together with Somali counterparts, were based at Jilib in the Jubba Valley in southern Somalia. We were attempting to reach and survey the reamining areas of riverine forest in the Middle Jubba but were temporarily prevented from doing so by late rains which made the dirt roads north of Fanoole impassable. Whilst seeking an alternative route north up the valley, we made several journeys along the normally graded road between Jilib and Fanoole (Fig. 1). At that time this road was also badly rutted and difficult to travese.

On 22, 23 and 24 July, whilst negotiating the same section of road, we attempted to identify and count all birds that we saw from the vehicle. The speed of travel was determined primarily by the condition of the road, although we slowed down when encountering concentrations of birds, so as to ensure that all were recorded. Occasional stops were made to check the indentity of a few individuals, although most could be readily identified from the moving vehicle.

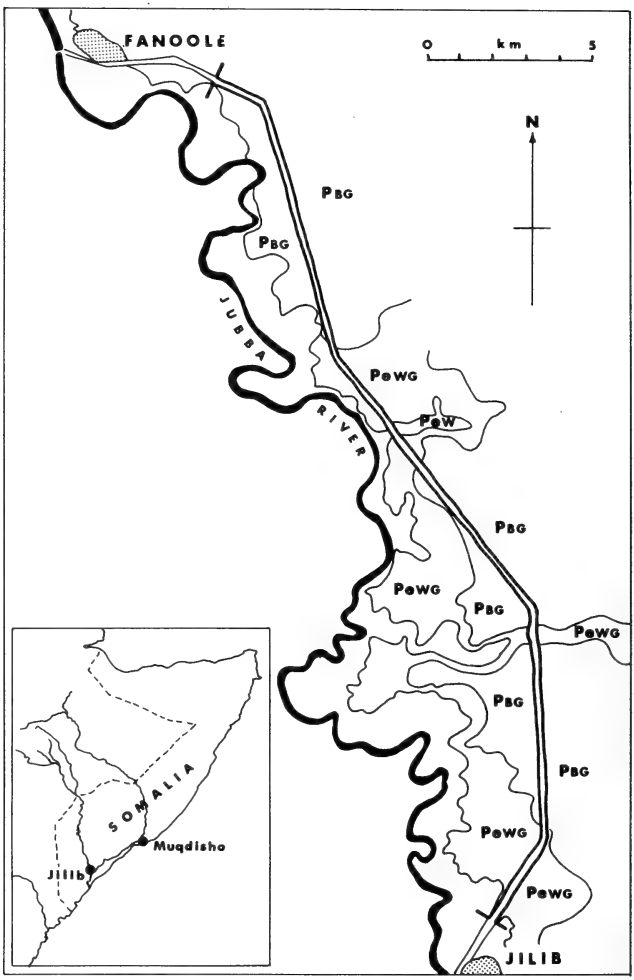


Fig. 1. *Location of the transect counts along the Jilib to Fanoole road, southern Somalia*

Key: Bars mark the maximum limits of the transect
P = pediplain (slope 0%)
Pe = slightly dissected pediplain (slope <2%)
BG = bushed grassland: scattered or grouped shrubs, canopy cover <20%
W = woodland: trees 18 m in height, shrubs may be insterspersed. Canopy cover <20%

This particular section of road passes through quite dense bush, dominated by *Acacia* spp. of average height of about 4 m. Most of this bushland has been little altered, except by the activities of nomadic parstoralists and the seasonal browsing of their herds of camels. The road runs parallel and close to a canal that originates at the Fanoole Barrage and supplies water to the Mugambo Rice Project near to Jilib. Telephone wires run between the road and the canal and, for most of its length, high-tension electricity wires on pylons run along the east side of the road, about 50 m from it. The bush beneath these wires had been cut but was re-growing. Thus, surrounding the road there is effectively a swathe of low vegetation, about 150 m wide. This is quite grassy along the banks of the canal and near the occasional village, but elsewhere consists of low bush of the same species as the taller bush more remote from the road.

Each survey began at a point where the road crosses a small side-canal about 1 km north of Jilib. On two occasions it continued for a distance of 33 km (to the telephone post numbered 622), but ran only for 20 km on the third occasion. No attempt was made to standardize the time of departure or speed of travel. Birds were identified by at least three observers on each occasion, covering both sides of the road, and were recorded in a notebook by a fourth observer.

## RESULTS AND DISCUSSION

The species are listed in Appendix 1. A total of 1850 birds of 72 species was encountered in 86 km of travel. The complete list gives a good impression of the species likely to be seen from this road at that particular time of year., although the recorded numbers of each species probably deviate considerably from their relative proportions in the community as a whole. Most small species are underestimated or completely missed by this method of survey. Species which habitually perch in prominent positions, often when foragingg, are over-represented, as may be species that come to the road either to obtain grit or to dust-bathe. The number of individuals of flocking species recorded may merely reflect the frequency of chance encounters with flocks but, for large counts the results may be representative.

Despite these misgivings, if the survey method were to be used on other occasions, the results ought to be comaparable with those presented here. This would allow a more complete picture of the bird community and seasonal changes in specie sfrequencies to be obtained. However, for seasonal changes in abundance to be demonstrated, such changes would need to be significantly greater than differences between counts made in the same season.

To compare the results of the three counts presented here, a coefficient of dissimilarity ($D_{jk}$) between counts was calculated using the Euclidian distance measure:

$$D_{jk} = \sqrt{\sum_{a=1}^{n} (X_{aj} - X_{ak})^2}$$

where X is the number of individuals (of each species) in each sample and there are a = 1,2,3...n species. Higher values of this index indicate greater differences between counts.

The greatest differences occur between the morning count on 23 July and the afternoon counts on 22nd and 24th (Appendix 1). In particular, the morning

count recorded substantially more doves, kingfishers, Striped Swallows[1], Orange-bellied Parrots and Pale Chanting Goshawks. It also produced the highest rate of encounter with birds per kilometre travelled. Whilst all species may have been more active in the early morning, and therefore more readily seen, the wetnes of the vegetation may have encouraged the species listed above to prefer the vicinity of the raod. Most used the telephone wires as lookout perches when foraging, and the doves occurred on the road itself, where they were gritting and sunbathing. This effect may not occur later in the dry seasons, when dew is infrequent, so that afternoon counts could prove to offer a better standard for comparison, despite the lower recording rates.

Similar techniques have been used to carry out extensive surveys of birds in many parts of Africa in the past (Brown 1972, Pettet 1975). Other methods could provide comparable data but roadside counts have the advantage of being easily applied and can be used opportunistically. All authors express some misgivings about the accuracy of this technique, and it is perhaps most appropriately applied to those species, such as raptors, that are easily seen and identified from a moving vehicle and may also congregate along roadsides. Despite misgivings, it is worth making a few comparisons between these data from Somalia and those obtained elsewhere.

We recorded a total of 72 bird species from the fairly uniform habitat traversed by our section of road. In a 1600-km transect from Ibadan to Maiduguri in Nigeria during December, through a wide range of vegetation types from forest to dry savanna, Pettet (1975) noted a total of 71 species. Brown (1972) summarizes a series of roadside surveys of raptors from relatively pristine to heavily degraded habitats. The highest rate of encounter that he noted was from national parks and thinly inhabitaed area in Uganda where he found 20.8 resident raptors per 100 km (excludes vultures and Palaearctic migrants) compared to 47.5 raptors/100 km in Somalia (all residents). Kalahari National Park produced 16.45 raptors/100 km, Kruger National Park 6.79 raptors/100 km and developed parts of South Africa only 5.48 raptors/100 km. This last figure is perhaps an indication of how much the bird populations of the Jubba Valley could decline as a consequence of future development.

Thus it can be seen that, even with this simple recording technique, gross comparisons can be made between sites and useful conclusions drawn. The section of country through which our traverse in southern Somalia was made is evidently both rich in number of species and supprts a high density of raptorial birds. It is to be hoped that other ornithologists will take the opportunity to obtain similar data, particularly from little-visited or undeveloped locations. The information that they may gather could provide invaluable in helping to understand natural and induced changes in bird communities.

**ACKNOWLEDGEMENTS**

I would particularly like to thank the three other British members of the Somalia Research Project, Jane Madgwick, Mike Maunder and Nigel Varty, and out Somali counterparts Cabdi Wahaab and Jimaleh, for their participation in these counts. The project was made possible through the substantial support, financial

[1]Scientific names are given in Appendix 1

and in kind, by numerous organizations and individuals. All are fully acknowledged in our final report.

## REFERENCES

ASH, J.S. & MISKELL, J.E. 1983. Birds of Somalia, their habitat, status and distribution. *Scopus* Special Supplement No. 1.

BROWN, L. [H.] 1972. *African birds of prey.* 2nd edition. London: Collins.

FRY, C.H. 1970. Migration, moult and weights of birds in Northern Guinea savanna in Nigeria and Ghana. *Ostrich* supplement 8: 239–263.

PETTET, A. 1975. Road transects for large-scale surveying. *Bulletin of the Nigerian Ornithologists' Society* 11: 2–18.

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*Scopus* 11: 87–93, March 1988 Received 4 March 1988

**APPENDIX 1. Birds counted along the Jilib–Fanoole road, Somalia, in July 1986; order and nomenclature follows Ash & Miskell (1983)**

| Species | dates in July 1986 22nd | 23rd | 24th |
|---|---|---|---|
| Pink-backed Pelican *Pelecanus rufescens* | | 4 | |
| Grey Heron *Ardea cinerea* | | | 1 |
| Goliath Heron *A. goliath* | | 1 | |
| Cattle Egret *Bubulcus ibis* | 6 | 18 | 20 |
| Yellow-billed Egret *Egretta intermedia* | | | 1 |
| Hamerkop *Scopus umbretta* | 2 | 2 | |
| Open-billed Stork *Anastomus lamelligerus* | | 1 | 1 |
| Woolly-necked Stork *Ciconia episcopus* | | 13 | 8 |
| Marabou *Leptoptilos crumeniferus* | 1 | | |
| Yellow-billed Stork *Mycteria ibis* | | 15 | 5 |
| Hadada *Bostrychia hagedash* | | 1 | |
| Sacred Ibis *Threskiornis aethiopica* | | 18 | 5 |
| African Spoonbill *Platalea alba* | | 1 | 2 |
| Egyptian Goose *Alopochen aegyptiacus* | | 2 | 1 |
| Brown Snake Eagle *Circaetus cinereus* | 2 | 4 | 1 |
| Southern Banded Snake Eagle *C. fasciolatus* | 1 | 1 | |
| Black-chested Snake Eagle *C. gallicus pectoralis* | 3 | 2 | 2 |
| Pale Chanting Goshawk *Melierax poliopterus* | 3 | 19 | 1 |
| African Fish Eagle *Haliaeetus vocifer* | | 1 | |
| Black-shouldered Kite *Elanus caeruleus* | | | 1 |
| Crested Francolin *Francolinus sephaena* | | 4 | |
| Jacana *Actophilornis africana* | | 1 | 1 |
| Spur-winged Plover *Vanellus spinosus* | 25 | 21 | 45 |
| Black-headed Plover *V. tectus* | 4 | 19 | 13 |

| Species | dates in July 1986 22nd | 23rd | 24th |
|---|---|---|---|
| Common Sandpiper *Actitis hypoleucos* | 1 | | |
| Black-faced Sandgrouse *Pterocles decoratus* | 15 | 15 | 10 |
| Namaqua Dove *Oena capensis* | | 1 | |
| dove, species not determined | 18 | 73 | 30 |
| Laughing Dove *Streptopelia senegalensis* | 5 | 40 | 16 |
| Emerald-spotted Wood Dove *Turtur chalcospilos* | | 10 | 1 |
| Orange-bellied Parrot *Poicephalus rufiventris* | | 17 | 1 |
| White-bellied Go-away Bird *Corythaixoides leucogaster* | | 3 | |
| Didric Cuckoo *Chrysoccocyx caprius* | 1 | | |
| White-browed Coucal *Centropus superciliaris* | 1 | 9 | 2 |
| Pied Kingfisher *Ceryle rudis* | 12 | 18 | 11 |
| Pygmy Kingfisher *Ispidina picta* | | 1 | |
| Brown-hooded Kingfisher *Halcyon albiventris* | | 2 | |
| Striped Kingfisher *H. chelicuti* | 16 | 38 | 25 |
| Chestnut-bellied Kingfisher *H. leucocephala* | 9 | 56 | 6 |
| Carmine Bee-eater *Merops nubicus* | 57 | 44 | 1 |
| Little Bee-eater *M. pusillus* | | 11 | |
| Madagascar Bee-eater *M. superciliosus* | 21 | 39 | 11 |
| Lilac-breasted Roller *Coracias caudata* | 1 | 13 | 6 |
| Von der Decken's Hornbill *Tockus deckeni* | 1 | 17 | 5 |
| Grey Hornbill *T. nasutus* | 1 | 4 | 1 |
| D'Arnaud's Barbet *Trachyphonus darnaudii* | 1 | 1 | |
| Striped Swallow *Hirundo abyssinica* | 2 | 54 | 6 |
| Ethiopian Swallow *H. aethiopica* | 26 | 18 | 16 |
| Wire-tailed Swallow *H. smithii* | | 1 | |
| Drongo *Dicrurus adsimilis* | 2 | 15 | 3 |
| Black-headed Oriole *Oriolus larvatus* | | 1 | 1 |
| Rufous Chatterer *Turdoides rubiginosus* | | 2 | |
| Common Bulbul *Pycnonotus barbatus* | 3 | | |
| Winding Cisticola *Cisticola galactotes* | 2 | 12 | 5 |
| Crombec species *Sylvietta* sp. | 1 | | |
| Pangani Longclaw *Macronyx aurantiigula* | | 1 | |
| Three-streaked Tchagra *Tchagra jamesi* | | 2 | |
| Long-tailed Fiscal *Lanius cabanisi* | 25 | 27 | 23 |
| White-crowned Shrike *Eurocephalus rueppelli* | 94 | 61 | 66 |
| Golden-breasted Starling *Cosmosparus regius* | 3 | 12 | 4 |
| Rüppell's Long-tailed Glossy Starling *Lamprotornis purpuropterus* | 34 | 42 | 64 |
| Superb Starling *Spreo superbus* | 9 | 10 | 20 |
| Red-billed Oxpecker *Buphagus erythrorhynchus* | | 1 | 1 |
| Violet-backed Sunbird *Anthreptes orientalis* | 1 | | |
| sunbird species, *Anthreptes/Nectarinia* sp. | 9 | 3 | 5 |
| Red-billed Buffalo Weaver *Bubalornis niger* | 11 | 35 | 2 |
| White-headed Buffalo Weaver *Dinemellia dinemelli* | 32 | 34 | 11 |

| Species | dates in July 1986 22nd | 23rd | 24th |
|---|---|---|---|
| Grey-headed Sparrow *Passer griseus* | 1 | 6 | 4 |
| Pin-tailed Whydah *Vidua macroura* | 5 | 7 | 7 |
| Red-billed Firefinch *Lagonosticta senegala* | | 1 | |
| Green-winged Pytilia *Pytilia melba* | 1 | | |
| Yellow-rumped Seed-eater *Serinus atrogularis* | | 4 | |
| Index of dissimilarity (see text, p. 89) | | 121.8 | 121.1 |
| | | 83.5 | |
| Number of species | 42 | 62 | 46 |
| Number of individuals | 468 | 909 | 473 |
| Distance travelled (km) | 33 | 33 | 20 |
| Time taken (min) | 110 | 120 | 53 |
| Start time (local) | 13:30 | 6:15 | 16:40 |
| Speed (km $h^{-1}$) | 18.0 | 16.5 | 23.1 |
| Birds $km^{-1}$ | 14.2 | 27.5 | 23.2 |
| Bird $min^{-1}$ | 4.3 | 7.6 | 8.9 |

* * * * * * * *

## SHORT COMMUNICATIONS

### A second Savi's Warbler *Locustella luscinioides* at Ngulia

At 04:00 on 21 December 1987 a Savi's Warbler *Locustella luscinioides* was mist-netted beneath floodlights outside Ngulia Safari Lodge, Tsavo National Park (West). It was ringed, a description taken, photographed and released. It was compared in the hand with the single River Warbler *L. fluviatilis* caught the same night.

The bird was an adult of the eastern race *fusca*. The inner three pairs of primaries were old and unmoulted as also were three pairs of secondaries. The remaining flight feathers, the rest of the wing feathers and the body plumage were moulted and fairly fresh. The upperparts were palish warm brown. Below, the flanks and sides of the breast were pale buff, the chin, throat and centre of breast and belly whitish, and the long undertail coverts pale buff without any barring; there were no streaks or spots on the breast. A whitish supercilium was indistinct. The legs and toes were pinkish brown. Measurements/structural details were: wing-length 72 mm, the tip pointed with the 2nd primary longest; tail rounded with outer feathers even shorter than in River Warbler; bill pointed with tip finer than in River Warbler; weight 15.2 g, visible fat rating 2.

This is the second Kenyan and East African record of the Savi's Warbler. The first was also caught (at night) at Ngulia (3°00S, 38°13E), on 6 December 1975 (Backhurst & Pearson 1976). The species winters regularly in Ethiopia where it has been recorded south to Lake Abiata, 7°36N, 38°40E (J.S. Ash, *in litt.*). The two Tsavo birds may have been overshooting vagrants. On the other hand, this is a very skulking species, difficult to locate, and these two records might suggest that small numbers regularly reach and cross the East African equator. There are several species of Palaearctic passerine migrant which winter commonly south to about central Ethiopia but not beyond. The Savi's Warbler is the only one of these which has featured among the 80 000 migrants caught to date at Ngulia.

**Reference**

Backhurst, G.C. & Pearson, D.J. 1976. Savi's Warbler in Tsavo, an addition to the Kenya list. *EANHS Bulletin* 1976: 21–22.

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*Scopus* 11: 94, March 1988 Received 9 March 1988

### Rüppell's Weaver *Ploceus galbula* new to Kenya

Erlanger (1907) lists an adult female Rüppell's Weaver *Ploceus galbula* collected at Garre-Liwin, south Somaliland, on 6 May 1901. He was actually at Karo-Lola (3°51N, 41°40E) in Kenya on this date, which is also the locality given by Hilgert (1908) for this specimen in his catalogue of the Erlanger collection. However,

Hilgert erred in giving the year as 1900: on 6 May 1900 Erlanger was near Harar in northern Ethiopia. Garre-Liwin is the name for a general area in which were situated several of Erlanger's collecting localities in Somalia and Kenya, and one of these was Karo-Lola (=Garolola) in Kenya (*vide* Miskell & Ash 1985). Dr D.S. Peters of the Forschungsinstitut Senckenberg, wherein the Erlanger collection is housed, has kindly confirmed the identification of his three specimens discussed here, and stated that according to the original labels they were collected in 1901.

In Africa, *Ploceus galbula* is widely distributed across Somalia, Djibouti, Ethiopia and eastern Sudan. In northern Somalia it breeds commonly south to 9°30N, but is recorded south to 6°30N (Ash & Miskell 1983). There are also single southerly Erlanger records at Solole (*c.* 1°25N, 42°25E) on the lower Jubba in Somalia, and at Haro-Gobana (*c.* 5°40N, 41°05E) in Ethiopia. In Ethiopia it breeds commonly south as far as 7°30N and is known from many localities in the south of that country as far as 4°30N (Ash pers. obs.; Dr R.W. Ashford pers. comm.; Miss P.M. Allen pers. comm.; Dr R.A. Cheke pers. comm.; Erlanger (1907); Hilgert (1908); Urban & Brown (1970), etc.). In Sudan it occurs east of 31°E, south to 11°N, although there is no breeding record south of 14°N to the west of Lake Turkana (Nikolaus 1987).

It thus appears that in Sudan, Ethiopia and Somalia the species is frequently recorded well to the south of its known breeding range, and the only known occurrence in Kenya is probably at, or near, the extreme southern limit of its range. Its appearance further west in the rift valley in the Lake Turkana and Chew Bahir area is more to be expected.

**Acknowledgements**

I gratefully acknowledge the help of the following for the provision of information on which this note is based: the late Miss P.M. Allen, Dr R.W. Ashford, Dr R.A. Cheke, Dr Adrian Lewis, John E. Miskell, Gerhard Nikolaus and Dr D.S. Peters.

**References**

Ash, J.S. & Miskell, J.E. 1983. Birds of Somalia, their habitat, status and distribution. *Scopus* Special Supplement No. 1.

Erlanger, C. Fr. 1907. Beiträge zur Vogelfauna Nordostafrikas. *Journal für Ornithologie* 1907: 1–158.

Hilgert, C. 1908. *Katalog der Collection von Erlanger in Nieder-Ingelheim a. Rh.* Berlin: Friedländer & Sohn.

Miskell, J.E. & Ash, J.S. 1985. Gillett's Lark *Mirafra gilletti* new to Kenya. *Scopus* 9: 53–54.

Nikolaus, G. 1987. *Distribution atlas of Sudan's birds with notes on habitat and status.* Bonner Zoologische Monographien 25. Bonn: Zoologisches Forschungsinstitut und Museum Alexander Koenig.

Urban, E.K. & Brown, L.H. 1971. *A checklist of the birds of Ethiopia.* Addis Ababa: Haile Sellassie I University.

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 Received 24 February 1988

## Behaviour of *Quelea quelea* during an invasion of the species in Turkana, north-west Kenya

In the last week of July 1987 I noticed vast numbers of Red-billed Queleas *Quelea quelea* in the plains of north-western Turkana District between Lokudule and Nanam (*c.* 4°18N, 34°41E). After modest rains in April and May the area was covered with dry yellow grasses; there was no human cultivation of sorghum or millet in the area. Most birds seen were either immature or adults in non-breeding plumage and very few individuals in breeding plumage were observed. Many old nests were seen in small isolated shrubs or in thickets along dry luggas.

During the first few days of August the birds started moving westwards. At first only isolated flocks of 50–100 quelea arrived in Lokichoggio, but after two or three days the vicinity of every conceivable water source was 'covered' with the birds. Natural rock pools in the Mogila and Songot Mountains were full of drowned birds.

The birds behaved in a strange tame and suicidal manner. In the AMREF staff houses at Lopading all doors had to be shut for several days to keep out the birds. A small entrance at ground level for use by the resident cat also had to be closed. Nevertheless, birds still managed to get into the buildings and several drowned while attempting to drink out of the WC. At the peak, an estimated 5000–10000 birds were within the AMREF compound (*c.* 1 ha).

The quelea lined branches and even small twigs in the compound near places where we were watering plants, and masses were killed for food by the Turkana people by simply hitting them with sticks as they sat in the bushes. In the evenings the birds left the compound, probably to roost in large trees outside, but they returned in the mornings. The numbers reduced after the first week of August and by 15th not a single quelea was to be seen in the area.

*Thomas Romig, Box 30125, Nairobi*

*Scopus* 11: 96, March 1988 Received 21 October 1987

## House Sparrows *Passer domesticus* in Somalia

Apropos the account of the discovery of a hybrid sparrow *Passer domesticus* x *castanopterus* in Somalia in 1980 (Ash & Colston 1981) it is of interest to report the presence of a group of House Sparrows *P. domesticus* found by JEM in the port of Mogadishu (2°03N, 45°21E), Somalia. They were found on 13 January 1982, when a male and two females were seen examining some holes in a concrete structure in the port. Much time had been spent in this area during the previous several days when there had been no sign of the birds. JSA visited the site on 15 January and the detailed plumage descriptions obtained in good light at a range of a few metres indicated that the male agreed with the Indian subspecies *P.d. indicus*.

There was no suggestion in either sex that hybridization with the Somali Sparrow *P. castanopterus* may have been involved. In the male the grey of the head extended from the base of the bill to the hind crown, but the nape and hind-neck were chestnut, forming a half-collar reaching to the ear coverts. The bill and

face mask were black, the latter being separated by conspicuous white cheeks from an extensive black bib, which became 'scaly' at its lower edge. There were two conspicuous white wing bars of which the proximal one was more prominent; the mantle was streaked chestnut and black, the lower back grey brown and the rump pale brown (as in the females) without a trace of chestnut. These characters are diagnostic for *P.d. indicus*.

The occurrence of these birds, together with the afore-mentioned report of a hybrid along the coast at 32 km to the south-west, suggests that a small population of House Sparrows may have been present somewhere in the Mogadishu area for some time. However, that these two records occurred at a time when the small Kenyan population underwent a noteworthy expansion may not be without significance (Lewis 1983).

**References**

ASH, J.S. & COLSTON, P.R. 1981. A House x Somali Sparrow *Passer domesticus* x *castanopterus* hybrid. *Bulletin of the British Ornithologists' Club* 101: 291–294.

LEWIS, A.D. 1983. Range extension and population increase of the House Sparrow in Kenya. *Scopus* 7: 23–26.

*J.S. Ash, Division of Birds, Smithsonian Institution, Washington, DC 20560, USA (*Present address: *Godshill Wood, Fordingbridge, Hants SP6 2LR, England)* and *J.E. Miskell, CARE-Sudan, Box 2702, Khartoum, Sudan*

*Scopus* 11: 96–97, March 1988 Received 2 February 1988

***Malimbus*** 9 (1) June 1987, 9 (2) December 1987
[The contents of the latest issues of our sister journal]

**9 (1)**

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Hilary Fry (appreciation in French)
The birds of the northern Aïr, Niger by J. Newby, J. Grettenberger & J. Watkins
Nest sites, breeding seasons, clutch size and egg sizes of the Hamerkop *Scopus umbretta* by R.T. Wilson
La Tourterelle des bois, *Streptopelia turtur*, dans l'Ouest africain: mouvements migratoires et régime alimentaire by M-Y. Morel
Geographical variation in plumage of female Klass's Cuckoo *Chrysococcyx klaas* by M.P.S. Irwin
*Acrocephalus scirpaceus* et *Acrocephalus baeticatus* dans la région de Richard-Toll (Sénégal) by Marie-Yvonne Morel
Présence du Martinet pâle (*Apus pallidus*) entre autres migrateurs paléarctiques sur le versant ivoirien du Mont Nimba by Yves Thonnerieux
Bill and leg colour in Forbes' Plover by Paul Herroelen
Inland records of Western Reef Heron *Egretta gularis* by J. Frank Walsh
First records of Night Herons (*Nycticorax nycticorax*) on the island of El Hierro, Canary Islands by M. Nogales, T. Piersma and N. Bloksma
Review of Colston & Curry-Lindahl: *The birds of Mount Nimba* by L.D.C. Fishpool
Corrigenda; Notice; Accounts.

Malimbus *contents, cont.*

**9 (2)**



## REVIEWS

**The endemic birds of Madagascar** by T.J. Dee, 1986. ICBP, Cambridge, England. Size A5, pp. vi + 173, softback, £8 in UK.

Madagascar has no less than 130 endemic species plus a further 25 endemic subspecies. Most of these forms are forest birds and, in common with many other areas of the world, it is the forests that come under attack by man to provide cleared land for agriculture. The endemic fauna and flora suffers accordingly. At last it seems that the Malagasy government is taking steps to halt the destruction. However, creation of national parks and reserves needs to be done swiftly before it is too late. This book provides an important data base for future conservation work related to birds. Let us hope that it will be used wisely and in time.

D.A. Turner

**Southern Birds: No. 13 Birds of Lapalala Wilderness, Waterberg, Transvaal** by I.H. Davidson, pp. 69 and **No. 14 Birds of the Upper Limpopo River valley.** D.H. Day, pp. 76. Both A5 size, softback, R6.00 each from Southern Birds, Box 650284, Benmore 2010, South Africa.

Two more in the series of useful annotated bird check-lists of areas in southern Africa. The present two cover border areas of northern Transvaal, and include good black and white photos of habitats, maps and graphs. I will say straight

away that these booklets are most useful for anyone likely to visit the areas concerned or wanting to know about the birds that occur there. A small criticism, which could easily be remedied in future issues, is that precise dates, especially in Day's work, are rarely given. For migrants this has the effect that much of the information is practically unusable for those interested in these species: "Recorded...in December 1974 and March 1976..." for the Olivetree Warbler *Hippolais olivetorum* is really a waste of the observations; in this case the number of birds involved is also not mentioned. The inclusion of precise dates in an abbreviated style and numbers seen would add little to the overall length.

It would be useful to have similar booklets for areas, such as National Parks, in eastern Africa; such series used to exist, notably for Parks in Tanganyika and Uganda, but, as far as I know, are no longer available. Clearly the different market forces operating in southern and eastern Africa are important, but I should have thought that there would be a ready sales outlet at entrances to our National Parks for booklets on all natural history aspects. It's high time someone filled these niches.

Graeme Backhurst

**Distribution atlas of Sudan's birds with notes on habitat and status.** G. Nikolaus, 1987. Bonn: Bonner zoologische Monographien No. 25. Size 164 x 239 mm, pp. 322, numerous distribution maps and sketches of birds; softback. Price 64 DM.

Nobody has done more to increase our knowledge of the birds of this vast country than Gerhard Nikolaus. The present, nicely produced, book lists all species known to occur. Each is treated in a standardized way, with a minimum of text: English name, scientific name, abbreviations covering migratory status, breeding status, abundance and habitat, and sometimes additional data under a 'Remarks' heading. Each species positively recorded is given a sequental number and the Mackworth-Praed & Grant numbers are also given. Subspecies occurrring in Sudan are also covered. Almost every species has, alongside the text, a map—three to a page—where the distribution is shown using a 1° x 1° grid and various symbols which show, occurrence, breeding and direction of migration. Distribution of subspecies is shown by different symbols. Old records of species not subsequently recorded and records not properly substantiated are included in their rightful positions in the book, but in parentheses and without a number. A total of 938 species are admitted to the list.

The book ends with a gazetteer, a list of the larger collections of Sudan birds, a comprehensive list of references, and indexes of English and scientific names.

As the author says in his introduction, the list is incomplete—he attempted to visit every degree-square in the country, but, according to the map of coverage, did not manage to reach 49 of them. Nevertheless, in such a huge country—the largest in Africa—with so few roads, this is no mean achievement.

The *Distribution atlas* is an excellent book—strongly recommended.

Graeme Backhurst

## Editorial Notice

This issue has been delayed because not enough suitable material had been received in the second half of 1987 to warrant production.

The first issue of Volume 12 will be devoted to a large seven-year report on the activities of the ringing scheme operating in eastern Africa. At about the same time the long-awaited 1986 Bird Report (Volume 10, number 5) will be published; this will be smaller than usual due to very few records having been received from Tanzania and none from Uganda. It is appropriate to appeal, therefore, once again, to all people interested in birds to send in their records for the annual report. A common complaint that is often heard is that people don't know what to send in. It is always best to send records and let the recorders make the selection rather than not to send any at all! In 1982 we produced a list (*Scopus* Supplement, June 1982) of East African birds in which the species were categorized in various ways as an aid for people submiting records. Although this list is somewhat out of date—and we plan a new version soon—copies can still be obtained free of charge from Don Turner (Box 48019, Nairobi).

It is a very sad thing that so much information in the way of records is wasted. A large number of bird watchers visit East Africa each year as tourists, often on specialized bird trips, but very few of the observations made make their way back to us here for publication. Some records are published in journals and magazines in the visitors' home countries but these are usually not very appropriate outlets for short notes on birds from what is often the other side of the world and, in any case, make literature searching more difficult for future workers on East African birds. Another factor of importance is that different standards are often applied by the editors of far-off magazines regarding records from outside their own areas. Once a record appears in print, it gains a degree of authenticity in the process, although the record may have had no critical appraisal at all. This state of affairs would be eliminated if observers sent their records to the relevant local body—for East Africa, the recorders listed inside the back cover opposite.

Of course the majority of records of value do not relate to rare or hard-to-identify species at all, and in this regard local people resident virtually anywhere in East Africa other than Nairobi and Mombasa can make a very real contribution by simply sending in lists of birds they see throughout the year. Nairobi and Mombasa are fairly well covered, but all records are always welcome, but especially from out-of-the-way places seldom visited by bird watchers. Please remember that to be of the most value, records should be dated precisely. A record gains stature when it is precise: "five seen on 10 December 1987" is so very much more worthwhile that "five in early December" or even, "a few towards the end of the year."

Other publications due out in the near future include *Birds of South Sudan*, *Scopus* Special Supplement No. 3, *A bird atlas for Kenya* (by two OSC members but not an OSC publication) and an up-dated East African check-list.

*Editor*

form used in this issue. Names of periodicals must be given in full and, in the case of books, the town of publication and the publisher should be given. A number of works which are cited frequently should not be listed under 'References'; the name(s) of the author(s) and date(s) of the publication should be given in the text in the normal way.

Authors of 'papers' over ten pages in length receive five copies of their contribution free of charge. Extra copies, which will be supplied at cost, must be ordered when the MS is submitted. All contributions should be sent to the Editor, G.C. Backhurst, Box 24702, Nairobi, Kenya; they will be acknowledged.

**Works which should not be listed under 'References'**

BACKHURST, G.C., BRITTON, P.L. & MANN, C.F. 1973. The less common Palaearctic migrant birds of Kenya and Tanzania. *Journal of the East Africa Natural History Society and National Museum.* 140: 1–38, = Backhurst *et al.* 1973.

BENSON, C.W., BROOKE, R.K., DOWSETT, R.J., & IRWIN, M.P.S. 1971. *The birds of Zambia.* London: Collins, = Benson *et al.* 1971.

BRITTON, P.L. (ed.) 1980. *Birds of East Africa.* Nairobi: EANHS, = Britton 1980.

BROWN, L.H. & BRITTON, P.L. 1980. *The breeding seasons of East African birds.* Nairobi: EANHS, = Brown & Britton 1980.

BROWN, L.H., URBAN, E.K. & NEWMAN, K. 1982. *The birds of Africa*, Vol. I. London and New York: Academic Press, = Brown *et al.* 1982.

HALL, B.P. & MOREAU, R.E. 1970. *An atlas of speciation in African passerine birds.* London: British Museum (Nat. Hist.), = Hall & Moreau 1970.

JACKSON, F.J. 1938. *The birds of Kenya Colony and the Uganda Protectorate*, 3 vols. London: Gurney & Jackson, = Jackson 1938.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1957 and 1960. *African handbook of birds.* Series I, vols 1 and 2; *Birds of eastern and north eastern Africa*, 2nd edition. London: Longmans Green & Co., = Mackworth-Praed & Grant 1957 and/or 1960.

MOREAU, R.E. 1966. *The bird faunas of Africa and its islands.* London: Academic Press, = Moreau 1966.

MOREAU, R.E. 1972. *The Palaearctic-African bird migration systems.* London: Academic Press, = Moreau 1972.

SNOW, D.W. (ed.) 1978. *An atlas of speciation in African non-passerine birds.* London: British Museum (Nat. Hist.), = Snow 1978.

URBAN, E.K., FRY, C.H. & KEITH, S. 1986. *The birds of Africa*, Vol. II. London: Academic Press, = Urban *et al.* 1986.

**East African Bird Report**

This normally forms the fifth issue of *Scopus* and each report covers one calendar year and relates just to the birds of Kenya, Tanzania and Uganda. Records of Afrotropical and Oceanic birds should be sent to D.A. Turner, Box 48019, Nairobi; Palaearctic bird records should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Report. Sightings of rare birds may be telephoned through to any OSC member (numbers inside the front cover) in the hope that the bird(s) may be seen by others. Criteria covering the submission of Bird Report records are given in *Scopus* Supplement, June 1982, and copies may be obtained from D.A. Turner. Records of rare birds are vetted by the independent and internationally-based East African Rarities Committee.

## Contents

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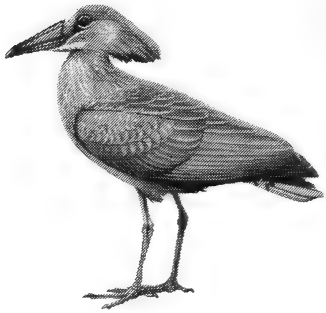
# *SCOPUS*



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*Edited by*

Graeme Backhurst

Volume 11, No. 5, August 1989

**East African Bird Report 1987**

# *SCOPUS*

Cover illustration from a gouache painting by Dr P.A. Clancey

*Scopus* is normally published three times a year (although issues may be combined) by the Ornithological Sub-Committee of the East Africa Natural History Society. Subscriptions are payable to the OSC Hon Treasurer (and Secretary), D.A. Turner [tel 48133], Scopus a/c, Box 48019, Nairobi, Kenya, at the following rates:

| | |
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The rates for 'All others' apply to subscribers in all countries other than Kenya. Those wishing to remit by bank transfer should do so to D.A. Turner, Scopus a/c No. 2852601, Barclays Bank of Kenya Ltd., Market Branch, Box 30018, Nairobi.



**Notes for Contributors**

*Scopus* welcomes original contributions on all aspects of the ornithology of eastern Africa—the area from the Sudan south to Moçambique. Contributions will be assessed by independent referees. The material published is divided into 'papers' and 'short communications', the latter will usually be less than two pages in length.

*Continued inside back cover*

*Scopus* 11 (5): 101, August 1989

# The 1987 East African Bird Report

This year we have changed the organization of the report. The bulk of our records has always come from Kenya, and this tendency has latterly become more acute. Only Kenya has the regular widespread coverage necessary to give the year to year comparisons of climatic events, numerical trends and migration which an annual report should be able to emphasize. With the combined East African format that we have adopted up to now, we feel that the picture for Kenya has emerged a little blurred, while records for Tanzania and Uganda have been buried in the main systematic lists. We have therefore decided to devote the main body of the 1987 report entirely to Kenya, and to list interesting records for the other two countries in sections of their own. We believe that this arrangement will make material easier to locate, at a time when ornithological interest and enquiry is often directed along national lines.

We plan to issue in the near future a set of revised guidelines for report contributors, together with new lists of Scarce and Requested species for each of the three East African countries separately.

We must again thank our regular contributors. Without their help the continued production of the report, as far as we are aware the only successful venture of this kind in tropical Africa, would not be possible. Finally, we express our appreciation to the members of the Rare Birds Committee who have dealt expeditiously, as always, with reports forwarded to them.

*D.J. Pearson, Chairman Ornithological Sub-Committee*
*East Africa Natural History Society*

## SPECIES REPORT

This report covers the three East African countries separately. Records are included under one or more categories, indicated by code letters after the English name as explained below. Categories follow the East African Rare Bird List *Scopus* Supplement of June 1982.

S(A): **Scarce** species in category **A** (five or fewer previous records from East Africa); all records of such species are published.

S(B): **Scarce** species in category **B** (six to twenty-five previous records from East Africa); all records of such species are published.

**R**: Species of interest whose status in East Africa requires clarification, and for which all records are **Requested**. Records may be listed or summarized in full each year, or reviewed after several years.

**E**: Records showing an **Extension** of range, or from areas where the species is decidedly uncommon to scarce.

**N**: Records included for their **Numerical** interest, either of particularly large numbers or of careful counts.

**D**: Records of migrants where **Dates** are of interest.

**B**: Records of **Breeding** interest, from new or unusual areas or involving interesting numerical elements.

**M**: Records of **Miscellaneous** interest.

*Records were collated by D.A. Turner and D.J. Pearson*

### East African Rare Birds Committee

During 1988 the committee was asked to adjudicate on a number of records for 1987. The following were accepted:

***Falco pelegrinoides* Barbary Falcon** 2 Ngulia Lodge, Tsavo West NP, 24 Nov–18 Dec 1987 (DJP, GCB, BWF, DAT).

***Calidris ruficollis* Red-necked Stint** adult in full breeding plumage Lake Magadi 19 Jul 1987 (BWF, DAT).

***Sterna sumatrana* Black-naped Tern** 9 Latham Island, Tanzania, 22 Nov 1987 (NEB, EMB)—First record for East Africa.

***Emberiza forbesi* Brown-rumped Bunting** 2 at foot of Kongelai escarpment 12 Oct 1987 (DAT).

The following records were not accepted:

***Fregata minor* Greater Frigatebird** Lamu 10 Aug 1987—but accepted as *Fregata* sp.

***Accipiter brevipes* Levant Sparrowhawk** near Kindaruma, Embu District 1 Nov 1987.

***Falco fasciinucha* Taita Falcon** Lake Turkana, 26 Jan 1987.

***Gallinago stenura* Pintail Snipe** Ramisi, south of Mombasa, 11 Apr 1987.

***Calidris melanotos* Pectoral Sandpiper** north of Malindi, 4 Sep 1987.

***Stercorarius parasiticus* Arctic Skua** Sabaki River mouth, 23 Mar 1987—but accepted as *Stercorarius* sp.

The members of the Rare Birds Committee are

J.S. Ash
R.J. Dowsett
B.W. Finch
D. Fisher
S.C. Madge
D.J. Pearson
A.J. Prater
J.C. Sinclair
T. Stevenson
D.A. Turner
D.A. Zimmerman

## KENYA—GENERAL REVIEW

The year saw reasonable rains over much of Kenya in both seasons, yet the rift valley again received little of this, and the lakes continued the receding trend of the previous few years. Nakuru and Elmenteita both became reduced to shallow pans surrounded by extensive soda flats, relatively devoid of birds, The large numbers of Lesser Flamingos *Phoeniconaias minor* at Nakuru left later in the year. Naivasha and Baringo, on the other hand, developed more shallow muddy areas and were in fact excellent for waders and ducks. Some ten thousand migrant waders were present at Naivasha in December, including, for the second season running, over 300 Black-tailed Godwits *Limosa limosa*. These godwit numbers were eclipsed, however, by an unprecedented count of 4500 in Allia Bay, on the east shore of Lake Turkana in February. This was just one of a number of interesting observations made during a complete count of waterbirds along the east side of this lake from Loiengalani to Allia Bay, and which also included 27 Slender-billed Gulls *Larus genei*, 530 Wigeon *Anas penelope*, a Northern Pochard *Aythya ferina*, a Long-toed Stint *Calidris subminuta* and Cream-coloured Coursers *Cursorius cursor* of the nominate Palaearctic race, the last not noted previously in Kenya.

The southeast bushlands were green early in the year after much rain in December 1986. Wintering migrants in this area included many Sprossers *Luscinia luscinia*, as well as Marsh Warblers *Acrocephalus palustris* and a River Warbler *Locustella fluviatilis* which was the first February record north of the main wintering area in southern Africa. The long rains were delayed until April in most of the east, and lasted only to early May. Small numbers of migrants included nothing of unusual interest. The short rains were also late, starting in early November at Nairobi, but not until late November in Tsavo. Bird of prey passage was unexceptional, though many falcons *Falco* spp. were seen in the Mara in early November and a large flock of Eastern Red-footed Falcons *F. amurensis* in Tsavo West later in the month. At Ngulia, ringing success was modest due to the large proportion of nights without mist. However, a Savi's Warbler *Locustella luscinioides* in mid December (the second for Kenya) provided the highlight of the season, while an unprecedented 41 Afrotropical nightjars *Caprimulgus* spp., mainly Dusky *fraenatus*, Slender-tailed *clarus*, Nubian *nubicus* and Donaldson-Smith's *donaldsoni*, were caught on 19–20 December.

There were no additions to the Kenya list during the year. The most notable Palaearctic record was of a full-plumaged Red-necked Stint *Calidris ruficollis* (the country's second) at Lake Magadi on the unexpected date of 19 July. Afrotropical species deserving mention include White-backed Night Herons *Gorsachius leuconotus* in the Mara (the last Kenya record was from the Mara in 1978), Black and White Flycatchers *Bias musicus* in Meru NP, the first African Finfoot *Podica senegalensis* from Mt Kenya, and Brown-rumped

Buntings *Emberiza forbesii* at Kongalai. Chestnut-banded Sandplovers *Charadrius pallidus*, discovered at Suguta in 1986, were seen at the same site in October 1987. Finally, two different Barbary Falcons *Falco pelegrinoides* were present at Ngulia during November–December (see *Scopus* in press). This species, recently recorded at Isiolo, perhaps ranges much further south than formerly suspected.

*D.J. Pearson*

## KENYA: AFROTROPICAL AND OCEANIC SPECIES

***Podiceps nigricollis* Black-necked Grebe** R: 1 Naivasha 6 Aug (JMC, BTF).

***Diomedea melanophris* Black-browed Albatross** S(B): single adults off Shimoni 31 Aug and 24 Sep, and single sub-adults 19 and 26 Aug (MH, PH).

***Phaethon lepturus* White-tailed Tropicbird** S(B): single adults off Shimoni 11 Aug and 29 Sep, and 2 on 19 Oct (MH, PH).

***Pelecanus onocrotalus* White Pelican** E: 17 Samburu GR 11 Feb (DKR).

***Sula dactylatra* Masked Booby** R: 1 off Shimoni 19 Aug and 24 Sep (MH, PH).

***Sula leucogaster* Brown Booby** S(A): 1 Tenewe Island mid Aug (AS).

***Fregata* sp.** 2 males and 2 females Lamu 10 Aug (CR) and a second stage juv off Shimoni 11 Aug (MH, PH) were probably Greater Frigatebirds *Fregata minor*.

***Ixobrychus minutus* Little Bittern** R: 1 Saguta 3 Jan (MACC); several Nguuni, Mombasa, May, 1 Jun, 1 Aug and 2 Sep (CR); *c.* 12 Baringo Jul–end Sep—probably breeding (TS); 1 8 km W of Kisumu 21 Jun (TS).

***Ixobrychus sturmii* Dwarf Bittern** R: 1 Kakamega 6 Mar (HS, JCvW), 1 Nguuni, Mombasa, 20 Aug (CR); 1 Ngulia 29 Oct (GCB); 1 Saltlick Lodge, Tsavo (West) NP 22 Nov (DAT).

***Ardeola idae* Madagascar Squacco Heron** R: recorded 7 May–1 Oct from Mara GR, Baringo, Nakuru, Nairobi, Athi River, Thika, Amboseli, Mombasa and Watamu; max 6–7 Thika OPs Jul. (DJP, CR, DKR, IR, TS, DAT).

***Egretta ardesiaca* Black Heron** R: recorded away from coast at Naivasha Jan, Jun, Jul, Aug and Dec, max 6 late Jul; Amboseli 22 Oct (2), Mara GR 10 Nov (2) and Ahero RS 15 Nov (1). (BB, ADL, DJP, DKR, TS, DAT).

***Egretta garzetta* Little Egret** M: up to 40 large, heavy-billed birds of the coastal/Lake Turkana '*dimorpha*-type' present at Magadi Jul–Aug (BWF, ADL, DJP, DAT).

***Egretta gularis* African Reef Heron** R: 1 Allia Bay, Lake Turkana 6 Feb (HS, JCvW); 1 Nguuni, Mombasa, 25–26 Aug (CR).

***Gorsachius leuconotus* White-backed Night Heron** S(B): 2 ads and 1 imm Kichwa Tembo, Mara GR, during Mar and Apr (BWF, TS).

***Nycticorax nycticorax* Night Heron** N: >40 roosting Amboseli 17 Nov included 60 per cent imms (ADL).

***Anastomus lamelligerus* Open-billed Stork** NE: *c.* 200 flew south Ngulia 27 Nov (DJP, GCB).

***Ciconia episcopus* Woolly-necked Stork** E: 4 Mara GR 27 Sep and 2 there 10 Oct and 5 Keekorok area, Mara GR 30 Dec (BJG, DKR, IR).

***Gypohierax angolensis* Palm-nut Vulture** EB: Pair at nest Meru NP 19 Jun (DKR) and 1 seen 23 Dec (BWF); 1 Samburu GR 10 Sep (ADL).

***Gypaetus barbatus* Lammergeyer** R: 1 over Limuru Jul (CR), 1 Hells Gate gorge 31 Dec (BJG).

***Circaetus cinerascens* Banded Snake Eagle** R: 1 Meru NP 4 Jan and 13 Nov (TP, DAT).

***Accipiter ovampensis* Ovampo Sparrowhawk** R: 1 near Buffalo Camp, Mara GR 22 Feb (ADL) and possibly the same bird seen on occasions Oloolollo Escarpment, Mara GR (BWF).

***Melierax poliopterus* Pale Chanting Goshawk** E: 1 10 km west of Narok, 5 Oct (DKR).

***Butastur rufipennis* Grasshopper Buzzard** R: few records: 1 Sandy Bay, Lake Turkana 31 Jan (HS, JCvW).; 1 Tsavo West NP early Jan (CR). Singles near Narok 10 Nov (DKR), Ngulia 24 and 27 Nov (GCB) and Meru NP 22 Dec (DKR).

***Kaupifalco monogrammicus* Lizard Buzzard** E: 1 Hippo Pools, Nairobi NP 13 Sep (IR).

***Aviceda cuculloides* Cuckoo Hawk** R: singles Lake Nakuru NP 20 Aug and 24 Sep (TP).

***Chelictinia riocourii* Swallow-tailed Kite** E: away from usual areas at Lake Turkana and Suswa, Kiambere 11 Apr (BB), 2 Kapedo 16 May (TS); 1 Baringo 19 Sep (IR); 1 Meru NP 7 Nov (DAT).

***Macheiramphus alcinus* Bat Hawk** R: recorded from Baringo, Buffalo Springs, Kindaruma, Siakago, Mombasa, Tiwi and Shimoni (many observers).

***Falco alopex* Fox Kestrel** E: 1–2 Moiti, Lake Turkana, 15 Feb (JCvW, HS).

***Falco chiquera* Red-necked Falcon** M: singles Sandy Bay, east Lake Turkana 31 Jan and near Porr 28 Jan (HS, JCvW) and 1 Mrima Hill near Shimoni 9 Apr (DAT).

***Falco cuvieri* African Hobby** E: 1 Baringo 16 Jun (TS).

***Falco tinnunculus* Common Kestrel** B: pair breeding at Magadi with full-feathered chick, 30 Aug (MACC).

***Polihierax semitorquatus* Pygmy Falcon** E: pair Kamburu 29 Mar and one there 20 Apr (BB).

***Coturnix chinensis* Blue Quail** R: 2 Sabaki Mouth 10 Jul (GR).

***Francolinus psilolaemus* Moorland Francolin** R: 1 near Timau (2400 m) 10 Nov (DAT).

***Guttera pucherani* Kenya Crested Guineafowl** E: several Campi ya Nyati, Meru NP 19 Jun and 5–6 Nov (PD, DKR) and pair Chogoria Forest Station, Mt Kenya 31 Oct (DAT).

***Ortyxelos meiffreni* Quail Plover** R: 1 Buffalo Springs 14 Jul (BWF); a few Aruba, Tsavo East NP 28 Oct (BWF); a few Shaba GR early Nov (AS, RL).

***Turnix sylvatica* Button Quail** R: 1 Mara GR 6 May (ADL) and 1 Ndawe, Tsavo NP (West) 16 Jul (GCB).

***Crex egregia* African Crake** R: 2 Lambwe Valley 25 Apr (TS) and present Nguuni, Mombasa May–Oct (CR).

***Porphyrio alleni* Allen's Gallinule** R: up to >50 Baringo May–Aug (TS, DJP).

***Porzana pusilla* Lesser Spotted Crake** R: 1 Nguuni, Mombasa, 14 Nov (CR).

***Rallus caerulescens* African Water Rail** R: 1 Lambwe Valley 25 Apr (TS); 1 Timboroa Lake 21 Sep (IR).

***Sarothrura rufa* Red-chested Pygmy Crake** R: 1 heard and seen Thika 19 Apr (DAT).

***Podica senegalensis* African Finfoot** RE: recorded Thiba River, Kamburu, 7 Jan (BB); Naro Moru 9 Jun and 15 Sep (TS, IR); Mara River Oct–Nov (KP).

***Neotis heuglini* Heuglin's Bustard** E: several sightings Sandy Bay and along east side of Lake Turkana Jan and Feb (HS, JCvW).

***Rostratula benghalensis* Painted Snipe** R: recorded most months, from Homa Bay, Kisumu, Yala, Ahero RS, Kamburu, Nakuru, Buffalo Springs, Naivasha, Amboseli, Loiengalani, Lake Jipe and Mombasa (many observers).

***Charadrius pallidus* Chestnut-banded Sandplover** E: *c.* 30 Suguta 20 Oct (JS *per* MACC).

***Vanellus crassirostris* Long-toed Plover** EM: 2 on beach Mida Creek 6 Aug (ADL) and 1 Mara GR 10 Nov (DKR).

***Vanellus armatus* x *spinosus* presumed Blacksmith Plover x Spur-winged Plover hybrid** an ad Nakuru 11 Jul, resembling a Spur-winged Plover with a Blacksmith's hood (DKR).

***Vanellus lugubris* Senegal Plover** E: 2 Mara GR Jan (BWF).

***Himantopus himantopus* Black-winged Stilt** B: nest with 2 eggs Magadi 20 Jul (BWF, DJP, DAT).

***Rhinoptilus chalcopterus* Violet-tipped Courser** R: 1 Ngulia 1 Feb (ADL).

***Glareola ocularis* Madagascar Pratincole** RN: >200 Sabaki–Malindi 8–9 Aug (JMC, BTF).

***Gelochelidon nilotica* Gull-billed Tern** M: 1 Samburu GR 14 Sep (DKR).

***Sterna dougallii* Roseate Tern** B: several hundred pairs bred Kisite Island, Shimoni, but heavily predated (AS, DAT).

***Rynchops flavirostris* African Skimmer** R: 5 Sabaki 8 Aug and 2 Oct, 1 Nairobi NP 29 Aug, 1 Lake Jipe 16 Oct (JMC, BTF, IR, BWF).

***Clamator glandarius* Great Spotted Cuckoo** E: a juv Elmenteita 22 Nov (MACC).

***Clamator jacobinus* Black and White Cuckoo** M: 2 black phase birds Watamu 2–3 Oct (IR). 1 of race *serratus* found dead near Sagana 3 May (DAT). D: recorded Ngulia from 17 Nov (GCB).

***Clamator levaillantii* Levaillant's Cuckoo** R: 1 Kamburu 18 Apr (BB); 2 Mogotio 17 Jun (TS); 1 Kakamega 22 Sep (IR).

***Cuculus poliocephalus rochii*** Madagascar Lesser Cuckoo R: 1 near Ramisi 12 Apr—very worn plumage (DAT).

***Centropus grillii* Black Coucal** R: 1 in breeding plumage Ngulia 30 Jan and another imm nearby 31 Jan (ADL).

***Scotopelia peli* Pel's Fishing Owl** R: pair usual site Thiba River (BB).

***Caprimulgus clarus* Slender-tailed Nightjar** M: at Ngulia 1 ringed 27 Nov and 25 between 16 and 20 Dec when common on nearby park tracks (BWF, DJP); present Nguuni, Mombasa throughout the year (CR).

***Caprimulgus donaldsoni* Donaldson-Smith's Nightjar** M: at Ngulia, 4 ringed 16–27 Nov and 16 from 16–20 Dec (GCB, BWF, DJP); 1 Loitokitok mid Oct (CR).

***Caprimulgus fraenatus* Dusky Nightjar** R: pair displaying and churring Kamboyo, Tsavo NP (West) 7–8 Feb (DJP). At Ngulia, 1 ringed 23 Nov and 5 between 16 and 19 Dec; very common on park tracks near Ngulia from mid to late Dec (BWF, DJP).

***Caprimulgus inornatus* Plain Nightjar** R: 1 Meru NP 12 Mar (DAT). At Ngulia, 8 ringed 15–27 Nov and 1 17 and 20 Dec; a few on nearby park tracks mid Dec (GCB, BWF, DJP).

***Caprimulgus nubicus* Nubian Nightjar** R: 1 Meru NP 6 Nov (DAT); 8 ringed Ngulia 17–20 Dec when also common on nearby park tracks (BWF, DJP).

***Macrodipteryx vexillarius* Pennant-winged Nightjar** R: A full-plumaged male and a female Mara River Camp 29 Aug (ADL).

***Apus berliozi* Forbes-Watson's Swift** R: 1 Sokoke Forest 4 Nov (MACC).

***Apus melba* Alpine Swift** E: 1 Sokoke Forest 4 Feb (ADL).

***Schoutedenapus myoptilus* Scarce Swift** N: 100s (with *Apus barbatus* Black Swift) over Kichwa Tembo, Mara GR, Mar (BWF). E: 1 Baringo 4 Jul (TS), several Mt Elgon 22 Apr (CR), 2 over Kakamega Forest 27 Dec (BJG).

***Telacanthura ussheri* Mottle-throated Spinetail** E: 2 Kiambere 11 Apr (BB); 1 Mountain Lodge 25 Oct (ADL).

***Merops revoilii* Somali Bee-eater** B: pair excavating Samburu GR 8 Dec (DKR).

***Coracias abyssinica* Abyssinian Roller** R: 2 Nakuru NP 5 Feb, 1 near Marigat 17 Mar and 1 there 5 Nov (DAT, TP).

***Phoeniculus granti* Violet Wood Hoopoe** R: 1 near Archer's Post 10 Aug (TS).

***Halcyon leucocephala* Chestnut-bellied Kingfisher** M: singles caught soon after first light Ngulia 17 Nov and 20 Dec (GCB, DJP).

***Lybius melanopterus* Brown-breasted Barbet** E: 1 near Taveta 16 Oct (BWF).

***Dendropicos poecilolaemus* Uganda Spotted Woodpecker** R: 1 Ukwala 30 Oct (BWF).

***Picoides obsoletus* Brown-backed Woodpecker** R: 1 Shimba Hills NP 21 Oct (BWF).

***Eremompterix leucotis*** **Chestnut-backed Sparrow Lark** EN: flock of 25–30 Meru NP throughout Mar (ADL, DAT).

***Psalidoprocne albiceps*** **White-headed Rough-wing** E: 2 near Embu 3 May (DAT) and a few behind Ngong Hills 28 May (BWF, DAT).

***Riparia cincta*** **Banded Martin** ND: >100 Mara River Camp 28 Aug; 100s Amboseli 22 Oct; >100 Amboseli 15 Nov (ADL).

***Ptilostomus afer*** **Piapiac** S(B): 12 Kisumu Golf Course 31 May (GR).

***Turdoides hindei*** **Hinde's Pied Babbler** R: party of 7 Kianyaga 3 May (DAT), 1 near Maua (Meru District) 6 Nov (DAT).

***Turdoides plebejus*** **Brown Babbler** E: recorded Baringo 16 Jun and Maralal 14–15 Jun and 21 Sep (TS) and several Kisumu and Yala areas 27–29 Apr (CR).

***Coracina caesia*** **Grey Cuckoo Shrike** E: an ad Samburu Lodge 18 Aug was at unusually low altitude (ADL).

***Phyllastrephus strepitans*** **Northern Brownbul** E: pair near Siakago (SE of Embu) 1 Nov (DAT).

***Cercomela familiaris*** **Red-tailed Chat** R: common on Oloololo Escarpment, Mara GR throughout the year (BWF).

***Cercotrichas hartlaubi*** **Brown-backed Scrub Robin** R: 2 Naro Moru 11 Jun (TS).

***Cossypha natalensis*** **Red-capped Robin Chat** E: present Kichwa Tembo forest, Mara GR, Jun–Dec (BWF).

***Monticola rufocinerea*** **Little Rock Thrush** R: seen Elmenteita 10 and 24 Oct (MACC) and Kapenguria 12 Oct (DAT).

***Oenanthe pileata*** **Capped Wheatear** E: 1 Nguuni, Mombasa, 26 Mar (CR).

***Turdus fischeri*** **Spotted Ground Thrush** R: 3 Diani Forest 21 Aug (TS), 5 Gedi Forest 2 Oct (IR) and 1 Shimoni 19 Oct (BWF).

***Turdus pelios*** **African Thrush** E: recorded Nakuru NP May, Jul, Aug and Sep (ADL, DJP).

***Turdus tephronotus*** **Bare-eyed Thrush** E: a pair Tiwi 16 Mar (BWF), a pair resident at Samburu Lodge (DAT).

***Cisticola aberrans*** **Rock-loving Cisticola** R: 4–6 pairs resident Oloololo escarpment, Mara GR (BWF).

***Cisticola woosnami*** **Trilling Cisticola** R: very common along Sabaringo Valley, Mara GR (BWF).

***Eremomela scotops*** **Green-capped Eremomela** R: several pairs resident Sabaringo Valley, Mara GR (BWF).

***Hyliota flavigaster*** **Yellow-bellied Hyliota** R: several pairs Sabaringo Valley, Mara GR; regularly wanders down to Kichwa Tembo (BWF).

***Sylvietta isabellina*** **Somali Long-billed Crombec** R: 1 near Tsavo Gate, Tsavo NP (West) 20 Dec (BWF, DJP) and 1 elsewhere in the same park on 17 Dec (TP).

***Muscicapa lendu* Chapin's Flycatcher** RB: feeding young Kakamega 6 Jan (BWF); also seen 20 Mar and 22 Sep (TS, IR).

***Batis orientalis* Grey-headed Batis** RE: female Buffalo Springs 18 Aug (ADL).

***Bias musicus* Black and White Flycatcher** S(B): 2 males singing Meru NP (Campi ya Nyati) 5–6 Nov (PD) and 1 on 22 Dec (DKR).

***Anthus caffer* Little Tawny Pipit** R: 1 northern Mara GR end of Mar (BWF) and 1 near Cottar's Camp, Mara GR 31 Jul (ADL, WR); 2 10 km south of Kajiado 26 Sep (DJP).

***Tmetothylacus tenellus* Golden Pipit** E: a male Nairobi NP (Athi River) 25 Apr (DJP); 5 Nguuni, Mombasa, 4 Jun and 1 15 km north-west of Mombasa 27 Aug (CR).

***Corvinella corvina* Yellow-billed Shrike** E: 3 Lokitela Farm near Endebess, Mt Elgon, 16–17 Mar (TS).

***Corvinella melanoleuca* Magpie Shrike** R: 4 near Cottar's Camp, Mara GR, 30 May and 6 there 31 Jul (ADL).

***Prionops poliolopha* Grey-crested Helmet Shrike** R: 6 Nakuru NP 17 Mar (DAT) and 8 there 28 Dec (BWF); small parties Elmenteita 2 Aug, 6 Sep and 6 Dec (MACC).

***Prionops retzii* Retz's Helmet Shrike** E: 5 Kindaruma 29 Mar (BB).

***Cinnyricinclus sharpii* Sharpe's Starling** RE: 1 Taita Hills 18 Aug (TS).

***Speculipastor bicolor* Magpie Starling** RE: 4 Watamu 25 Oct (BWF), 16 Nguuni, Mombasa 4 Nov (CR) and >30 Mtito Andei 22 Nov (DAT).

***Spreo shelleyi* Shelley's Starling** R: 1 Mtito Andei 8 Feb (DJP); 1 Tsavo NP (East) Mar (CR); 1 Meru NP 12 Mar (DAT).

***Nectarinia habessinica* Shining Sunbird** E: 1 Baringo 16–19 Jan and 1 Kapedo 16 May (TS).

***Euplectes diadematus* Fire-fronted Bishop** R: 6 Nguuni, Mombasa 19 Nov (CR).

***Ploceus castaneiceps* Taveta Golden Weaver** E: pair nesting Hunter's Lodge with Golden Weavers *P. subaureus* Nov (BWF).

***Ploceus golandi* Clarke's Weaver** R: at Sokoke, 5 1 Sep, *c.* 15 4 Sep and a few 23–24 Oct (ADL, BWF, CR).

***Passer castanopterus* Somali Sparrow** R: still abundant at Kapedo (TS).

***Passer domesticus* House Sparrow** E: north-westward spread from Mombasa continues, with birds at Salama, 70 km from Nairobi, in Dec (BWF).

***Emberiza forbesi* Brown-rumped Bunting** E: 2 at foot of Kongalai escarpment 12 Oct (DAT).

***Serinus donaldsoni* Grosbeak Canary** N: several behind Ngong Hills 28 May (BWF, DAT) and *c.* 50 along 5 km near Taita Hills Lodge 5 Aug (ADL).

## KENYA PALAEARCTIC SPECIES

***Ciconia ciconia* White Stork** ND: 100s Mara GR 16–18 Feb (DKR); 600 flying north, Kisumu 3 Mar (HS, JCvW), >1000 Kericho 16 Nov and >1000 Mara GR 20 Nov (DAT). E: *c.* 10 flying north Lamu 21 Mar (HS, JCvW).

***Ciconia nigra* Black Stork** R: seen Nairobi NP up to 8 Apr and from 28 Oct, max. 8 on 11 Dec. 2 Mara GR 10 Jan; 1 Meru NP 13 Mar; 1 Tsavo Gate 27 Nov (BWF, DKR, DAT).

***Platalea leucorodia* Eurasian Spoonbill** S(B): a first year bird Naivasha 1 Jun and presumably same individual 12 Aug (DJP).

***Anas acuta* Pintail** N: >1000 Thika oxidation ponds 23 Nov (BWF).

***Anas clypeata* Shoveler** D: a late male Naivasha 10 and 17 May and 1 Jun (DJP).

***Anas crecca* Teal** R: few records: singles shot Lake Ol Bolossat 3 and 30 Jan (*per* MACC); 3 Naivasha north shore 16 Jan and 5 on northwest shore 22 Jan (MACC, DJP).

***Anas penelope* Wigeon** R: up to at least 30 Naivasha north shore Jan–Feb (DJP, MACC) and one still present 17 Apr. 3 shot Lake Ol Bolossat 3 Jan and 1 on 28 Feb (*per* MACC). Unprecedented numbers counted E shore Lake Turkana late Jan–early Feb, as follows: 283 Loiengalani, 140 El Molo–Sandy Bay, 153 Allia Bay (HS, JCvW).

***Anas querquedula* Garganey** N: >2000 Thika OPs 23 Nov (BWF).

***Aythya ferina* Northern Pochard** S(A): a male Allia Bay, Lake Turkana, 8 Feb (HS, JCvW). Full details received. *This is only the fifth record for Kenya.*

***Aythya fuligula* Tufted Duck** R: 1 shot Lake Ol Bolossat 30 Jan (*per* MACC).

***Aquila heliaca* Imperial Eagle** S(B): an adult Meru NP 24 Dec (BWF).

***Aquila pomarina* Lesser Spotted Eagle** R: few records received: 2 Sirimon, Mt Kenya 12 Jan and 1 Homa Bay 12 Mar (HS, JCvW); >7 Meru NP 6 Nov (DAT); 1 Ngulia 21 Nov (DJP); seen regularly Oloololo escarpment, Mara GR Nov–Dec (BWF).

***Circaetus gallicus gallicus* Short-toed Eagle** S(B): birds east of Lamech 21 Feb (ADL, DF) and at Nguuni, Mombasa, 19 and 28 Nov (CR) were of the Palaearctic nominate race.

***Circus aeruginosus* Eurasian Marsh Harrier** D: 1 Mara GR 26 Sep was unusually early (IR).

***Hieraaetus pennatus* Booted Eagle** R: many single sightings: recorded Samburu, Isiolo, Mt Elgon, Elmenteita, Nairobi and Tsavo, up to 13 Mar and from 15 Oct. 4 flying south Ras Ngomeni 28 Nov (BWF).

***Pernis apivorus* Honey Buzzard** R: 1 Naivasha 28 Sep (IR) was the only record received.

***Falco amurensis* Eastern Red-footed Falcon** R: 10 Athi River 8 Apr and 3 Nairobi NP 25 Apr (DJP). 2 Ngulia 24 Nov and 1 there 26 Nov (BWF); *c.* 200 Kamboyo, Tsavo West NP, 28 Nov (MACC).

***Falco concolor* Sooty Falcon** R: 1 Nguuni, Mombasa, 8 Mar (CR); 1 Ramisi 11 Apr (DAT); 2 Meru NP 6 Nov (DAT); 1 Baringo 12 Nov (DAT); 3 Kakamega 21 Nov (BWF).

***Falco eleonorae* Eleonora's Falcon** S(B): 5–6 Shaba GR 8 Nov (AS); 1 Kakamega 21 Nov (BWF); 1 Lukenya 24 Nov (BWF).

***Falco pelegrinoides* Barbary Falcon** S(A): 2 Ngulia Lodge, Tsavo West NP 24 Nov–18 Dec (DJP, GCB, BWF, DAT).

***Falco subbuteo* Eurasian Hobby** D: 1 Nakuru and 2 Limuru 1 May (DJP).

***Haematopus ostralegus* Oystercatcher** R: 1 Malindi 25 Mar (HS, JCvW); 1 Mida 1 Oct (IR); 2 flying south off Kisite 25 Oct (CR, DAT).

***Charadrius alexandrinus* Kentish Plover** R: 1 Lamu 16 Mar (HS, JCvW) is only the third record from the coast.

***Charadrius asiaticus* Caspian Plover** ND: 520 Allia Bay, Lake Turkana early Feb (HS, JCvW); a few 100s Maralal 18 Jan (HS, JCvW), 100s Marula (Naivasha) 21 Jan and for several weeks (MACC); 1 in breeding plumage dead on road, Mbaruk 5 Jun (MACC); >1000 Mara GR 28 Aug (ADL).

***Charadrius dubius* Little Ringed Plover** R: recorded several localities, max. >50 Baringo late Dec (TS).

***Pluvialis fulva* Pacific Golden Plover** S(B): 1 El Molo Bay, Lake Turkana, 20 Feb (HS, JCvW); singles Naivasha 20 Apr, 25 Oct and 18 Nov (DJP).

***Pluvialis squatarola* Grey Plover** E: inland: 3 singles east shore Lake Turkana 26 Jan–4 Feb (HS, JCvW); 1 Nakuru 22 Nov (BWF); 1 Lake Jipe 23 Nov (DAT).

***Numenius phaeopus* Whimbrel** E: inland: 1 Nakuru 24 Aug (ADL).

***Tringa erythropus* Spotted Redshank** RN: small numbers recorded as usual from many sites. Present Naivasha up to 17 May, with >30 during Apr (DJP). >40 Aruba 24 Nov (DAT) and 17 Baringo 16 Dec (TS) were largest end-of-year numbers.

***Tringa totanus* Redshank** R: 5 individuals along southeast shore Lake Turkana last week Jan (HS, JCvW); 1 Naivasha 2 Feb (DJP).

***Xenus cinereus* Terek Sandpiper** E: inland: 1 Moiti Spit, Lake Turkana, 2 Feb (HS, JCvW); 1 Naivasha 20 Apr (DJP); 1 Naivasha 13 Sep (DJP).

***Gallinago media* Great Snipe** R: 1 Nguuni, Mombasa, 31 Oct (CR); 1 Naivasha 28 Dec (BWF).

***Calidris alba* Sanderling** E: inland: 1 Dandora oxidation ponds 28 Sep (DJP).

***Calidris ruficollis* Red-necked Stint** S(A): an adult in full breeding plumage Lake Magadi 19 Jul (BWF, DAT).

***Calidris subminuta* Long-toed Stint** S(B): 1 in winter plumage Sandy Bay, east shore Lake Turkana, 17 Feb (HS, JCvW). Full details and photographs received.

***Calidris temminckii* Temminck's Stint** R: recorded from usual rift valley sites, with *c.* 20 Baringo 16 Dec (TS). 1 Ahero 29 Feb (HS, JCvW).

***Limicola falcinellus* Broad-billed Sandpiper** R: at Sabaki the only records were of 3 on 23 Mar and 3 on 2 Oct. 1 Naivasha 24–25 Dec (ADL).

***Limosa lapponica* Bar-tailed Godwit** R: 3 Watamu beach 3 Nov (MACC).

***Limosa limosa* Black-tailed Godwit** R: recorded wintering in unprecedented numbers. On east shore Lake Turkana, late Jan–early Feb, *c.* 150 Loiengalani–Sandy Bay and *c.* 4500 Allia Bay (HS, JCvW). Up to *c.* 400 Naivasha Jan, and still *c.* 100 there Apr; a few oversummered at this site and numbers increased again to >300 in Dec (MACC, DJP, TS). 20 Ahero 24 Sep (IR).

***Arenaria interpres* Turnstone** E: inland: along east shore of Lake Turkana, late Jan to early Feb, 26 El Molo Bay–Moiti and 28 Allia Bay (HS, JCvW). 2 Naivasha 29 Sep (TS) and 3 Nakuru 22 Nov (BWF).

***Burhinus oedicnemus* Stone Curlew** R: singles Lake Baringo 3 and 9 Jan (TS).

***Cursorius cursor cursor* Cream-coloured Courser** S(A): on east shore of Lake Turkana, 2 Loiyengalani 23 Jan, 3 near Porr mountain 28 Jan, 23 Moiti Spit 2 Feb and 1 Sandy Bay 18 Feb were identified as Palaearctic birds, probably this race (HS, JCvW).
*First records of the Cream-coloured Courser as a Palaearctic visitor to East Africa.*

***Stercorarius* sp.** 1 Sabaki River mouth 23 Mar (CR).

***Larus argentatus* Herring Gull** R: up to 30 race *heuglini* Malindi early in the year, and 10 flying north at Lamu 10 Mar. Singles Loiengalani, Lake Turkana, 22 and 24 Jan, 1 race *heuglini*, the other a paler bird, presumably *taimyrensis* (HS, JCvW).

***Larus genei* Slender-billed Gull** S(B): on east shore of Lake Turkana, 23 Loiengalani 22 Jan, 2 El Molo Bay 26 Jan, 2 Moiti 2 Feb; ads and first-year birds involved (HS, JCvW).
*The largest numbers of this species yet recorded in Kenya*

***Larus ridibundus* Black-headed Gull** MD: 1 Nakuru 17 Jun was in full breeding plumage (TS).

***Sterna sandvicensis* Sandwich Tern** S(B): 1 Sabaki mouth 7 Nov (MACC), 1 Malindi 26 Nov (DAT).

***Caprimulgus europaeus* Eurasian Nightjar** R: the only records received were *c.* 6 Baringo 29 Mar–6 Apr (TS) and ones and twos, including 7 ringed, Ngulia, 15–25 Nov (GCB).

***Upupa epops epops* Hoopoe** R: singles Saguta 3 Jan, Solai 5 Feb, Tsavo NP (West) 7 Feb, Ngulia 25 Nov and Nakuru 26 Dec were the only records received (MACC, BWF, ADL).

***Cercotrichas galactotes* Rufous Bush Chat** E: several Lamu Island 19 Mar (HS, JCvW) were presumably wintering.

***Luscinia luscinia* Sprosser** D: several wintering birds Mtito Andei–Tsavo Safari Lodge area 8 Feb (DJP). E: several Elmenteita 12 Nov and for next few days (MACC).

***Luscinia megarhynchos* Nightingale** E: wintering along Waso Nyiro, Samburu GR, 10–12 Mar (HS, JCvW).

***Monticola saxatilis* Rock Thrush** D: 1 Narok 5 Oct was unusually early (DAT).

***Oenanthe pleschanka* Pied Wheatear** E: 1 Malindi 24 Mar (HC, JCvW). An unusual species on the coast.

***Phoenicurus phoenicurus* Redstart** RE: 1 Kajiado 12 Apr (DJP).

***Saxicola rubetra* Whinchat** E: 1 ringed Ngulia 17 Dec (DJP, BWF). D: 1 Elmenteita 22 Apr was unusually late (MACC).

***Acrocephalus arundinaceus* Great Reed Warbler** RE: 1 Homa Bay 2 Mar (HS, JCvW).

***Acrocephalus griseldis* Basra Reed Warbler** R: 1 near Sabaki River mouth 23 Mar (HS, JCvW). 27 ringed Ngulia 16 Nov–20 Dec (GCB, DJP).

***Acrocephalus palustris* Marsh Warbler** RD: presumed wintering birds Amboseli and Buffalo Camp (at least 2) 7 Feb (DJP). 1 Athi River 12 Apr (DJP).

***Hippolais icterina*** **Icterine Warbler** R: 1 Mara GR 18 Nov (DAT).

***Hippolais olivetorum*** **Olive-tree Warbler** R: singles caught and ringed Ngulia 25 Nov and 17 Dec were the only records (GCB, DJP).

***Locustella fluviatilis*** **River Warbler** R: one giving snatches of song Buffalo Camp, east of Amboseli, 2 Feb (DJP). 26 ringed Ngulia 17 Nov–20 Dec (GCB, DJP).

*There are no previous February records for East Africa.*

***Locustella luscinioides*** **Savi's Warbler** S(A): one caught and ringed Ngulia 20 Dec (DJP, BWF, DEGB) was only the second East African record (see *Scopus* 11: 94).

***Sylvia nisoria*** **Barred Warbler** RE: common in dense *Acacia* canopy near the south-eastern shore of Lake Turkana, early Feb (HS, JCvW).

***Oriolus oriolus*** **Golden Oriole** D: early passage on coast with *c.* 20 Lamu 19 Mar and >100 Malindi by 24 Mar (HS, JCvW).

***Motacilla alba*** **White Wagtail** RE: 3 Sabaki 28 Nov (BWF); 1 Baringo 27–29 Dec (TS).

***Ficedula albicollis*** **Collared Flycatcher** S(B): 1 Mt Elgon 13 Oct (DAT); 1 Kakamega 21 Nov (BWF).

***Lanius minor*** **Lesser Grey Shrike** D: 1 Meru NP 6 Nov (DAT).

*There are still few Kenya records of this species during the southward passage period.*

***Lanius nubicus*** **Nubian Shrike** S(B): 1 Baringo early in the year, recorded up to 16 Mar (TS, DAT).

***Lanius senator*** **Woodchat Shrike** R: 1 Bogoria 12 Nov (DAT).

## KENYA BACK RECORDS

***Clamator jacobinus*** **Black and White Cuckoo** RM: 1 dark phase Endebess 17 Dec 1986 (MACC).

***Macrodipteryx vexillarius*** **Pennant-winged Nightjar** RE: a female found dead Nairobi 23 Feb 1985 (*per* PW)—specimen in National Museum, Nairobi.

***Prionops retzii*** **Retz's Helmet Shrike** E: 4–5 Tana River, Kamburu, 25 Dec 1984 (BB).

***Hippolais olivetorum*** **Olive-tree Warbler** R: singles Nguuni, Mombasa, 12 Jan 1986 and 25 Mar 1986 (CR).

***Motacilla cinerea*** **Grey Wagtail** E: 1 Nguuni, Mombasa, 1 Mar 1985 (CR).

***Vidua hypocherina*** **Steel-blue Whydah** E: singles Kamburu 4 Nov and 16 Nov 1985 (BB).

**First and last dates of some Palaearctic migrants in Kenya**

| Species | last recorded | first recorded |
|---|---|---|
| *Circus aeruginosus* | 11 Apr Naivasha | 26 Sep Mara |
| *C. macrourus* | — | 28 Oct Nairobi |
| *C. pygarus* | — | 10 Oct Elmenteita |
| *Aquila nipalensis* | — | 19 Oct Sigor |
| *A. pomarina* | — | 6 Nov Meru |
| *Buteo buteo* | 8 Apr Nairobi | 23 Sep Kakamega |
| *Falco subbuteo* | 1 May Langata, Limuru, Nakuru | 19 Sep Baringo |
| *Charadrius dubius* | 11 Apr Naivasha | 20 Sep Nakuru |
| *Actitis hypoleucos* | [1]11 May Athi River | 8 Jul Dandora |
| *Tringa erythropus* | 17 May Naivasha | — |
| *Tringa glareola* | [1]11 May Athi River | 18 Jul Thika |
| *Tringa ochropus* | 12 Apr Kajiado | 18 Jul Thika |
| *Calidris temminckii* | 26 Apr Naivasha | 11 Oct Naivasha |
| *Gallinago gallinago* | — | 6 Sep Naivasha |
| *Cuculus canorus* | 4 May Athi River | 4 Nov Nguuni |
| *Caprimulgus europaeus* | 6 Apr Baringo | 15 Nov Ngulia |
| *Apus apus* | 1 Apr Nairobi | — |
| *Merops apiaster* | 3 May Kieni | 12 Sep Samburu |
| *M. persicus* | 5 Apr Tiwi | 15 Nov Ngulia |
| *Coracias garrulus* | 12 Apr Athi River | 19 Oct Turkwell Gorge |
| *Riparia riparia* | 17 May Naivasha | 19 Sep Baringo |
| *Delichon urbica* | 17 Apr Naivasha | 26 Sep Langata |
| *Oriolus oriolus* | 9 Apr Shimoni | 14 Oct Nairobi |
| *Cercotrichas galactotes* | 5 Apr Tiwi | 15 Nov Ngulia |
| *Irania gutturalis* | — | 24 Nov Ngulia |
| *Luscinia luscinia* | 8 Apr Athi River | 24 Oct Langata |
| *L. megarhynchos* | — | 16 Nov Ngulia |
| *Monticola saxatilis* | 12 Apr Athi River | 5 Oct Narok |
| *Oenanthe isabellina* | — | 18 Sep Elmenteita |
| *O. oenanthe* | 4 Apr Maji ya Chumvi | 11 Sep Ngong Hills |
| *O. pleschanka* | — | — |
| *Acrocephalus arundinaceus* | 18 Apr Athi River | — |
| *A. griseldis* | — | 16 Nov Ngulia |
| *A. palustris* | 12 Apr Athi River | 29 Oct Athi River |
| *A. schoenobaenus* | 16 May Athi River | 11 Oct Naivasha |
| *A. scirpaceus* | 16 May Athi River | 31 Oct Kisumu |
| *Hippolais languida* | — | 9 Nov Samburu |
| *H. olivetorum* | — | 25 Nov Ngulia |
| *H. pallida* | 20 Apr Naivasha | 30 Oct Siaya |
| *Locustella fluviatilis* | — | 17 Nov Ngulia |
| *Phylloscopus trochilus* | 25 Apr Athi River | 20 Sep Athi River |
| *Sylvia atricapilla* | — | 1 Nov Kakamega |
| *S. borin* | 18 Apr Nairobi | 31 Oct Kisumu |

*Continued overleaf*

*First and last dates continued*

| Species | last recorded | first recorded |
|---|---|---|
| *S. communis* | 18 Apr Athi River | 29 Oct Athi River, Ngulia |
| *S. nisoria* | — | 30 Oct Ngulia |
| *Muscicapa striata* | 18 Apr Athi River | 10 Oct Athi River, Elmenteita |
| *Anthus cervinus* | 17 Apr Naivasha | 24 Oct Naivasha |
| *A. trivialis* | — | 11 Oct Mt Elgon |
| *Motacilla alba* | — | 18 Nov Naivasha |
| *M. cinerea* | — | 11 Oct Magadi, Mt Elgon |
| *M. flava* | 17 May Naivasha | 13 Sep Naivasha |
| *Lanius collurio* | 25 Apr Athi River | 21 Oct Nairobi |
| *L. isabellinus* | — | 15 Nov Ngulia |
| *L. minor* | 1 May Nakuru, Nairobi | 6 Nov Meru NP |

[1] Single *Actitis hypoleucos* and *Tringa glareola* at Naivasha 1 June were presumably oversummering.

## TANZANIA RECORDS

A successful expedition was mounted in July to net and study birds in the Minziro Forest near the Uganda border north of Bukoba. This was a follow-up to the visit in 1984 (see *Scopus* 11: 9–12). A further 15 species new to Tanzania were recorded, but details will be published in a future issue. Tanzania provided the one new East African species of the year, when a party of nine Black-naped Terns *Sterna sumatrana* was found on Latham Island in November. A note of this record is in press (*Scopus* 13, No. 2).

***Ciconia abdimii* Abdim's Stork** N: >40 000 feeding on army worms 40 km west of Arusha 27 Jan (DAT).

***Ciconia ciconia* White Stork** N: >100 000 with Abdim's Storks at army worm infestation 40 km west of Arusha 27 Jan (DAT).

***Ardeola idae* Madagascar Squacco Heron** RD: an early bird, Dar es Salaam 27 May (EMB, NEB).

***Egretta garzetta* Little Egret** B: several active nests, Pangavini Is, Dar es Salaam, 12 Jan (EMB, NEB).

***Threskiornis aethiopica* Sacred Ibis** B: feeding well-grown young, Pangavini Is, 12 Jan (EMB, NEB).

***Platalea alba* African Spoonbill** B: 1 carrying nest material, Dar es Salaam 10 May (EMB, NEB).

***Alopochen aegyptiacus* Egyptian Goose** NM: Lake Manyara, >1000 with >50 per cent flightless in wing moult 10 Jun (EMB, NEB).

*Circus aeruginosus* **Eurasian Marsh Harrier** D: 1 Ngorongoro 1 Sep was unusually early (ZB).

*Buteo tachardus* **Mountain Buzzard** E: an ad Ngorongoro Crater 13 Jun (EMB, NEB).

*Hieraaetus pennatus* **Booted Eagle** R: Pugu Hills, 24 Jan (EMB, NEB).

*Pernis apivorus* **Honey Buzzard** R: singles, Dar es Salaam 17 Feb and 8 Apr (EMB, NEB).

*Elanus caeruleus* **Black-shouldered Kite** MB: Serengeti NP: >20 imms and ads counted in trees on short-grass plains 13 Jun (EMB, NEB).

*Pandion haliaetus* **Osprey** D: ad Mindu Dam, Morogoro, 26 Apr (EMB, NEB); 1 Lake Tagalala, Selous GR 12 Aug was presumably oversummering (ZB).

*Falco amurensis* **Eastern Red-footed Falcon** R: singles Serengeti NP 9 and 20 Mar (JHF).

*Coturnix coturnix* **Quail** R: several calling, Litembo Highlands 2 Jan (EMB, NEB).

*Neotis denhami* **Denham's Bustard** R: recorded Ruaha NP 2 Jan (EAdeL).

*Turnix sylvatica* **Button Quail** R: singles Peramiho and Kitimbi (both Songea) 1–6 Jan (EMB, NEB).

*Crex egregia* **African Crake** R: singles Kitimbi (Songea) 6 Jan and Ngorongoro Crater 13 Jun (EMB, NEB).

*Gallinula angulata* **Lesser Moorhen** RB: 2 ads and 1 imm Kitimbi (Songea) 6 Jan and 1 Ngorongoro Crater 13 Jun (EMB, NEB).

*Porzana marginalis* **Striped Crake** R: Kitimbi (Songea) 6 Jan (EMB, NEB).

*Rallus caerulescens* **African Water Rail** R: Kitimbi (Songea) 6 Jan and Minziro Forest 9 Jul (EMB, NEB).

*Sarothrura elegans* **Buff-spotted Pygmy Crake** RE: female Pugu Hills 5 Apr was the first record for the area (EMB, NEB).

*Sarothrura rufa* **Red-chested Pygmy Crake** R: Peramiho (Songea) 1 Jan (EMB, NEB).

*Microparra capensis* **Lesser Jacana** R: several Kitimbi (Songea) 6 Jan and 14 Njombe 7 Jan (EMB, NEB).

*Haematopus ostralegus* **Oystercatcher** R: 2 Dar es Salaam on 7 and 9 Aug (ZB).

*Numenius arquata* **Curlew** E: inland: 1 Mbalageti River, Serengeti NP 27 Apr (JHF).

*Tringa erythropus* **Spotted Redshank** R: 27 Ngorongoro Conservation Area 17 Jan and 8 there 3 Mar; 2 Mbalageti River, Serengeti NP 27 Apr (JHF).

*Tringa totanus* **Redshank** R: recorded Msasani Beach, Dar es Salaam, Feb (EAdeL).

*Arenaria interpres* **Turnstone** E: inland: 1 in breeding plumage Ngorongoro Crater 1 Sep (ZB).

*Rhinoptilus chalcopterus* **Violet-tipped Courser** R: present in coastal scrub, Dar es Salaam 18 Jan (EMB, NEB).

*Larus cirrocephalus* **Grey-headed Gull** B: >300 in breeding plumage, with pre-breeding activity, Lake Manyara, 10 Jun (EMB, NEB).

*Larus hemprichii* **Sooty Gull** DN: max at Dar es Salaam, 180, 27 Apr (EMB, NEB).

***Sterna sumatrana* Black-naped Tern** S(A): 9 Latham Island 22 Nov (NEB, EMB), a note on this occurrence is in press (*Scopus* 13).
*First record for East Africa.*

***Agapornis pullaria* Red-headed Lovebird** M: only 2 sightings during three weeks in NW of the country in Jul (EMB, NEB).

***Cuculus poliocephalus* Lesser Cuckoo** D: 4 Dar es Salaam 26 Apr (EMB, NEB).

***Glaucidium capense* Barred Owlet** R: Farkwa, Dodoma 30 Jun (EMB, NEB).

***Macrodipteryx vexillarius* Pennant-winged Nightjar** R: >6 Biharamulo 22 Jul (MACC, MWW).

***Apus apus* Eurasian Swift** N: thousands Morogoro–Dar es Salaam 14 Dec (EAdeL).

***Apus melba* Alpine Swift** E: a flock of >36 Singida, 1 Jul (EMB, NEB).

***Merops apiaster* Eurasian Bee-eater** D: early birds Lake Manyara NP 4–5 Sep (ZB).

***Coracias garrulus* Eurasian Roller** D: northward passage peaked with >300 in 30 min, Dar es Salaam, 7 Apr (EMB, NEB).

***Tockus pallidirostris* Pale-billed Hornbill** RB: a pair with begging young Peramiho (Songea), 7 Jul (EMB, NEB).

***Pitta angolensis* African Pitta** R: Pugu Hills: 3 on 20 Apr and 2 calling 2 May (EMB, NEB).

***Hirundo atrocaerulea* Blue Swallow** R: 2 Kifanya Njombe, 7 Jan (EMB, NEB).

***Hirundo daurica* Red-rumped Swallow** M: 4 Morogoro 30 Jun, unusual at this altitude, (EMB, NEB).

***Hirundo griseopyga* Grey-rumped Swallow** B: entering termite mound Ngorongoro 13 Jun (EMB, NEB).

***Irania gutturalis* Irania** E: 2 Ngorongoro Conservation Area 16 Jan (JHF).

***Turdus fischeri* Spotted Ground Thrush** D: 2 Pugu Hills 2 May (EMB, NEB).

***Acrocephalus arundinaceus* Great Reed Warbler** R: 2 singing, Iringa 8 Jan (EMB, NEB).

***Heliolais erythroptera* Red-winged Warbler** R: Lukinga and Magazini (both Songea) 4 and 6 Jan (EMB, NEB).

***Hippolais icterina* Icterine Warbler** R: 1 in song SRI, Serengeti NP 14–18 Jan (JHF).

***Bias musicus* Black and White Flycatcher** EB: a pair incubating Minziro Forest 17 Jul (MACC, MWW).

***Anthus cervinus* Red-throated Pipit** E: 3 Esoit Ndiarkarta River, Serengeti NP, 19 Mar (JHF).

***Anthus lineiventris* Striped Pipit** R: present Mbinga 2 Jan (EMB, NEB).

***Lanius collurio* Red-backed Shrike** D: a late female on 29 Apr (EMB, NEB).

***Estrilda perreini* Lavender Waxbill** R: Mbamba Bay, 2 Jan (EMB, NEB).

***Pyrenestes minor* Lesser Seed-cracker** R: Lukinga (Songea), 4 Jan (EMB, NEB).

## TANZANIA BACK RECORDS

***Charadrius asiaticus*** **Caspian Plover** D: 8 Serengeti NP 12 May 1986, all in non-breeding plumage (JHF).

***Tringa erythropus*** **Spotted Redshank** R: 2 Esoit Ndiakarta River, Serengeti NP 10 Apr 1986; 3 in breeding plumage Ngorongoro Crater 21 Apr 1986; 5 Ngorongoro 31 Dec 1986 (JHF).

***Oenanthe isabellina*** **Isabelline Wheatear** D: present Naabi Hill, Serengeti, 31 Mar (JHF).

## UGANDA RECORDS

Most records came, as usual, from the Kampala area and the south-west. Surveys of a number of western forests involving observation and mist-netting, were conducted between July and September. The Kasyoha–Kitomi and Itwara Forests were worked systematically for the first time. These studies produced a number of interesting distributional records.

***Pelecanus rufescens*** **Pink-backed Pelican** B: *c.* 30 pairs nesting Kakoge (Luwero) 21 Nov, some with small young—a new colony, mixed with Marabous *Leptoptilos crumeniferus*, 16 km north of Nakakono.

***Ardeola rufiventris*** **Rufous-bellied Heron** R: 1 Lake Mburu 28 Nov (DEP).

***Phoeniconaias minor*** **Lesser Flamingo** EN: up to *c.* 3000 Munyanyange mid Jul, and 10 each Nyamunika and Kikorongo craters 22 Jul (EA, PK, DEP).

***Falco peregrinus*** **Peregrine Falcon** E: 1 Kampala 31 Oct (DEP).

***Tringa erythropus*** **Spotted Redshank** R: 1 Kajansi, Kampala, 28 Mar (DEP).

***Recurvirostra avosetta*** **Avocet** E: in QENP, 17 at Munyanyange 18 Mar and 8 on 20 Jul (DEP).

***Rynchops flavirostris*** **African Skimmer** RN: 50 Kikorongo Crater, QENP on 21 Jul (DEP).

***Cuculus canorus*** **Eurasian Cuckoo** E: an imm Kampala 24 Oct (DEP).

***Cuculus gularis*** **African Cuckoo** R: 1 Kampala 24 Jan (DEP *et al.*). At least 1 Kasyoha–Kitomi Forest mid Sep (PB, AMcN).

***Glaucidium tephronotum*** **Red-chested Owlet** E: 1 netted Kasyoha–Kitomi Forest mid Sep (PB, AMcN).

***Ispidina lecontei*** **Dwarf Kingfisher** E: 1 Malabigambo Forest mid Jul (CW).

***Merops gularis*** **Black Bee-eater** E: frequent Kasyoha–Kitomi Forest mid Sep (PB, AMcN).

***Hirundo atrocaerulea*** **Blue Swallow** E: several in grassland around Malabigambo Forest mid Jul (CW).

***Riparia riparia*** **Sand Martin** N: tens of thousands roosting near Lake Nabugabo 27–30 Dec (DEP).

***Phyllastrephus xavieri*** **Xavier's Greenbul** E: 5 netted at Itwara and 4 at Kasyoha–Kitomi Forest Sep (PB, AMcN).

***Neocossyphus rufus*** **Red-tailed Ant** Thrush E: 2 netted Bugoma Forest late Aug (CW).

***Hippolais icterina*** **Icterine Warbler** R: 1 Lake Nabugabo 28–29 Dec (DEP).

***Phylloscopus sibilatrix*** **Wood Warbler** S(B): at least 3 Lake Nabugabo 27–31 Dec (DEP).

***Sylvia atricapilla*** **Blackcap** E: 1 netted Lake Nabugabo 31 Dec (DEP).

***Muscicapa cassini*** **Cassin's Flycatcher** E: 2 River Lamia, Bwamba Forest early Aug and also seen Kasyoha–Kitomi Forest mid Sep (PB, AMcN).

***Platysteira concreta*** **Yellow-bellied Wattle-eye** E: frequent Kasyoha–Kitomi Forest mid Sep (PB, AMcN).

***Trochocercus nitens*** **Blue-headed Crested Flycatcher** E: 1 netted Malabigambo Forest mid Jul (CW).

***Peoptera lugubris*** **Narrow-tailed Starling** E: seen Itwara Forest early Sep (PB, AMcN).

***Euplectes hartlaubi*** **Marsh Widowbird** E: male displaying to female Lake Nabugabo 27–28 Dec (DEP).

***Parmoptila woodhousei*** **Red-fronted Antpecker** E: 1 netted Kasyoha–Kitomi Forest mid Sep (PB, AMcN).

***Emberiza tahapisi*** **Cinnamon-breasted Rock Bunting** E: 1 Lake Mburu NP 28 Nov (DEP).

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## RINGING AND MIGRATION AT NGULIA, TSAVO, AUTUMN 1987

G.C. Backhurst and D.J. Pearson

Visits to Ngulia Safari Lodge in Tsavo West National Park to study the annual southward migration of Palaearctic birds were made over 23 days between 29 October and 20 December 1987. On most nights mist never descended to Lodge level and the season's total of 2441 Palaearctic migrants ringed was the lowest since 1973/74.

There had been some isolated showers of rain (indicated by patches of short new grass) in the Park before our first visit at the end of October but no mist formed at the Lodge during the nights. The very few migrants in the area included two male Red-backed Shrikes[1], Spotted Flycatchers, Northern and Isabelline Wheatears, a Whitethroat and a Barred Warbler.

Very little rain fell in the next two weeks so that conditions at the beginning of our second visit from 14 November were still very dry. An hour of mist on the night of 16th brought birds down to the Lodge's lights, and 103 were ringed, including no less than 45 Rufous Bush Chats but no Marsh Warblers and only one Sprosser. The first Marsh Warbler was caught in the bush after dawn. Practically no mist occurred on the next seven nights and only 143 migrants were caught. An hour and a half of mist from 04:00 on 24th enabled 135 migrants to be caught of which 95 were Whitethroats.

The night of 25 November proved to be the most productive of the season. Mist came down at 01:30 and the 27 metres of net erected caught 608 migrants, again predominantly Whitethroats. Bush netting after dawn produced a further 166 of a wider variety of species, including a Golden Oriole, an Olive-tree Warbler, Basra Reed Warblers and three Blackcaps. The next two nights were virtually mist-free but the 28th had good mist and some drizzle from 01:00 until dawn. The low total of 262 ringed was probably due to the large moon up during the first hour or so of mist; a further 111 were caught in the bush. The following night was totally clear.

The November period was characterized by the very low proportion of Sprossers and Marsh Warblers and the correspondingly high percentage (65 per cent) of Whitethroats in the catch. Totals of birds ringed and a comparision with the species' 15-year means are given in Table 1.

Four of the five nights spent at the Lodge in the December small moon period were misty and allowed steady catching. By now Marsh Warbler was dominant. This period, from 16th to 20th, was notable in producing the third Whinchat and second Savi's Warbler for the site, the latter being only the second for East Africa (Pearson *et al.* 1988).

Afrotropical birds were, in the main, poorly represented. The exception was the number and variety of nightjars *Caprimulgus* spp. caught during the nights in December: on 19th 8 Slender-tailed *C. clarus*, 6 Donaldson-Smith's *C. donaldsoni*, 3 Nubian *C. nubicus* and 2 Dusky *C. fraenatus* and on 20th 13 Slender-tailed, 4 Donaldson Smith's, 4 Nubian and 1 Plain *C. inornatus*.

**Acknowledgements**

We are most grateful to the Warden of Tsavo National Park (West) for allowing us to ring birds in the Park and to the management of Ngulia Safari Lodge and African tours and Hotels Ltd. for assistance with accommodation. The Ngulia Ringing Group this year, in addition to the authors, comprised Anna Forbes-Watson , Brian Finch, Daphne Backhurst,

[1]scientific names of Palaearctic species are given in Table 1

Table 1. *Numbers of Palaearctic night migrants ringed at Ngulia Safari Lodge between October and February in the years 1969–1988**

| Species | 1987/8* total | %† | Total 1969–1988* |
|---|---|---|---|
| Eurasian Nightjar *Caprimulgus europaeus* | 7 | 42 | 257 |
| Eurasian Swallow *Hirundo rustica* | 5 | 55 | 141 |
| Golden Oriole *Oriolus oriolus* | 1 | – | 14 |
| Rufous Bush Chat *Cercotrichas galactotes* | 73 | 138 | 877 |
| Irania *Irania gutturalis* | 41 | 41 | 1538 |
| Sprosser *Luscinia luscinia* | 211 | 20 | 15966 |
| Nightingale *L. megarhynchos* | 15 | 42 | 549 |
| Rock Thrush *Monticola saxatilis* | 3 | 37 | 126 |
| Isabelline Wheatear *Oenanthe isabellina* | 5 | 96 | 83 |
| Northern Wheatear *O. oenanthe* | 2 | 27 | 112 |
| Pied Wheatear *O. pleschanka* | 1 | 31 | 49 |
| Whinchat *Saxicola rubetra* | 1 | – | 3 |
| Basra Reed Warbler *A. griseldis* | 27 | 57 | 736 |
| Marsh Warbler *A. palustris* | 650 | 34 | 29102 |
| Sedge Warbler *A. schoenobaenus* | 1 | – | 85 |
| Upcher's Warbler *H. languida* | 20 | 100 | 323 |
| Olive-tree Warbler *H. olivetorum* | 2 | 9 | 324 |
| Olivaceous Warbler *H. pallida* | 9 | 36 | 386 |
| River Warbler *Locustella fluviatilis* | 26 | 13 | 2947 |
| Savi's Warbler *L. luscinioides* | 1 | – | 2 |
| Willow Warbler *Phylloscopus trochilus* | 28 | 30 | 1412 |
| Blackcap *Sylvia atricapilla* | 3 | – | 52 |
| Garden Warbler *S. borin* | 5 | 15 | 511 |
| Whitethroat *S. communis* | 1218 | 81 | 23777 |
| Barred Warbler *S. nisoria* | 16 | 41 | 601 |
| Spotted Flycatcher *Muscicapa striata* | 20 | 44 | 708 |
| Red-backed Shrike *Lanius collurio* | 16 | 28 | 868 |
| Red-tailed Shrike *L. isabellinus* | 34 | 74 | 734 |
| Number of species | 26 | – | 26 |
| Total ringed | 2441 | | 82283 |

* 1987/88 season—but no ringing done in January or February 1988.

† The autumn 1987 total expressed as a percentage of the mean of the 15 years 1972/73 to 1986/87 for each species.

*Footnote overleaf*

Adam Batty, Mary Sinclair, Don Turner, Arnold and Brian Small, Sue Silvester, Stella Wood, Sandra and Bob Ewart, Gus Yaki, Joseph and Adrienne Fuhrman, Salome Kamau, Gerald Maisel, Heidi English, Miles Coverdale, Tony Potterton.

**References**

PEARSON, D.J., FINCH, B.W. & BACKHURST, D.E.G. 1988. A second Savi's Warbler *Locustella luscinioides* at Ngulia. *Scopus* 11: 94.

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*Scopus* 11: 120–122, August 1989

Footnote to Table 1

Totals of Palaearctic species ringed in previous autumn seasons but not in this year are as follows:

Little Bittern *Ixobrychus m. minutus* 4, Eleonora's Falcon *Falco eleonorae* 1, Corncrake *Crex crex* 7, Spotted Crake *Porzana porzana* 1, Great Snipe *Gallinago media* 1, Eurasian Cuckoo *Cuculus canorus* 2, Lesser Cuckoo *C. poliocephalus* 1, Eurasian Scops Owl *Otus scops* 5, Sand Martin *Riparia riparia* 6, Redstart *Phoenicurus phoenicurus* 3, Great Reed Warbler *Acrocephalus arundinaceus* 35, Reed Warbler *A. scirpaceus* 70, Icterine Warbler *Hippolais icterina* 4, Wood Warbler *Phylloscopus sibilatrix* 2, Red-throated Pipit *Anthus cervinus* 1, Tree Pipit *A. trivialis* 23, Yellow Wagtail *Motacilla flava* 3, hybrid Red-backed/Red-tailed Shrike *Lanius collurio* x *isabellinus* 9.

From December 1969 a total of 82 461 Palaearctic night-migrating birds of 45 species has been ringed at Ngulia during southward passage between the months of October and February.

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## INDEX TO AUTHORS

## INDEX TO SCIENTIFIC GENUS AND SPECIES NAMES

all organisms mentioned are listed

*Indices prepared by Dr Leon Bennun and Graeme Backhurst*

Contributions, which will be acknowledged, should be typed in one-and-a-half or double spacing on one side of the paper only, with wide margins all round, and should be sent in duplicate. Hand-written MSS will also be considered but they must be clearly written, and sent in duplicate too. Both English and scientific names of birds should be given when the species is first mentioned, thereafter only one name should be used; they should be those of a stated work and any deviations from this work should be noted and reasons given. Metric units should be used. Contributions will be welcomed on floppy disk—please contact the Editor for details.

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## East African Bird Report

This normally forms a separate issue of *Scopus* and each report covers one calendar year and tends to relate principally to the birds of Kenya. Records from Tanzania and Uganda are listed in separate sections. Records of Afrotropical and oceanic birds should be sent to D.A. Turner, Box 48019, Nairobi; Palaearctic bird records should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Report.

Sightings of rare birds may be telephoned through to any OSC member (numbers inside the front cover) in the hope that the bird(s) may be seen by others. Criteria covering the submission of Bird Report records are given in the *Scopus* Supplement of June 1982, and copies may be obtained, free of charge, from D.A. Turner. Records of rare birds are assessed by the independent and internationally-based East African Rarities Committee.

*Scopus* 11 (5), August 1989

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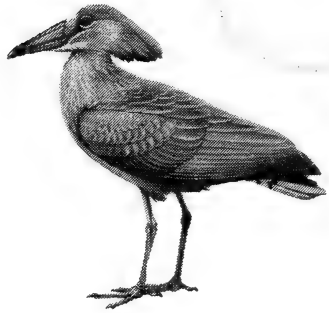

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*Edited by*
Graeme Backhurst

Volume 12, No. 1/2, July 1988

**Eastern African Ringing Report 1981–1987**

# *SCOPUS*

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*Scopus* 12 (1/2), July 1988

# EASTERN AFRICAN RINGING REPORT 1981–1987

G.C. Backhurst

This report covers the six years from 1 July 1981 to 30 June 1987. Previous reports have appeared in the *Journal of the East Africa Natural History Society and National Museum*, the last being for the years 1977–81 (Backhurst 1981b). The geographical area serviced by the scheme comprises Kenya, Tanzania, Uganda and the Sudan, while small numbers of 'Nairobi' rings have been used by ringers in Djibouti, Ethiopia, Rwanda, Somalia, and Zambia.

The list of birds ringed (Table 1) includes all birds ringed in Kenya, Tanzania, Uganda and the Sudan. It includes 8000 Lesser Flamingo *Phoeniconaias minor* pulli ringed with British Trust for Ornithology (BTO) rings in 1962 at Lake Magadi, Kenya; 245 Palaearctic migrants ringed with Stockholm Museum rings at Wadi Halfa, Sudan by S. Mathiasson in 1964; and 779 Palaearctic migrants ringed with BTO rings around Khartoum, Sudan by A. Pettet in 1965, 1966 and 1977. Pettet's efforts resulted in one recovery, of a Willow Warbler *Phylloscopus trochilus* from Khartoum to Lebanon (Nikolaus & Backhurst 1982). Table 1 does not include several thousand Red-billed Quelea *Quelea quelea* ringed with Tanganyika Game Department rings around Dodoma in the 1950s. The small numbers of Afrotropical birds ringed with 'Nairobi' rings in Djibouti, Ethiopia, Rwanda, Somalia and Zambia are included in the table but the Palaearctic migrants are not.

Ringing in Ethiopia (with BTO rings) took place between 1969 and 1980 and has been documented by John Ash, the most active ringer the country has had, and was summarized in this journal (Ash 1981) some years ago. A total of 61 303 birds was ringed during Dr Ash's period and since then, apart from continued ringing of quelea by W. Erickson and M. Jaeger with BTO rings (J.S.Ash *in litt.*), only a score of birds has been ringed by Dr J.C. Hillman and C. D. Becker with Nairobi rings. Recoveries affecting Ethiopia which have come to light since Ash's 1981 report will be presented by him in *Scopus* in the near future.

Although many ringing schemes produce annual reports, the number of recoveries from this scheme each year since 1981 has been so small that it was not thought worthwhile to produce a report until now. The complete list of birds ringed in the four countries is given in Table 1. The last time a complete list was given was in the report for 1971–72 (Backhurst 1973). The list takes up a great deal of space but it is considered valuable to give a full picture of the range of ringing done in the area rather than to list only the Palaearctic migrants as has sometimes been done in the past.

Most of the achievements during the six year period have been due to the efforts of a small number of very keen ringers operating in Kenya (at Ngulia, Nairobi, the coast and rift valley) and the Sudan.

Gerhard Nikolaus, sometimes aided by others, worked in the Sudan, concentrating on

passerine migrants at sites on the Red Sea coast and at Wadi Halfa at the very northern edge of the Afrotropical region, and on waders around Khartoum. These studies have produced a wealth of new information on the timing and composition of Palaearctic migration in north-eastern Africa, but a disappointingly small number of recoveries has been reported from this effort. However, the few reports so far include species not previously recovered from ringing in eastern Africa.

A related project was the short visit by Don Smith in the spring of 1984 to the minute island of Sanganeb in the Red Sea. His work was bedevilled by strong winds so that only 95 migrants were ringed, but one long-distance recovery, of a Blackcap *Sylvia atricapilla*, resulted. The visit also led to the discovery of the remains of a swallow which was later described as a new species (Fry & Smith 1985). In 1981/82, also in Sudan, Mike Rae was fortunate in finding a method of catching large numbers of Red-throated Pipits *Anthus cervinus* and ringed over 700—six times the previous total for the whole scheme—but no recoveries have been reported.

In Kenya, wader ringing, mainly by David Pearson, Daphne Backhurst, and Miles Coverdale, continued at Lake Magadi in the rift valley and at Mida Creek on the coast. Analyses of data collected during these and earlier wader netting operations have been presented in a series of papers on migration timing, moult and weights. Although there have been further recoveries from the rift valley ringing, only a single recovery, of a Lesser Sandplover *Charadrius mongolus* to Pakistan, has resulted so far from the 3000-plus waders ringed at Mida and it is surprising that none of the larger species ringed there has yet been reported.

The ringing of thousands of Yellow Wagtails *Motacilla flava* a year at Nairobi continued until 1982, but surrounding urban development and change of sewage works operations at the traditional Kariobangi site brought this long-term study to a close. The Yellow Wagtail remains the scheme's most-ringed species, over 15 000 ahead of the species in second position (see Table 2).

The annual autumn ringing effort at Ngulia in Tsavo West National Park in south-eastern Kenya has continued throughout the period. This still provides a fascinating insight into nocturnal migration and its problems, and recoveries trickle in slowly and continue to build up a picture of the origin of some of the species involved. For many years there had been no recovery of a Whitethroat *Sylvia communis*; but now the first three are reported below, two of them ringed in the same year. Recoveries of Marsh Warbler *Acrocephalus palustris*—the most-ringed species at Ngulia—have, however, shown a less encouraging trend than in the late 1970s. The Sprosser *Luscinia luscinia*, after a poor start (there had been only two to the Middle East up to 1980), has given a further five recoveries, including one which was breeding when caught by a ringer in extreme south-eastern Finland.

Although over 80 000 Palaearctic migrants have been ringed at Ngulia few species have topped the 1000 mark. The fourth and fifth most ringed species, the River Warbler *Locustella fluviatilis* (2921) and Irania *Irania gutturalis* (1497) have still to produce a recovery but it is worth remembering that a Barred Warbler *Sylvia nisoria* recovered in Saudi Arabia in 1973 was from only 36 ringed at Ngulia at that time.

Elsewhere in the region most ringing has formed a part of specific Afrotropical studies in defined habitats, most often forests. Simon Stuart and his colleagues did a great deal of ringing in the mountains of northern Tanzania and discovered a distinctive bird new to science, the Rufous-winged Sunbird *Nectarinia rufipennis* (Jensen 1983). Leon Bennun and others have worked in a number of forest habitats in Kenya and Uganda, including the Bwindi (Impenetrable) Forest, Gedi and Ol Doinyo Orok, while his own doctoral studies on Grey-capped Social Weavers *Pseudonigrita arnaudi* have been at Olorgesaillie (see Bennun *et al.* 1986, Bennun 1987).

Alison Beakbane, Liz Boswell and others were very active in the Mufindi area of southern Tanzania, and ringed a number of night migrants at a brightly-lighted tea factory. This site promised to be another Ngulia but suitable calm misty conditions were infrequent, so that numbers caught were low, although no less than 52 African Pittas *Pitta angolensis* were ringed. Neil Baker has concentrated on the birds of the Pugu Hills forest near Dar es Salaam but has also worked little-known forest areas in the extreme north-west of Tanzania where he has found several new species for the country (Baker & Hirslund 1987).

John Dittami carried out detailed studies at Nakuru on the seasonality of breeding and moult in five Afrotropical passerine species, correlating these with physiological and environmental cycles of species living on the equator and their control mechanisms.

An innovation in this report is the bibliography starting on page 48. It is hoped that it will prove useful to have all references to studies using ringing in eastern Africa in one place.

## ACKNOWLEDGEMENTS

I would like to thank Gerhard Nikolaus for tracing many of the recoveries to the Sudan and for his contribution in ringing birds there. David Pearson kindly read several drafts of this report and made important modifications, for which I thank him. I thank too the Director of the National Museums of Kenya for allowing the Museum's address to appear on our rings and his staff in the Department of Ornithology for forwarding recovery letters to me. I am also grateful to the staff of the many national ringing schemes listed on p. 36 for notifying recoveries of Nairobi-ringed birds in their countries. Thanks also go to Eric I. Ö. Öhman of Mekaniska HB for making the rings for us.

**List of ringers 1981–1987**

| Last name | Given name | Abbreviation | Country of operation |
|---|---|---|---|
| Allport* | Gary | GA | Kenya |
| Andersson | Staffan | SA | Kenya |
| Archer* | Tony | ALA | Kenya |
| Ash* | John | JSA | Sudan |
| Asplund | Mikael | MA | Kenya |
| Backhurst§ | Daphne | DEGB | Kenya |
| Backhurst§ | Graeme | GCB | Kenya |
| Baker | Neil | NEB | Tanzania |
| Beakbane* | Alison | AJB | Tanzania |
| Becker* | Dustin | CDB | Ethiopia |
| Bennun | Leon | LAB | Kenya, Uganda |
| Boswell | Elizabeth | EMB | Tanzania |
| Britton*§ | Hazel | HAB | Kenya |
| Britton*§ | Peter | PLB | Kenya |
| Brown† | Leslie | LHB | Kenya |
| Brøgger-Jensen* | Steffen | SB-J | Tanzania |
| Carlsson* | Alan | AC | Kenya |
| Carswell* | Margaret | MC | Uganda |
| Coverdale§ | Miles | MACC | Kenya |
| Cunningham-van Someren | G. | GRCvS | Kenya |
| Denton* | Michael | MLD | Djibouti |
| Dillingham* | Ian | IHD | Kenya |
| Dinkeloo* | Hanni | HD | Kenya |
| Dirks*§ | June | JD | Kenya |
| Dittami* | John | JD | Kenya |
| Evans | Matthew | ME | Kenya |
| Fanshawe* | John | JF | Kenya |
| Forbes-Watson§ | Anna | AMF-W | Kenya |
| Gichuki | Cecilia | CG | Kenya |
| Gill* | Frank | FBG | Kenya |
| Grossmann* | Henning | HG | Tanzania |
| Gwilliams | P. | PG | Tanzania |
| Haas* | Volker | VH | Kenya |
| Hill | L. | LAH | Zambia |
| Hillman | Jesse | JCH | Ethiopia |
| Holman* | Dick | RMH | Sudan |
| Horne | Jennifer | JFMH | Kenya |
| Howell | Kim | KMH | Tanzania |
| Jensen* | Flemming | FJ | Tanzania |
| Kelsey*§ | Martin | MGK | Kenya, Zambia |
| Kinnaird | Margaret | MFK | Kenya |
| Kramer | Steve | SK | Uganda |
| Lederer* | W. | EL | Zambia |
| Leisler* | Berndt | BL | Kenya |

| Last name | Given name | Abbreviation | Country of operation |
|---|---|---|---|
| Loske* | K-H. | K-HL | Zambia |
| Lott* | Dale | DFL | Kenya |
| Madgwick* | Jane | JM | Somalia |
| McGuigan* | Chris | CMcG | Kenya |
| Mlingwa | Charles | CM | Tanzania |
| Mordue* | Terence | TAM | Tanzania |
| Moyer* | David | DCM | Tanzania |
| Newmark | William | WDN | Tanzania |
| Ng'weno | Fleur | FN | Kenya |
| Nikolaus*§ | Gerhard | GN | Sudan |
| Oelke | Hans | HO | Kenya |
| Parish* | Duncan | DP | Kenya |
| Pearson§ | David | DJP | Kenya, Sudan |
| Rabøl* | Jørgen | JR | Kenya |
| Raddatz* | B. | BR | Sudan |
| Rae* | Michael | MR | Sudan |
| Reyer* | Uli | UR | Kenya |
| Savalli | Udo | UMS | Kenya |
| Scott | Alistair | AJS | Zambia |
| Short | Lester | LLS | Kenya |
| Siemens* | Larry | LS | Kenya |
| Sion | Etienne | ES | Tanzania |
| Smith* | Donald | DAS | Sudan |
| Stuart* | Simon | SNS | Tanzania |
| Taylor* | Barry | PBT | Kenya |
| Thompson* | Jeremy | JJT | Kenya |
| Tyler* | Stephanie | SJT | Tanzania |
| Varty* | Nigel | NV | Somalia |
| Welch* | Geoffrey | GRW | Djibouti |
| Welch* | Hilary | HJW | Djibouti |
| Wood* | Brian | BW | Somalia |
| Wrege | Peter | PW | Kenya |

*No longer ringing
§Member of the Ngulia Ringing Group (NRG).

## Table 1. List of birds ringed in eastern Africa from 1960 to 30 June 1987

Species in bold type are Palaearctic in origin; an asterisk (*) indicates that some of the individuals included in the entry were probably from the Palaearctic; the final column headed 'R' gives the number of recoveries of birds ringed in Kenya, Tanzania, Uganda and the Sudan recovered over 100 km from the ringing site and an asterisk in this column means that there have been foreign-ringed birds of the species recovered in eastern Africa. Other notes: on p. 28, the two shrikes marked † were lumped in the annual totals until 1973 (although many were distinguished on the schedules) and it is not possible now to assign all individual birds to one or other of the two species now recognized. A similar situation applies to the three *Phyllastrephus* bulbuls (*cabanisi, fischeri, placidus*) on p. 21 and the white-eyes *Zosterops* spp on p. 30.

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Podicipedidae: grebes** | | | | | | | | | |
| Tachybaptus ruficollis | 2 | 0 | 3 | 1 | 0 | 0 | 0 | 6 | |
| **Ardeidae: herons** | | | | | | | | | |
| **Ixobrychus m. minutus** | 6 | 1 | 2 | 0 | 0 | 0 | 0 | 9 | |
| Ixobrychus minutus payesii | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | |
| Ixobrychus sturmii | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Ardea purpurea* | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | *0 |
| Ardeola ralloides* | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 5 | |
| Bubulcus ibis | 11 | 1 | 16 | 0 | 0 | 0 | 0 | 28 | *0 |
| Butorides striatus | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | |
| Nycticorax nycticorax* | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | *0 |
| **Scopidae: Hamerkop** | | | | | | | | | |
| Scopus umbretta | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | |
| **Ciconiidae: storks** | | | | | | | | | |
| Ciconia abdimii | 0 | 49 | 174 | 7 | 0 | 0 | 0 | 230 | |
| **Threskiornithidae: ibises, spoonbills** | | | | | | | | | |
| Bostrychia hagedash | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | |
| Plegadis falcinellus | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | *0 |
| Threskiornis aethiopica | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | |
| Platalea alba | 73 | 1 | 0 | 0 | 0 | 0 | 0 | 74 | |
| **Phoenicopteridae: flamingos** | | | | | | | | | |
| Phoeniconaias minor | 8026 | 0 | 0 | 0 | 0 | 0 | 0 | 8026 | *8 |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Anatidae: ducks** | | | | | | | | | |
| Dendrocygna bicolor | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | |
| Dendrocygna viduata | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| Alopochen aegyptiacus | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | |
| **Anas acuta** | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | |
| Anas capensis | 414 | 0 | 1 | 0 | 0 | 0 | 0 | 415 | |
| **Anas clypeata** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | *0 |
| Anas erythrorhynchos | 80 | 0 | 0 | 0 | 1 | 0 | 0 | 81 | 1 |
| Anas hottentota | 185 | 0 | 0 | 0 | 2 | 0 | 0 | 187 | 3 |
| **Anas querquedula** | 27 | 2 | 1 | 1 | 0 | 0 | 2 | 33 | 1 |
| Anas sparsa | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Anas undulata | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | |
| Netta erythrophthalma | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | *0 |
| Plectopterus gambensis | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | |
| Sarkidiornis melanotos | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | *0 |
| **Accipitridae: birds of prey** | | | | | | | | | |
| **Circus macrourus** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Circus ranivorus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Terathopius ecaudatus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Accipiter badius | 4 | 0 | 1 | 0 | 0 | 0 | 3 | 8 | |
| Accipiter melanoleucus | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Accipiter minullus | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 6 | |
| **Accipiter nisus** | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| Accipiter tachiro | 17 | 0 | 7 | 2 | 9 | 5 | 3 | 43 | |
| Buteo augur | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | |
| **Buteo buteo vulpinus** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | *0 |
| Buteo tachardus | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 4 | |
| Kaupifalco monogrammicus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Lophaetus occipitalis | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Melierax gabar | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | |
| Melierax metabates | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Melierax poliopterus | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | |
| Milvus migrans | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | |
| **Milvus m. migrans** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | *0 |
| Elanus caerulescens | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Pandionidae: Osprey** | | | | | | | | | |
| **Pandion haliaetus** | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | *0 |
| **Falconidae: falcons** | | | | | | | | | |
| Falco biarmicus | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Falco cuvieri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Falco eleonorae** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Falco naumanni** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Falco peregrinus | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | |
| **Falco subbuteo** | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| **Falco tinnunculus** | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | |
| Polihierax semitorquatus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Phasianidae: game birds** | | | | | | | | | |
| Coturnix chinensis | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | |
| **Coturnix c. coturnix** | 1 | 3 | 21 | 1 | 0 | 0 | 0 | 26 | |
| Coturnix coturnix erlangeri | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | |
| Coturnix delegorguei | 740 | 57 | 247 | 47 | 26 | 59 | 38 | 1214 | |
| Francolinus coqui | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Francolinus hildebrandti | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Francolinus leucoscepus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Francolinus sephaena | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| **Turnicidae: button quails** | | | | | | | | | |
| Turnix sylvatica | 34 | 1 | 4 | 0 | 2 | 1 | 2 | 44 | |
| **Gruidae: cranes** | | | | | | | | | |
| Balearica pavonina | 0 | 7 | 0 | 1 | 1 | 0 | 0 | 9 | |
| **Rallidae: rails** | | | | | | | | | |
| **Crex crex** | 6 | 0 | 3 | 2 | 4 | 0 | 0 | 15 | |
| Crex egregia | 2 | 0 | 2 | 11 | 2 | 0 | 1 | 18 | |
| Gallinula angulata | 1 | 0 | 1 | 3 | 1 | 0 | 0 | 6 | |
| **Gallinula c. chloropus** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| Gallinula c. meridionalis | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Limnocorax flavirostra | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 12 | |
| Porphyrio alleni | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Porphyrio porphryio | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Porzana marginalis | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | |
| **Porzana parva** | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 5 | |
| **Porzana porzana** | 4 | 0 | 0 | 0 | 1 | 0 | 2 | 7 | |
| Porzana pusilla | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | |
| Rallus caerulescens | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | |
| Sarothrura affinis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Sarothrura boehmi | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 7 | |
| Sarothrura elegans | 4 | 0 | 0 | 0 | 1 | 0 | 1 | 6 | |
| Sarothrura pulchra | 4 | 0 | 0 | 0 | 3 | 0 | 1 | 8 | |
| Sarothrura rufa | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | |
| Fulica cristata | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 2 |
| **Jacanidae: jacanas** | | | | | | | | | |
| Actophilornis africanus | 18 | 0 | 0 | 1 | 0 | 0 | 0 | 19 | |
| **Rostratulidae: painted snipes** | | | | | | | | | |
| Rostratula benghalensis | 62 | 7 | 8 | 0 | 0 | 0 | 0 | 77 | |
| **Charadriidae: plovers** | | | | | | | | | |
| **Charadrius alexandrinus** | 38 | 12 | 38 | 0 | 0 | 0 | 0 | 88 | |
| **Charadrius asiaticus** | 2 | 0 | 0 | 14 | 0 | 0 | 0 | 16 | |
| **Charadrius dubius** | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | *1 |
| **Charadrius hiaticula** | 207 | 7 | 20 | 9 | 14 | 0 | 9 | 266 | 1 |
| **Charadrius leschenaultii** | 188 | 45 | 48 | 23 | 61 | 0 | 5 | 370 | |
| Charadrius marginatus | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | |
| **Charadrius mongolus** | 148 | 32 | 19 | 39 | 51 | 0 | 0 | 289 | |
| Charadrius pallidus | 404 | 0 | 30 | 22 | 0 | 0 | 7 | 463 | |
| Charadrius pecuarius | 326 | 0 | 64 | 4 | 2 | 0 | 11 | 407 | |
| Charadrius tricollaris | 87 | 4 | 3 | 1 | 0 | 0 | 1 | 96 | |
| **Pluvialis squatarola** | 165 | 9 | 13 | 23 | 36 | 0 | 0 | 246 | |
| Vanellus armatus | 373 | 4 | 36 | 8 | 2 | 0 | 29 | 452 | |
| Vanellus coronatus | 20 | 0 | 0 | 0 | 1 | 0 | 0 | 21 | |
| Vanellus crassirostris | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | |
| Vanellus lugubris | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | |
| Vanellus melanopterus | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Vanellus senegallus | 7 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | |
| Vanellus spinosus | 49 | 23 | 44 | 5 | 9 | 0 | 32 | 162 | |
| Vanellus tectus | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 8 | |
| **Scolopacidae: sandpipers** | | | | | | | | | |
| **Actitis hypoleucos** | 296 | 18 | 0 | 7 | 1 | 0 | 6 | 328 | *1 |
| **Numenius arquata** | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | |
| **Numenius phaeopus** | 44 | 2 | 0 | 0 | 0 | 0 | 0 | 46 | |
| **Tringa erythropus** | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | |
| **Tringa glareola** | 1136 | 22 | 62 | 10 | 0 | 0 | 1 | 1231 | 6 |
| **Tringa nebularia** | 232 | 8 | 9 | 15 | 2 | 0 | 7 | 273 | 1 |
| **Tringa ochropus** | 64 | 0 | 0 | 2 | 0 | 0 | 0 | 66 | |
| **Tringa stagnatilis** | 1350 | 20 | 33 | 12 | 3 | 0 | 8 | 1426 | 4 |
| **Tringa totanus** | 8 | 1 | 17 | 0 | 1 | 1 | 0 | 28 | |
| **Xenus cinereus** | 203 | 31 | 24 | 14 | 42 | 0 | 1 | 315 | |
| **Gallinago gallinago** | 229 | 6 | 6 | 2 | 0 | 0 | 1 | 244 | |
| **Gallinago media** | 52 | 0 | 0 | 0 | 1 | 0 | 0 | 53 | 1 |
| Gallinago nigripennis | 49 | 0 | 0 | 0 | 0 | 0 | 1 | 50 | |
| **Gallinago stenura** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Lymnocryptes minimus** | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 23 | |
| **Calidris alba** | 25 | 4 | 1 | 0 | 16 | 0 | 0 | 46 | |
| **Calidris alpina** | 134 | 2 | 49 | 0 | 0 | 0 | 0 | 185 | |
| **Calidris ferruginea** | 2085 | 154 | 443 | 111 | 117 | 0 | 48 | 2958 | 6 |
| **Calidris minuta** | 12811 | 236 | 1529 | 657 | 241 | 6 | 230 | 15710 | *8 |
| **Calidris subminuta** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Calidris temminckii** | 52 | 5 | 2 | 1 | 0 | 0 | 0 | 6 | |
| **Limicola falcinellus** | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 4 | |
| **Limosa lapponica** | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| **Limosa limosa** | 2 | 3 | 9 | 0 | 0 | 0 | 0 | 14 | |
| **Philomachus pugnax** | 6320 | 218 | 456 | 153 | 2 | 0 | 18 | 7167 | *27 |
| **Arenaria interpres** | 12 | 2 | 4 | 0 | 0 | 0 | 0 | 18 | |
| **Recurvirostridae: avocets, stilts** | | | | | | | | | |
| Himantopus himantopus* | 207 | 2 | 7 | 1 | 1 | 0 | 0 | 218 | |
| Recurvirostra avosetta* | 97 | 0 | 6 | 0 | 0 | 0 | 0 | 103 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Phalaropidae: phalaropes** | | | | | | | | | |
| **Phalaropus lobatus** | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| **Dromadidae: Crab Plover** | | | | | | | | | |
| Dromas ardeola | 22 | 13 | 26 | 7 | 22 | 0 | 0 | 90 | |
| **Burhinidae: thicknees** | | | | | | | | | |
| Burhinus capensis | 2 | 0 | 0 | 4 | 2 | 0 | 0 | 8 | |
| Burhinus senegalensis | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 7 | |
| Burhinus vermiculatus | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | |
| **Glareolidae: coursers, etc.** | | | | | | | | | |
| Cursorius cursor | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Cursorius temminckii | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Pluvianus aegyptius | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | *0 |
| Rhinoptilus africanus | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | |
| Rhinoptilus chalcopterus | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | |
| Rhinoptilus cinctus | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Glareola ocularis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Glareola pratincola* | 53 | 4 | 0 | 2 | 0 | 0 | 1 | 60 | |
| **Laridae: gulls, terns** | | | | | | | | | |
| Larus cirrocephalus | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 9 | |
| **Larus fuscus** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | *0 |
| Larus hemprichii | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 14 | |
| Larus leucophthalmus | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | |
| **Larus ridibundus** | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 4 | *0 |
| Chlidonias hybridus* | 1 | 0 | 11 | 7 | 0 | 0 | 0 | 19 | |
| **Chlidonias leucopterus** | 265 | 12 | 95 | 0 | 0 | 0 | 0 | 372 | |
| **Chlidonias niger** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| **Gelochelidon nilotica** | 19 | 5 | 10 | 4 | 3 | 0 | 0 | 41 | |
| Sterna albifrons saundersi | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Sterna anaethetus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | *0 |
| Sterna bengalensis | 72 | 309 | 1 | 0 | 0 | 0 | 0 | 382 | |
| Sterna bergii | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | |
| **Sterna caspia** | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | *0 |
| Sterna dougallii | 285 | 0 | 0 | 0 | 0 | 0 | 0 | 285 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Sterna hirundo** | 4 | 6 | 2 | 0 | 0 | 0 | 0 | 12 | *0 |
| **Sterna paradisaea** | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Sterna repressa | 9 | 125 | 398 | 0 | 0 | 0 | 0 | 532 | |
| **Rynchopidae: skimmers** | | | | | | | | | |
| Rynchops flavirostris | 18 | 0 | 6 | 0 | 0 | 0 | 0 | 24 | 1 |
| **Pteroclidae: sandgrouse** | | | | | | | | | |
| Pterocles decoratus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Pterocles exustus | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | |
| Pterocles quadricinctus | 35 | 0 | 4 | 0 | 0 | 0 | 0 | 39 | |
| Pterocles senegallus | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| **Columbidae: pigeons** | | | | | | | | | |
| Aplopelia larvata | 58 | 0 | 12 | 2 | 35 | 52 | 0 | 159 | |
| Columba delegorguei | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| Columba guinea | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | |
| Oena capensis* | 45 | 0 | 8 | 4 | 13 | 4 | 1 | 75 | |
| Streptopelia capicola | 97 | 0 | 1 | 0 | 0 | 0 | 7 | 105 | |
| **Streptopelia decaocto** | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 20 | |
| Streptopelia decipiens | 52 | 0 | 3 | 0 | 0 | 1 | 0 | 56 | |
| Streptopelia lugens | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | |
| Streptopelia roseogrisea* | 0 | 0 | 0 | 12 | 17 | 0 | 0 | 29 | |
| Streptopelia semitorquata | 19 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | |
| Streptopelia senegalensis* | 169 | 2 | 0 | 24 | 37 | 7 | 7 | 246 | |
| **Streptopelia turtur** | 5 | 43 | 26 | 11 | 31 | 0 | 3 | 119 | *2 |
| Streptopelia vinacea | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Turtur abyssinicus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Turtur afer | 105 | 1 | 1 | 4 | 0 | 1 | 1 | 113 | |
| Turtur chalcospilos | 191 | 11 | 1 | 2 | 2 | 10 | 3 | 220 | |
| Turtur tympanistria | 335 | 5 | 15 | 8 | 8 | 3 | 17 | 391 | |
| Treron australis | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| Treron waalia | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| **Psittacidae: parrots** | | | | | | | | | |
| Agapornis fischeri | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | |
| Agapornis fischeri x personata | 0 | 0 | 0 | 0 | 0 | 635 | 0 | 635 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Poicephalus cryptoxanthus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Poicephalus meyeri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Musophagidae: turacos** | | | | | | | | | |
| Corythaixoides leucogaster | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Tauraco hartlaubi | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | |
| Tauraco schuetti | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Cuculidae: cuckoos** | | | | | | | | | |
| Cercococcyx montanus | 4 | 0 | 0 | 1 | 2 | 2 | 0 | 9 | |
| Chrysococcyx caprius | 217 | 5 | 14 | 6 | 2 | 2 | 3 | 249 | |
| Chrysococcyx cupreus | 27 | 0 | 1 | 0 | 0 | 0 | 0 | 28 | |
| Chrysococcyx klaas | 72 | 0 | 2 | 1 | 0 | 0 | 1 | 76 | |
| Clamator jacobinus* | 124 | 3 | 14 | 11 | 3 | 5 | 11 | 171 | |
| Clamator levaillantii | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Cuculus canorus** | 9 | 0 | 10 | 10 | 16 | 0 | 0 | 45 | |
| Cuculus clamosus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Cuculus gularis | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Cuculus poliocephalus** | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | |
| Cuculus solitarius | 3 | 0 | 1 | 0 | 1 | 1 | 0 | 6 | |
| Ceuthmochares aereus | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | |
| Centropus monachus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Centropus superciliosus | 33 | 1 | 2 | 1 | 1 | 1 | 0 | 39 | |
| **Tytonidae: barn owls** | | | | | | | | | |
| Tyto alba | 13 | 0 | 6 | 1 | 0 | 0 | 0 | 20 | |
| Tyto capensis | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | |
| **Strigidae: owls** | | | | | | | | | |
| Asio capensis | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Bubo africanus | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 6 | |
| Bubo lacteus | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Bubo poensis vosseleri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Ciccaba woodfordii | 7 | 0 | 0 | 0 | 0 | 3 | 4 | 14 | |
| Glaucidium capense | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | |
| Glaucidium perlatum | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Glaucidium tephronotum | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Otus ireneae | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | |
| Otus scops senegalensis | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 6 | |
| **Otus scops sspp.** | 11 | 3 | 2 | 3 | 0 | 1 | 0 | 20 | |
| **Caprimulgidae: nightjars** | | | | | | | | | |
| **Caprimulgus aegyptius** | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 5 | |
| Caprimulgus clarus | 0 | 0 | 0 | 23 | 3 | 6 | 5 | 37 | |
| Caprimulgus climacurus | 57 | 1 | 1 | 1 | 0 | 0 | 0 | 60 | |
| Caprimulgus donaldsoni | 108 | 15 | 0 | 0 | 6 | 3 | 5 | 137 | |
| **Caprimulgus europaeus** | 206 | 11 | 23 | 8 | 13 | 3 | 7 | 271 | *0 |
| Caprimulgus fossii | 7 | 0 | 0 | 5 | 1 | 1 | 3 | 17 | |
| Caprimulgus fraenatus | 33 | 3 | 0 | 4 | 3 | 2 | 3 | 48 | |
| Caprimulgus inornatus | 82 | 8 | 22 | 2 | 10 | 4 | 3 | 131 | |
| Caprimulgus nubicus | 11 | 0 | 7 | 3 | 0 | 0 | 1 | 22 | |
| Caprimulgus pectoralis | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | |
| Caprimulgus poliocephalus | 8 | 0 | 0 | 1 | 3 | 0 | 0 | 12 | |
| Macrodipteryx longipennis | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | |
| Macrodipteryx vexillarius | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| **Apodidae: swifts** | | | | | | | | | |
| Apus aequatorialis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Apus affinis | 162 | 0 | 0 | 0 | 0 | 0 | 1 | 163 | |
| **Apus apus** | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | *0 |
| Apus caffer | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| **Colidae: mousebirds** | | | | | | | | | |
| Colius leucocephalus | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Colius striatus | 518 | 3 | 7 | 2 | 4 | 0 | 8 | 542 | |
| Urocolius macrourus | 121 | 0 | 9 | 0 | 6 | 2 | 3 | 141 | |
| **Trogonidae: trogons** | | | | | | | | | |
| Apaloderma narina | 8 | 1 | 1 | 0 | 0 | 0 | 8 | 18 | |
| Apaloderma vittatum | 15 | 0 | 2 | 1 | 0 | 1 | 0 | 19 | |
| **Alcedinidae: kingfishers** | | | | | | | | | |
| Ceryle maxima | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Ceryle rudis | 552 | 0 | 9 | 0 | 0 | 0 | 0 | 561 | *0 |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Alcedo atthis** | 7 | 6 | 4 | 0 | 0 | 0 | 0 | 17 | |
| Alcedo cristata | 111 | 1 | 23 | 1 | 3 | 3 | 2 | 144 | |
| Alcedo quadribrachys | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Halcyon albiventris | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | |
| Halcyon chelicuti | 71 | 0 | 0 | 0 | 1 | 0 | 0 | 72 | |
| Halcyon leucocephala | 92 | 3 | 1 | 2 | 2 | 2 | 0 | 102 | *0 |
| Halcyon malimbica | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | |
| Halcyon senegalensis | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | |
| Halcyon senegaloides | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 8 | |
| Ispidina picta | 531 | 5 | 13 | 19 | 17 | 0 | 4 | 589 | |
| **Meropidae: bee-eaters** | | | | | | | | | |
| Merops albicollis | 76 | 3 | 1 | 0 | 1 | 0 | 0 | 81 | |
| **Merops apiaster** | 4 | 1 | 3 | 6 | 4 | 0 | 0 | 18 | |
| Merops bullockoides | 2008 | 63 | 103 | 0 | 0 | 0 | 0 | 2174 | |
| Merops bulocki | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| Merops hirundineus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Merops muelleri | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Merops nubicus | 0 | 1 | 23 | 0 | 0 | 0 | 0 | 24 | |
| Merops oreobates | 69 | 0 | 0 | 1 | 0 | 1 | 2 | 73 | |
| Merops orientalis | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | |
| **Merops persicus** | 12 | 1 | 1 | 0 | 1 | 0 | 1 | 16 | |
| Merops pusillus | 13 | 1 | 3 | 1 | 0 | 0 | 3 | 21 | |
| Merops superciliosus | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | |
| Merops variegatus | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | |
| **Coraciidae: rollers** | | | | | | | | | |
| Coracias caudata | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | |
| **Coracias garrulus** | 30 | 9 | 0 | 2 | 1 | 1 | 10 | 53 | *0 |
| **Upupidae: Hoopoe** | | | | | | | | | |
| Upupa epops | 15 | 0 | 0 | 0 | 2 | 0 | 0 | 17 | |
| **Upupa e. epops** | 59 | 10 | 32 | 38 | 55 | 0 | 0 | 194 | |
| **Phoeniculidae: wood hoopoes** | | | | | | | | | |
| Phoeniculus bollei | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Phoeniculus cyanomelas | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Phoeniculus minor | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Phoeniculus purpureus | 300 | 0 | 0 | 0 | 0 | 0 | 1 | 301 | |
| **Bucerotidae: hornbills** | | | | | | | | | |
| Tockus alboterminatus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Tockus deckeni | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | |
| Tockus erythrorhynchus | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Tockus jacksoni | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Tockus nasutus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Capitonidae: barbets** | | | | | | | | | |
| Buccanodon duchaillui | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 7 | |
| Buccanodon leucotis | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Buccanodon olivaceum | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| Buccanodon whytii | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| Gymnobucco bonapartei | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Lybius bidentatus | 37 | 3 | 0 | 0 | 0 | 0 | 0 | 40 | |
| Lybius diadematus | 68 | 2 | 9 | 0 | 0 | 0 | 0 | 79 | |
| Lybius guifsobalito | 12 | 2 | 1 | 0 | 0 | 0 | 0 | 15 | |
| Lybius hirsutus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Lybius lacrymosus | 97 | 0 | 1 | 1 | 0 | 1 | 2 | 102 | |
| Lybius leucocephalus | 20 | 0 | 2 | 0 | 0 | 0 | 0 | 22 | |
| Lybius melanocephalus | 38 | 0 | 0 | 0 | 0 | 11 | 2 | 51 | |
| Lybius melanopterus | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Lybius minor | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | |
| Lybius rolleti | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Lybius torquatus | 2 | 0 | 0 | 0 | 0 | 1 | 3 | 6 | |
| Lybius vielloti | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | |
| Pogoniulus bilineatus | 179 | 3 | 3 | 5 | 4 | 6 | 1 | 201 | |
| Pogoniulus chrysoconus | 47 | 0 | 1 | 0 | 1 | 2 | 1 | 52 | |
| Pogoniulus leucomystax | 47 | 0 | 49 | 27 | 10 | 3 | 0 | 136 | |
| Pogoniulus pusillus | 15 | 3 | 0 | 0 | 0 | 0 | 2 | 20 | |
| Pogoniulus simplex | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 6 | |
| Trachylaemus purpuratus | 14 | 0 | 1 | 0 | 0 | 0 | 0 | 15 | |
| Trachyphonus darnaudii | 118 | 1 | 0 | 0 | 0 | 5 | 0 | 124 | |
| Trachyphonus erythrocephalus | 27 | 0 | 0 | 0 | 2 | 8 | 3 | 40 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Trachyphonus margaritatus | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 13 | |
| **Indicatoridae: honeyguides** | | | | | | | | | |
| Indicator conirostris | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | |
| Indicator exilis | 13 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | |
| Indicator indicator | 42 | 0 | 1 | 1 | 0 | 0 | 2 | 46 | |
| Indicator meliphilus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Indicator minor | 92 | 2 | 2 | 1 | 2 | 2 | 3 | 104 | |
| Indicator pumilio | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Indicator variegatus | 34 | 1 | 1 | 1 | 4 | 1 | 16 | 58 | |
| Prodotiscus insignis | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Prodotiscus regulus | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| **Picidae: woodpeckers** | | | | | | | | | |
| Jynx ruficollis | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| **Jynx torquilla** | 5 | 4 | 8 | 4 | 19 | 0 | 2 | 42 | |
| Campethera abingoni | 4 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | |
| Campethera bennettii | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | |
| Campethera cailliautii | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Campethera caroli | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 7 | |
| Campethera nivosa | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 9 | |
| Campethera nubica | 38 | 0 | 3 | 1 | 0 | 0 | 0 | 42 | |
| Campethera tullbergi | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Denropicos fuscescens | 54 | 0 | 2 | 0 | 0 | 0 | 1 | 57 | |
| Dendropicos poecilolaemus | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Denropicos stierlingi | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | |
| Mesopicos goertae | 27 | 0 | 0 | 1 | 0 | 0 | 0 | 28 | |
| Mesopicos griseocephalus | 24 | 0 | 2 | 0 | 0 | 0 | 0 | 26 | |
| Picoides obsoletus | 13 | 0 | 3 | 0 | 0 | 0 | 0 | 16 | |
| Thripias namaquus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Eurylaimidae: broadbills** | | | | | | | | | |
| Smithornis capensis | 28 | 9 | 7 | 5 | 1 | 0 | 0 | 50 | |
| **Pittidae: pittas** | | | | | | | | | |
| Pitta angolensis | 3 | 0 | 11 | 40 | 1 | 0 | 5 | 60 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Alaudidae: larks** | | | | | | | | | |
| **Calandrella brachydactyla** | 9 | 3 | 6 | 0 | 2 | 0 | 0 | 20 | |
| Calandrella cinerea | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| Eremopteryx leucopareia | 15 | 0 | 0 | 8 | 1 | 1 | 2 | 27 | |
| Eremopteryx nigriceps | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 8 | |
| Eremopteryx signata | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | |
| Galerida cristata | 10 | 0 | 3 | 0 | 0 | 0 | 4 | 17 | |
| Galerida fremantlii | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| Mirafra africana | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | |
| Mirafra albicauda | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Mirafra cantillans | 7 | 0 | 2 | 1 | 0 | 0 | 0 | 10 | |
| Mirafra hypermetra | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Mirafra poecilosterna | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Mirafra pulpa | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Mirafra rufocinnamomea | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | |
| **Hirundinidae: swallows** | | | | | | | | | |
| **Deilchon urbica** | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 1 |
| Hirundo abyssinica | 1224 | 14 | 14 | 3 | 1 | 6 | 10 | 1272 | |
| Hirundo aethiopica | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| Hirundo angolensis | 241 | 8 | 13 | 2 | 3 | 0 | 0 | 267 | |
| Hirundo atrocaerulea | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Hirundo daurica | 479 | 0 | 5 | 0 | 0 | 0 | 3 | 487 | 1 |
| **Hirundo daurica rufula** | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | |
| Hirundo fuligula | 38 | 0 | 3 | 0 | 2 | 2 | 1 | 46 | |
| Hirundo griseopyga | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| **Hirundo rustica** | 12993 | 196 | 41 | 58 | 482 | 9 | 25 | 13804 | *47 |
| Hirundo semirufa | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Hirundo senegalensis | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| Hirundo smithii | 234 | 6 | 0 | 2 | 0 | 0 | 0 | 242 | |
| Psalidoprocne albiceps | 371 | 1 | 1 | 0 | 1 | 0 | 0 | 374 | |
| Psalidoprocne pristoptera | 179 | 0 | 3 | 1 | 0 | 9 | 0 | 192 | |
| Riparia cincta | 490 | 0 | 0 | 0 | 0 | 0 | 0 | 490 | |
| Riparia paludicola | 1851 | 0 | 0 | 0 | 0 | 1 | 1 | 1853 | |
| **Riparia riparia** | 1782 | 7 | 5 | 7 | 72 | 0 | 10 | 1883 | 1 |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Dicruridae: drongos** | | | | | | | | | |
| Dicrurus adsimilis | 25 | 1 | 3 | 1 | 4 | 4 | 0 | 38 | |
| Dicrurus ludwigii | 35 | 5 | 1 | 2 | 0 | 2 | 1 | 46 | |
| **Oriolidae: orioles** | | | | | | | | | |
| Oriolus auratus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Oriolus brachyrhynchus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Oriolus chlorocephalus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Oriolus larvatus | 17 | 0 | 0 | 0 | 1 | 0 | 1 | 19 | |
| Oriolus nigripennis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Oriolus oriolus** | 29 | 1 | 78 | 101 | 159 | 0 | 5 | 373 | |
| Oriolus percivali | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| **Corvidae: crows** | | | | | | | | | |
| Corvus albus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Ptilostomus afer | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Paridae: tits** | | | | | | | | | |
| Parus albiventris | 47 | 2 | 0 | 0 | 1 | 0 | 0 | 50 | |
| Parus fringillinus | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Parus funereus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Parus leucomelas | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| Parus rufiventris | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | |
| **Remizidae: penduline tits** | | | | | | | | | |
| Remiz caroli | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | |
| **Timaliidae: babblers** | | | | | | | | | |
| Alcippe abyssinica | 222 | 0 | 15 | 22 | 23 | 27 | 0 | 309 | |
| Kakamega poliothorax | 30 | 0 | 0 | 0 | 0 | 2 | 0 | 32 | |
| Trichastoma albipectus | 82 | 0 | 1 | 2 | 1 | 3 | 0 | 89 | |
| Trichastoma fulvescens | 60 | 0 | 0 | 1 | 5 | 1 | 0 | 67 | |
| Trichastoma pyrrhopterum | 96 | 0 | 0 | 0 | 1 | 0 | 0 | 97 | |
| Trichastoma rufipennis | 109 | 21 | 10 | 6 | 7 | 17 | 11 | 181 | |
| Turdoides aylmeri | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Turdoides fulvus | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | |
| Turdoides hypoleucus | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Turdoides jardineii | 13 | 0 | 3 | 0 | 31 | 1 | 0 | 48 | |
| Turdoides melanops | 10 | 0 | 0 | 0 | 18 | 0 | 0 | 28 | |
| Turdoides plebejus | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | |
| Turdoides rubiginosus | 58 | 3 | 0 | 0 | 1 | 0 | 5 | 67 | |
| Turdoides squamulatus | 11 | 0 | 0 | 0 | 0 | 0 | 5 | 16 | |
| **Campephagidae: cuckoo shrikes** | | | | | | | | | |
| Campephaga flava | 74 | 0 | 2 | 5 | 1 | 0 | 1 | 83 | |
| Campephaga quiscalina | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| Coracina caesia | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Pycnonotidae: bulbuls** | | | | | | | | | |
| Andropadus ansorgei | 7 | 0 | 0 | 0 | 1 | 6 | 0 | 14 | |
| Andropadus curvirostris | 133 | 0 | 0 | 0 | 5 | 0 | 0 | 138 | |
| Andropadus gracilirostris | 15 | 0 | 0 | 0 | 1 | 1 | 0 | 17 | |
| Andropadus gracilis | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 14 | |
| Andropadus importunus | 403 | 43 | 2 | 3 | 0 | 2 | 40 | 493 | |
| Andropadus latirostris | 2566 | 1 | 124 | 177 | 116 | 318 | 0 | 3302 | |
| Andropadus masukuensis | 574 | 11 | 39 | 7 | 4 | 6 | 0 | 641 | |
| Andropadus milanjensis | 298 | 0 | 31 | 2 | 2 | 22 | 0 | 355 | |
| Andropadus tephrolaemus | 308 | 7 | 57 | 25 | 27 | 15 | 0 | 439 | |
| Andropadus virens | 618 | 34 | 46 | 5 | 8 | 8 | 12 | 731 | |
| Baeopogon indicator | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Bleda syndactyla | 74 | 0 | 4 | 0 | 1 | 6 | 0 | 85 | |
| Chlorocichla flavicollis | 70 | 2 | 1 | 2 | 0 | 1 | 0 | 76 | |
| Chlorocichla flaviventris | 94 | 11 | 1 | 7 | 1 | 1 | 7 | 122 | |
| Chlorocichla laetissima | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| Criniger calurus | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Nicator chloris | 50 | 2 | 3 | 10 | 1 | 1 | 9 | 76 | |
| Phyllastrephus albigularis | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | |
| Phyllastrephus baumanni | 31 | 0 | 1 | 0 | 1 | 1 | 0 | 34 | |
| Phyllastrephus cabanisi | 23 | 0 | 0 | 0 | 0 | 1 | 0 | 24 | |
| Phyllastrephus cerviniventris | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | |
| Phyllastrephus debilis | 303 | 21 | 4 | 32 | 3 | 6 | 9 | 378 | |
| Phyllastrephus fischeri | 37 | 20 | 7 | 41 | 5 | 2 | 5 | 117 | |
| Phyllastrephus flavostriatus | 90 | 9 | 17 | 4 | 3 | 10 | 3 | 136 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | F |
|---|---|---|---|---|---|---|---|---|---|
| Phyllastrephus placidus | 230 | 3 | 79 | 46 | 49 | 72 | 0 | 479 | |
| Phyllastrephus strepitans | 128 | 7 | 0 | 10 | 0 | 1 | 49 | 195 | |
| Phyllastrephus terrestris | 90 | 3 | 0 | 5 | 1 | 0 | 1 | 100 | |
| Phyllastrephus spp. | 393 | - | - | - | - | - | - | 393 | |
| Pycnonotus barbatus | 2150 | 47 | 43 | 13 | 18 | 17 | 64 | 2352 | |
| **Turdidae: thrushes** | | | | | | | | | |
| Alethe diademata | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Alethe fuelleborni | 226 | 5 | 21 | 0 | 0 | 0 | 0 | 252 | |
| Alethe poliocephala | 439 | 0 | 81 | 41 | 66 | 80 | 0 | 707 | |
| Alethe poliophrys | 11 | 0 | 0 | 0 | 6 | 0 | 0 | 17 | |
| Cercomela familiaris | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| Cercomela melanura | 9 | 0 | 4 | 1 | 1 | 0 | 0 | 15 | |
| Cercomela scotocerca | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Cercomela sordida | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| **Cercotrichas galactotes** | 703 | 46 | 42 | 21 | 37 | 10 | 36 | 895 | |
| Cercotrichas hartlaubi | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| Cercotrichas leucophrys | 171 | 2 | 0 | 0 | 3 | 12 | 4 | 192 | |
| Cercotrichas podobe | 6 | 0 | 8 | 0 | 6 | 0 | 6 | 26 | |
| Cercotrichas quadrivirgata | 124 | 2 | 1 | 20 | 5 | 0 | 25 | 177 | |
| Cichladusa guttata | 38 | 4 | 2 | 1 | 4 | 9 | 4 | 62 | |
| Cossypha caffra | 254 | 4 | 36 | 9 | 2 | 2 | 0 | 307 | |
| Cossypha cyanocampter | 79 | 0 | 0 | 1 | 1 | 4 | 0 | 85 | |
| Cossypha heuglini | 244 | 11 | 2 | 1 | 1 | 3 | 11 | 273 | |
| Cossypha natalensis | 326 | 57 | 31 | 128 | 25 | 5 | 130 | 702 | |
| Cossypha niveicapilla | 71 | 1 | 0 | 1 | 1 | 3 | 0 | 77 | |
| Cossypha roberti | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Cossypha semirufa | 43 | 2 | 11 | 2 | 10 | 14 | 2 | 84 | |
| Dryocichloides anomalus | 3 | 0 | 1 | 7 | 1 | 0 | 0 | 12 | |
| Dryocichloides archeri | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | |
| Dryocichloides lowei | 8 | 4 | 9 | 4 | 0 | 0 | 0 | 25 | |
| Dryocichloides montanus | 93 | 0 | 0 | 0 | 0 | 0 | 0 | 93 | |
| Dryocichloides poliopterus | 43 | 0 | 0 | 0 | 6 | 1 | 0 | 50 | |
| **Irania gutturalis** | 1091 | 102 | 42 | 30 | 31 | 114 | 127 | 1537 | |
| **Luscinia luscinia** | 10232 | 1252 | 946 | 1810 | 1702 | 1383 | 1389 | 18714 | 7 |
| **Luscinia megarhynchos** | 458 | 39 | 45 | 55 | 86 | 17 | 31 | 731 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Luscinia svecica** | 14 | 2 | 10 | 7 | 6 | 0 | 0 | 39 | |
| Modulatrix orostruthus | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 12 | |
| Modulatrix stictigula | 148 | 3 | 7 | 0 | 0 | 0 | 0 | 158 | |
| Monticola angolensis | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | |
| Monticola rufocinerea | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Monticola saxatilis** | 118 | 8 | 3 | 8 | 9 | 5 | 9 | 160 | |
| Myrmecocichla aethiops | 156 | 97 | 42 | 0 | 0 | 0 | 0 | 295 | |
| Myrmecocichla nigra | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| Neocossyphus poensis | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| Neocossyphus rufus | 7 | 3 | 0 | 5 | 0 | 2 | 1 | 18 | |
| Oenanthe bottae heuglini | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Oenanthe deserti** | 11 | 1 | 1 | 0 | 0 | 0 | 0 | 13 | |
| **Oenanthe hispanica** | 2 | 1 | 8 | 5 | 13 | 0 | 6 | 35 | |
| **Oenanthe isabellina** | 98 | 19 | 4 | 9 | 9 | 4 | 4 | 147 | |
| Oenanthe leucopyga | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | |
| **Oenanthe lugens persica** | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| Oenanthe lugens schalowi | 40 | 35 | 14 | 0 | 0 | 0 | 0 | 89 | |
| **Oenanthe oenanthe** | 149 | 24 | 33 | 11 | 7 | 6 | 9 | 239 | |
| Oenanthe pileata | 7 | 1 | 3 | 0 | 0 | 0 | 0 | 11 | |
| **Oenanthe pleschanka** | 46 | 23 | 1 | 2 | 0 | 2 | 12 | 86 | |
| **Phoenicurus ochruros** | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 12 | |
| **Phoenicurus phoenicurus** | 146 | 19 | 59 | 54 | 64 | 0 | 3 | 345 | 1 |
| Pogonocichla stellata | 394 | 13 | 110 | 55 | 76 | 119 | 3 | 770 | |
| **Saxicola rubetra** | 90 | 7 | 7 | 11 | 18 | 0 | 3 | 136 | |
| Saxicola torquata sspp. | 27 | 138 | 52 | 2 | 4 | 0 | 4 | 227 | |
| **Saxicola torquata sspp.** | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 5 | |
| Sheppardia aequatorialis | 317 | 0 | 7 | 1 | 13 | 13 | 0 | 351 | |
| Sheppardia gunningi | 12 | 34 | 23 | 13 | 14 | 4 | 6 | 106 | |
| Sheppardia sharpei | 127 | 5 | 35 | 0 | 0 | 1 | 2 | 170 | |
| Stizorhina fraseri | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| Swynnertonia swynnertoni | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| Thamnolaea cinnamomeiventris | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | |
| Turdus abyssinicus | 557 | 1 | 15 | 11 | 15 | 16 | 1 | 616 | |
| Turdus fischeri | 18 | 3 | 0 | 14 | 0 | 0 | 9 | 44 | |
| Turdus gurneyi | 62 | 3 | 17 | 1 | 0 | 2 | 0 | 85 | |
| Turdus libonyanus | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 5 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Turdus pelios | 75 | 1 | 3 | 0 | 2 | 0 | 0 | 81 | |
| **Turdus philomelos** | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Turdus piaggiae | 18 | 0 | 12 | 5 | 18 | 19 | 0 | 72 | |
| Turdus tephronotus | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| **Sylviidae: warblers** | | | | | | | | | |
| **Acrocephalus arundinaceus** | 272 | 17 | 88 | 144 | 146 | 2 | 22 | 691 | |
| Acrocephalus baeticatus | 36 | 6 | 2 | 1 | 0 | 0 | 0 | 45 | |
| Acrocephalus gracilirostris | 147 | 0 | 5 | 1 | 0 | 6 | 0 | 159 | |
| **Acrocephalus griseldis** | 445 | 38 | 37 | 41 | 41 | 108 | 58 | 768 | |
| **Acrocephalus palustris** | 17247 | 1907 | 3418 | 3953 | 6802 | 3219 | 1899 | 38445 | *12 |
| Acrocephalus rufescens | 65 | 0 | 1 | 0 | 0 | 1 | 0 | 67 | |
| **Acrocephalus schoenobaenus** | 2057 | 13 | 23 | 93 | 60 | 14 | 623 | 2883 | 2 |
| **Acrocephalus scirpaceus** | 1519 | 75 | 355 | 1013 | 460 | 8 | 3593 | 7023 | 3 |
| **Acrocephalus stentoreus** | 6 | 2 | 0 | 0 | 0 | 0 | 1 | 9 | |
| Apalis binotata | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | |
| Apalis cinerea | 63 | 0 | 0 | 1 | 0 | 3 | 0 | 67 | |
| Apalis flavida | 65 | 28 | 2 | 1 | 0 | 2 | 1 | 99 | |
| Apalis jacksoni | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | |
| Aplalis melanocephala | 13 | 0 | 0 | 1 | 0 | 0 | 1 | 15 | |
| Apalis moreaui | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Apalis porphyrolaema | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 4 | |
| Apalis pulchra | 168 | 1 | 1 | 6 | 4 | 10 | 0 | 190 | |
| Apalis ruwenzori | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | |
| Apalis thoracica | 34 | 2 | 26 | 5 | 3 | 6 | 2 | 78 | |
| Bathmocercus cerviniventris | 172 | 0 | 0 | 0 | 6 | 5 | 0 | 183 | |
| Bathmocercus winifredae | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Bradypterus alfredi | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Bradypterus baboecala | 47 | 0 | 4 | 1 | 0 | 4 | 0 | 56 | |
| Bradypterus barratti | 62 | 0 | 26 | 7 | 12 | 7 | 0 | 114 | |
| Bradypterus carpalis | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | |
| Bradypterus cinnamomeus | 89 | 0 | 0 | 0 | 6 | 7 | 0 | 102 | |
| Camaroptera brachyura | 811 | 57 | 11 | 31 | 22 | 14 | 53 | 999 | |
| Camaroptera chloronota | 106 | 0 | 0 | 0 | 3 | 5 | 1 | 115 | |
| Camaroptera simplex | 46 | 3 | 0 | 0 | 3 | 2 | 3 | 57 | |
| Chloropeta gracilirostris | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Chloropeta natalensis | 71 | 0 | 1 | 1 | 1 | 0 | 0 | 74 | |
| Chloropeta similis | 62 | 0 | 0 | 0 | 4 | 5 | 0 | 71 | |
| Cisticola brachyptera | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | |
| Cisticola brunnescens | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Cisticola cantans | 158 | 0 | 2 | 3 | 0 | 3 | 1 | 167 | |
| Cisticola carruthersi | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | |
| Cisticola chiniana | 143 | 14 | 0 | 0 | 4 | 6 | 0 | 167 | |
| Cisticola chubbi | 68 | 8 | 6 | 6 | 5 | 8 | 0 | 101 | |
| Cisticola cinereola | 2 | 1 | 0 | 0 | 3 | 2 | 0 | 8 | |
| Cisticola erythrops | 121 | 1 | 0 | 1 | 3 | 1 | 1 | 128 | |
| Cisticola fulvicapilla | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | |
| Cisticola galactotes | 445 | 3 | 0 | 7 | 0 | 3 | 2 | 460 | |
| Cisticola hunteri | 100 | 0 | 0 | 0 | 2 | 3 | 0 | 105 | |
| Cisticola juncidis | 13 | 0 | 1 | 2 | 0 | 0 | 0 | 16 | |
| Cisticola lais | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Cisticola lateralis | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Cisticola nana | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| Cisticola natalensis | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | |
| Cisticola njombe | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Cisticola robusta | 58 | 0 | 0 | 0 | 0 | 0 | 4 | 62 | |
| Cisticola tinniens | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Cisticola woosnami | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| Eminia lepida | 247 | 9 | 1 | 6 | 4 | 11 | 0 | 278 | |
| Eremomela flavicrissalis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Eremomela icteropygialis | 10 | 0 | 0 | 0 | 0 | 2 | 1 | 13 | |
| Eremomela scotops | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | |
| Heliolais erythroptera | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| **Hippolais icterina** | 7 | 0 | 14 | 14 | 31 | 0 | 2 | 68 | |
| **Hippolais languida** | 230 | 40 | 6 | 18 | 3 | 17 | 15 | 329 | |
| **Hippolais olivetorum** | 251 | 11 | 18 | 5 | 24 | 6 | 11 | 326 | |
| **Hippolais pallida** | 423 | 65 | 204 | 337 | 411 | 82 | 141 | 1663 | |
| Hylia prasina | 73 | 0 | 2 | 0 | 0 | 0 | 0 | 75 | |
| Hyliota flavigaster | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | |
| **Locustella fluviatilis** | 1883 | 323 | 205 | 318 | 73 | 205 | 202 | 3209 | |
| **Locustella luscinioides** | 16 | 0 | 18 | 28 | 0 | 0 | 56 | 118 | |
| **Locustella naevia** | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Macrosphenus kretschmeri | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 6 | |
| Orthotomus metopias | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | |
| Parisoma boehmi | 4 | 0 | 0 | 0 | 0 | 3 | 1 | 8 | |
| Parisoma lugens | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| Phyllolais pulchella | 23 | 1 | 0 | 0 | 0 | 0 | 0 | 24 | |
| **Phylloscopus bonelli** | 10 | 0 | 1 | 1 | 0 | 0 | 2 | 14 | |
| Phylloscopus budongoensis | 12 | 0 | 0 | 0 | 1 | 1 | 2 | 16 | |
| **Phylloscopus collybita** | 23 | 0 | 11 | 0 | 0 | 0 | 0 | 34 | *0 |
| Phylloscopus laetus | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | |
| Phylloscopus ruficapilla | 107 | 0 | 2 | 0 | 0 | 8 | 0 | 117 | |
| **Phylloscopus sibilatrix** | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 5 | |
| **Phylloscopus trochilus** | 4170 | 334 | 419 | 331 | 83 | 48 | 135 | 5520 | *2 |
| Phylloscopus umbrovirens | 71 | 0 | 30 | 10 | 38 | 57 | 0 | 206 | |
| Prinia bairdii | 128 | 0 | 0 | 0 | 5 | 3 | 0 | 136 | |
| Prinia gracilis | 0 | 1 | 10 | 0 | 0 | 0 | 2 | 13 | |
| Prinia leucopogon | 146 | 0 | 0 | 2 | 0 | 0 | 0 | 148 | |
| Prinia somalica | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Prinia subflava | 189 | 14 | 11 | 1 | 5 | 3 | 2 | 225 | |
| Schoenicola platyura | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Sphenoeacus mentalis | 12 | 1 | 0 | 0 | 0 | 1 | 0 | 14 | |
| Spiloptila rufifrons | 7 | 0 | 0 | 0 | 0 | 3 | 0 | 10 | |
| **Sylvia atricapilla** | 1275 | 49 | 353 | 124 | 157 | 11 | 2 | 1971 | *5 |
| **Sylvia borin** | 2102 | 113 | 328 | 458 | 905 | 38 | 34 | 3978 | 1 |
| **Sylvia communis** | 16051 | 1675 | 1334 | 949 | 1403 | 1054 | 2064 | 24530 | 3 |
| **Sylvia curruca** | 368 | 15 | 325 | 56 | 142 | 0 | 1457 | 2363 | 1 |
| **Sylvia hortensis** | 9 | 35 | 35 | 36 | 39 | 0 | 1 | 155 | |
| Sylvia leucomelaina | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | |
| **Sylvia melanocephala** | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | |
| **Sylvia mystacea** | 17 | 2 | 44 | 5 | 14 | 0 | 0 | 82 | |
| **Sylvia nana** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Sylvia nisoria** | 535 | 105 | 108 | 100 | 169 | 26 | 63 | 1106 | *1 |
| **Sylvia rueppellii** | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | |
| Sylvietta brachyura | 42 | 12 | 0 | 2 | 1 | 2 | 2 | 61 | |
| Sylvietta isabellina | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Sylvietta leucophrys | 25 | 0 | 3 | 0 | 10 | 17 | 0 | 55 | |
| Sylvietta rufescens | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Sylvietta virens | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| Sylvietta whytii | 76 | 1 | 4 | 2 | 4 | 4 | 1 | 92 | |
| **Muscicapidae: flycatchers** | | | | | | | | | |
| Bradornis microrhynchus | 77 | 0 | 4 | 0 | 0 | 9 | 2 | 92 | |
| Bradornis pallidus | 30 | 1 | 2 | 1 | 11 | 0 | 1 | 46 | |
| Empidornis semipartitus | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| **Ficedula albicollis** | 2 | 1 | 1 | 2 | 5 | 0 | 2 | 13 | |
| **Ficedula hypoleuca** | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | |
| Melaenornis chocolatina | 242 | 9 | 20 | 5 | 6 | 10 | 0 | 292 | |
| Melaenornis edolioides | 47 | 0 | 2 | 3 | 1 | 0 | 0 | 53 | |
| Melaenornis pammelaina | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Muscicapa adusta | 146 | 1 | 25 | 9 | 9 | 9 | 0 | 199 | |
| Muscicapa aquatica | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | |
| Muscicapa caerulescens | 8 | 0 | 0 | 4 | 0 | 0 | 9 | 21 | |
| Muscicapa gambagae | 2 | 3 | 4 | 0 | 0 | 0 | 1 | 10 | |
| Muscicapa griseigularis | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| **Muscicapa striata** | 642 | 48 | 160 | 151 | 360 | 12 | 40 | 1413 | 1 |
| Myioparus plumbeus | 8 | 1 | 0 | 2 | 0 | 1 | 0 | 12 | |
| Batis capensis | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | |
| Batis diops | 3 | 0 | 0 | 0 | 5 | 0 | 0 | 8 | |
| Batis minor | 47 | 5 | 0 | 0 | 0 | 1 | 2 | 55 | |
| Batis mixta | 167 | 20 | 35 | 13 | 3 | 4 | 0 | 242 | |
| Batis molitor | 46 | 1 | 0 | 1 | 1 | 2 | 2 | 53 | |
| Batis orientalis | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Batis perkeo | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Batis soror | 11 | 0 | 0 | 0 | 4 | 0 | 0 | 15 | |
| Platysteira blissetti | 80 | 0 | 1 | 0 | 2 | 1 | 0 | 84 | |
| Platysteira castanea | 24 | 0 | 0 | 0 | 3 | 0 | 0 | 27 | |
| Platysteira concreta | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 7 | |
| Platysteira cyanea | 114 | 2 | 2 | 0 | 0 | 0 | 0 | 118 | |
| Platystcira peltata | 51 | 7 | 0 | 2 | 4 | 2 | 16 | 82 | |
| Erannornis longicauda | 53 | 1 | 2 | 2 | 0 | 1 | 0 | 59 | |
| Erythrocercus holochlorus | 18 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | |
| Terpsiphone rufiventer | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| Terpsiphone viridis | 251 | 12 | 15 | 3 | 17 | 12 | 17 | 327 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Terpsiphone rufiventer x viridis | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Trochocercus albiventris | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | |
| Trochocercus albonotatus | 172 | 0 | 21 | 7 | 21 | 22 | 0 | 243 | |
| Trochocercus cyanomelas | 65 | 13 | 9 | 23 | 4 | 1 | 48 | 163 | |
| Trochocercus nigromitratus | 61 | 0 | 5 | 0 | 0 | 6 | 0 | 72 | |
| **Motacillidae: pipits, wagtails** | | | | | | | | | |
| **Anthus campestris** | 5 | 0 | 1 | 1 | 0 | 0 | 0 | 7 | |
| **Anthus cervinus** | 123 | 757 | 5 | 0 | 0 | 0 | 1 | 886 | |
| Anthus leucophrys | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | |
| Anthus novaeseelandiae | 116 | 2 | 0 | 0 | 0 | 1 | 1 | 120 | |
| Anthus sokokensis | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 8 | |
| **Anthus trivialis** | 330 | 40 | 55 | 33 | 47 | 15 | 4 | 524 | |
| Macronyx aurantiigula | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 14 | |
| Macronyx croceus | 40 | 1 | 2 | 0 | 0 | 0 | 0 | 43 | |
| Macronyx sharpei | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Motacilla aguimp | 428 | 25 | 13 | 7 | 11 | 3 | 1 | 488 | |
| **Motacilla alba** | 49 | 1 | 5 | 2 | 0 | 0 | 0 | 57 | *1 |
| Motacilla capensis | 15 | 0 | 1 | 0 | 0 | 0 | 0 | 16 | |
| **Motacilla cinerea** | 19 | 2 | 2 | 1 | 3 | 0 | 0 | 27 | *0 |
| Motacilla clara | 18 | 0 | 1 | 0 | 0 | 0 | 0 | 19 | |
| **Motacilla flava** | 49681 | 2770 | 391 | 510 | 64 | 210 | 1 | 53627 | 32 |
| Tmetothylacus tenellus | 43 | 16 | 2 | 2 | 0 | 0 | 1 | 64 | |
| **Malaconotidae: bush shrikes** | | | | | | | | | |
| Dryoscopus cubla | 44 | 0 | 3 | 1 | 4 | 1 | 6 | 59 | |
| Dryoscopus gambensis | 20 | 0 | 3 | 0 | 0 | 0 | 0 | 23 | |
| Laniarius barbarus | 86 | 0 | 4 | 0 | 0 | 0 | 0 | 90 | |
| Laniarius ferrugineus | 138 | 2 | 2 | 3 | 8 | 1 | 5 | 159 | |
| Laniarius fuelleborni | 43 | 3 | 19 | 4 | 3 | 0 | 0 | 72 | |
| Laniarius funebris | 69 | 3 | 0 | 0 | 0 | 2 | 0 | 74 | |
| Laniarius luehderi | 63 | 0 | 1 | 0 | 0 | 0 | 0 | 64 | |
| Laniarius mufumbiri | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Malaconotus blanchoti | 8 | 1 | 0 | 1 | 2 | 0 | 1 | 13 | |
| Malaconotus bocagei | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Malaconotus dohertyi | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Malaconotus multicolor | 9 | 0 | 3 | 2 | 1 | 1 | 0 | 16 | |
| Malaconotus quadricolor | 14 | 0 | 0 | 2 | 0 | 1 | 0 | 17 | |
| Malaconotus sulfureopectus | 41 | 2 | 1 | 0 | 0 | 0 | 3 | 47 | |
| Nilaus afer | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | |
| Rhodophoneus cruentus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Tchagra australis | 121 | 2 | 0 | 0 | 1 | 0 | 2 | 126 | |
| Tchagra jamesi | 12 | 0 | 0 | 4 | 1 | 0 | 0 | 17 | |
| Tchagra minuta | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | |
| Tchagra senegala | 50 | 2 | 3 | 0 | 3 | 0 | 0 | 58 | |
| **Laniidae: shrikes** | | | | | | | | | |
| Lanius cabanisi | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| Lanius collaris | 213 | 44 | 17 | 2 | 6 | 5 | 2 | 289 | |
| **Lanius collurio** | 799 | 109 | 243 | 399 | 564 | 9 | 86 | 2209 | *0 |
| Lanius dorsalis | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| **Lanius excubitor** | 6 | 3 | 4 | 3 | 4 | 0 | 0 | 20 | |
| Lanius excubitorius | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | |
| **Lanius isabellinus** | 583 | 34 | 30 | 0 | 31 | 15 | 43 | 736 | 2 |
| **Lanius collurio + isabellinus†** | 240 | - | - | - | - | - | - | 240 | |
| **Lanius collurio x isabellinus** | 9 | 0 | 1 | 0 | 1 | 0 | 0 | 11 | |
| Lanius mackinnoni | 7 | 0 | 1 | 1 | 0 | 2 | 0 | 11 | |
| **Lanius minor** | 8 | 4 | 32 | 15 | 63 | 0 | 1 | 123 | 1 |
| **Lanius nubicus** | 37 | 17 | 77 | 108 | 186 | 0 | 17 | 442 | 1 |
| **Lanius senator** | 4 | 8 | 28 | 39 | 133 | 0 | 0 | 212 | |
| **Prionopidae: helmet shrikes** | | | | | | | | | |
| Eurocephalus rueppelli | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | |
| Prionops plumata | 3 | 0 | 1 | 0 | 13 | 1 | 0 | 18 | |
| Prionops retzii | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | |
| Prionops scopifrons | 26 | 0 | 0 | 1 | 0 | 0 | 0 | 27 | |
| **Sturnidae: starlings** | | | | | | | | | |
| Cinnyricinclus femoralis | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Cinnyricinclus leucogaster | 77 | 0 | 13 | 10 | 4 | 0 | 0 | 104 | |
| Cinnyricinclus sharpii | 15 | 0 | 0 | 1 | 0 | 0 | 0 | 16 | |
| Cosmopsarus regius | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Creatophora cinerea | 193 | 1 | 1 | 0 | 2 | 0 | 1 | 198 | |
| Lamprotornis chalybaeus | 109 | 274 | 91 | 0 | 0 | 0 | 0 | 474 | 1 |
| Lamprotornis chloropterus | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Lamprotornis corruscus | 13 | 2 | 0 | 1 | 0 | 0 | 0 | 16 | |
| Lamprotornis purpuropterus | 27 | 48 | 12 | 0 | 0 | 0 | 0 | 87 | |
| Onychognathus walleri | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | |
| Poeoptera kenricki | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Poeoptera stuhlmanni | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Spreo hildebrandti | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | |
| Spreo shelleyi | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Spreo superbus | 115 | 34 | 4 | 0 | 0 | 0 | 0 | 153 | |
| Buphagus erythrorhynchus | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| **Nectariniidae: sunbirds** | | | | | | | | | |
| Anthreptes collaris | 280 | 7 | 2 | 7 | 5 | 5 | 25 | 331 | |
| Anthreptes fraseri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Anthreptes longuemarei | 4 | 0 | 0 | 0 | 1 | 3 | 1 | 9 | |
| Anthreptes metallicus | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 13 | |
| Anthreptes neglectus | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Anthreptes orientalis | 19 | 0 | 0 | 0 | 3 | 4 | 0 | 26 | |
| Anthreptes platurus | 0 | 0 | 52 | 8 | 5 | 0 | 0 | 65 | |
| Anthreptes rectirostris | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| Anthreptes reichenowi | 17 | 2 | 0 | 4 | 0 | 0 | 0 | 23 | |
| Anthreptes rubritorques | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Nectarinia alinae | 12 | 0 | 0 | 0 | 9 | 0 | 0 | 21 | |
| Nectarinia amethystina | 73 | 0 | 8 | 4 | 9 | 7 | 3 | 104 | |
| Nectarinia bifasciata | 78 | 0 | 0 | 0 | 0 | 0 | 2 | 80 | |
| Nectarinia bouveri | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Nectarinia chloropygia | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| Nectarinia cuprea | 164 | 0 | 1 | 0 | 0 | 1 | 3 | 169 | |
| Nectarinia erythroceria | 425 | 2 | 0 | 0 | 0 | 0 | 0 | 427 | |
| Nectarinia famosa | 444 | 1 | 2 | 0 | 0 | 0 | 0 | 447 | |
| Nectarinia habessinica | 10 | 0 | 32 | 8 | 15 | 0 | 0 | 65 | |
| Nectarinia hunteri | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Nectarinia kilimensis | 1108 | 11 | 11 | 13 | 1 | 12 | 0 | 1156 | |
| Nectarinia loveridgei | 27 | 10 | 10 | 0 | 0 | 0 | 0 | 47 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Nectarinia mariquensis | 161 | 2 | 4 | 0 | 0 | 0 | 0 | 167 | |
| Nectarinia mediocris | 311 | 73 | 374 | 258 | 92 | 4 | 0 | 1112 | |
| Nectarinia olivacea | 725 | 31 | 112 | 68 | 76 | 161 | 129 | 1302 | |
| Nectarinia preussi | 311 | 2 | 4 | 16 | 19 | 24 | 0 | 376 | |
| Nectarinia pulchella | 133 | 0 | 3 | 0 | 1 | 12 | 1 | 150 | |
| Nectarinia regia | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 7 | |
| Nectarinia reichenowi | 1192 | 0 | 2 | 2 | 0 | 0 | 0 | 1196 | 1 |
| Nectarinia rufipennis | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| Nectarinia seimundi | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Nectarinia senegalensis | 277 | 8 | 0 | 0 | 3 | 12 | 11 | 311 | |
| Nectarinia shelleyi | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | |
| Nectarinia tacazze | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 149 | |
| Nectarinia talatala | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | |
| Nectarinia venusta | 604 | 8 | 59 | 11 | 1 | 2 | 10 | 695 | |
| Nectarinia veroxii | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Nectarinia verticalis | 252 | 6 | 6 | 4 | 10 | 7 | 5 | 290 | |
| **Zosteropidae: white-eyes** | | | | | | | | | |
| Zosterops abyssinica | - | 7 | 8 | 2 | 0 | 0 | 3 | 20 | |
| Zosterops poliogastra | - | 4 | 26 | 36 | 67 | 165 | 0 | 298 | |
| Zosterops senegalensis | - | 17 | 85 | 15 | 11 | 14 | 3 | 145 | |
| Zosterops spp. | 1104 | - | - | - | - | - | - | 1104 | |
| **Ploceidae: weavers** | | | | | | | | | |
| Amblyospiza albifrons | 82 | 0 | 6 | 0 | 0 | 0 | 0 | 88 | |
| Anaplectes rubriceps | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | |
| Anomalospiza imberbis | 93 | 0 | 1 | 0 | 0 | 0 | 0 | 94 | |
| Euplectes afer | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 6 | |
| Euplectes albonotatus | 193 | 1 | 0 | 0 | 2 | 1 | 0 | 197 | |
| Euplectes ardens | 149 | 0 | 6 | 0 | 11 | 1 | 40 | 207 | |
| Euplectes axillaris | 549 | 0 | 2 | 0 | 3 | 0 | 0 | 554 | |
| Euplectes capensis | 70 | 0 | 1 | 3 | 15 | 11 | 0 | 100 | |
| Euplectes diadematus | 26 | 0 | 4 | 0 | 0 | 0 | 0 | 30 | |
| Euplectes gierowii | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | |
| Euplectes hordeaceus | 50 | 1 | 0 | 0 | 1 | 0 | 0 | 52 | |
| Euplectes jacksoni | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Euplectes macrourus | 19 | 0 | 0 | 0 | 0 | 2 | 28 | 49 | |
| Euplectes nigroventris | 62 | 9 | 4 | 0 | 0 | 0 | 1 | 76 | |
| Euplectes orix | 22 | 1 | 0 | 0 | 4 | 1 | 1 | 29 | |
| Euplectes progne | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | |
| Malimbus rubricollis | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| Ploceus alienus | 7 | 0 | 0 | 0 | 4 | 0 | 0 | 11 | |
| Ploceus aurantius | 84 | 2 | 0 | 0 | 0 | 1 | 0 | 87 | |
| Ploceus baglafecht | 757 | 100 | 54 | 3 | 3 | 5 | 0 | 922 | |
| Ploceus bertrandi | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| Ploceus bicolor | 45 | 5 | 3 | 0 | 0 | 1 | 15 | 69 | |
| Ploceus bojeri | 173 | 0 | 0 | 7 | 0 | 0 | 0 | 180 | |
| Ploceus castaneiceps | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| Ploceus castanops | 224 | 0 | 3 | 0 | 0 | 0 | 0 | 227 | |
| Ploceus cucullatus | 707 | 10 | 0 | 0 | 3 | 11 | 6 | 737 | |
| Ploceus galbula | 7 | 0 | 33 | 0 | 0 | 0 | 0 | 40 | |
| Ploceus golandi | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | |
| Ploceus insignis | 34 | 0 | 0 | 2 | 1 | 0 | 0 | 37 | |
| Ploceus intermedius | 532 | 1 | 20 | 3 | 3 | 18 | 10 | 587 | |
| Ploceus jacksoni | 497 | 0 | 0 | 0 | 0 | 0 | 0 | 497 | |
| Ploceus luteolus | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | |
| Ploceus melanocephalus | 1467 | 7 | 0 | 0 | 0 | 0 | 0 | 1474 | |
| Ploceus melanogaster | 94 | 0 | 1 | 2 | 1 | 1 | 0 | 99 | |
| Ploceus nigerrimus | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 146 | |
| Ploceus nigricollis | 143 | 2 | 0 | 0 | 1 | 0 | 0 | 146 | |
| Ploceus ocularis | 314 | 7 | 5 | 3 | 9 | 5 | 13 | 356 | |
| Ploceus pelzelni | 458 | 7 | 0 | 0 | 0 | 0 | 0 | 465 | |
| Ploceus rubiginosus | 96 | 1 | 2 | 0 | 0 | 1 | 0 | 100 | 1 |
| Ploceus rueppelli | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 29 | |
| Ploceus spekei | 153 | 0 | 0 | 1 | 0 | 0 | 3 | 157 | |
| Ploceus subaureus | 63 | 2 | 0 | 0 | 0 | 0 | 0 | 65 | |
| Ploceus superciliosus | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| Ploceus velatus | 89 | 7 | 18 | 4 | 28 | 29 | 18 | 193 | |
| Ploceus weynsi | 168 | 0 | 0 | 0 | 0 | 0 | 0 | 168 | |
| Ploceus xanthops | 116 | 0 | 7 | 4 | 2 | 5 | 3 | 137 | |
| Quelea cardinalis | 142 | 0 | 0 | 0 | 0 | 4 | 3 | 149 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Quelea erythrops | 287 | 12 | 2 | 0 | 0 | 0 | 3 | 304 | |
| Quelea quelea | 732 | 5 | 0 | 4 | 0 | 2 | 1 | 744 | *0 |
| Bubalornis niger | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| Dinemellia dinemelli | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |
| Plocepasser donaldsoni | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Plocepasser mahali | 82 | 0 | 0 | 0 | 0 | 0 | 0 | 82 | |
| Pseudonigrita arnaudi | 121 | 0 | 0 | 0 | 175 | 317 | 226 | 839 | |
| Pseudonigrita cabanisi | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | |
| Passer castanopterus | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Passer eminibey | 37 | 0 | 0 | 0 | 3 | 28 | 39 | 107 | |
| Passer griseus | 297 | 4 | 0 | 1 | 3 | 3 | 6 | 314 | |
| Passer luteus | 0 | 11 | 44 | 1 | 6 | 0 | 0 | 62 | |
| Passer motitensis | 163 | 117 | 63 | 2 | 0 | 4 | 0 | 349 | |
| **Petronia brachydactyla** | 0 | 4 | 1 | 0 | 43 | 0 | 0 | 48 | |
| Petronia dentata | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | |
| Petronia pyrgita | 46 | 2 | 0 | 0 | 9 | 5 | 3 | 65 | |
| Petronia superciliaris | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| Sporopipes frontalis | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | |
| Hypochera chalybeata | 62 | 0 | 1 | 1 | 0 | 0 | 0 | 64 | |
| Hypochera purpurascens | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| Vidua fischeri | 1 | 0 | 0 | 0 | 0 | 4 | 1 | 6 | |
| Vidua hypocherina | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Vidua macroura | 287 | 0 | 1 | 1 | 1 | 0 | 11 | 301 | |
| Vidua paradisaea | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | |
| **Estrildidae: waxbills** | | | | | | | | | |
| Amandava subflava | 62 | 0 | 0 | 0 | 2 | 1 | 23 | 88 | |
| Clytospiza monteiri | 38 | 1 | 0 | 0 | 0 | 0 | 0 | 39 | |
| Cryptospiza jacksoni | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | |
| Cryptospiza reichenovii | 225 | 9 | 106 | 37 | 2 | 1 | 0 | 380 | |
| Cryptospiza salvadorii | 260 | 0 | 8 | 25 | 14 | 57 | 0 | 364 | |
| Cryptospiza shelleyi | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Estrilda astrild | 420 | 1 | 12 | 10 | 4 | 0 | 14 | 461 | |
| Estrilda atricapilla | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Estrilda erythronotus | 23 | 0 | 0 | 0 | 0 | 1 | 0 | 24 | |
| Estrilda melanotis | 83 | 0 | 24 | 12 | 1 | 2 | 0 | 122 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| Estrilda nonnula | 158 | 2 | 1 | 0 | 0 | 0 | 0 | 161 | |
| Estrilda paludicola | 61 | 0 | 2 | 0 | 1 | 0 | 0 | 64 | |
| Estrilda rhodopyga | 56 | 1 | 0 | 0 | 0 | 0 | 5 | 62 | |
| Estrilda troglodytes | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Hypargos niveioguttatus | 69 | 20 | 21 | 13 | 2 | 4 | 14 | 143 | |
| Lagonosticta rhodopareia | 68 | 0 | 0 | 0 | 3 | 9 | 0 | 80 | |
| Lagonosticta rubricata | 77 | 0 | 21 | 5 | 2 | 4 | 1 | 110 | |
| Lagonosticta rufopicta | 40 | 0 | 0 | 0 | 0 | 0 | 1 | 41 | |
| Lagonosticta senegala | 757 | 2 | 10 | 26 | 3 | 11 | 11 | 820 | |
| Mandingoa nitidula | 53 | 5 | 4 | 7 | 4 | 3 | 21 | 97 | |
| Nesocharis ansorgei | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Nigrita canicapilla | 72 | 0 | 0 | 0 | 5 | 18 | 0 | 95 | |
| Nigrita fusconota | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Ortygospiza atricollis | 94 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | |
| Ortygospiza locustella | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| Pyrenestes minor | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | |
| Pyrenestes ostrinus | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | |
| Pytilia afra | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | |
| Pytilia melba | 175 | 6 | 0 | 0 | 12 | 9 | 4 | 206 | |
| Spermophaga ruficapilla | 274 | 2 | 1 | 3 | 8 | 2 | 0 | 290 | |
| Uraeginthus angolensis | 2 | 1 | 0 | 0 | 1 | 20 | 6 | 30 | |
| Uraeginthus bengalus | 356 | 0 | 6 | 4 | 0 | 4 | 4 | 374 | |
| Uraeginthus cyanocephalus | 19 | 0 | 0 | 0 | 0 | 8 | 10 | 37 | |
| Uraeginthus ianthinogaster | 116 | 0 | 6 | 12 | 0 | 2 | 0 | 136 | |
| Amadina fasciata | 19 | 0 | 0 | 0 | 1 | 0 | 24 | 44 | |
| Lonchura bicolor | 303 | 5 | 21 | 10 | 2 | 1 | 0 | 342 | |
| Lonchura cucullata | 581 | 6 | 13 | 4 | 6 | 5 | 21 | 636 | |
| Lonchura fringilloides | 11 | 0 | 0 | 0 | 1 | 0 | 0 | 12 | |
| Lonchura griseicapilla | 4 | 0 | 0 | 0 | 0 | 6 | 3 | 13 | |
| Lonchura malabarica | 18 | 1 | 5 | 3 | 2 | 93 | 12 | 134 | |
| **Fringillidae: buntings, seed-eaters** | | | | | | | | | |
| Emberiza cabanisi | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | |
| **Emberiza caesia** | 0 | 3 | 14 | 46 | 67 | 0 | 0 | 130 | |
| **Emberiza cineracea** | 0 | 3 | 2 | 2 | 3 | 0 | 0 | 10 | |
| Emberiza flaviventris | 27 | 0 | 4 | 1 | 1 | 0 | 0 | 33 | |

Table 1 *continued*

| Family/species | 60–81 | 81–2 | 82–3 | 83–4 | 84–5 | 85–6 | 86–7 | 60–87 | R |
|---|---|---|---|---|---|---|---|---|---|
| **Emberiza hortulana** | 0 | 79 | 35 | 91 | 169 | 0 | 0 | 374 | |
| Emberiza poliopleura | 24 | 0 | 0 | 3 | 0 | 2 | 6 | 35 | |
| Emberiza striolata | 1 | 10 | 47 | 5 | 0 | 0 | 0 | 63 | |
| Emberiza tahapisi | 14 | 0 | 4 | 0 | 42 | 0 | 3 | 63 | |
| Linurgus olivaceus | 239 | 1 | 8 | 1 | 0 | 0 | 0 | 249 | |
| Rhodopechys githaginea | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 | |
| Serinus atrogularis | 136 | 0 | 0 | 0 | 0 | 1 | 0 | 137 | |
| Serinus burtoni | 256 | 15 | 26 | 11 | 6 | 9 | 0 | 323 | |
| Serinus canicollis | 67 | 0 | 10 | 13 | 4 | 0 | 0 | 94 | |
| Serinus citrinelloides | 559 | 1 | 25 | 14 | 1 | 0 | 0 | 600 | |
| Serinus donaldsoni | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | |
| Serinus dorsostriatus | 133 | 0 | 0 | 0 | 2 | 10 | 2 | 147 | |
| Serinus gularis | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | |
| Serinus koliensis | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | |
| Serinus mozambicus | 174 | 1 | 3 | 0 | 3 | 2 | 1 | 184 | |
| Serinus reichardi | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | |
| Serinus striolatus | 1208 | 12 | 75 | 36 | 10 | 3 | 0 | 1344 | |
| Serinus sulphuratus | 224 | 3 | 0 | 0 | 7 | 0 | 11 | 245 | |
| Totals | 230385 | 14256 | 17579 | 14987 | 18213 | 9930 | 14411 | 319761 | 197 |

**Table 2**
**The twenty most-ringed species in eastern Africa**

| Rank | Species | 1960 to 1987 total |
|---|---|---|
| 1st | *Motacilla flava* Yellow Wagtail | 53627 |
| 2nd | *Acrocephalus palustris* Marsh Warbler | 38445 |
| 3rd | *Sylvia communis* Whitethroat | 24530 |
| 4th | *Luscinia luscinia* Sprosser | 18714 |
| 5th | *Calidris minuta* Little Stint | 15710 |
| 6th | *Hirundo rustica* Eurasian Swallow | 13804 |
| 7th | *Phoeniconaias minor* Lesser Flamingo | 8026 |
| 8th | *Philomachus pugnax* Ruff | 7167 |
| 9th | *Acrocephalus scirpaceus* Reed Warbler | 7023 |
| 10th | *Phylloscopus trochilus* Willow Warbler | 5520 |
| 11th | *Sylvia borin* Garden Warbler | 3978 |
| 12th | *Andropadus latirostris* Yellow-whiskered Greenbul | 3302 |
| 13th | *Locustella fluviatilis* River Warbler | 3209 |
| 14th | *Calidris ferruginea* Curlew Sandpiper | 2958 |
| 15th | *Acrocephalus schoenobaenus* Sedge Warbler | 2883 |
| 16th | *Sylvia curruca* Lesser Whitethroat | 2363 |
| 17th | *Pycnototus barbatus* Common Bulbul | 2352 |
| 18th | *Lanius collurio* Red-backed Shrike | 2209 |
| 19th | *Merops bullockoides* White-fronted Bee-eater | 2174 |
| 20th | *Sylvia atricapilla* Blackcap | 1971 |

## Key to symbols, abbreviations and terms used in Table 3

| | | |
|---|---|---|
| Ring number: | where this is in *italics* the ring has been returned. | |
| Age: | i | immature |
| | fg | full grown, age uncertain |
| | A | adult |
| | 1 | pullus (= nestling or chick) |
| | 2 | full grown, year of hatching unknown |
| | 3 | hatched during year of ringing |
| | 4 | hatched before year of ringing, exact year unknown |
| | 5 | hatched during previous calendar year |
| | 6 | hatched before previous calendar year but exact year unknown. |
| Sex: | m | male |
| | f | female. |
| Manner of recovery: | + | shot or killed by man |
| | x | found dead or dying |
| | xL | found dead (not recent) |
| | x*ca* | killed by cat |
| | /?/ | manner of recovery unknown |
| | () | caught or trapped alive and not released, or released with ring removed |
| | v | caught or trapped, released with ring (= control) |
| | vB | as v above but breeding. |
| | vv | sighting of a colour-marked bird |
| Date of recovery: | | where this is in brackets this is the date of the reporting letter; zeros mean that the day or month were not given |
| | aut | autumn |
| | sum | summer |
| | win | winter. |
| Distance: | | the great circle distance between the ringing and recovery sites to the nearest 5 km. |
| Elapsed time: | | given in days. |

## Key to ringing schemes

| | | |
|---|---|---|
| *B* ..... Bombay | *K* ..... København | *Pr* ..... Praha |
| *Br* ..... Bruxelles | *Ka* ..... Kaunas | *R* ..... Radolfzell |
| *C* ..... Cyprus | *L* ..... London | *S* ..... Stockholm |
| *G* ..... Gdansk | *M* ..... Moskwa | *T* ..... Tehran |
| *H* ..... Helgoland | *Ma* ..... Matsalu | *TA* ..... Tel Aviv |
| *Hi* ..... Hiddensee | *N* ..... Nairobi | *Z* ..... Zagreb |
| *Hk* ..... Helsinki | *P* ..... Pretoria | |

**Table 3**
**Recoveries and controls of birds affecting eastern Africa**

***Pelecanus onocrotalus* White Pelican**

| | | | |
|---|---|---|---|
| *L* ? | 1 | ? | Lake Shala, **Ethiopia** 7°30N, 38°30E. |
| | vv | 78/79 | Lake Ras Amer, Dinder Park, **Sudan** 12°35N, 35°07E, 675 km (*per* GN). |

***Bubulcus ibis* Cattle Egret**

| | | | |
|---|---|---|---|
| *P* 600396 | 1 | 12.12.70 | Benoni, Transvaal, **South Africa** 26°11S, 28°18E (C. Hunter). |
| | x | 10.09.80 | Musoma, **Tanzania** 2°09S, 33°27E, 2730 km, 3560 d (J. Harding). |

***Ciconia ciconia* White Stork**

| | | | |
|---|---|---|---|
| *H* 239074 | 1 | 19.06.54 | Seefelder Außendeich, Weser Ems, **West Germany** 53°27N, 8°21E (O. Wiepken). |
| | x | 26.05.55 | Boro, Bahr el Ghazal, **Sudan** 8°28N, 25°41E, 5235 km, 341 d (*per* GN). |
| *Pr* B7635 | 1 | 04.07.55 | Cicarovce, Trebisov, **Czechoslovakia** 48°33N, 22°02E (A. Stollmann). |
| | x | 03.11.55 | Mongalla, **Sudan** 5°10N, 31°47E, 4910 km, 122 d (*per* GN). |
| *H* 212801 | 1 | 23.06.34 | Oldenbrok, Weser Ems, **West Germany** 53°17N, 8°24E. |
| | + | 30.10.34 | Dul, Singa, **Sudan** 12°52N, 34°23E, 5040 km, 129 d (*per* GN) |
| *H* 216803 | 1 | 16.06.34 | Bardenfleth, Weser Ems, **West Germany** 53°14N, 8°22E. |
| | + | 30.10.34 | Dul, Singa, **Sudan** 12°52N, 34°23E, 5040 km, 136 d (*per* GN) |
| *M* B51286 | 1 | 14.06.57 | Belovegskaya, **USSR** 52°40N, 24°00E. |
| | | 00.02.80 | **Sudan**, ring found in Khartoum Museum (*per* GN). |
| *H* 242305 | 1 | 24.06.61 | Wohlde, Schleswig-Holstein, **West Germany** 54°23N, 9°19E. |
| | + | 13.04.85 | Gadaref, **Sudan** 14°12N, 35°33E, 5012 km, 8694 d (*per* GN). |
| *R* BB17922 | 1 | 07.07.64 | Großpetersdorf, Burgenland, **Austria** 47°15N, 16°19E (R. Trieble). |
| | /?/ | (17.06.86) | *between* Khartoum and Jebel Aulia, **Sudan** 15°25N, 32°30E, 3839 km, *c.* 8015 d (*per* GN). |
| *R* B56363 | 1 | 01.06.70 | Pírgos, Thessalonika, Macedonia, **Greece** 40°38N, 22°44E (G. Müller). |
| | x | 18.02.82 | New Halfa, Kassala, **Sudan** 15°37N, 35°36E, 3045 km, 4280 d (J. Geypens). |
| *H* 3425 | 1 | 29.06.74 | Mustin, Schleswig-Holstein, **West Germany** 53°41N, 10°53E (BG Goos/Kelm). |
| | x | 15.06.79 | New Halfa, **Sudan** 15°37N, 35°36E, 4745 km, 1812 d (*per* GN). |

| | | | |
|---|---|---|---|
| *H* 4316 | 1 | 02.07.74 | Seeth, Schleswig-Holstein, **West Germany** 54°20N, 9°10E |
| | + | 00.08.83 | Abu Naama, Blue Nile, **Sudan** 12°42N, 34°08E, 5115 km, >3316 d; see *Helgoland 5177* below (*per* GN). |
| *H* 5177 | 1 | 08.06.76 | Seeth, Schleswig-Holstein, **West Germany** 54°22N, 9°10E. |
| | + | 00.08.83 | Abu Naama, Blue Nile, **Sudan** 12°42N, 34°08E, 5120 km, >2610 d (*per* GN). |

This bird, and *Helgoland 4316*, both ringed in the same nest in different years, were shot together at the same place on the same day.

| | | | |
|---|---|---|---|
| *G* V7806 | 1 | 19.07.76 | Samarzewo, Ladek, Konin, **Poland** 52°13N, 14°46E (M. Keller). |
| | + | 25.08.83 | Wada'a, El Fasher, Darfur, **Sudan** 12°50N, 25°45E, 4485 km, 2593 d (Y. Mohamed). |
| *H* 6013 | 1 | 25.06.78 | Großkampen, Schleswig-Holstein, **West Germany** 53°54N, 9°25E (G. Dahms). |
| | x | 15.08.78 | Kabkabiyah, **Sudan** 13°39N, 24°05E, 4655 km, 51 d (B. Mohamed). |
| *H* 9451 | 1 | 28.06.79 | Spieka, Lüneburg, **West Germany** 53°45N, 8°35E (E. Meybohm). |
| | x | (15.01.82) | **Kenya**; <932 d; ring handed in with no information or finder's name (*per* GCB). |
| *H* 1904 | 1 | 28.06.80 | Leine/Aller, Niedersachsen, **West Germany** 52°43N, 9°35E. |
| | /?/ | 15.12.85 | Khartoum, **Sudan** 15°45N, 32°30E, 4575 km, 1996 d (*per* GN). |
| *H* 442F | 1 | 22.06.81 | Wingst-Oppeln, Lüneburg, Niedersachsen **West Germany** 53°44N, 9°00E (BGE.U.M.Meybohm). |
| | /?/ | 19.09.82 | South Kordofan, **Sudan** *c.* 13°N, 30°E, *c.* 4890 km, 454 d (E.A. Elnour). |
| *Pr* B17945 | 1 | 28.06.81 | Drahany, Prostejov, **Czechoslovakia** 49°26N, 16°54E (A. Toman). |
| | x | 25.04.82 | Kitale, **Kenya** 1°00N, 35°00E, 5650 km, 301 d (T.K. Roberts). |
| Z D110451 | 1 | 05.06.65 | Centa, **Yugoslavia** 45°07N, 20°23E |
| | x | wint 70 | Gadaref, **Sudan** 14°24N, 35°30E, 3700 km, >1973 d (*per* GN). |
| Z D128299 | 1 | 07.07.81 | Jabuka, Vojvodina, **Yugoslavia** 44°57N, 18°18E (I.Pelle). |
| | x | 01.11.82 | New Halfa, **Sudan** 15°37N, 35°36E, 3640 km, 482 d (GN). |
| *Pr* B4936 | 1 | 24.07.81 | Budisov, Trebíc, **Czechoslovakia** 49°17N, 16°00 E (J. Havlín). |
| | + | 12.12.82 | Shabaga, **Sudan** *c.* 14°15N, 32°12E, 4165 km, 506 d; this bird also carried ring *Vavra Budisov 1981* (*per* GN). |

| | | | |
|---|---|---|---|
| *H* 0767 | 1 | 29.07.81 | Wanna-Süderleda, Lüneburg, **West Germany** 53°43N, 8°49E (BG E.U.M. Meybohm). |
| | x | 19.02.83 | Mwiti kira, Dodoma, **Tanzania** 6°31S, 35°39E, 7040 km, 570 d (C.C.H. Elliott). |
| *Pr* B19192 | 1 | 07.06.82 | Brezhrad, Hradec Králové, **Czechoslovakia** 50°10N, 15°47E. (J. Zajíc). |
| | /?/ | sum 83 | **Sudan** (ring handed in to Khartoum Museum) (*per* GN). |
| *M* A131857 | 1 | 19.06.82 | Dyakovsky, Litinsky, Vinnitsa, Ukraine SSR, **USSR** 49°19N, 28°05E. |
| | /?/ | (00.12.82) | Khartoum, **Sudan** 15°30N, 32°33E, 3780 km, *c.* 165 d (Moscow Ringing Centre). |
| *H* 1335 | 1 | 28.06.82 | Schloß Ricklingen, Hannover, **West Germany** 52°26N, 9°30E (B. Loehmer). |
| | x | 25.03.83 | Kibwezi, **Kenya** 2°25S, 37°58E, 6565 km, 270 d (*per* GCB). |
| *K* 7530 | 1 | 13.07.82 | Skovby, Haderslev, Jylland, **Denmark** 55°10N, 9°23E. |
| | x | 11.11.82 | Nakuru, **Kenya** 0°18S, 35°59N, 6620 km, 121 d (P-E. Svale and Danish Ringing Office). |
| *Pr* HH138 | 1 | 25.06.83 | Mospríz, Jindrichuv Hradec, **Czechoslovakia** 49°08N, 15°05E (J. Holecek). |
| | + | 11.01.84 | Eldoret, **Kenya** 0°30N, 35°15E, 5735 km, 200 d (W.K. Maio). |
| *Z* D127733 | 1 | 07.07.83 | Jabuka, Vojvodina, **Yugoslavia** 44°57N, 20°36E. |
| | x | aut 83 | Kashim el Gibra, **Sudan** 14°55N, 35°55E, 3635 km (*per* GN). |
| *H* 763A | 1 | 09.07.83 | Barsbek, Schleswig-Holstein, **West Germany** 54°24N, 10°19E (G. Fiedler). |
| | x | 13.11.83 | Darfur Region, **Sudan** *c.* 13°N, 25°E, *c.* 4775 km, 127 d (A.M. Abbker Idris). |
| *G* 6581V | 1 | 24.07.84 | Szeszki, Kowale Oleckie Suwaki, **Poland** 54°11N, 22°21E (Polish Ringing Office). |
| | x | 30.09.84 | El Okeid, **Sudan** 13°12N, 30°15E, 4605 km, 68 d (Dr D. Hamed). |
| *Ka* 901888 | 1 | 27.07.84 | Alytus, Lithuanian SSR, **USSR** 54°23N, 24°04E (J. Smigelskas). |
| | x | 01.10.84 | Iddel Ghanam (150 km W of Nyala), **Sudan** 11°44N, 23°44E, 4740 km, 66 d (G. Calderbank). |
| *Hi* A1899 | 1 | 25.06.78 | Neuruppin, **East Germany** 52°45N, 12°45E. |
| | x | 15.11.80 | Khartoum, **Sudan** 15°26N, 32°36E, 4500 km, 874 d (*per* GN). |
| *Hi* B1955 | 1 | 05.07.86 | Gorden, Bad Liebenwerda, **East Germany** 51°31N, 13°24E. |
| | x | 26.02.87 | Saboti, Kitale, **Kenya** 0°56N, 34°50E, 5970 km, 236 d; hit by tractor (*per* GCB). |
| *Hi* A5896 | 1 | 02.07.82 | Jetschbea, Bautzen, **East Germany** 51°11N, 14°26E. |
| | vv | 02.04.83 | Nakuru, **Kenya** 0°16S, 36°04E, 6070 km, 274 d (V. Haas). |

| | | | |
|---|---|---|---|
| *G* V5821 | 1 | 14.07.85 | Chocielewko Dolne, Nowa Wies Leborska, (Slupsk), **Poland** 54°32N, 17°01E (T. Solinski). |
| | x | 00.04.87 | *near* Kitale, **Kenya** 1°01N, 35°00E, 6155 km, *c.* 625 d; hit by tractor (*per* P. Robinson). |
| *Hi* K3315 | 1 | 05.07.73 | Eisenhüttenstadt, Lawitz, **East Germany** 52°08N, 14°38E (*per* Vogelwarte Hiddensee). |
| | x | 00.03.85 | near Kitale, **Kenya** 1°01N, 35°00E, 5990 km, >4284 d; hit by tractor (*per* P. Robinson). |
| *G* V9898 | 1 | 14.07.86 | Czerwony Dwòr, Suwalki, **Poland** 54°07N, 22°12E (K. Zyskowski). |
| | x | 20.04.87 | Narok, **Kenya** 1°04S, 35°44E, 6260 km, 280 d (J. Dillon). |

The White Stork is the most recovered bird by far in eastern Africa.

***Plegadis falcinellus* Glossy Ibis**

| | | | |
|---|---|---|---|
| *M* D443581 | 1 | 28.06.58 | Kzyl Agachsky, Azerbaydzhan SSR, **USSR** 39°00N, 48°50E. |
| | | 15.05.80 | **Sudan**, ring in Khartoum Museum (*per* GN and Moscow Ringing Centre). |

***Platalea leucorodia* Eurasian Spoonbill**

| | | | |
|---|---|---|---|
| *R* B66525 | 1 | 19.07.82 | Illmitz, Neusiedl, Burgenland, **Austria** 47°46N, 16°48E (A. Grüll). |
| | /?/ | (23.01.84) | El Fasher, **Sudan** 13°37N, 25°22E, 3880 km, *c.* 553 d (M.A. Ibrahim). |

***Phoeniconaias minor* Lesser Flamingo**

| | | | |
|---|---|---|---|
| *L* 1020487 | 1 | 30.10.62 | Lake Magadi, **Kenya** 2°00S, 36°10E (L.H. Brown, *et al.*). |
| | () | (01.08.87) | Dodoma, **Tanzania** 6°10S, 35°40E (bird alive in cage), 480 km, [9041 d] (D.R. Missingo, via BTO). |
| *L* 1040688 | 1 | 31.10.62 | Lake Magadi, **Kenya** (L.H. Brown, *et al.*). |
| | + | 10.1082 | *near* Eliye Springs, Lake Turkana, Kenya 3°30N, 36°03E, 600 km, 7284 d (caught at night with aid of torches, clubbed to death), (*per* J. Packenham, via BTO). |
| *L* 1032989 | 1 | 01.11.62 | Lake Magadi, **Kenya** (L.H. Brown, *et al.*). |
| | /?/ | 20.05.87 | Mto wa Mbu, Lake Manyara, **Tanzania** 3°15S, 36°00E, 155 km, 8966 d (R. Nathanael, via BTO). |

***Phoenicopterus ruber* Greater Flamingo**

| | | | |
|---|---|---|---|
| *T* LL13845 | 1 | 24.07.80 | Lake Uromiyeh, Azarbayjan, **Iran** 37°32N, 45°42E. |
| | /?/ | *c.* 1980 | Port Sudan, **Sudan** 19°38N, 37°07E (ring only found in the possession of a Sudanese), 2155 km (*per* DAS) . |

***Anas erythrorhynchos* Red-billed Teal**

| | | | |
|---|---|---|---|
| *P* 651551 | i m | 13.08.81 | Barberspan, Transvaal, **South Africa** 26°36S, 25°36E (Barberspan Orn. Res. Station). |
| | + | 11.11.82 | Mbeya, **Tanzania** 8°40S, 34°20E (Min. of Natural Resources), 2195 km, 455 d. |

| | | | |
|---|---|---|---|
| *P* 651792 | a m | 05.08.82 | Barberspan, Transvaal, **South Africa** 26°33S, 25°36E (Barberspan Orn. Res. Station). |
| | + | 00.12.83 | *near* Mbeya, **Tanzania** 8°54S, 33°27E, 2130 km, >482 d (*per* K.M. Howell). |

Both these birds were almost certainly killed by eating insecticide-treated rice.

***Anas querquedula* Garganey**

| | | | |
|---|---|---|---|
| *N* H1691 | 6 m | 11.11.78 | Juba, **Sudan** 4°52N, 31°30E (GN). |
| | + | 00.10.82 | Krutinskiy region, Omsk oblast, Russian SFSR, **USSR**, 56°04N, 71°24E, 6690 km, *c.* 1430 d (Moscow Ringing Centre). |

The first recovery of a Garganey affecting eastern Africa.

***Netta erythrophthalma* Southern Pochard**

| | | | |
|---|---|---|---|
| *P* 759214 | a m | 14.02.77 | Barberspan, Transvaal, **South Africa** 26°33S, 25°36E (Barberspan Orn. Res. Station). |
| | + | 26.05.81 | Mbeya, **Tanzania** 8°40S, 34°20E (unintentionally killed by crop spray), 2190 km, 1562 d (T.C.E. Congdon). |

***Buteo buteo vulpinus* Steppe Buzzard**

| | | | |
|---|---|---|---|
| *Hk* D53786 | 1 | 27.06.75 | Mustasaari, Korsholm, Vaasan Lääni, **Finland** 63°18N, 21°40E (F. Matts). |
| | x | 15.04.85 | Miri-Bara Dam, Kadugli, Kordofan, **Sudan** 11°15N, 29°40E, 5820 km, 3580 d (*per* GN). |

***Anthropoides virgo* Demoiselle Crane**

| | | | |
|---|---|---|---|
| — | 1 | 09.1892 | Ascania Nova, Crimea, **USSR** *c.* 56°N, 35°E. |
| | + | 1896 | Shaigi, near Dongola, **Sudan** *c.* 18°30N, 30°30E. |

This bird carried a letter with the place and date of its origin in a metal tube (*per* GN).

***Charadrius leschenaultii* Greater Sandplover**

| | | | |
|---|---|---|---|
| *N A42779* | 4 | 07.09.81 | 10 km S of Suakin, Red Sea, **Sudan** 19°08N, 37°17E (GN, DJP). |
| | + | 03.04.82 | Habara Steppe, **Syria** 35°40N, 37°45E (killed while breeding—it had a nest with 4 eggs) 1840 km, 208 d (*per* A. Termanini). |

The first recovery of the species affecting eastern Africa.

***Charadrius mongolus* Lesser Sandplover**

| | | | |
|---|---|---|---|
| *N* A43250 | 4 | 21.12.82 | Mida Creek, **Kenya** 3°22S, 39°58E (DJP). |
| | + | 03.09.85 | backwater of Shadi Kor, Pasni, Baluchistan, **Pakistan** 25°13N, 63°30E, 4065 km, 987 d (J. Bashir). |

This is the first recovery of the species affecting eastern Africa (and the first of any species to Pakistan) and also the first recovery from the over 3000 waders ringed in coastal Kenya.

***Vanellus armatus* Blacksmith Plover**

| | | | |
|---|---|---|---|
| *N* C1615 | A | 20.10.70 | Lake Naivasha, Kenya (PLB, HAB). |
| | *f?l* | *c.* 1977 | Lake Ol Bolossat, Kenya, 60 km, >2629 d (*per* J. Thompson). |

***Actitis hypoleucos* Common Sandpiper**

| | | | |
|---|---|---|---|
| *P* BB41704 | 4 | 15.12.81 | Harare, **Zimbabwe** 17°40S, 30°51E (A.J. Tree). |
| | + | 23.03.83 | **Sudan/Zaïre** border S of Yambio 4°30N, 28°15E, 2480 km, 463 d (*per* J. Moller). |

***Tringa nebularia* Greenshank**

| | | | |
|---|---|---|---|
| *N C5313* | 4 | 06.11.80 | Suakin, Red Sea, **Sudan** 19°08N, 37°17E (GN). |
| | + | 02.05.86 | Kaduysky region, Vologda Oblast, **USSR** 59°15N, 37°11E, 4460 km, 2003 d (Moscow Ringing Centre). |

The first recovery of the species affecting eastern Africa.

***Calidris minuta* Little Stint**

| | | | |
|---|---|---|---|
| *P* AA36208 | 2 | 13.01.82 | Darwendale Dam, **Zimbabwe** 17°52S, 30°30E (D. Elliott). |
| | v | 14.05.83 | Lake Magadi, **Kenya** 2°00S, 36°10E, 1870 km, 486 d (DJP, DEGB). |
| *N* K2001 | 4 | 07.12.82 | Jebl Aulia dam, Sudan 15°15N, 32°28E (GN). |
| | v | 09.03.83 | Khartoum, Sudan 15°31N, 32°35E, 30 km, 92 d (GN). |

***Philomachus pugnax* Ruff**

| | | | |
|---|---|---|---|
| *N B16688* | 4 f | 02.12.78 | Lake Magadi, **Kenya** 2°00S, 36°10E, (DJP, DEGB). |
| | x | 19.05.85 | Vilyuy River, Suntarsk Region, Yakut ASSR, **USSR**, 62°08N, 117°05E, 9730 km, 2360 d (Moscow Ringing Centre). |
| *N* C2137 | 3 m | 03.11.82 | Hasaheisa, Sudan 14°25N, 33°20E (GN). |
| | + | 15.02.85 | 330 km S of Khartoum, Sudan *c.* 13°00N, 34°00E, 170 km, *c.* 835 d (*per* K.M. Ahmed). |
| *N C2933* | 3 m | 31.08.78 | Aweil, **Sudan** 8°46N, 27°24E (GN). |
| | + | 22.05.84 | Toybokhoy, Suntarskiy Region, Yakutian ASSR, **USSR** 62°08N, 116°51E, 9110 km, 2091 d (Moscow Ringing Centre). |
| *N* B18706 | 5 f | 02.01.83 | Lake Nakuru, **Kenya** 0°20S, 36°06E (DJP, JPD). |
| | x | 07/08.86 | Naoursum Reserve, Khazakstan SSR, **USSR** 51°36N, 64°29E, 6355 km, >1275 d; found in the nest of a Hobby *Falco subbuteo* (*per* E.I. Gavrilov). |
| *N* B27267 | 6 f | 16.01.83 | Khartoum, **Sudan** 15°33N, 32°35E (GN). |
| | + | 22.05.83 | Verkhnevilyiski District, Yakutian ASSR, **USSR**, 63°23N, 120°19E, 8350 km, 126 d (Moscow Ringing Centre). |
| *N* B27080 | 6 f | 22.08.81 | Kosti, Sudan 13°10N, 32°50E (GN). |
| | + | 20.11.81 | Manaquil, Gezeira, Sudan 14°15N, 32°50E, 120 km, 90 d (S.I. Ibrahim). |
| *N C1684* | 6 m | 16.01.82 | Lake Magadi, **Kenya** 2°00S, 36°10E, (DJP). |
| | + | 16.05.82 | Motyginski District, Krasnoyarsk, **USSR** 58°11N, 94°36E, 8420 km, 120 d (Moscow Ringing Centre). |
| *B B50481* | 2 f | 16.09.82 | Bharatpur, Rajasthan, **India** 27°15N, 77°30E (Bombay Natural History Society). |
| | + | 27.01.84 | Mwea, **Kenya** 1°17S, 36°50E, 5380 km, 498 d (G. Rebelo). |

The Ruff has provided the best series of recoveries of any wader, mostly due to its popularity with hunters. *Bombay B50481* is the second involving India and Kenya. *Nairobi B18706*, found in a Hobby's nest, was an unusually large prey item for this small falcon and was also the furthest west Ruff recovery in the USSR.

***Stercorarius parasiticus* Arctic Skua**

| | | | |
|---|---|---|---|
| *L* EH11311 | 1 | 08.07.81 | Foula, Shetland, **UK** 60°08N, 2°05W (Brathay E.G.). |
| | x | 03.01.85 | Omdurman, **Sudan** 15°37N, 32°29°E, 5675 km, 1275 d (El Tayeb Ali Mohmed). |

This was the first record of the species for the Sudan and was also unusual in being far inland.

***Sterna caspia* Caspian Tern**

| | | | |
|---|---|---|---|
| | vv | 02.01.87 | Sabaki River mouth, **Kenya** 3°09S,40°09E (also seen next day). |

This ringed bird was photographed by Mr Terry Mathews; an inscription is visible in giant enlargements from the negatives but the definition is not good enough to trace even the country of origin. Caspian Terns from the USSR and Sweden have been recovered in Sudan (Nikolaus & Backhurst 1982) and one from Finland has been found in Ethiopia (Ash 1981) but this is the first ringed example to have been detected in Kenya.

***Sterna hirundo* Common Tern**

| | | | |
|---|---|---|---|
| *TA* DD1238 | 1 | 30.06.82 | Ma'agan Micha'el, **Israel** 34°55N, 32°34E. |
| | x | 00.02.83 | Diani Beach, S of Mombasa, **Kenya** 4°18S, 39°35E, 4420 km, >215 d (*per* J. Langer). |
| *G* HC32338 | 1 | 08.06.81 | Grabòwka Pond, Ruda Sulowska, Milicz, Wroclaw, **Poland** 51°31N, 17°06E (A. Mrugasiewicz). |
| | v/x | 21.10.84 | Lake Naivasha, **Kenya** 6085 km, 1231 d. Caught alive by torchlight, released but found dead next day. (W.H. Buskirk). |
| *G* HC 58946 | 1 | 11.06.86 | Laszczòw, Zamosc, **Poland** 50°32N, 23°43E (Z. Wròbel). |
| | + | 00.12.87 | Malindi, **Kenya** 3°14S, 40°08E, 6180 km, *c.* 550 d (M. Szpilewski). |

Common Terns are very rare at inland waters in Kenya.

***Rynchops flavirostris* African Skimmer**

| | | | |
|---|---|---|---|
| *N* B30504 | A | 25.08.86 | Wadi Halfa, Sudan (GN *et al.*). |
| | + | 25.10.86 | Abr Rakham village, Sudan *c.* 13°45N, 34°10E, 955 km, 61 d (*per* P. Vernon). |

The first recovery of the species affecting eastern Africa, and from only 24 ringed.

***Streptopelia turtur* Turtle Dove**

| | | | |
|---|---|---|---|
| *M* P375455 | 3 | 18.06.78 | Ural River, 60 km NE of Uralsk, Kazakh SSR, **USSR** 51°22N, 52°20E (Iz. Kaz. SSR). |
| | + | 00.04.83 | 25 km S of Khartoum, **Sudan** 15°27N, 32°40E, 4360 km, >1746 d (*per* GN and Moscow Ringing Centre). |
| *N* C2083 | 3 | 20.09.82 | 10 km S of Suakin, Red Sea, **Sudan** 19°08N, 37°17E (GN). |
| | + | 29.08.85 | *near* Fergana, Uzbek SSR, **USSR** 40°21N, 71°43E, 4030 km, 1074 d (Moscow Ringing Centre). |
| *N* C6028 | 4 | 21.09.84 | Khor Arba'at, Red Sea, **Sudan** (GN, DJP, BR). |
| | + | 14.09.85 | Mingechaur, Azerbaydzhan SSR, **USSR** 40°50N, 47°04E, 2520 km, 358 d (Moscow Ringing Centre). |

These are the first Turtle Dove recoveries and show the recovery potential of the species of which only 119 have been ringed, all in the Sudan.

***Apus apus* Eurasian Swift**

| | | | |
|---|---|---|---|
| *L* SB11397 | 4 | 24.06.83 | Shrewsbury, Shorpshire, **England** 52°43N, 2°42W. |
| | x | 15.12.84 | Kasulu, **Tanzania** 4°35S, 30°10E, 7075 km, 540 d (British Trust for Ornithology). |

***Hirundo rustica* Eurasian Swallow**

| | | | |
|---|---|---|---|
| *N* J171704 | 6 | 27.01.85 | Mufulira, **Zambia** 12°34S, 28°16E (K-HL, WL). |
| | () | 28.06.85 | Leninsk-Kuznetsky, Kemerovsk Oblast, **USSR** 54°36N, 86°14E, 9220 km, 152 d (Moscow Ringing Centre). |
| *N* J171055 | 4 | 17.02.85 | Mufulira, **Zambia** (LAH). |
| | x*ca* | 20.06.85 | Leningrad, **USSR** 59°23N, 32°04E, 8000 km, 123 d (Moscow Ringing Centre). |
| *Hk* V003386 | 3 | 03.08.83 | Espoo, Uudenmaan, **Finland** 60°09N, 24°44E. |
| | v | 03.05.84 | Mumias, **Kenya** 00°20N, 34°29E, 6700 km, 274 d (E. Nicholas, *per* GCB). |
| *Ma* 452854 | 4 | 05.08.80 | Häädemeeste, Pärnu region, Estonian SSR, **USSR** 58°06N, 24°29E (Operation Baltic). |
| | + | 14.10.80 | Alupe, Busia, **Kenya** 00°30N, 34°08E, 6460 km, 70 d (*per* H.J. Enserink). |
| *M XA879548* | 4 f | 11.05.81 | Chokpak, Dzhambul, Kazakh SSR, **USSR** 42°31N, 70°38E. |
| | v | 21.02.82 | Kariobangi Sewage Works, Nairobi, **Kenya** 5920 km, 286 d; re-ringed *Nairobi J166927* (DJP, DEGB). |
| *Pr* T168573 | 3 | 11.05.80 | Sedlec, Nesyt Pond (at roost), Breclav, **Czechoslovakia** 48°47N, 16°42E (C. Folk). |
| | + | 26.10.81 | Alupe, Busia, **Kenya** 00°30N, 34°08E, 5620 km, 533 d (*per* H.J. Enserink). |

More recoveries have resulted from Eurasian Swallow ringing in eastern Africa than for any other species; there have also been good numbers of foreign-ringed birds found here, particularly in the Kenya/Uganda border area of Busia District.

***Luscinia luscinia* Sprosser**

| | | | |
|---|---|---|---|
| *N J154398* | 3 | 14.11.80 | Ngulia, Tsavo, **Kenya** 3°00S, 38°13E (NRG). |
| | x | 12.06.86 | Kursk Region, Kursk Oblast, **USSR** 51°48N, 36°05E, 6090 km, 2036 d (Moscow Ringing Centre). |
| *N* J159577 | 3 | 10.12.80 | Ngulia, Tsavo, **Kenya**; caught at night (NRG). |
| | x | 02.07.81 | Krolevetskiy Region, Sumskaya Oblast, Ukraine SSR, **USSR** 51°36N, 33°23E, 6085 km, 204 d (Moscow Ringing Centre). |
| *N* J167990 | 3 | 25.11.81 | Ngulia, Tsavo, **Kenya**; caught at night (NRG). |
| | vB | 10.06.82 | Soskua, Lappeenranta, Kymi, **Finland** 61°03N, 28°23E, 7170 km, 197 d (T. Pyyhtiä). |
| *N* A45171 | 3 | 13.11.82 | Ngulia, Tsavo, **Kenya**; caught at night (NRG). |
| | x | 28.04.86 | Kibbutz Dalia, **Israel** 32°35N, 35°05E, 3970 km, 1262 d (Y. Fitelson). |
| *N* X42769 | 3 | 13.12.85 | Ngulia, Tsavo, **Kenya**; caught at night (NRG). |
| | + | 03.09.86 | Ras Ba'albek, Beqa'a, **Lebanon** 34°00N, 36°12E, 4120 km, 264 d (M.A. Khoudari). |

***Acrocephalus palustris* Marsh Warbler**

| | | | |
|---|---|---|---|
| *N* J124753 | 3 | 12.12.77 | Ngulia, Tsavo, **Kenya** 3°00S, 38°13E; caught at night (NRG). |
| | v | 27.05.80 | Praha-Jenerálka, **Czechoslovakia** 50°07N, 14°21E 6330 km, 897–928 d; also retrapped at Praha-Jenerálka on 27.06.80. (Prague Ringing Office). |
| *C* 01006677 | 3 | 05.10.80 | Akrotiri Sewage Farm, **Cyprus** 34°37N, 32°58E (M. Lobb). |
| | v | 14.08.83 | Khor Arba'at, Red Sea, **Sudan**, 1695 km, 1043 d; re-ringed with *Nairobi J 80451* (GN). |
| *B r*41297554 | 3 | 15.08.81 | Hoboken, Antwerpen, **Belgium** 51°10N, 4°21E (Wrg. 41 Antwerpen). |
| | v | 08.09.82 | Khor Arba'at, Red Sea, **Sudan**, 4500 km, 389 d; re-ringed with *Nairobi J162949* (GN). |
| *H* 9F54369 | 3 | 31.07.83 | Bad Oldeslohe, Schleswig-Holstein, **West Germany** 53°49N, 10°23E (P. Hinze). |
| | v | 18.09.83 | Khor Arba'at, Red Sea, **Sudan**, 4410 km, 49 d; *Nairobi J188910* added (GN). |
| *N* X31255 | 4 | 23.11.84 | Ngulia, Tsavo, **Kenya**; caught at night (NRG). |
| | + | 07.05.85 | Salalah, **Oman** 17°00N, 54°04E, 2835 km, 165 d (*per* S.B. Ajham). |

***Acrocephalus schoenobaenus* Sedge Warbler**

| | | | |
|---|---|---|---|
| *N* X55617 | 4 | 05.09.86 | Wadi Halfa, **Sudan** 21°55N, 31°20E (GN *et al.*). |
| | x | 22.04.87 | Eskisehir, **Turkey** 39°46N, 30°30E, 1985 km, 229 d (Yusuf Öztürk). |

The second recovery affecting eastern Africa: the first was from Central Kenya to north-west of the Caspian Sea in 1972.

***Acrocephalus scirpaceus* Reed Warbler**

| | | | |
|---|---|---|---|
| *C* 01006507 | 4 | 17.08.80 | Akrotiri Salt Lake, **Cyprus** 34°37N, 32°58E (M. Lobb). |
| | + | 12.09.83 | Khartoum, **Sudan** 15°33N, 32°35E, 2120 km, 1121 d (*per* GN). |
| *N* J164076 | 3 | 22.10.82 | Wad Medani, **Sudan** 14°24N, 33°30E (GN, DJP). |
| | + | 10.05.83 | Abshar, Shadegan, Khozestan, **Iran** 30°37N, 48°45E, 2380 km, 200 d (*per* R. Khalili). |

***Phylloscopus collybita* Chiffchaff**

| | | | |
|---|---|---|---|
| *Hk* K861898 | 1 | 21.06.76 | **Finland** 61°N, 23°E. |
| | /?/ | 29.12.76 | **Uganda** 2°N, 32°E, 6600 km, 191 d. |

***Phylloscopus trochilus* Willow Warbler**

| | | | |
|---|---|---|---|
| *Hk* Y058297 | 3 | 19.08.77 | **Finland** 61°N, 21°E. |
| | /?/ | 20.10.80 | **Uganda** 1°N, 34°E, 6760 km, 1158 d. |

These two *Phylloscopus* recoveries were supplied by R.J. Dowsett; further details are awaited.

***Sylvia atricapilla* Blackcap**

| | | | |
|---|---|---|---|
| *N* J160061 | 3 m | 17.10.80 | Erkowit, Red Sea, **Sudan** 18°45N, 37°10E (GN). |
| | + | 14.11.82 | Nicosia, **Cyprus** 35°11N, 33°23E, 1865 km, 758 d (Th. Hadjikyriacos). |

| | | | |
|---|---|---|---|
| *N* J160417 | 4 f | 06.01.81 | Gilo, **Sudan** 4°01N, 32°51E (GN). |
| | + | 04.05.82 | *near* Zahle, **Lebanon** 33°50N, 35°55E, 3330 km, 483 d. |
| *R* BT43913 | 2 f | 22.09.82 | *c.* 150 km NE of Bawita, **Egypt** *c.* 29°00N, 29°20E (H. Biebach). |
| | v | 23.09.84 | Khor Arba'at, Red Sea, **Sudan** 19°48N, 37°03E, 1285 km, 732 d (GN, BR). |
| *N* A48207 | 5 f | 01.05.84 | Sanganeb Island, Red Sea, **Sudan** 19°44N, 37°26E (DAS). |
| | + | 20.09.85 | Paralimni, **Cyprus** 35°03N, 35°59E, 1710 km, 507 d (*per* Game Department, Nicosia). |

***Sylvia communis* Whitethroat**

| | | | |
|---|---|---|---|
| *N J137043* | 3 | 25.11.79 | Ngulia, Tsavo, **Kenya** 3°00S, 38°13E (NRG). |
| | x | aut 81 | Arskiy Region, Tatar ASSR, **USSR** 56°02N, 49°51E, 6645 km, >630 d (Moscow Ringing Centre). |
| *N J148425* | 4 | 13.12.79 | Ngulia, Tsavo, **Kenya**; caught at night (NRG). |
| | + | (05.05.86) | Al-Fedmi, Al-Mahrah, **South Yemen (PDRY)** *c.* 17°N, 51°E, 2630 km, <2335 d (A. Abdulah Alif). |
| *N* X33962 | 3 | 07.12.83 | Ngulia, Tsavo, **Kenya** (NRG). |
| | x | mid 08.87 | Misyaf [unlocated], **Syria**, *c.* 1347 d (R. Atfé). |

These are the first recoveries of Whitethroats affecting eastern Africa. It is interesting that the first two originated from the 3930 ringed at Ngulia in autumn 1979. The third bird resulted from only 657 Whitethroats ringed at Ngulia that season; the finding locality in Syria has not yet been traced.

***Sylvia curruca* Lesser Whitethroat**

| | | | |
|---|---|---|---|
| *N* T5988 | 4 | 17.09.86 | Wadi Halfa, **Sudan** 21°55N, 31°20E (GN *et al.*). |
| | xL | 28.06.87 | Marcal River, *near* Kemenesmagasi, **Hungary** 47°19N, 17°13E, 3090 km, 284 d (Hungarian Ringing Office). |

The first recovery of the species affecting eastern Africa.

***Muscicapa striata* Spotted Flycatcher**

| | | | |
|---|---|---|---|
| *N* X20809 | 3 | 29.08.83 | Khor Arba'at, Red Sea, **Sudan** 19°48N, 37°03E (GN). |
| | /?/ | 13.08.84 | Bulanik, **Turkey** 39°04N, 42°16E, 2200 km, 350 d (A. Biloll). |

The first recovery of the species affecting eastern Africa although there have been at least 33 to Zaïre (Dowsett *et al.* 1988).

***Motacilla alba* White Wagtail**

| | | | |
|---|---|---|---|
| *N J160229* | 3 | 15.11.80 | Suakin, Red Sea, **Sudan** 19°08N, 37°17E (GN). |
| | +*ca* | 22.03.83 | Yaroslavl, Russian SFSR, **USSR** 57°45N, 39°40E, 4295 km, 857 d (Moscow Ringing Centre). |
| *S* SVS2889620 | 1 | 12.08.83 | Ottenby, Öland, **Sweden** 56°12N, 16°24E (Ottenby Bird Station). |
| | x | 05.12.83 | Buram, southern Dafur, **Sudan** 10°51N, 25°09E, 5095 km, 115 d (J. Brookes). |

***Motacilla flava* Yellow Wagtail**

| | | | |
|---|---|---|---|
| *N J127855* | 2 m | 18.10.79 | Kariobangi Sewage Works, Nairobi, **Kenya** 1°15S, 36°53E (DJP, DEGB). |
| | x | (02.10.82) | *near* Bushire, **Iran** 28°59N, 50°50E, 3675 km, <1080 d (B. Salimian). |

| | | | |
|---|---|---|---|
| *N J183818* | 6 f | 24.03.84 | Kariobangi Sewage Works, Nairobi, **Kenya** (DJP, DEGB). |
| | x*ca* | (18.10.84) | Rudnyansk Region, Volgograd Oblast, Russian SFSR, **USSR** 50°46N, 44°39E, 5825 km, <208 d (Moscow Ringing Centre). |

More Yellow Wagtails have been ringed in eastern Africa than any other species and there have been 32 long-distance recoveries, but none of foreign-ringed birds and none affecting the Sudan; the *Riga* bird listed by Nikolaus & Backhurst (1981) was, in fact, a White Wagtail.

***Lanius collurio* Red-backed Shrike**

| | | | |
|---|---|---|---|
| *S* 3248320 | 3 | 19.08.78 | Ottenby, Öland, **Sweden** 56°12N, 16°24E. (Ottenby Bird Station). |
| | /?/ | aut 81/82 | **Sudan,** ring found in Khartoum Museum (*per* GN). |
| *S* 3087260 | 1 | 10.07.83 | Hassela, Klövberget, Hälsingland, **Sweden** 62°12N, 16°38E (*per* Stockholm Ringing Centre). |
| | + | 28.10.83 | Angbanga, Raga, Bahr El Ghazal, **Sudan** 8°26N, 25°46E, 6020 km, 110 d (*per* R. Staav). |

***Lanius nubicus* Nubian Shrike**

| | | | |
|---|---|---|---|
| *N* ? | - | ? | **Sudan.** |
| | x | 11.07.85 | Gush Halav, **Israel** 33°01N, 35°27E (*per* J. Langer and the Israel Ringing Office). |

A frustrating recovery, and the first of the species affecting eastern Africa: the finder lost the ring but remembered that it had been from Nairobi. All the Nubian Shrikes ringed in our area have been caught in the Sudan. Shrike recoveries are interesting: the most-ringed species, the Red-backed *Lanius collurio*, has yet to produce a recovery (although several foreign-ringed birds have been recovered in the Sudan and Tanzania) while there have been two recoveries to the Persian Gulf of Red-tailed *L. isabellinus* and a Lesser Grey *L. minor* found in Greece.

***Lamprotornis chalybaeus* Blue-eared Glossy Starling**

| | | | |
|---|---|---|---|
| *N* B20774 | fg f | 08.05.81 | Lake Nakuru, **Kenya** 0°20S, 36°06E (JPD). |
| | () | (16.03.87) | Malaba, **Kenya/Uganda** border 0°38N, 34°16E, 230 km, <2138 d . |

An interesting recovery of a species that occurs from sea-level to 3000 m; its movements may be best regarded as wanderings, purely in response to food supply.

***Nectarinia reichenowi* Golden-winged Sunbird**

| | | | |
|---|---|---|---|
| *N* X11653 | a m | 12.11.77 | Mau Narok, Kenya 0°36S, 36°00E (FBG). |
| | x | (05.05.87) | Elmenteita, Kenya 0°29S, 36°09E, 20 km, <3461 d (E.K.A. Mutai). |

There has been an earlier 65-km recovery of this species in Kenya but without the longevity interest of this bird.

***Quelea quelea* Red-billed Quelea**

| | | | |
|---|---|---|---|
| *L* NE47876 | im | 30.05.80 | Kibish Hills, **Ethiopia** 5°05N, 35°57E (J.S. Ash). |
| | + | 26.07.82 | Lafon, **Sudan** 5°02N, 32°27E, 385 km, 787 d (S.A.K. Binyason). |

## A BIBLIOGRAPHY OF RINGING IN EASTERN AFRICA

References mentioned in the text, and others utilizing data from ringing studies in eastern Africa


Ash, J.S. 1970–1979. Birds ringed in Ethiopia October 1969–31 December 1970; Bird-ringing in Ethiopia 1969–1971; Bird-ringing in Ethiopia 1969–1972; Bird-ringing in Ethiopia, 1969–1973; Bird-ringing in Ethiopia, 1969–1974; Bird-ringing in Ethiopia, report No. 6, 1969–1976; Bird-ringing in Ethiopia, report No. 7, 1969–1977; Bird-ringing in Ethiopia, report No. 8, 1969–1978. *Cyclostyled reports.*

Ash, J.S. 1976. Bird-ringing in Ethiopia, report No. 5, 1969–1975. *USNAMRU No. 5 Technical report* No. 1: 1–17.

Ash, J.S. 1981. Bird-ringing results and ringed bird recoveries in Ethiopia. *Scopus* 5: 85–101.

Ash, J.S. [n.d.]. Ethiopian bird-ringing recoveries. *Cyclostyled report.*

Backhurst, D., Pearson, D.J. & Richards, D.K. 1984. A Kenya record of the Black-eared Wheatear *Oenanthe hispanica. Scopus* 8: 50–51.

Backhurst, G.C. 1969. A record of *Gallinago stenura* from Kenya. *Bulletin of the British Ornithologists' Club* 89: 95–96.

Backhurst, G.C. 1968–1977. East[ern] Africa ringing reports [titles vary]: 1966–1967. *Journal of the East Africa Natural History Society and National Museum* 27 (116): 61–65; 1967–1968, *ibidem* 27 (118): 217–225; 1968–1969, *ibidem* 28 (119): 16–26; 1969–1970, *ibidem* 28 (123): 1–14; 1970–1971, *ibidem* 136: 1–16; 1971–1972, *ibidem* 144: 1–15; 1972–73, 1973–74, *ibidem* 146: 1–9; 1974–77, *ibidem* 163: 1–10.

Backhurst, Graeme [C.]. 1981a. Bird migration spectacular. *Swara* 4 (2): 28–31.

Backhurst, G.C. 1981b. Eastern African ringing report 1977–1981. *Journal of the East Africa Natural History Society and National Museum* 174: 1–19.

Backhurst, G.C. & Britton, P.L. 1969. A record of *Calidris subminuta* from Kenya. *Bulletin of the British Ornithologists' Club* 89: 121.

Backhurst, G.C. & Pearson, D.J. 1976. Savi's Warbler in Tsavo, an addition to the Kenya list. *EANHS Bulletin* 1976: 21–22.

Backhurst, G.C. & Pearson, D.J. 1977a. Southward migration at Ngulia, Tsavo, Kenya 1976/77. *Scopus* 1: 12–17.

Backhurst, G.C. & Pearson, D.J. 1977b. Ethiopian region birds attracted to the lights of Ngulia Safari Lodge, Kenya. *Scopus* 1: 98–103.

Backhurst, G.C. & Pearson, D.J. 1979. Southward migration at Ngulia, Tsavo, Kenya 1978/79. *Scopus* 3: 19–25.

Backhurst, G.C. & Pearson, D.J. 1980. Southward migration at Ngulia, Tsavo, Kenya 1979/80. *Scopus* 4: 14–20.

Backhurst, G.C. & Pearson, D.J. 1981. Ringing and migration at Ngulia, Tsavo, November 1980–January 1981. *Scopus* 5: 28–30.

Backhurst, G.C. & Pearson, D.J. 1983a. Ringing and migration at Ngulia, Tsavo, November–December, 1981. *Scopus* 5: 166–167.

Backhurst, G.C. & Pearson, D.J. 1983b. Ringing and migration at Ngulia, Tsavo, October to December 1982. *Scopus* 6: 144–145.

Backhurst, G.C. & Pearson, D.J. 1984a. Ringing and migration at Ngulia, Tsavo, autumn 1983. *Scopus* 7: 136–138.

BACKHURST, G.C. & PEARSON, D.J. 1984b. The timing of the southward night migration of Palaearctic birds over Ngulia, southeast Kenya. *Proceedings of the Fifth Pan-African Ornithological Congress*: 361–369.

BACKHURST, G.C. & PEARSON, D.J. 1987. Ringing and migration at Ngulia, Tsavo, autumn 1985. *Scopus*: 9: 160–162.

BACKHURST, G.C. & PEARSON, D.J. 1988. Ringing and migration at Ngulia, Tsavo, autumn 1986. *Scopus*: 10: 133–136.

BACKHURST, G.C., PEARSON, D.J. & KELSEY, M.G. 1986. Ringing and migration at Ngulia, Tsavo, autumn 1984. *Scopus* 8: 128–1130.

BAKER, N.E., BEAKBANE, A.J. & BOSWELL, E.M. 1984. Streaky-breasted Pygmy Crake *Sarothrura boehmi*: first documented records for Tanzania. *Scopus* 8: 64–66.

BAKER, N.E. & HIRSLUND, P. 1987. Minziro Forest Reserve: an ornitholgical note including seven additions to the Tanzanian list. *Scopus* 11: 9–12.

BENNUN, L.A. 1986. Montane birds of the Bwindi (Impenetrable) Forest. *Scopus* 10: 87–91.

BENNUN, L.A. 1987. Ringing and recapture of Spotted Ground Thrushes *Turdus fischeri fischeri* at Gede, Kenya coast: indications of site fidelity and population size stability. *Scopus* 11: 1–5.

BENNUN, L.A., GICHUKI, C., DARLINGTON, J. & NG'WENO, F. 1986. The avifauna of Ol Doinyo Orok, a forest island: initial findings. *Scopus* 10: 83–86.

BRITTON, P.L. 1970. Some non-passerine bird weights from East Africa. *Bulletin of the British Ornithologists' Club* 90: 142–144, 152–154.

BRITTON, P.L. 1972. Weights of African bulbuls (Pycnonotidae). *Ostrich* 43: 23–42.

BRITTON, P.L. 1974. Relative biomass of Ethiopian and Palaearctic passerines in west Kenya habitats. *Bulletin of the British Ornithologists' Club* 94: 108–113.

BRITTON, P.L. 1977. Weights of birds in western and coastal Kenya: a comparison. *Scopus* 1: 70–73.

BRITTON, P.L. 1978. Seasonality, density and diversity of birds of a papyrus swamp in western Kenya. *Ibis* 120: 450–466.

BRITTON, P.L. & BRITTON, H.A. 1977. An April fall of Palaearctic migrants at Ngulia. *Scopus* 1: 109–111.

BRITTON, P.L. & BRITTON, H.A. 1986. Moult schedules of some pycnonotids and ploceids in coastal Kenya. *Scopus* 10: 103–106.

BRITTON, P.L., BRITTON, H.A. & COVERDALE, M.A.C. 1980. The avifauna of Mrima Hill, south Kenya coast. *Scopus* 4: 73–78.

BRITTON, P.L. & RATHBUN, G.B. 1978. Two migratory thrushes and the African Pitta in coastal Kenya. *Scopus* 2: 11–17.

BRITTON, P.L. & SUGG, M. STJ. 1973. Birds recorded on the Kimilili Track, Mt. Elgon, Kenya. *Journal of the East Africa Natural History Society and National Museum*. 143: 1–7.

BRITTON, P.L. & ZIMMERMAN, D.A. 1979. The avifauna of Sokoke Forest, Kenya. *ibidem* 169: 1–15.

BROBERG, L. 1967. A Long-toed Stint *Calidris subminuta* in Ethiopia. *Ibis* 109: 440.

CURRY-LINDAHL, K. 1981. *Bird migration in Africa*. 2 vols. London: Academic Press.

Curry-Lindahl, K. 1983. Ngulia layover. *Animal Kingdom* 85 (6): 40–45.

Diamond, A.W. & Fayad, V.C. 1979. Preliminary comparisons between the avifaunas of the North Nandi and Kakamega Forests. *Scopus* 3: 93–100.

Dittami, J. [P.] 1981. Observations on wintering wheatears in burned grass areas at Lake Nakuru, Kenya. *Vogelwarte* 31: 177–178.

Dittami, J.P. 1983. Notes on Blue-eared Glossy Starlings *Lamprotornis chalybaeus* at Nakuru, Kenya. *Scopus* 7: 37–39.

Dittami, J.P. 1987. A comparison of breeding and moult cycles and life histories in two tropical starling species: the Blue-eared Glossy Starling *Lamprotornis chalybaeus* and Rüppell's Long-tailed Glossy Starling *L. purpuropterus*. *Ibis* 129: 69–85.

Dittami, J.P. 1986. Seasonal reproduction; moult and their endocrine correlates in two tropical Plocidae species. *Journal of Comparative Physiology (B)* 156: 641–647.

Dittami, J.P. & Gwinner, E. 1985. Annual cycles in the African Stonechat *Saxicola torquata axillaris* and their relationship to environmental factors. *Journal of Zoology, London (A)* 207: 357–370.

Dittami, J.P. & Knauer, B. 1986. Seasonal organisation of breeding and moulting in Fiscal Shrikes (*Lanius collaris*). *Journal für Ornithologie* 127: 79–84.

Dowsett, R.J., Backhurst, G.C. & Oatley, T.B. 1988. Afrotropical ringing recoveries of Palaearctic migrants. 1. Turdidae, Sylvidae, Muscicapidae, Sturnidae, Oriolidae. *Tauraco* 1: (pagination not yet known).

Fayad, V.C. & Fayad, C.C. 1977. A Grasshopper Warbler *Locustella naevia* from Kenya. *Scopus* 1: 84–86.

Fogden, M.P.L. 1972. Premigratory dehydration in the Reed Warbler *Acrocephalus scirpaceus* and water as a factor limiting migratory range. *Ibis* 114: 548–552.

Fry, C.H., Britton, P.L. & Horne, J.F.M. 1974. Lake Rudolf and the Palaearctic exodus from East Africa. *Ibis* 116: 44–51.

Fry, C.H. & Smith, D. 1985. A new swallow from the Red Sea. *Ibis* 127: 1–6.

Jensen, F.P. 1983. A new species of sunbird from Tanzania. *Ibis* 125: 447–449.

Kelsey, M.G., Backhurst, G.C. & Pearson, D.J. in press. Age differences in the timing and biometrics of migrating Marsh Warblers in Kenya. *Ringing & Migration*.

Leisler, B., Heine, G. & Siebenrock, K-H. 1983. Einnischung und interspezifische Territorialität überwinternder Steinschmätzer (*Oenanthe isabellina, O. oenanthe, O. pleschanka*) in Kenia. *Journal für Ornithologie* 124: 393–413.

Mann, C.F. 1980. Notes on the avifaunas of the Kakamega and the Nandi Forests. *Scopus* 4: 97–99.

Mann, C.F. 1985. An avifaunal study in Kakamega Forest, Kenya, with particular reference to species density, weights and moult. *Ostrich* 56: 236–262.

Moreau, R.E. 1972. *The Palaearctic–African bird migration systems*. London: Academic Press.

Nikolaus, G. 1979a. The first record of the Basra Reed Warbler in the Sudan. *Scopus* 3: 103–104.

Nikolaus, G. 1979b. Notes on some birds new to south Sudan. *Scopus* 3: 68–73.

Nikolaus, G. 1980. An experiment to attract migrating birds with car headlights in the Chyulu Hills, Kenya. *Scopus* 4: 45–46.

Nikolaus, G. 1981. Palaearctic migrants new to the north Sudan. *Scopus* 5: 121–124.

Nikolaus, G. 1982. Further notes on some birds new to south Sudan. *Scopus* 6: 1–4.

Nikolaus, G. 1983a. An important passerine ringing site near the Sudan Red Sea coast. *Scopus* 7: 15–18.

Nikolaus, G. 1983b. Attraction of nocturnal migrants to car headlights in the Sudan Red Sea Hills. *Scopus* 7: 19–20.

Nikolaus, G. 1984. Further notes on birds new or little known in the Sudan. *Scopus* 8: 38–42.

Nikolaus, G. & Backhurst, G.C. 1982. First ringing report for the Sudan. *Scopus* 6: 77–90.

Nikolaus, G. & Pearson, D.J. 1982. Autumn passage of Marsh Warblers *Acrocephalus palustris* and Sprossers *Luscinia luscinia* on the Sudan Red Sea coast. *Scopus* 6: 17–19.

Pearson, D.J. 1970. Weights of Red-backed Shrikes on autumn passage in Uganda. *Ibis* 112: 114–115.

Pearson, D.J. 1971. Weights of some Palaearctic migrants in southern Uganda. *Ibis* 113: 173–184.

Pearson, D.J. 1972. The wintering and migration of Palaearctic passerines at Kampala, southern Uganda. *Ibis* 114: 43–60.

Pearson, D.J. 1973. Moult of some Palaearctic warblers wintering in Uganda. *Bird Study* 20: 24–36.

Pearson, D.J. 1977. The first year moult of the Common Sandpiper *Tringa hypoleucos* in Kenya. *Scopus* 1: 89–94.

Pearson, D.J. 1978. The genus *Sylvia* in Kenya and Uganda. *Scopus* 2: 63–71.

Pearson, D.J. 1980. Northward spring passage of Palaearctic passerines across Tsavo. *Scopus* 4: 25–28.

Pearson, D.J. 1981. The wintering and moult of Ruffs *Philomachus pugnax* in the Kenyan rift valley. *Ibis* 123: 158–182.

Pearson, D.J. 1982. The migration and wintering of Palaearctic *Acrocephalus* warblers in Kenya and Uganda. *Scopus* 6: 49–59.

Pearson, D.J. 1984a. The moult of the Little Stint *Calidris minuta* in the Kenya rift valley. *Ibis* 123: 158–182.

Pearson, D.J. 1984b. The Nightingale *Luscinia megarhynchos*, the Sprosser *Luscinia luscinia* and the Irania *Irania gutturalis* in Kenya. *Scopus* 8: 18–23.

Pearson, D.J. 1987. The status, migrations and seasonality of the Little Stint in Kenya. *Ringing & Migration* 8: 91–108.

Pearson, D.J. & Backhurst, G.C. 1973. The head plumage of eastern yellow-headed Yellow Wagtails wintering at Nairobi, Kenya. *Ibis* 115: 589–591.

Pearson, D.J. & Backhurst, G.C. 1976a. Palaearctic passerine migration at Kariobangi, Nairobi. *EANHS Bulletin* 1976: 23–28.

Pearson, D.J. & Backhurst, G.C. 1976b. The southward migration of Palaearctic birds over Ngulia, Kenya. *Ibis* 118: 78–105.

Pearson, D.J. & Backhurst, G.C. 1978. Southward migration at Ngulia, Tsavo, Kenya 1977/78. *Scopus* 2: 42–47.

Pearson, D.J. & Backhurst, G.C. 1983. Moult in the River Warbler *Locustella fluviatilis*. *Ringing & Migration* 4: 227–230.

Pearson, D.J. & Backhurst, G.C. 1988. The characters and taxonomic position of the Basra Reed Warbler. *British Birds* 81: 171–178.

Pearson, D.J., Backhurst, G.C. & Backhurst, D.E.G. 1979. Spring weights and passage of Sedge Warblers *Acrocephalus schoenobaenus* in central Kenya. *Ibis* 121: 8–19.

Pearson, D.J., Britton, H.A. & Britton, P.L. 1978. Substantial wintering populations of the Basra Reed Warbler *Acrocephalus griseldis* in eastern Kenya. *Scopus* 2: 33–35.

Pearson, D.J., Finch, B.W. & Backhurst, D.E.G. 1988. A second Savi's Warbler *Locustella luscinioides* at Ngulia. *Scopus* 11: 94.

Pearson, D.J., Phillips, & Backhurst, G.C. 1970. Weights of some Palaearctic waders wintering in Kenya. Ibis 112: 199–208.

Rabøl, J. Coexistence and competition between overwintering Willow Warblers *Phylloscopus trochilus* and local warblers at Lake Naivasha, Kenya. *Ornis Scandinavica* 18: 101–121.

Rathbun, G.B. 1978. The African Pitta at Gedi Ruins, Kenya. *Scopus* 2: 7–10.

Stuart, S.N. & Jensen, F.P. 1981. Further range extensions and other notable records of forest birds from Tanzania. *Scopus* 5: 106–115.

Stuart, S.N. & Turner, D.A. Some range extensions and other notable records of forest birds from eastern and northeastern Tanzania. *Scopus* 4: 36–41.

Sugg, M. StJ. 1974. Mensural and moult data from a breeding colony of Pied Kingfishers. *Ostrich* 45: 227–234.

Tree, A.J. 1985. Analysis of ringing recoveries of Ruff involving southern Africa. *Safring News* 14: 75–79.

Tyler, S. 1979. Bird ringing in an Addis Ababa garden. *Scopus* 3: 1–7.

Tyler, S.J. 1987. *Ficedula* species in Ethiopia. *Scopus* 11: 54–55.

Zimmerman, D.A. 1986. A twenty-year-old greenbul from western Kenya. *Scopus* 10: 111–112.

Zink, G. 1973–1985. *Der Zug europäischer Singvögel*. 4 vols. Möggingen: Vogelwarte Radolfzell.

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**Works which should not be listed under 'References'**

BACKHURST, G.C., BRITTON, P.L. & MANN, C.F. 1973. The less common Palaearctic migrant birds of Kenya and Tanzania. *Journal of the East Africa Natural History Society and National Museum.* 140: 1–38, = Backhurst *et al.* 1973.

BENSON, C.W., BROOKE, R.K., DOWSETT, R.J., & IRWIN, M.P.S. 1971. *The birds of Zambia.* London: Collins, = Benson *et al.* 1971.

BRITTON, P.L. (ed.) 1980. *Birds of East Africa.* Nairobi: EANHS, = Britton 1980.

BROWN, L.H. & BRITTON, P.L. 1980. *The breeding seasons of East African birds.* Nairobi: EANHS, = Brown & Britton 1980.

BROWN, L.H., URBAN, E.K. & NEWMAN, K. 1982. *The birds of Africa*, Vol. I. London and New York: Academic Press, = Brown *et al.* 1982.

HALL, B.P. & MOREAU, R.E. 1970. *An atlas of speciation in African passerine birds.* London: British Museum (Nat. Hist.), = Hall & Moreau 1970.

JACKSON, F.J. 1938. *The birds of Kenya Colony and the Uganda Protectorate*, 3 vols. London: Gurney & Jackson, = Jackson 1938.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1957 and 1960. *African handbook of birds.* Series I, vols 1 and 2; *Birds of eastern and north eastern Africa*, 2nd edition. London: Longmans Green & Co., = Mackworth-Praed & Grant 1957 and/or 1960.

MOREAU, R.E. 1966. *The bird faunas of Africa and its islands.* London: Academic Press, = Moreau 1966.

MOREAU, R.E. 1972. *The Palaearctic-African bird migration systems.* London: Academic Press, = Moreau 1972.

SNOW, D.W. (ed.) 1978. *An atlas of speciation in African non-passerine birds.* London: British Museum (Nat. Hist.), = Snow 1978.

URBAN, E.K., FRY, C.H. & KEITH, S. 1986. *The birds of Africa*, Vol. II. London: Academic Press, = Urban *et al.* 1986.

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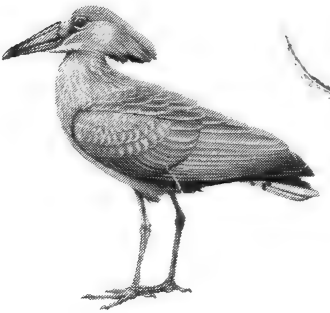

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*Continued inside back cover*

# PALAEARCTIC MIGRANTS IN THE MIDDLE AND LOWER JUBBA VALLEY, SOUTHERN SOMALIA

D.J. Pearson

During 1987 I spent two short periods studying the abundance of Palaearctic migrants in the Jubba valley, southern Somalia. From 18 to 28 March observations were made along the river and its floodplain and in the peripheral bushlands, from Kismaayo on the coast upstream to Bu'aale (see Fig. 1). This was towards the end of a particularly severe and protracted dry season. Most migrants found then were assumed to be wintering, and there was little indication of early spring passage. On a further visit during the 'short' rainy season, from 5 to 12 November, observations were confined to the area between Kismaayo and Fanoole barrage, 40 km north of Jilib. This second visit provided an opportunity to assess the southward migration of Palaearctic landbirds through the area, and also to assess its importance for migrant waders at a time when natural wetlands and irrigation schemes were still extensively flooded.

Much of the lower Jubba floodplain, from the neighbourhood of Jamaame to above Jilib, is under cultivation, the main crops being maize and bananas. The Fanoole and Mogambo irrigated rice projects, some 10–20 km north of Jamaame and east and west of the river respectively, each covers tens of thousands of hectares. Equally extensive is the Jubba sugar project, centred further upstream at Mareerey, west of the river. In this area, regular wet season flooding associated with high river levels during May–August leave extensive temporary floods (*dhesheegs*) and numerous small pans which may persist up to November–December. There are scattered small patches of bush and thicket, much of it *Acacia nilotica*. Nearer the coast, the valley is less agriculturally productive, mostly dry plains and bushland and sandy ridges covered with low *Acacia tortilis* woodland. Here, the largest of the *dhesheegs*, Lake Waamo, is situated in dry bush country some 30 km west of Jamaame. This huge depression, about 20 km from west to east by about 5 km wide, has connections with the Kenyan Northern Ewaso Nyiro system.

Along the middle Jubba, upstream of Jilib, the floodplain is more thickly bushed, and agriculture more patchy. North of Fanoole barrage (which supplies water via a canal to the Fanoole rice project some 60 km to the south) and almost to Bu'aale, the bush is very thick and deeply flooded areas exist, some of which persist through the dry season. Along this stretch, the last patches of riverine forest survive, although these are disappearing fast. From Bu'aale northwards the floodplain is much narrower, with *Acacia-Dobera* bushland reaching to within a few hundred metres of the river.

## OBSERVATIONS

During the March visit, most of the floodplain vegetation and the peripheral bushlands were dry and leafless. Some green thicket and rank grass cover persisted near the river, however, especially around and above Fanoole barrage. Two large, muddy-edged *dhesheegs* with over 100 ha of standing water were found—Lake Radiile near Bu'aale and Shoonto *dhesheeg* some 20 km to the south—in an area bounded by riverine forest on one side and thicket and woodland on the other. Shoonto in particular held impressive numbers of waders, ducks, herons and storks. Further south, near Jamaame, a few scat-

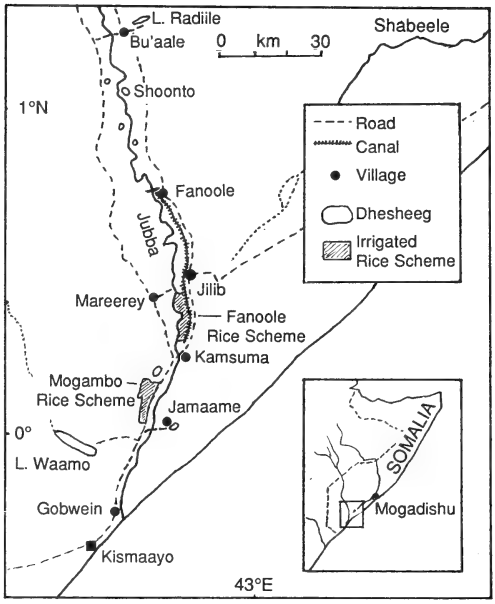


Fig. 1. *Showing middle and lower Jubba valley, Somalia and localities mentioned in the text*

tered thicket patches were still green but the *dhesheegs* were all dry.

Waterbirds were found mainly above Fanoole barrage. A few thousand migrant waders were estimated present in all, mainly Little Stints *Calidris minuta* and Wood Sandpipers *Tringa glareola*. These were concentrated at Shoonto and Lake Radiile, with smaller numbers on other wet patches, such as overspills from canals and irrigation ditches. Further south, a small flooded section of Fanoole rice scheme held over 1000 Ruffs *Philomachus pugnax*. Very few waders were present along the exposed silty edges of the river; occasional Common Sandpipers *Actitis hypoleucos*, Greenshanks *Tringa nebularia*, Ringed Plovers *Charadrius hiaticula* and Little Stints. Small groups of Garganey *Anas querquedula* were the only Palaearctic ducks found.

Only eight migrant landbird species appeared to be wintering in the valley in any numbers. Three of these occupied bush and thicket habitats. Rufous Bush Chat *Cercotrichas galactotes* and Upcher's Warbler *Hippolais languida* were frequent in drier bush peripheral to the floodplain, especially where thicket was broken and less continuous. The former was the commoner of these two, and over ten could usually be located in a morning in the appropriate habitat. Both were more numerous in the sandy *Acacia tortilis* woodlands near the coast, but ranged north to at least Bu'aale. Small numbers of Nightingales *Luscinia megarhynchos* were found in woodland thicket along the middle Jubba and in patches of bush around irrigation channels near Jamaame. Four other species were widespread and common in cultivated and open country: Pied Wheatears *Oenanthe pleschanka*, Isabelline Wheatears *O. isabellina* (mainly on dusty plains nearer the coast), Yellow Wagtails *Motacilla flava* and Eurasian Swallows *Hirundo rustica*. Finally, Blue-cheeked Bee-eaters *Merops persicus* were very common, especially perched on wires along irrigation canals.

In November, the short rains were in progress and much of the floodplain and nearby bushlands were becoming green. Also, this was the end of the river flood season so that there was an abundance of green *Acacia nilotica* thicket and rank undergrowth near the river suitable for migrants. Wet habitat for waders, ducks, herons and storks was now available in the lower part of the valley, and Lake Waamo was largely flooded. The rice

schemes were also extensively irrigated. Migrant waders and other water birds were far more abundant in this area than in March. Numbers of waders on the rice schemes were estimated very roughly at 3000 at Fanoole and 8000 at Mogambo. Several thousand more were scattered on drying *dhesheegs* and small pans around Jilib and Jamaame. At Lake Waamo, 200 waders were counted along a kilometre of fairly open grassy-muddy shore at a cattle watering point. These included no less than five Great Snipe *Gallinago media*. This huge expanse had a flooded perimeter of at least 30 km, but much of this was bordered by bushes and vegetation and so held limited numbers of waders. Herons were present in many thousands, however, (250 Squacco Herons *Ardeola ralloides* were counted perched on bush tops in one area of less than 5 ha), and storks, ibises and White-faced Whistling Ducks *Dendrocygna viduata* were also very numerous. A conservative total of 20 000 waders, half of them on natural floods, was estimated present in November in the lower part of the valley. By contrast, the wetlands along the middle Jubba north of Fanoole barrage appeared to be deep and less suitable for waders than in the dry season.

The variety of migrant landbirds was greater than in March. Most were apparently on passage, and were seen in the thicket and woodland of the floodplain. Nightingales were widespread and abundant, and scores were present around Fanoole barrage alone. At some rank sites a few Sprossers *Luscinia luscinia* were also present. Spotted Flycatchers *Muscicapa striata* and Red-backed Shrikes *Lanius collurio* were quite common, and a few Golden Orioles *Oriolus oriolus*, Eurasian Cuckoos *Cuculus canorus* and Eurasian Rollers *Coracias garrulus* were noted. Palaearctic warblers were scarce, however. Marsh Warblers *Acrocephalus palustris* were limited to occasional ones and twos. Several Barred Warblers *Sylvia nisoria* were found near the coast and a single River Warbler *Locustella fluviatilis* was seen at Jilib. Pied and Isabelline Wheatears were common and practically up to winter numbers. A few Northern Wheatears *Oenanthe oenanthe* were also present, presumably on passage. It was interesting that not a single Rufous Bush Chat and only one Upcher's Warbler was found on this second visit; the wintering populations of these two species had presumably not yet arrived. Grey Wagtails *Motacilla cinerea* were seen surprisingly often, usually in villages, and it was assumed that some of these at least were on passage. White Wagtails *M. alba* occurred increasingly throughout the November week. This is perhaps a common wintering bird (see Ash & Miskell 1983) whose absence in March was due to an early departure (it leaves Kenya before mid March).

Migrant birds of prey were remarkably uncommon and few species were recorded. Only eight individuals were seen during the whole November week, at a time when the heavy raptor passage through neighbouring Kenya is at a peak.

## DISCUSSION

Published information on the wintering and passage of Palaearctic migrants along and to the west of the Jubba in southern Somalia is very scanty. Recent new observations from the country, notably by J.S. Ash (see, e.g., Ash 1983, Ash & Miskell 1983, 1988), have come mostly from the Shabelle and Mogadishu areas. The records summarized here, therefore, add substantially to knowledge of migration in areas quite close to the Kenya border. According to the atlas data given by Ash & Miskell (1983), no fewer than eighteen

of the Palaearctic species recorded here were new to the Jubba valley (for details see Appendix 1). Three, Honey Buzzard *Pernis apivorus*, Great Snipe and River Warbler, were new to the Somalia list. Black Stork *Ciconia nigra*, though not listed by Ash & Miskell (1983), is now known from one recent sighting on the Shebelle (J.E. Miskell, pers. comm.).

The wetlands and irrigation schemes in the lower part of the valley clearly provide important habitat for migrant waders during the autumn passage period. Only a few thousands overwinter, however, and the main sites supporting birds through the dry season seem to be located further up-river, north of Fanoole barrage. In general, more waders were found than those known to utilize corresponding areas along the lower Tana River in Kenya (author's obs.). On the other hand, the variety of migrant landbirds wintering was much less than in eastern Kenya (see, e.g., Britton 1980, Lack *et al.* 1981, Pearson *et al.* 1988). In particular, Olivaceous Warblers *Hippolais pallida*, Red-tailed Shrikes *Lanius isabellinus*, Barred Warblers, Whitethroats *Sylvia communis*, Iranias *Irania gutturalis*, Rock Thrushes *Monticola saxatilis* and Eurasian Rollers were scarce or absent, and Spotted Flycatchers, so common in coastal Kenya, were rather few. Basra Reed Warblers *Acrocephalus griseldis*, common on the lower Tana (Pearson *et al.* 1978) and known in Somalia from one site on the Shabelle (Ash & Miskell 1985), were searched for in rank habitat along the Jubba, but were not found wintering. The two species widespread in the Jubba bushlands, Rufous Bush Chat and Upcher's Warbler, are also known to winter commonly in Kenya, from the middle and lower Tana, south through Galana and Tsavo and it is likely that both occur widely through Kenya–Somalia border areas.

A heavy migration of Palaearctic landbirds occurs during November and December through central and southeastern Kenya (see, e.g., Pearson & Backhurst 1976, Pearson *et al.* 1988), and has been extensively studied in Tsavo at Ngulia Lodge (e.g. Backhurst & Pearson 1984). It is likely that this movement originates mainly in central and western Ethiopia, for the three principal species involved, the Marsh Warbler, the Sprosser and the Whitethroat, have been little recorded in northeast Kenya. It was of interest therefore that, of these three, only a few Sprossers and an occasional Marsh Warbler were encountered along the Jubba. Of the species migrating through southeastern Kenya it would seem that only the Nightingale and a few Eurasian Rollers, Cuckoos, Red-backed Shrikes, Spotted Flycatchers and perhaps some wheatear species and Upcher's Warblers might arrive via southern Somalia. The abundance of the Nightingale along the Jubba was especially interesting. This species occurs on southward passage in Somalia as far east as Mogadishu, though in smaller numbers (R.E. Stjernstedt, pers. comm.). These birds, and the concentrations noted in November along the middle and lower Tana in Kenya (author's obs.) would suggest a major stopover area for the Nightingale in eastern Ethiopia.

## REFERENCES

Ash, J.S. 1983. Over fifty additions of birds to the Somalia list including two hybrids, together with notes from Ethiopia and Kenya. *Scopus* 7: 54–79.

Ash, J.S. & Miskell, J.E. 1981. Basra Reed Warblers overwintering in Somalia. *Scopus* 5: 81–82.

Ash, J.S. & Miskell, J.E. 1983. Birds of Somalia. *Scopus* Special Supplement No. 1.

ASH, J.S. & MISKELL, J.E. 1983. Birds of Somalia. *Scopus* Special Supplement No. 1.

ASH, J.S. & MISKELL, J.E. 1988. Observations on birds in Somalia in 1978–1982, together with a bibliography of recent literature. *Scopus* 11: 57–78.

BACKHURST, G.C. & PEARSON, D.J. 1984. The timing of the southward night migration of Palaearctic birds over Ngulia, southeast Kenya. *Proceedings of the Fifth Pan-African Ornithological Congress*: 361–369.

LACK, P.C., LEUTHOLD, W. & SMEENK, C. 1980. Check-list of the birds of Tsavo East National Park, Kenya. *Journal of the East Africa Natural History Society and National Museum* 170: 1–25.

PEARSON, D.J. & BACKHURST, G.C. 1976. The southward migration of Palaearctic birds over Ngulia, Kenya. *Ibis* 118: 78–105.

PEARSON, D.J., BRITTON, H.A. & BRITTON, P.L. 1978. Substantial wintering populations of the Basra Reed Warbler *Acrocephalus griseldis* in eastern Kenya. *Scopus* 2: 33–35.

PEARSON, D.J., NIKOLAUS, G. & ASH, J.S. 1988. The southward migration of Palaearctic passerines through northeast and east tropical Africa: a review. *Proceedings of the Sixth Pan-African Ornithological Congress* 243–262.

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## APPENDIX 1

Palaearctic migrants recorded from the middle and lower Jubba valley 18–28 March and 5–12 November 1987. Species previously unrecorded from the Jubba valley according to Ash & Miskell (1983) are indicated by an asterisk.

***Black Stork *Ciconia nigra*** 1 Fanoole rice scheme 5 Nov. Only the second record for Somalia.

***Shoveler *Anas clypeata*** 2 Jamaame 9 Nov.

**Garganey *A. querquedula*** small parties in March on *dhesheegs*, dams and irrigation from Mareerey north to Lake Radiile; max. *c.* 80 Radiile. Small parties Nov Jamaame and Lake Waamo.

**Eurasian Marsh Harrier *Circus aeruginosus*, Pallid Harrier *C. macrourus*, Montagu's Harrier *C. pygargus*** occasional singles of all three harrier species, both seasons, from Jamaame area north to Shoonto.

**Booted Eagle *Hieraaetus pennatus*** 2 Fanoole barrage 20 Mar; 1 Jamaame 11 Nov.

***Honey Buzzard *Pernis apivorus*** 1 in trees along river at Jilib 6 Nov. No previous record for Somalia.

**Osprey *Pandion haliaetus*** 1 Jamaame 9 Nov.

***Lesser Kestrel *F. naumanni*** 1 Fanoole barrage 6 Nov was the only record.

***Hobby *Falco subbuteo*** 1 Kamsuma 7 Nov was the only record.

**Caspian Plover** ***Charadrius asiaticus*** recorded Mareerey and Fanoole barrage in March, with a flock of *c.* 400 Lake Radiile 22 Mar; a small party Kismaayo 11 Nov.

**Little Ringed Plover** ***C. dubius*** occasional in March, with ones and twos along silty river edges. In November, small parties up to 20 common on muddy pans and edges of *dhesheegs*.

**Ringed Plover** ***C. hiaticula*** in March common along river with *c.* 200 Fanoole barrage; common other wetlands with 100+ Shoonto desheeg. Common in November on floods and rice schemes with hundreds at Mogambo.

***Spotted Redshank** ***Tringa erythropus*** 10+ Shoonto *dhesheeg* 21 Mar and *c.* 10 Lake Radiile 22 Mar.

**Wood Sandpiper** ***T. glareola*** very abundant and widespread both seasons on wetlands and irrigation; the most numerous wader on rice schemes and natural floods. Thousands in November at Fanoole and Mogambo rice schemes and at Lake Waamo.

**Greenshank** ***T. nebularia*** widespread in small numbers both seasons. Singles along the river in March.

**Green Sandpiper** ***T. ochropus*** singles Mareerey in March; 1 Jilib and several Mogambo rice scheme in November.

**Marsh Sandpiper** ***T. stagnatilis*** Common and widespread on wetlands and irrigation; max. in March *c.* 100 Lake Radiile; in November hundreds at Mogambo rice scheme.

**Terek Sandpiper** ***Xenus cinereus*** 2 Jamaame 9 Nov and 2 Jilib 11 Nov, on small pans.

**Common Sandpiper** ***Actitis hypoleucos*** very common and widespread in small numbers both seasons. In ones and twos along the river in March.

**Common Snipe** ***Gallinago gallinago*** uncommon in March. Small numbers in November around Jamaame and on the rice schemes, but scores present Lake Waamo.

***Great Snipe** ***G. media*** 5+ Lake Waamo 10 Nov along 1 km of shore. No previous record for Somalia.

**Curlew Sandpiper** ***Calidris ferruginea*** common both seasons in small parties on muddy pans and *dhesheegs*.

**Little Stint** ***C. minuta*** widespread and abundant on muddy pans and dhesheegs. In March, max. *c.* 400 at Shoonto. Hundreds in November on rice irrigation and at Lake Waamo.

**Temminck's Stint** ***C. temminckii*** in March, up to 3 together along silty river edges Jilib and Bu'aale; also 6+ Shoonto dhesheeg and 3 Lake Radiile. In November, 2 Jamaame on 9th, 2 Lake Waamo on 10th and 1 Jilib on 11th.

**Black-tailed Godwit** ***Limosa limosa*** scarce; 2 Fanoole rice scheme 27 Mar; 1 Lake Waamo 10 Nov.

**Ruff** ***Philomachus pugnax*** small numbers in March on wetlands Fanoole barrage–Bu'aale and 1000+ Fanoole rice scheme. In November, widespread and abundant in lower part of valley with thousands Mogambo and 1000+ Lake Waamo.

***Whiskered Tern** ***Chlidonias hybridus*** a few non-breeding plumaged birds Mareerey factory dams 19 Mar and Fanoole barrage 20 Mar. Two non-breeding plumaged birds

Jamaame 9 Nov. Very possibly Palaearctic in origin.

**White-winged Black Tern** ***C. leucopterus*** small numbers March, Mareerey–Bu'aale, max. 70+ Shoonto; a few hundreds in November Fanoole and Mogambo rice schemes.

**Gull-billed Tern** ***Gelochelidon nilotica*** local and in small numbers; a few Fanoole and Shoonto in March and Jamaame area in November.

**Caspian Tern** ***Sterna caspia*** near coast seen upstream to Gobwein.

***Eurasian Cuckoo** ***Cuculus canorus*** frequent in November; ones and twos seen Jilib, Mogambo, Kamsuma and Gobwein.

**Eurasian Bee-eater** ***Merops apiaster*** 2 together on wires along Jilib–Fanoole barrage road, 6 Nov.

**Blue-cheeked Bee-eater** ***M. persicus*** common both seasons in open country on the floodplain, especially on wires along canals. Scores along Jilib–Fanoole barrage road in November, with parties constantly moving south.

**Eurasian Roller** ***Coracias garrulus*** in March 1 Mogambo on 24th was the only record. In November, uncommon; up to three together around Jilib.

**Eurasian Swallow** ***Hirundo rustica*** common and widespread on floodplain. Scores and hundreds in November, but small numbers in March.

**Eurasian Sand Martin** ***Riparia riparia*** 1 Jilib March was the only record.

**Eurasian Golden Oriole** ***Oriolus oriolus*** in March, 1 flying north Fanoole barrage on 20th and 2 in bush near Bu'aale on 21st. In November, 1 along river at Jilib on 5th and 3 on 6th; 2 in *Acacia* woodland Gobwein on 11th.

**Rufous Bush Chat** ***Cercotrichas galactotes*** widespread and common in March in dry bush and thicket peripheral to floodplain, where it was the most numerous passerine migrant; especially common on red soil near coast; occasionally seen on floodplain but not noted near the river. None seen in November.

**Sprosser** ***Luscinia luscinia*** a few in November (5th, 6th and 12th) in thicket near the river at Jilib; also 30+ around Fanoole barrage on 7th and one near Jamaame on 9th. Some of these birds were in song.

**Nightingale** ***L. megarhynchos*** in March, a few in residual green scrub patches at Kamsuma, single birds by river at Jilib and Fanoole barrage and 20+ in woodland edge thicket at Shoonto. In November, very common on the floodplain from Jamaame area northwards, especially in *Acacia nilotica* thickets, with smaller numbers in peripheral bushland also; scores around Fanoole barrage; many in song.

**Eurasian Rock Thrush** ***Monticola saxatilis*** scarce; 1 Mareerey 24 Mar; 1 Jilib 7 Nov.

**Isabelline Wheatear** ***Oenanthe isabellina*** very common in March and November on flat dusty plains around Jilib and nearer the coast; occasional further north.

**Northern Wheatear** ***O. oenanthe*** 1 at Jilib on 28th, probably on passage, was the only March record. Frequent and widespread in November, mainly on floodplain cultivation.

**Pied Wheatear** ***O. pleschanka*** common and widespread in open bush and cultivation, on floodplain and peripheral areas; from Lake Waamo and Jamaame northwards, but none

seen on coast. More numerous in March than November.

***Basra Reed Warbler** ***Acrocephalus griseldis*** 1 along ditch on Mogambo rice scheme 7 Nov was the only record.

***Marsh Warbler** ***A. palustris*** in November, 2 Jilib on 5th, 2 Fanoole on 7th, 2–3 after rain Mogambo rice scheme on 7th, 1 Jamaame on 8th, 1 Kamsuma on 9th; generally scarce.

***Sedge Warbler** ***A. scheoenobaenus*** singing Mareerey factory dams 24 Mar; also seen Fanoole rice scheme 27 Mar.

***Upcher's Warbler** ***Hippolais languida*** in March, the commonest migrant warbler; widespread throughout dry bush and *Acacia tortilis* woodland outside the floodplain; commonest near coast where many in song in red soil woodland thicket. In November, 1 Gobwein on 11th was the only record.

***Olivaceous Warbler** ***H. pallida*** uncommon. In March, single birds singing and presumably wintering in floodplain thicket near Jilib and Jamaame. In November, 1 Fanoole barrage, 1 Jamaame and 1 Kamsuma, again all on floodplain.

***River Warbler** ***Locustella fluviatilis*** 1 in *Acacia nilotica* thicket and rank grass by river at Jilib 12 Nov. Good views obtained. No previous record for Somalia.

***Whitethroat** ***Sylvia communis*** a presumed passage bird Fanoole barrage 21 Mar.

**Barred Warbler** ***S. nisoria*** at least 10 in *Salvadora persica* thicket in *Acacia tortilis* woodland at Gobwein 11 Nov; probably many more since only a small part of the habitat was covered.

***Willow Warbler** ***Phylloscopus trochilus*** 2 in scrub along river bank at Fanoole barrage, together with a Whitethroat, on 21 Mar were presumably on passage. No other records.

**Spotted Flycatcher** ***Muscicapa striata*** very few in March, in riverine thicket and *Acacia* woodland; some of these were completing moult and presumably wintering. Common and widespread in November south to the coast, mostly on the floodplain.

***Red-throated Pipit** ***Anthus cervinus*** scarce; 1 Shoonto 22 Mar, 2 Lake Waamo 10 Nov and 2 Jilib 11 Nov.

**White Wagtail** ***Motacilla alba*** 1 Jilib on 19th was the only March record. Increasingly common during the November week in villages and near coast.

**Grey Wagtail** ***M. cinerea*** frequent in November in villages, usually by water; mostly singly, but 4 together Jamaame on 8th.

**Yellow Wagtail** ***M. flava*** common both seasons on floodplain near water and with domestic stock; hundreds Lake Waamo in November. Birds racially assigned were mostly *flava* and *beema*.

**Red-backed Shrike** ***Lanius collurio*** frequent and widespread in November, in ones and twos on the floodplain.

**Red-tailed Shrike** ***L. isabellinus*** a male of the race *speculigerus* at Jilib 19 Mar was the only record.

# EASTERN RED-FOOTED FALCONS *FALCO AMURENSIS* AND RED-FOOTED FALCON *F. VESPERTINUS* IN SOMALIA AND ETHIOPIA

J.S. Ash & J.E. Miskell

We follow Stresemann & Amadon (1979) in regarding the Eastern Red-footed or Amur Falcon *Falco amurensis* as being distinct from the Red-footed Falcon *F. vespertinus*. This policy has been followed previously by some authors, for example White (1965), without comment, and Moreau (1972), who added that they were allopatric and that the differences between the two were greater than would normally be regarded as subspecific, and that there are no reports of interbreeding. The Amur Falcon, as we prefer to call it, breeds from Lake Baikal eastwards to the Pacific and southwards to northern China (Moreau 1972), and overwinters in east tropical Africa south to Cape Province and west to northern Namibia (Brown *et al.* 1982). *F. vespertinus* breeds westwards from Lake Baikal, mostly between 50° and 60°E across Asia north of the Caspian and Black Seas into western Europe.

## STATUS IN ETHIOPIA AND SOMALIA

### Ethiopia

Urban & Brown (1971) describe *vespertinus* as a passage migrant in Western Ethiopia in September–October and March–April, possibly frequent, and *amurensis* as a passage migrant, possibly in October and March, in northeast Ethiopia. In an exhaustive search of the literature we were able to trace only a single record of *F. vespertinus* and not one of *amurensis* in the whole of Ethiopia, and JSA failed to see either species during wide travels in the country in 1969–1977. In the Sudan adjoining Western Ethiopia there are no records east of the Nile valley (Nikolaus 1987). Vittery (1975, 1983) recorded a male flying north at Lake Langano (7°35N, 38°45E) in the Rift Valley on 26 April 1975, but the observation is unsupported by details of identification. Later in the same year, G. Nikolaus (*in litt.*) reported a bird from the Afdera River (9°32N, 41°00E), also in the Rift Valley, on 29 September to 1 October 1975 which he considered to be this species, but his description is not entirely convincing.

### Somalia

There are no records of *vespertinus* and only one old record, of two *amurensis*, collected at Obbia (5°21N, 48°32E) in January 1931 (Moltoni 1935, 1936). However, on 24 November 1978 there were two *amurensis* all day, joined by seven more in the evening, on the coast at Gezira (1°56N, 45°11E). On 13 April 1979 we encountered quite large numbers between Balad (2°21N, 45°11E) and Jiohar (2°47N, 45°30E), also in southern Somalia, associated with an immense passage of Eurasian Rollers *Coracias garrulus* (Ash & Miskell 1980). We made five separate observations on this day, as follows:

a. 13 km north of Balad: *c.* 100 small falcons comprising 50 male and 30 female amurensis, *c.* 10 Lesser Kestrels *F. naumanni*, 5 Kestrels *F. tinnunculus* and 5 Hobbies *F. subbuteo*, with *c.* 100 Eurasian Rollers feeding on termites.

b. 30 km south of Jiohar: several small parties of small falcons, mostly *amurensis*, flying ENE with Eurasian Rollers.

c. 24 km south of Jiohar: 20 *amurensis* flying NE.

d. 14 km south of Jiohar: 15 *amurensis* catching termites.

e. 11 km south of Jiohar: 25 *amurensis* flying NE at dusk.

In the same area where the birds were seen in the spring of 1979 at least ten were watched on 17 April 1981 at 11 km south of Balad. Shortly afterwards, three falcons, almost certainly *amurensis*, accompanying a group of raptors which consisted of 1 *subbuteo*, 25 *tinnunculus* and 5 Swallow-tailed Kites *Chelictinia riocourii* were feeding aerially over open ground on 28 April 1981 near Bergadid (5°04N, 45°20E) in the west of the country close to the Ethiopian border.

## MIGRATION OF *FALCON AMURENSIS*

Moreau (1972) described the migration as "the most extraordinary of all those under discussion", and Brown & Amadon (1968) remarked that in its journey of 6000–7000 miles it "possible performs the most remarkable migration known in any bird of prey." The present indications are that the main bulk of Amur Falcons leave their breeding quarters, between Lake Baikal and Korea, pass through Assam south of the Himalayas and leave western India between 14° and 16°N in the area of Goa on a long flight, of at least 3000 km across the Indian Ocean, in the north-east monsoon between November and January.

Apparent arrival localities along the east African seaboard range from Obbia in the north at *c.* 5°N to Pemba Island at 5°S. Inland movements, such as the large southerly movement in January at Dodoma (6°11S, 35°45E) in Tanzania (Britton 1980) suggest arrival of birds at some point north of 5°S. Records of single immature birds near Aden on 25 November 1984 (Ash in prep.) and at Muscat, also on 25 November (year not given, Meinertzhagen (1954)), although being further north, still fit in well with the timing of this westerly movement.

As far as is known the world population, estimated by Moreau (1972) as possibly numbering 4.5 million, overwinters in Africa, and if as seems likely after crossing the Indian Ocean they pass over the African coast between 5°N and 5°S it is remarkable that there are only four records of presumed new arrivals on the coast (at Obbia and Gezira in Somalia, Bamburi (4°00S, 39°43E) in Kenya, and Pemba (5°10S, 39°48E) in Tanzania). This strongly suggests that birds are passing over unseen high overhead, many probably at night, and continuing inland. From a total of over 70 records that we have traced in Somalia, Uganda, Kenya and Tanzania, 38 can be dated to the immigration period in November–January, but only five of them refer to more than 100 birds, the highest being 1000+ (once). Thus this large mass of birds is passing through virtually unseen. In their final winter quarters further south 5000, and even up to 100 000, have been seen together (Moreau 1972). These observations strongly suggest that Amur Falcons not only cross the Indian Ocean in an uninterrupted flight, but that many of them continue non-stop as far as Malawi and Zambia.

Their late arrival in November–January results from the timing of their trans-oceanic flight to coincide with the N.E. monsoon, and practically all Amur Falcons are absent from East Africa after January. The few records there in February are from southern Tanzania

and presumably, like some of the January records, are birds within the northern limit of their final winter range.

Return passage takes place more rapidly, in March and April, and observations in Africa fall within the same area as the autumn birds, except that there are a few more records to the north and west. The reverse migration takes place in similar conditions to those in autumn, except that the following wind is now from the S.W. monsoon. There is no reason to assume the "massive descent" expected by Moreau (1972) or to suppose that the absence of records on the Indian seaboard in spring is any more unexpected than are the few records on the African coast in autumn. Nevertheless, the route back from eastern Africa in spring is still not known.

The extraordinary record by Meinertzhagen (1954) of 100 Amur Falcons, of which he shot a pair, near Mecca on 6 April 1948, is difficult to understand. Moreau (1972) suggested that the falcons may have been "seduced" into being diverted off-course by the presence of breeding locusts in the Red Sea area, although it is difficult to understand how their influence might have been exerted over a distance of many hundreds of kilometres from the most northerly record of *amurensis* in Africa at Obbia.

We have discussed elsewhere (Ash & Miskell 1980) the migration of Eurasian Rollers with which the falcons were associated on 13 April 1979, and whose onward passage is not understood either. Several possibilities exist which might equally well apply to Amur Falcons:

a. the birds may have been heading towards the coast along which they might proceed to a short sea-crossing at Cape Guardafui.
b. the birds may have been heading for a direct long-distance crossing of the Indian Ocean (although this seems unlikely at this latitude before the S.W. monsoon is established).
c. they may have been diverted from their original track towards the large rainstorms on 13 April where there would be insects in the upwelling air ahead of the rain.

Amur Falcons deposit large reserves of pre-migratory fat (Moreau 1972) and are thus able to travel great distances non-stop. They are also aerial feeders, as are the rollers, so can exploit any available food sources, particularly airborne locusts and termites, whilst on migration.

We suspect that the main exodus of falcons in spring may leave Africa from the same area at which they arrived four to five months earlier, at very high altitude, not necessarily on a narrow front, and perhaps mainly to the south of Somalia. Further south in April the westerly wind will be firmly established, but possibly some birds find they are ahead of the wind-change zone and become 'trapped' by the easterly head winds further north, and thus continue overland in a north-easterly direction, rather than face a long oversea flight in a head wind. This might account for the birds in western Arabia, and possibly even for those found in Somalia. Whichever is the case, it is indeed remarkable that a migration which must involve millions of birds is so poorly understood.

## REFERENCES

ASH, J.S. (in prep.). Some observations in South Yemen in 1984. (*Sandgrouse*).

ASH, J.S. & MISKELL, J.E. 1980. A mass-migration of Rollers *Coracias garrulus*. *Bulletin of the British Ornithologists' Club* 100: 216–218.

BRITTON, P.L. (ED.) 1980. *Birds of East Africa*. Nairobi: EANHS.

BROWN, L. & AMADON, D. 1968. *Eagles, hawks and falcons of the world*. Feltham: Hamlyn for Country Life Books.

BROWN, L.H., URBAN, E.K. & NEWMAN, K. 1982. *The birds of Africa*. Vol. I. London & New York: Academic Press.

MEINERTZHAGEN, R. 1954. *Birds of Arabia*. Edinburgh: Oliver and Boyd.

MOLTONI, E. 1935. Contributo alla conoscenza degli uccelli della Somalia Italiana. *Atti della società Italiano di scienze naturali, e del Museo civile di storia naturale in* Milano. 74: 333–371.

MOLTONI, E. 1936. Gli uccelli fino ad oggi notificati per la Somalia italiana. *ibidem*: 75: 307–389.

MOREAU, R.E. 1972. *The Palaearctic–African bird migration systems*. London & New York: Academic Press.

NIKOLAUS, G. 1987. Distribution atlas of Sudan's birds with notes on habitat and status. Bonner Zoologische Monographien, Nr. 25. Zoologisches Forschungsinstitut und Museum Alexander Koenig Bonn.

STRESEMANN, E. & AMADON, D. 1979. Order Falconiformes. *In Peters' check list of birds of the world*, vol. I, 2nd edition (MAYR, E. & COTRELL, G.W. EDS.). Cambridge, Mass: Museum of Comparative Zoology.

URBAN, E.K. & BROWN, L.H. 1971. *A checklist of the birds of Ethiopia*. Addis Ababa: Haile Sellassie I University Press.

VITTERY, A. 1975. Bird notes for April/May. *Ethiopian Wildlife and Natural History Society Newsletter* 98: 5.

VITTERY, A. 1983. Movements of Palaearctic raptors in the Ethiopian Rift Valley. *Scopus* 7: 1–9.

WHITE, C.M.N. 1965. *A revised check list of African non-passerine birds*. Lusaka: Government Printer.

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*Postscript*: Since the above was written it has been learned that Douthwaite & Miskell (in prep.) are reporting the first occurrence of *Falco vespertinus* in Somalia.

# MADAGASCAR PRATINCOLES *GLAREOLA OCULARIS* AND OTHER PRATINCOLES IN SOMALIA.

J.S. Ash and J.E. Miskell

Britton's (1977) review of the status of the Madagascar Pratincole *Glareola ocularis* in Africa showed that the pattern of its migrations and breeding cycle are now well understood, and that a part of the Kenya coast is an important area for non-breeding birds in April–August. He also gave two dated non-breeding records for Somalia, from which he deduced that there might be an "off-season area" in that country. Some personal observations are presented to show that he was correct in this supposition, and we also quote some other earlier records.

## OBSERVATIONS

Except for two records, most of the earlier Madagascar Pratincoles prior to 1979 in Somalia, for which there are nine references in the literature in the period 1923–1971, refer to collected birds (Table 1). Unfortunately there is little information on the actual numbers present at the time of collection, so mostly it is impossible to know whether they are merely isolated records of single birds, or whether they were collected from flocks. The only record of large numbers in this period is the 500 recorded on the Jubba River by Moltoni (1936b). In 1979, large numbers of *G. ocularis* were seen in Somalia, when a flock of 3000 was counted on 25 and 28 May near Jiohar on the Webi Shabelle. We found these birds in mid-afternoon resting on patches of exposed mud in a large area of flooded land. The diagnostic characters of identification were clearly seen in close views, and no Common Pratincoles *G. pratincola* could be seen with them. Three observers separately estimated their numbers, by counting birds in one batch of 100 and then applying this to the whole flock. Our individual totals were 2700, 3000 and 3500. When followed by a more thorough count our final figure of 3000 was arrived at.

## OFF-SEASON RANGE

Except for the undated 1929 record (Moltoni 1935, 1936a), all the other records fall between 25 May (in two years) and 4 September (Table 1), while extreme dates cited by Britton for Kenya are 4 April and 30 September. Earlier dates in spring and later dates in autumn are to be expected in Kenya, so that the respective differences of 51 and 26 days may suggest a rather leisurely movement between the Jubba and Shebelle areas and the Kenya coast. The single record from Ethiopia on 29 October (Ash 1977), falls well outside the above off-season dates, at a time of the year when *G. ocularis* should be breeding in Madagascar. Perhaps it can be explained as a displaced bird following a 'reverse migration', for it was in exactly the opposite direction to which it should have been in relation to the off-season area in Somalia. Smaller numbers of birds were seen in 1980, but no special searches were made, and all observations resulted from chance finds in the large area in which the birds occurred. However, up to 3000 birds were seen again in the mid-Shabelle valley in 1981.

Table 1. *Records of* Glareola ocularis *in Somalia*

| Locality | Co-ordinates | Dates | N | Authority |
|---|---|---|---|---|
| Giumbo (Jumba) | 0°15S, 42°38E | 1923 | ? | Moltoni 1936a |
| Mogadishu area | 2°02N, 45°21E | 1929 | 1 | Moltoni 1935, 1936a |
| Belet Amin (Beled Amiin) | 0°12N, 42°47E | Jun 1934 | 500+ | Moltoni 1936a, 1936b |
| Belet Amin | 0°12N, 42°47E | 30 Jun 1934 | 1 | Moltoni 1936b |
| Torda | 0°05S, 42°44E | Jul 1934 | 1 | Moltoni 1936a, 1936b |
| Jiohar (Jowhar) | 2°47N, 45°30E | 25 May 1939 | 1 | Moltoni 1941 |
| Jiohar | 2°47N, 45°30E | 3 Jun 1939 | 1 | Moltoni 1941 |
| Kurtonware (Kurtunwaarey) | 1°37N, 44°20E | 14 Aug 1959 | 1 | Berlioz & Roche 1963 |
| Giamama (Jamaame) | 0°04N, 42°45E | 4 Sep 1964 | 1 | Roche 1975 |
| Goluen (Golweyn) | 1°40N, 44°35E | 24 Aug 1971 | ? | R.G. Allan (pers. comm.) |
| 9 km S of Jiohar | 2°42N, 45°27E | 25 May 1979 | 3000 | JSA, JEM |
| 9 km S of Jiohar | 2°42N, 45°27E | 28 May 1979 | 3000 | JSA, JEM |
| 16 km N of Afgoi | 2°17N, 45°05E | 19 Jun 1979 | 4 | JSA, JEM |
| 14 km S of Afgoi | 2°04N, 45°14E | 1 Jul 1979 | 400 | JSA, JEM |
| 20 km S of Uanle Uen | 2°28N, 44°59E | 3 Jul 1979 | 2 | JSA |
| Uarmahan (War Maxan) | 2°24N, 45°01E | 4 Jul 1979 | 1 | JSA |
| Uarmahan (War Maxan) | 2°24N, 45°01E | 5 Jul 1979 | 25 | JSA |
| 30 km S of Uanle Uen | 2°23N, 45°01E | 26 Jun 1980 | 10 | JSA |
| Uarmahan to near Mogadishu | | 7 Jul–4 Aug 1980 | 10+ | JSA |
| Shalambot/Dannow area | 1°42N, 44°42S–1°44N, 44°37E | 13 Aug 1980 | 20+ | JSA |
| Near Uarmahan | 2°24N, 45°01E | 6 Jul 1981 | 20+ | JSA |
| Near Uarmahan | 2°24N, 45°01E | 7 Jul 1981 | 3000 | JSA |
| Kurtonware | 1°37N, 44°20E | 20–22 Jul 1981 | 100s | JSA |
| Kurtonware | 1°37N, 44°20E | 3 Aug 1981 | many | JSA |

Clearly southern Somalia is an important off-season area for this species. Probably the majority of birds spend most of the non-breeding season in Somalia, and it is very likely these birds which, whilst on southward passage, augment the Kenya coast population in August and September. At this time, from mid-August onwards, numbers on the Kenyan coast increase from *c.* 800 to up to 9000 (Britton 1977, 1980). From May to August huge areas of favourable habitat exist in Somalia along the Jubba and Shabelle valleys. Both areas are poorly known ornithologically and in particular a large area along the lower Shabelle is virtually inaccessible and has never been other than casually explored for birds. From July onwards, after the cessation of the big rains (the *gu* season), the marshes and flood plains dry up rapidly, and would become increasingly unfavourable for *G. ocularis*.

As in Kenya, *G. pratincola* also occurs in Somalia in the same general area as *ocularis*, except that it is in smaller numbers and *pratincola* alone occurs in the north-west (Archer

& Godman 1937, Clarke 1984). Although present in most months, and breeding in June and July, their dates of occurrence also can coincide with those of *ocularis*, so that all pratincole identifications need to be checked carefully. The records of *pratincola* in southern Somalia from Kismayu (0°22S, 42°32E) in July 1901, recorded in Hilgert (1908), Moltoni (1936a) and Neumann (1920), presumably all refer to Erlanger's (1904–1907) records. To these we can add 26 records of our own of up to 100 birds over a wide area south of 3°N between 2 April 1979 and 9 December 1981 (*vide* the 'Checklist'—Ash & Miskell 1983). From the north-west, the original two September records by Archer & Godman (1937), have been increased by three more by Clarke (1984) in August and September in 1956 and 1958.

Two records of single Black-winged Pratincoles *G. nordmanni* from Hargeisa (9°33N, 44°04E) and Tug Wajaleh (9°37N, 43°17E) in September 1920 (Archer & Godman 1937) are the only records for this species in Somalia.

## REFERENCES


Archer, G.F. & Godman, E.Moltoni. 1937. *The birds of British Somaliland and the Gulf of Aden.* Vol 1. London: Gurney and Jackson.

Ash, J.S. 1977. Four species of birds new to Ethiopia and other notes. *Bulletin of the British Ornithologists' Club* 97: 4–9.

Ash, J.S. & Miskell, J.E. 1983. Birds of Somalia their habitat, status and distribution. *Scopus* Special Supplement No. 1.

Benson, C.W. 1978. The Madagascar Pratincole *Glareola ocularis* in Somalia. *Scopus* 2: 21.

Berlioz, J. & Roche, J. 1963. Étude d'une collection d'oiseaux de la Somalie. *Bulletin du Muséum National d'Histoire Naturelle* 2 (35): 580–592.

Britton, P.L. 1977. The Madagascar Pratincole *Glareola ocularis* in Africa. *Scopus* 1: 94–97.

Britton, P.L. (ed.) 1980. *Birds of East Africa.* Nairobi: EANHS.

Clarke, G. 1985. Bird observations from northwest Somalia. *Scopus* 9: 24–42.

Erlanger, C. Fr. 1905. Beiträge zur Vogelfauna Nordostafrikas. *Journal für Ornithologie* 1905: 42–158.

Hilgert, C. 1908. *Katalog der Collection von Erlanger in Nieder-Ingelheim a. Rh.* Berlin: Friedlander & Sohn.

Moltoni, E. 1935. Contributo alla conoscenza degli uccelli della Somalia Italiana. *Atti della societa Italiano di scienze naturali, e del Museo civile di storia naturale in Milano.* 74: 333–371.

Moltoni, E. 1936a. Gli uccelli fino ad oggi notificati per la Somalia italiana. *ibidem*: 75: 307–389.

Moltoni, E. 1936b. Spedizione zoologica del Marchese Saverio Patrizi nel Basso Giubo e nell'Oltre iuba. *Annali del Museo Civico di Storia Naturale di Genova* 58: 85–101.

Moltoni, E. 1941. Uccelli raccolti dal Sig. Ermanno Ciferri al Villaggio Duca Degli

Abruzzi (Somalia) dalla fine di aprile di iuglio 1939. *Rivista Italiana di Ornithologia.* Anno XI, Serie II. Milano 1941 (XIX): 85–115.

NEUMANN, O. 1920. [Neue Gattungen und Unterarten afrikanischer Vögel.] *Journal für Orithologie* 1920: 78.

ROCHE, J. 1966. Recherches écologiques et systematiques sur les oiseaux de la République de Somalie (Partie ex-Italienne). *Monitore Zoologico Italiano.* (Supplemento) 74: 44–79.

ROCHE, J. 1966. Recherches orithologiques en République de Somalie. *ibidem* N.S. Supplemento VI, No. 6: 103–140.

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## CORRECTIONS

In the paper 'On the breeding behaviour of three montane sunbirds *Nectarinia* spp. in northern Malawi' by Dr Françoise Dowsett-Lemaire (*Scopus* 11: 79–86), a number of mistakes were made in the typesetting and editorial stages, for which I apologize. The corrections are as follows:

p. 82, line 10: replace 'with' by 'without'

p. 83, after line 3 a whole paragraph has been omitted:

> Bronze Sunbirds have loud calls *pe puaa, pe piu* (Fig. 2) that are used in territorial advertisement. Song consists of a musical and fast warble, heard only at short range, uttered when males chase and display near females, and also between females in territorial disputes. I saw up to three females singing together in an upright posture after unsuccessful chasing.

p. 84, line 7: replace 'alteration' by 'alternation'

p. 84, Discussion, third paragraph.: *N. afra* raises 'two or three' broods, not 'single' broods.

Ed.

# RECENT COUNTS OF WATTLED CRANES [1]*BUGERANUS CARUNCULATUS* ON THE KAFUE FLATS, ZAMBIA—NOVEMBER 1987

G.W. Howard

The population of Wattled Cranes *Bugeranus carunculatus* on the Kafue Flats in southern Zambia has attracted attention over the last 15 years because of the possible effects of the Kafue Hydroelectric Scheme (Douthwaite 1974, Konrad 1980, Howard & Aspinwall 1984, Urban 1988). An aerial census of the Kafue lechwe antelope *Kobus leche kafuensis* from 11 to 13 November 1987 afforded an opportunity to count some parts of the Kafue Flats' population of Wattled Cranes in a way that was comparable with the most recent published estimate of Howard & Aspinwall (1984).

## METHODS AND RESULTS

The Kafue Flats is a major wetland of Zambia consisting of the floodplain of the Kafue River between 15 and 16°S and 26 and 28°E. The floodplain is approximately 250 km long and more than 60 km across at its widest point (Howard 1985) and its central area (Fig. 1) contains parts of Lochinvar and Blue Lagoon National Parks. This central area of the Flats is the main refuge of many floodplain animals and is the least disturbed part of the wetland. The major concentration of Wattled Cranes of the Kafue Flats is known to occupy this central area (Douthwaite 1974, Konrad 1980).

The stratified random sampling technique used for the aerial census of the lechwe was described by Howard & Jeffery (1984) and was essentially the same as that reported by Howard & Aspinwall (1984). Wattled Cranes were counted and recorded when they were detected in the lechwe-counting transects (200 m wide, 200 feet (*c.* 70 m) above ground) in four (of the six) strata involved in the 1987 count (see Fig. 1). Group sizes were also recorded of those birds seen inside the transects.

The numbers of birds recorded in the four strata are shown in Table 1 together with the computed estimates of Wattled Cranes for these strata. These give a total of 369 birds counted and an estimate for the sampled area of 2508 Wattled Cranes.

Table 1. *Numbers counted and population estimates of Wattled Cranes in the sampled areas of the Kafue Flats, 11–13 November 1987*

| Stratum* | %Stratum sampled | Cranes counted | Estimates** |
|---|---|---|---|
| 1 | 8.8 | 72 | 818 |
| 2 | 15.6 | 131 | 840 |
| 3 | 13.3 | 53 | 398 |
| 4 | 25.0 | 113 | 452 |
| Totals | | 369 | 2508 |

* Fig. 1; **Estimated population = $\frac{\text{birds counted}}{\%\text{ stratum sampled}}$

[1]Called *Grus carunculatus* in *Birds of East Africa*

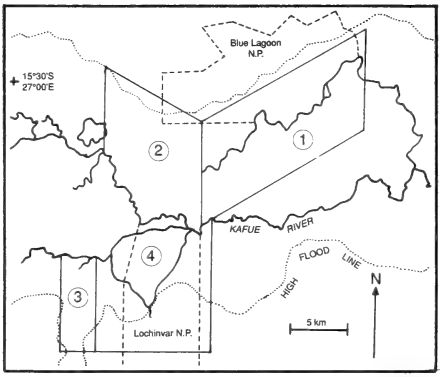


Fig. 1. *The central part of the Kafue Flats showing the strata sampled in November 1987*

Group sizes of birds in the transects are presented in Table 2. The numbers of groups in the strata and the mean group sizes per stratum are shown in Table 3. Stratum 2 had mainly pairs of Wattled Cranes with three groups of three birds and one group of 38 inside the transects. The other large group 37 was in the western end of Stratum 4 (Fig. 1); this stratum had the largest number of groups exceeding three birds.

Table 2. *Frequencies of recorded group sizes of Wattled Cranes on the Kafue Flats, November 1987*

| Group size | Frequency of observation | Sum of birds in group size | |
|---|---|---|---|
| 1 | 0 | 0 | |
| 2 | 67 | 134 | |
| 3 | 9 | 27 | |
| 4 | 2 | 8 | |
| 5 | 0 | 0 | |
| 6 | 2 | 12 | |
| 11 | 1 | 11 | |
| 13 | 3 | 26 | |
| 15 | 1 | 15 | |
| 18 | 1 | 18 | 200 |
| 19 | 1 | 19 | |
| 24 | 1 | 24 | |
| 37 | 1 | 37 | |
| 38 | 1 | 38 | |
| | | 369 | |

Table 3. *Numbers of Wattled Cranes observed in each stratum with mean group size*

| Stratum | No. of groups | Mean group size |
|---|---|---|
| 1 | 17 | 4.2 |
| 2 | 46 | 2.8 |
| 3 | 11 | 4.8 |
| 4 | 15 | 7.5 |
| Totals | 89 | 4.1 |

## DISCUSSION

The area sampled in these four strata represents approximately two-thirds of the area counted in 1982 by the same technique and counter (Fig. 1, cf. Howard & Aspinwall 1984, Fig.2). However, the area censused in 1987 was the portion occupied by approximately 90 per cent of the Wattled Cranes *counted* in 1982. At first sight, therefore, there appears to be a drop in the estimated population of Wattled Cranes in the sampled area of this central part of the Kafue Flats between 1982 and 1987 (90 per cent of 3282 cf. 2402—an apparent decline of 19 per cent in five years). But there are

two significant factors to be considered in comparing these two estimates: the time of the year in which counts were made and the composition of the counted groups.

The 1982 census was carried out in late May while the 1987 count was made in early November. In this respect the two estimates are not strictly comparable as we know that the *distribution* of Wattled Cranes on the Kafue Flats changes during the year (Douthwaite 1974).

Reference to Table 2 (and Table 3 of Howard & Aspinwall 1984) shows that the numbers of birds counted in the two surveys is about the same in the small groups (group sizes 1 to 4), totalling 153 in 1982 and 169 in 1987). The major differences between the counts for the two estimates are the large groups of Cranes (four groups over 50 in number, totalling 496 birds) which were present in May 1982 but were absent from the sampled transects in November 1987. It is suggested that these large groups may have left the sampled area by November 1987—either for another part of the Kafue Flats or for the postulated migration to the Makgadikgadi Pans in Botswana where there is an accumulation of Wattled Cranes during the wet season (Collar & Stuart 1985, Urban 1985). It is essential to an understanding of the conservation status and the population dynamics of this population of Wattled Cranes that the movement or dispersal of these large groups is studied further.

The Cranes that occurred in pairs or threes were likely to have been mated pairs so their distribution among the strata may be useful in locating the breeding (or post-breeding) sites of these birds. The strata 2 and 3 were the areas of major accumulation of pairs with some being recorded from the other two strata as well. Breeding is likely to have been completed by November and the chicks ready to leave or already gone from their parents (Douthwaite 1974, Collar & Stuart 1985). The pairs are thus likely to represent some of the resident breeding birds (Konrad 1980).

The accuracy of these estimates is difficult to assess and no attempt has been made to calculate errors of variances for this population (see also Howard & Aspinwall 1987). The combination of relatively sedentary small groups of birds (pairs and threes) with the flocks of tens to hundreds renders this stratified system of random sampling not especially appropriate for this population of Cranes. The sampling proportions within strata (Fig.1) are adequate for lechwe but may not be the most appropriate for Wattled Cranes. The size of the transects seem sensible for small groups of birds but do not always allow representation of the widely scattered large flocks. While it is realized that a new sampling programme should be developed especially for the Cranes, the data available as a by-product of the lechwe census are nevertheless of use for comparison and should be continued in the future. There is need for a more comprehensive survey method to cover a larger area of the Kafue Flats, to observe the remainder of breeding birds, to monitor the movements of the larger flocks and to assess the significance of the many semi-resident pairs of birds scattered on small wetlands (such as *dambos*) throughout much of southern, western and northern Zambia.

The counts recorded here tell us that the status of the small groups of birds in the Wattled Crane population of the central Kafue Flats remains little changed over the five years from 1982 to 1987. The same data pose questions about the larger flocks and

highlight areas for further research on this important wetland bird. These recent counts also show no evidence of any effect on Crane population of the new (10 years old) flooding regime of the Flats brought about by the operation of the Kafue Hydroelectric Scheme.

## ACKNOWLEDGEMENTS

The census was financed by the IUCN/WWF Zambia Wetlands Project which is gratefully acknowledged together with its Director. The counts reported here would not have been possible without the support of the pilots, navigators and other staff involved in the lechwe census.

## REFERENCES

COLLAR, N.J. & STUART, S.N. 1985. *Threatened birds of Africa and related islands. The ICBP/IUCN Red Data Book, Part I.* Cambridge: ICBP/IUCN.

DOUTHWAITE, R.J. 1974. An endangered population of Wattled Cranes (*Grus carunculatus*). *Biological Conservation* 6: 134–142.

HOWARD, G.W. 1985. The Kafue Flats of Zambia—a wetland ecosystem comparable with floodplain areas of northern Australia. *Proceedings of the Ecological Society of Australia* 13: 293–306.

HOWARD, G.W. & ASPINWALL, D.R. 1984. Aerial censuses of Shoebills, Saddlebilled Storks and Wattled Cranes at the Bangweulu Swamps and Kafue Flats, Zambia. *Ostrich* 55: 207–212.

HOWARD, G.W. & JEFFERY, R.C.V. 1987. Kafue lechwe population census, November, 1987. Report to the Director, National Parks and Wildlife Service, Chilanga, Zambia, 8 pp., mimeo.

KONRAD, P.M. 1980. The present status of the Wattled Crane in Africa. International Crane Foundation, Wisconsin, USA, unpublished MS.

URBAN, E.K. 1985. Monitoring cranes in Botswana. *The Babbler* 10: 6–7.

URBAN, E.K. 1988. Status of cranes in Africa. *Proceedings of the Sixth Pan-African Ornithological Congress*: 315–329.

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# INTERSPECIFIC COMPETITION FOR NEST CAVITIES BY INTRODUCED LOVEBIRDS *AGAPORNIS* SP. AT LAKE NAIVASHA, KENYA

J.J. Thompson and W.K. Karanja

Hybrid Fischer's x Yellow-collared Lovebirds *Agapornis fischeri* x *personata* were introduced to Lake Naivasha, Kenya in the late 1950s by private aviary owners. The birds' ability to breed in captivity forced the owners to release them into the wild and, in 1986, their numbers were estimated at just under 6000 (Thompson, in prep.). Hybrid lovebirds have been released elsewhere in Kenya (Cunningham-van Someren 1975) and are now found in Nairobi, Kiserian, the Ngong Hills, Meru, Embu, Nakuru, Molo, Kisumu and parts of the Kenya coast (G.R. Cunningham-van Someren, pers. comm.). Due to this wide distribution, Lake Naivasha was chosen as a convenient site at which to study competitive interspecific interactions between lovebirds and other cavity-nesting species.

Competition for nesting cavities among hole-nesting birds has been recorded both in natural avian communities and between introduced and native species. The introduction into North America of the European Starling *Sturnus vulgaris* and the House Sparrow *Passer domesticus* has forced Eastern Bluebirds *Sialia sialis* to nest almost exclusively in nest-boxes provided by man (Gowaty 1985). Woodpeckers, such as the Northern Flicker *Colaptes auratus* and the Red-headed Woodpecker *Melanerpes erythrocephalus* have also probably been adversely affected (Short 1979). Von Haartman (1957) was among the first to suggest that hole-nesting birds (his study only covered passerines in temperate regions) are limited by the availability of nest sites, and he placed more importance on these than on food availability as an ecological limiting factor determining the maximum number of nesting pairs.

Evidence of competition for nest holes among birds comes from both behavioural and experimental data. Interspecifically directed aggression among hole-nesting birds has been commonly noted (von Haartman 1957, Orians & Willson 1964, Welty 1964, Armstrong 1965, Short 1979, 1982) as being caused by competition for a limited supply of suitable holes or cavities. The Eurasian Wryneck *Jynx torquilla*, for example, will even empty out the nesting material and eggs of another bird (von Haartman 1957). Evidence also includes the densities of hole-nesting birds increasing with the provision of nest boxes (Welty 1964, von Haartman 1957) and nesting pairs, when removed from their hole, immediately being replaced by, until then, non-breeding individuals. Brush (1983), however, found competition between hole-nesters to be unimportant since cavities were not fully utilized and did not limit breeding despite extensive habitat and nesting season overlap. He concluded, though, that interference competition may be more crucial in situations where nest sites are in short supply.

Lovebirds have previously been noted as occupying and probably breeding in other species' nests (Moreau 1948), including the Rufous-tailed Weaver *Histurgops ruficauda* and old swift's nests (Forshaw 1981), and a barbet's nesting hole (Mackworth-Praed & Grant 1952). Whether their competition involved usurpation of the former species was not mentioned. To determine the extent to which the introduced lovebirds have interfered with

the success of resident hole-nesting birds, an attempt was made to answer four questions: 1. What is the overlap between lovebirds and other hole-nesters in the preferred nest-/roost-hole type? 2. How aggressive are lovebirds towards other species? 3. Are lovebirds capable of usurping other hole-nesters from their holes? 4. Are some hole-nesting species absent from the Lake Naivasha forest where they have commonly been recorded in the past?

## METHODS

Lake Naivasha lies in the Kenyan Rift Valley between latitudes 0°50S and 0°40S and longitudes 36°15E and 36°25E at an altitude of about 1890 m. Unlike most other nearby Rift Valley lakes, which are strongly alkaline, Lake Naivasha is fresh. The climate of the area is warm and semi-arid receiving a total average annual rainfall of some 630 mm. The study area included the strip of fever tree Acacia xanthophloea woodland which immediately surrounds the lake, an area of approximately 1790 ha. Outside the forested area, the rising land abruptly gives way to semi-arid Tarchonanthus camphoratus bushland.

During this study 16 species of cavity-nesters representing nine families were seen. These were the Grey Woodpecker *Mesopicos goertae*, Nubian Woodpecker *Campethera nubica*, Bearded Woodpecker *Thripias namaquus*, Cardinal Woodpecker *Dendropicos fuscescens*, Red-throated Wryneck *Jynx ruficollis*, Pearl-spotted Owlet *Glaucidium perlatum*, Woodland Kingfisher *Halcyon senegalensis*, Lilac-breasted Roller *Coracias caudata*, Hoopoe *Upupa epops*, Green Wood Hoopoe *Phoeniculus purpureus*, Grey Hornbill *Tockus nasutus*, Red-fronted Barbet *Lybius diadematus*, White-bellied Tit *Parus albiventris*, Blue-eared Glossy Starling *Lamprotornis chalybaeus*, Rüppell's Long-tailed Glossy Starling *L. purpuropterus* and the Superb Starling *Spreo superbus*.

Virtually the only tree available for nest cavity excavation is the fever tree. It is a flat-topped, fast-growing species up to 24 m high (Government Printer 1936) with a short life expectancy of about 40 years (J. Hayes, pers. comm.). A comparison of aerial photographs from 1969 and 1984 shows that the extent of fever tree distribution and overall maturity of the forest is increasing, probably due to a government ban on tree felling.

In order to identify occupied roosting or nest holes, daily watches were kept on likely cavities during the last hour of daylight. Information was recorded on the occupying species, height above ground level (estimated visually) and cavity type. A list of interspecific encounters between lovebirds and other species was compiled to determine any dominance hierarchy. The contestants in each encounter were judged 'winners' or 'losers', the 'winner' always being the aggressor while the 'looser' being the bird driven away or forced to retreat. Observations were recorded from all times of the day.

## RESULTS AND DISCUSSION

Cavity types fell into three well defined categories: firstly, many hole-nesters used the end of a broken branch or a crevice along its length to nest in, excavating the central rotten wood to form a cavity; secondly, a tree-knot or small lateral outgrowth sometimes forms, allowing entry by birds into the main trunk; lastly, holes excavated and occupied by woodpeckers (almost always in dead wood) or taken over by other hole-nesting species.

A total of 94 cavities occupied by birds was positively identified, 57 of which were used by lovebirds. Of these 57, 58 per cent were of the broken branch type, 14 per cent of the tree-knot type and 28 per cent old woodpecker holes. Average heights above ground level for the three cavity types were 6.2, 7.3 and 6.2 m respectively. Many other holes that were watched were either unoccupied or used by tree mice *Apodemus* sp.

The remaining species for which cavities were located are listed below with the number of cavities observed, cavity type and average height above ground level.

Pearl-spotted Owlet—one cavity in an abandoned woodpecker hole; 5 m.
Woodland Kingfisher—two cavities, both in woodpecker holes; 7 m.
Lilac-breasted Roller—two cavities, both in woodpecker holes; 15.5 m.
Hoopoe—one cavity in a tree-knot; 8 m.
Green Wood Hoopoe—three cavities, one in a broken branch, one in a tree-knot and one in a woodpecker hole; 6.6 m.
Red-fronted Barbet—one cavity in an abandoned woodpecker hole; 4 m.
Grey Woodpecker—13 holes located, all conventional woodpecker holes; 5 m.
Nubian Woodpecker—one hole, conventional woodpecker type; 2 m.
Bearded Woodpecker—four holes, conventional woodpecker type; 10 m.
Cardinal Woodpecker—two holes, one conventional, the other in a cavity at the junction of a dead branch and the tree trunk; 5 m.
Blue-eared Glossy Starling—three cavities, one in each type; 4 m.
Superb Starling—two cavities, one in a broken branch and one in a tree-knot; 8.5 m.

There was no obvious preference by lovebirds for any particular cavity type or height above ground level used. They have been described as indiscriminate cavity-nesters (Moreau 1948) and therefore all cavity nesting species are exposed to competition for nest sites with lovebirds. The occurrence of many apparently unoccupied holes does not necessarily imply an overabundance of them. They may be occupied by a variety of organisms from small mammals to insects or be unsuitable for occupation due to the presence of invertebrates, including parasites, after previous use by birds (Short 1979).

Except in maize *Zea mays* fields—maize forms a significant proportion of their diet at Naivasha—lovebirds were seen to aggress on another bird species only once. This occurred between a Grey Woodpecker and a group of lovebirds using holes 20 cm apart on the same branch. Individual lovebirds were seen twice to approach the woodpeckers' hole and peer into it while the woodpecker retreated inside. Another Grey Woodpecker was perched on a branch near the hole but with the arrival of a lovebird there, flew to an adjacent tree trunk 2 m away. At one time nine lovebirds were perched on a branch a metre above the woodpecker hole. Although perhaps not a clear case of aggression, the woodpecker appeared to be intimidated by the lovebirds' presence and certainly did not retaliate by attacking.

At Naivasha, lovebirds are a comparatively timid species and were observed as clear 'losers' in encounters with Lilac-breasted Rollers three times, a Green Wood Hoopoe once, a Drongo *Dicrurus adsimilis* once, a Red-fronted Barbet once, a Grey Woodpecker once, a Blue-eared Glossy Starling once, a Superb Starling once and a Grey-backed Fiscal

*Lanius excubitorius* once. However, it is their flocking behaviour which, at least in part, compensates for their lack of aggressiveness. Dilger (1960) concluded that although nest cavity defence is apparently non-existent in *A. fischeri* and *A. personata*, it may be adequately compensated for by increased mobbing activity. Although Dilger performed his experiments under laboratory conditions, lovebirds at Naivasha did become more aggressive when supported by other individuals, as described above in the encounter with the Grey Woodpecker. Furthermore, according to a local resident, a pair of Lilac-breasted Rollers which had nested regularly on his land, was forced to leave due to the sheer numbers of lovebirds. While a very aggressive species, Lilac-breasted Rollers are shy at the nest and desert easily (Mackworth-Praed & Grant 1962). High lovebird densities may also cause desertion by increased aggressive activity of the defending species and the consequent attraction of predators (Short 1982).

The only situation where lovebirds were consistently overtly aggressive towards other species was in maize fields. Orians & Willson (1964) reported a similar behavioural reversal between Red-winged Blackbirds *Agelaius phoeniceus* and Yellow-headed Blackbirds *Xanthocephalus xanthocephalus* in North America between feeding grounds and breeding territories. They argued that selection should favour heightened aggression in habits where each respective species is better adapted since the more suitable the habitat, the greater the benefits of fighting for it. Certainly lovebirds are better equipped to open maize ears but the other maize pests, such as weavers Ploceidae and mousebirds Coliidae, may also have learned to allow lovebirds first access, enabling a more efficient exploitation of the food source. As such, this reversal in aggressiveness may also be due to a reduction in aggression of other species usually dominant over lovebirds. A learned component is implied, given the relatively short time for selection to act since the introduction of lovebirds to the area.

While they are probably not capable of hole usurpation by sheer physical means, lovebirds may exert a competitive threat for hole possession by more indirect methods. During the day they will investigate and modify the cavities of other hole-nesters. For example, lovebirds were observed bringing to a Green Wood Hoopoe's nest, acacia twigs (which lovebirds use in the construction of their own nests) which the wood hoopoes removed on their return to roost. Similar behaviour has been observed in the Tityras *Tityra semifasciata* and *T. inquisitor* by Skutch (1969 quoted by Short 1979). They are successful in usurping woodpeckers by filling their holes with leaves and debris so the woodpeckers eventually tire of removing it and abandon the nest. Lovebirds were also seen to enter and peck away at the entrance of an old woodpecker hole taken over by a Pearl-spotted Owlet. Alteration of the entrance hole by usurping species has also been noted before (Short 1979, Lanning & Shiflett 1983).

Lovebirds are persistent in their efforts at nest usurpation. Three lovebirds were seen investigating a Red-fronted Barbet's hole—one actually entering for some minutes. On the return of the barbet they were forced to leave by its aggressive behaviour but four months later, lovebirds were still investigating the hole. Such persistence may eventually cause a harassed bird to give up its hole. However, Lanning & Shiflett (1983) have concluded in their study on Thick-billed Parrots *Rhynchopsitta pachyrhyncha* that

investigation of cavities may occur for reasons other than their usurpation. This possibly explains the long time period over which the lovebirds has been investigating the barbet's hole without usurping it. Nevertheless, it is probably this tendency towards hole investigation which attracts aggression from other hole-nesters. Woodpeckers, for example, are able to 'recognize' potential nest competitors and will readily attack them even when there is no direct threat to the nesting hole (Short 1979).

Lovebirds may indirectly prevent woodpeckers from excavating new holes due to the lovebird's habit of burrowing down and nesting in the central core of dead branches. By taking up much of the branches length as an entrance tunnel and nest cavity, woodpeckers are prevented from excavating a hole, especially if mobbed by the inhabiting lovebirds. Old woodpecker holes are used by many other species of hole-nesters so that the lovebirds are also preventing the excavation of potential homes for a variety of species.

Lovebirds permanently occupy their various cavities throughout the year, unlike some other hole-nesters. This and the substantial modification of the nesting cavity prevents sequential use of the hole by several hole-nesters in the same season—an adaptation suggested to be important for the reduction of aggression and nest interference (Brush 1983). Woodpeckers are particularly vulnerable because of their use of several alternative holes, which are vulnerable to usurpation by lovebirds (L.L. Short, pers. comm.). Alternate holes are especially important for fledgling woodpeckers and the risk of predation is increased without them. Furthermore, the majority of woodpecker holes at Naivasha are excavated in dead wood thus increasing the risk of usurpation since the entrance hole can be enlarged more easily than if it were excavated in live wood (Short 1979).

All hole-nesting species previously recorded at Lake Naivasha were seen but some were less common than expected. These were the Cardinal Woodpecker seen four times and the Red-fronted Barbet seen three times. Both are similar in size to lovebirds and hence most likely to draw the greatest degree of competition (Short 1979). Furthermore, the Cardinal Woodpecker was the only woodpecker seen to sometimes roost in holes similar to those used by lovebirds. It is possible that the densities of all hole-nesters have declined but no data are available on their densities before the introduction of lovebirds.

Lovebirds have successfully established themselves at Naivasha and it is hard to believe that other hole-nesters have not suffered as a result. Slobodkin (1961) has argued that for an invading species to establish itself, its ecological niche must have been previously unoccupied or inefficiently exploited and that either situation is less likely in a complex community. Since lovebirds have indeed established themselves in a complex community where every niche is likely to have been utilized, an element of competition at the expense of other species is implied.

It is likely that the increasing Naivasha and Kenyan lovebird populations will have a serious effect on indigenous cavity-nesters. This, and their status as a pest of maize (Thompson, in prep.) and their great adaptability to new habitats conferred to them by being hybrids, make them a bird worthy of monitoring in the future.

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## REFERENCES

ARMSTRONG, E.A. 1965. *Bird display and behavior.* New York: Dover.

BRUSH, T. 1983. Cavity use by secondary cavity-nesting birds and response to manipulations. *Condor* 85: 461–466.

CUNNINGHAM-VAN SOMEREN, G.R. 1975. *Agapornis fischeri* Reichenow in Kenya? *Auk* 92: 370–371.

DILGER, W.C. 1960. The comparative ethology of the African parrot genus *Agapornis*. *Zeitschrift für Tierpsychologie* 17: 649–685.

FORSHAW, J.M. 1981. *Parrots of the world.* 2nd edition. Melbourne: Lansdowne Editions.

GOVERNMENT PRINTER 1936. *Trees and shrubs of Kenya Colony.* Nairobi: Government Printer.

GOWATY, P.A. 1985. Bluebird belligerence. *Natural History* 94 (6): 8–12.

LANNING, D.V. & SHIFLETT, J.T. 1983. Nesting ecology of Thick-billed parrots. *Condor* 85: 66–73.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1952. *African handbook of birds. Series 1, Eastern and north-eastern Africa.* Vol. 1. London: Longman.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1962. *African handbook of birds. Series 2, Birds of the southern third of Africa.* Vol. 1. London: Longman.

MOREAU, R.E. 1948. Aspects of evolution in the parrot genus *Agapornis*. *Ibis* 90: 206–239.

ORIANS, G.H. & WILLSON, M.F. 1964. Interspecific territories of birds. *Ecology* 45: 736–745.

SHORT, L.L. 1979. Burdens of the picid hole-excavating habit. *Wilson Bulletin* 91: 16–28.

SHORT, L.L. 1982. *Woodpeckers of the world.* Delaware: Delaware Museum of Natural History.

SKUTCH, A. 1969. Life histories of Central American birds. III. *Pacific Coast Avifauna.* No. 35.

SLOBODKIN, L.B. 1961. *Growth and regulation of animal populations.* New York: Holt, Rinehart and Winston.

VON HAARTMAN, L. 1957. Adaptation in hole-nesting birds. *Evolution* 11: 339–347.

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# ADDITIONS TO THE KNOWN AVIFAUNA OF THE IMPENETRABLE (BWINDI) FOREST, SOUTH WESTERN UGANDA

Thomas M. Butynski and Jan Kalina

The Impenetrable (Bwindi) Forest Reserve (321 km²) in the extreme south west of Uganda holds one of the richest forest avifaunas in Africa (Keith *et al.* 1969, Friedmann & Williams 1970), including a particularly important montane avifauna (Keith 1980, Prigogine 1985). This is apparently because of its considerable altitudinal range (1160–2600 m) and probable role as a Pleistocene refuge (Keith 1980, Hamilton 1981).

The most significant accounts of the avifauna of the Impenetrable Forest are those of Keith *et al.* (1969), Friedmann & Williams (1970) and Keith (1980). Butynski (1984) provides a detailed description of the Impenetrable and reviews the scientific literature concerned with this forest.

During 1983–84 we made several one- to two-week trips to the forest to collect information on its conservation status. From August 1986 to the present (early 1989) we have undertaken a variety of conservation and research activities in and around the forest. Although our work has not focussed on the birds, we have made opportunistic observations. In particular, we have added a number of species to the bird list. All additions are based on sightings or calls. No mist netting or collecting of birds was undertaken. The species added are, however, all relatively easy to identify with certainty even when not in the hand.

We have added 29 species to the list of birds known to occur within the borders of the Impenetrable Forest Reserve. Of these, three are true forest species while several others are, in this part of Uganda, generally associated with forest or forest edge. Prior to our work, the bird check-list for the Impenetrable consisted of 286 species (Keith *et al.* 1969, Friedmann & Williams 1970, Britton 1980), 177 of which are forest species (Keith 1980, Britton 1980). The 29 species listed below bring the check-list to 315, 180 of which are forest species.

## NOTES ON SPECIES

The species' number, sequence and nomenclature follow Britton (1980). An asterisk after the species number denotes what we consider to be forest birds in this locality.

27 ***Ardea melanocephala*** Black-headed Heron Immature on compound of Ruhizha rest house, 2300 m; seen several times in Nov 1986.

42 ***Scopus umbretta*** **Hamerkop** One on dirt road, Ruhizha, 2300 m, 28 Oct 1987 and a pair nesting just outside the forest near Ruhizha, 2100 m.

96 ***Polyboroides radiatus*** **Harrier Hawk** Seen many times. Surprising that this bird was not on earlier lists as it is one of the more common raptors, especially from 1500–2400 m. Pair nesting, Ruhizha, 2300 m, 1988.

122 ***Buteo buteo*** **Common Buzzard** One, Ruhizha, 2300 m, 20 Mar 1988 and 5 Feb 1989.

126 ***Hieraaetus dubius*** **Ayres' Hawk Eagle** One adult and one immature, Kyaguliro, 2300 m, 27 Dec 1987.

134 ***Polemaetus bellicosus*** **Martial Eagle** Adult flew over Ruhizha rest house, 2300 m, 19 Nov 1986.

138 ***Milvus migrans*** **Black Kite** Common passage migrant over the forest at Ruhizha, 2300 m. Flocks usually of 10–100 birds, but sometimes over 200. Flying south and south-west May–October, especially in August.

152 ***Falco cuvieri*** **African Hobby** One, Ishasha Hill, 1600 m, 11 Apr 1983. Four Ruhizha, 2300 m, 10 Nov 1988, feeding on flying termites. Two Ruhizha, 25 Dec 1988.

158 ***Falco peregrinus*** **Peregrine Falcon** One, Ruhizha, 2300 m, 10 Nov 1988, feeding on flying termites and one there, 18 Dec 1988 harassing a White-necked Raven *Corvus albicollis*.

194 ***Balearica pavonina*** **Crowned Crane** Heard and seen on many occasions on forest edge, Ruhizha, 2300 m, and near Kayonza, 1500 m.

*211 ***Sarothrura elegans*** **Buff-spotted Pygmy Crake** Heard, Buhoma, 1500 m, 3–9 Feb 1984 and on several occasions, Ruhizha, 2300 m, Sep 1987.

256 ***Tringa glareola*** **Wood Sandpiper** One seen twice, Mubwindi Swamp, 2150 m, 22 Mar 1988 and again, 19 Sep 1988.

368 ***Poicephalus robustus*** **Brown-necked Parrot** Seen on several hundred occasions, Ruhizha, 2300 m, and other places over the forest. Very surprising that this species is not on previous lists. It seems likely that the records of Red-fronted Parrots *P. gulielmi* given by Mann (1972), Britton (1980), Bennun (1986) and Fry *et al.* (1988) were, in fact, *P. robustus*. *P. robustus* is apparently much more common today than during the 1960s when most avifaunal work was conducted in the Impenetrable. According to Britton (1980), a party of three *P. robustus* (one collected) at Kanungu in 1940 is the only record for Uganda. Kanungu lies 10 km north of the Impenetrable. Roger Wilson (pers. comm.) reports that *P. robustus* is frequently seen on the Virunga Volcanoes and is the only parrot there. The Virungas lie only 15 km from the Impenetrable. We contend that there are no good records of *P. gulielmi* for Uganda west of Mt Elgon. The Impenetrable Forest/Kanungu area may represent the northern limit of *P. robustus* in eastern and central Africa.

*371 ***Psittacus erithacus*** **Grey Parrot** Pairs seen twice, Kitahuria, 1600 m, 17 Feb 1983, Kyaguliro, three at 2200 m and one at 2250 m, 21 Jan 1989, and four at 2300 m, 3 Feb 1989. Thus 2300 m appears to be the upper limit for the species, 100 m higher than noted by Britton (1980).

395 ***Cuculus canorus*** **Eurasian Cuckoo** One, Kyguliro, 23 Mar 1988, 2300 m—600 m higher than reported as usual for this species by Britton (1980).

404 ***Centropus monachus*** **Blue-headed Coucal** One seen, two heard, Mubwindi Swamp, 2150 m, 2 Feb 1989.

441 ***Macrodipteryx vexillarius*** **Pennant-winged Nightjar** One, Ruhizha, 2300 m, 30 Jul 1987 and several times during the June to August 1988 dry season.

480 ***Merops apiaster*** **Eurasian Bee-eater** Flocks of 25–30 birds, Ruhizha, 2300 m, 11 and 27 Sep 1986, 11 Sep 1987 and 25 Sep 1988.

590 ***Mesopicos goertae*** **Grey Woodpecker** All sightings at Ruhizha, 2300 m. One, 12 Oct 1986, pair 18 Nov 1987. All in forest but within 400 m of its edge. Possibly only seasonally in the Impenetrable. All more than 300 m higher than reported by Britton (1980).

623 ***Delichon urbica*** **House Martin** Flocks of 100–200 catching flying termites, Ruhizha, 2300 m, 1 May 1988.

*645 ***Dicrurus ludwigii*** **Square-tailed Drongo** One, Ruhizha, 2200 m, 14 Aug 1987; 300 m higher than reported by Britton (1980).

688 ***Campephaga flava*** **Black Cuckoo Shrike** A male and female, Buhoma, 1550 m, 7 Feb 1984.

837 ***Camaroptera brachyura*** **Grey-backed Camaroptera** One, Buhoma, 1500 m, 10 Apr 1984 and one (seen by John Miskell, pers. comm.), Ruhizha, 2300 m, just outside forest edge, 17 Nov 1988. Britton (1980) gives the altitudinal limit as 2200 m.

994 ***Motacilla cinerea*** **Grey Wagtail** One, Mubwindi Swamp, 2150 m, 2 Feb 1989.

996 ***Motacilla flava*** **Yellow Wagtail** Solitary individuals seen twice on dirt road, Ruhizha, 2300 m, late Oct 1986 and 17 Jan 1988.

1030 ***Lanius collurio*** **Red-backed Shrike** One, Ruhizha, 2300 m, 5 Nov 1986.

1061 ***Lamprotornis splendidus*** **Splendid Glossy Starling** Flock, Kayonza, 1500 m, 10 Apr 1983.

1273 ***Emberiza flaviventris*** **Golden-breasted Bunting** One, Ruhizha, 8 Nov 1986, 2300 m, 100 m higher than reported by Britton (1980).

In addition to the above, we have probable sightings of the following species:

[*711 ***Chlorocichla laetissima*** **Joyful Greenbul** Several, Kitahurira, 1600 m, 17 Feb 1983.

Two species were observed just outside the edge of the Impenetrable and will probably eventually be found within its boundary:

160 ***Falco subbuteo*** **Hobby** Two, Kagoote Hill, 1700 m, 5 Feb 1984.

575 ***Jynx ruficollis*** **Red-throated Wryneck** One, Buoma, 1700 m, 1 Jul 1984.

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## REFERENCES

Bennun, L.A. 1986. Montane birds of the Bwindi (Impenetrable) Forest. *Scopus* 10: 87–91.

Britton, P.L. (ed.). 1980. *Birds of East Africa*. Nairobi: EANHS.

BUTYNSKI, T.M. 1984. Ecological survey of the Impenetrable (Bwindi) Forest, Uganda, and recommendations for its conservation and management. Report to the Uganda Government.

FRIEDMANN, H. & WILLIAMS, J.G. 1970. Additions to the known avifauna of the Bugoma, Kibale, and Impenetrable Forests, west Uganda. *Los Angeles County Museum Contributions in Science* 198.

FRY, C.H., KEITH, S. & URBAN, E.K. 1988. *The birds of Africa*. Vol. III. London: Academic Press.

HAMILTON, A.C. 1981. The quaternary history of African forests: its relevance to conservation. *African Journal of Ecology* 19: 1–6.

KEITH, S. 1980. The avifauna of the Impenetrable Forest, Kigezi, Uganda with special reference to the altitudinal distribution. *Proceedings of the Fourth Pan-African Ornithological Congress*: 159–167.

KEITH, S., TWOMEY, A., FRIEDMANN, H. & WILLIAMS, J. 1969. The avifauna of the Impenetrable Forest, Uganda. *American Museum Novitates* 2389.

MANN, C.F. 1972. The occurrence of the Red-headed Parrot in Uganda. *EANHS Bulletin* 1972: 79.

PRIGOGINE, A. 1985. *Conservation of the avifauna of the forests of the Albertine Rift*. ICBP Technical Publication No. 4. Cambridge: ICBP.

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# BEHAVIOURAL, PHYSICAL AND ENVIRONMENTAL DIFFERENCES BETWEEN RACES OF THE YELLOW-BREASTED APALIS *APALIS FLAVIDA* IN KENYA

Adrian D. Lewis

Lewis (1982) described the structure and possible functions of the vocal duets of the Yellow-breasted Apalis *Apalis flavida flavocincta* in the Nairobi area, and noted that birds (possibly of other races) in drier areas have rather different calls. At that time, several points were unclear, for example, whether the 'galloping' calls (Lewis 1982) of dry country birds are consistently different from those of their moister country kin; and whether duetting ever occurs in dry country members of this species, for example during the wet periods when they are breeding. This note reports the results of a further six years' of observations, including particularly frequent and extensive travel in various habitats during the last three years.

## MOIST, STABLE ENVIRONMENTS

Table 1. Apalis flavida *duetting of the type described by Lewis (1982) in moist, stable environments*

| Locality | co-ordinates | altitude (m) | Atlas square* |
|---|---|---|---|
| Maralal town | 1°06N 36°42E | 1980 | 38D |
| El Karama Ranch, Nanyuki | 0°12N 36°55E | 1740 | 50D |
| Lake Nakuru N.P. | 0°22S 36°05E | 1760 | 62A |
| Lake Naivasha | 0°46S 36°21E | 1880 | 62C |
| Naro Moru | 0°10S 37°01E | 1980 | 63A |
| Near Mountain Lodge, Mt Kenya | 0°18S 37°09E | 2020 | 63A |
| Muruka | 0°55S 37°04E | 1500 | 63C |
| North Mara | 1°15S 35°02E | 1680 | 74A |
| Bridge over Mara River | 1°33S 35°02E | 1460 | 74C |
| Cottar's Camp, Mara | 1°35S 35°29E | 1980 | 74C |
| Narok | 1°05S 35°52E | 1980 | 74B |
| Nairobi | 1°17S 36°49E | 1680 | 75B |
| Limuru | 1°06S 36°39E | 2200 | 75B |
| Near Athi River town | 1°25S 37°01E | 1500 | 76C |
| Potha, Machakos | 1°35S 37°14E | 1680 | 76C |
| South of Bissel | 2°10S 36°47E | 1680 | 87B |

*Lewis & Pomeroy (1989)

The males of these duetting birds have a black, elongated oval breast spot, whereas the females have a much smaller, circular black spot (Jackson 1938; specimens in the National Museum, Nairobi). These areas are within the range quoted for *A. f. flavocincta* by Britton (1980), apart from Maralal, which Britton lists as a locality for *A. f. malensis*.

But this latter race lacks the distinctive breast spot features of the Maralal birds and is an inhabitant of dry bush country, so that it is likely that *flavocincta* occupies the moist heights of Maralal mountain, while *malensis* is in the surrounding, lower altitude dry bush.

No seasonality has been noted in the duetting and, in those areas visited more frequently, it seems to occur throughout the year.

The 16 localities listed in Table 1 are at altitudes of 1460–2200 m and, using the environmental overlays of Lewis & Pomeroy (1989), 12 of the 13 quarter square degrees are subhumid–humid, and in areas that receive more than 500 mm of rainfall per year. The single exception is Bissel (87B) which, although at 1600 m altitude, is in a semi-arid, 250–500 mm rainfall area.

Hence duetting occurs in relatively moist and high altitude environments that, as in the case of the closely studied Nairobi birds, are sufficiently stable to provide food resources that enable each pair to remain as a pair, and to inhabit their territory, throughout the year (Harcus 1977, Lewis 1982). These areas very rarely experience the irregular rainfall and long, harsh dry seasons that are so common in lower altitude, arid and semi-arid regions.

Plausible functions of the duet in these stable environmental situations include (a) preservation of the pair bond throughout the year; (b) synchronization of the pair's gonadal cycles throughout the year; and (c) to enable the pair to remain in contact when widely dispersed on their territory (references in Lewis 1982). It is significant that duetting continues even when these stable environments are uncharacteristically dry.

## DRIER, LESS STABLE ENVIRONMENTS

The much more rapid 'gallop', *crit-crit-crit.....*, that was noted for Ishiara (Lewis 1982), has been found to be widespread in dry bushed and wooded country. It is possible that this call is given by both sexes (see below). As in the birds around Nairobi, these 'dry gallops' may be initiated by a rasping, two-second *terrrrsk* call, and this call is occasionally heard on its own. However, no duetting of the Nairobi type, nor female 'laughing' calls (Lewis 1982), have ever been heard in these arid–semi-arid, bushed and wooded habitats, even when they are uncharacteristically lush after rains. Particularly thorough coverage of these birds has been attained by T. Stevenson (pers. comm.), who is resident at semi-arid Baringo.

These areas certainly include the race *A. f. malensis* and possibly other races too, but the distributions of these subspecies are not precisely defined in Kenya, particularly in the south-east.

The breast ornament of these birds varies. In some pairs, the (presumed) male has a small, circular dark spot in the centre of the breast, while his mate has no breast marking at all. That a bird with no breast ornament in the garden of Lake Baringo Club gave the 'dry gallop', may mean that both sexes produce this call. Some birds in these dry areas, from example also at Lake Baringo, have a very diffuse dark bar or elongated oval on the breast: these markings are much paler than those of *A. f. flavocincta*.

The 12 localities in which this 'dry gallop' call has been heard are at altitudes of 150–1400 m (Table 2). Of the 14 quarter square degrees, 11 are in arid or semi-arid areas,

while the remaining three are subhumid. Thirteen of these squares have rainfall in the range 0–1000 mm per year.

Hence this type of non-duet calling occurs in lower altitude, less moist environments that may not produce food resources sufficient for pairs to remain on their territories throughout the dry (non-breeding) seasons. The absence of duetting may indicate that the pair bond is not maintained throughout the year. There are no data on the mobility of these dry country birds, apart from Lack's (1985) note of apparent May–October seasonality in the arid country of Tsavo East National Park.

Table 2. *Records of 'dry gallop' calls by* Apalis flavida

| Locality | co-ordinates | altitude (m) | Atlas square* |
|---|---|---|---|
| B4 road S of Lodwar | 2°35N 35°40E | 760 | 25B |
| B4 road N of Sigor | 1°38N 35°35E | 1050 | 37B |
| Between Tot and Kolowa | 1°13N 35°42E | 1150 | 37D |
| Lake Baringo | 0°38N 36°05E | 970 | 50A |
| Samburu G.R. | 0°40N 37°30E | 850 | 51AB |
| Meru N.P. | 0°05N 38°20E | 500 | 52C |
| Ishiara | 0°28S 37°48E | 800 | 63B |
| Garissa | 0°28S 39°38E | 150 | 65B |
| Mwala | 1°25S 37°28E | 1400 | 76A |
| Daka Dakotha | 2°15S 39°30E | 150 | 90AB |
| Tsavo Safari Camp | 2°39S 38°23E | 520 | 89C |
| Kuranze Ranch | 4°10S 38°08E | 350 | 113B |

*Lewis & Pomeroy (1989)

## THE KATILU–KITO PASS DUETS

On 23 March 1986, near Katilu (2°10N, 35°27E), and during the following day on the Kito Pass (1°06N, 35°53E), D.J. Pearson, D.A. Turner and ADL encountered a different type of duet. The Katilu male had a thin, black bar on the breast, and the bird produced the fast 'gallop' typical of the dry country, as described above. The female had no breast ornament, and produced the duet by giving two or three, low, croaking *terrrrsk* calls during the male's 'galloping'. The Katilu country was open but green bush at 600–900 m, and there had been recent rain. The same duet was heard on the Kito Pass, at just under 1200 m. This area was very dry, with a little standing water in stream beds.

These duets were immediately distinctive to all three of us, and it seems unlikely that they have been overlooked in other dry country areas, particularly in the very well studied Baringo area.

## DISCUSSION

*Apalis flavida flavocincta* shows significant differences from *A. f. malensis*, (and perhaps other dry country subspecies). These two races inhabit different environments, and have

differing breast ornamentation. The basic differences in the structures of their calls, i.e. duet as opposed to solitary calling, may point to differing social structures. It is particularly significant that *flavocincta* continues to duet during unusually dry conditions, whereas *malensis* does not duet even when its habitats are uncharacteristically moist and verdant.

Interbreeding of these two very different forms would appear to be unlikely, and they may be nearing, or be at, species status.

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## REFERENCES

BRITTON, P.L. (ED.) 1980. *Birds of East Africa.* Nairobi: EANHS.

HARCUS, J.L. The functions of vocal duetting in some African birds. *Zeitschrift für Tierpsychologie* 43: 23–45.

JACKSON, F.J. 1938. *The birds of Kenya Colony and the Uganda Protectorate.* 3 vols. London: Gurney & Jackson.

LACK, P.C. 1985. The ecology of the landbirds of Tsavo East National Park, Kenya. *Scopus* 9: 2–23, 57–96.

LEWIS, A.D. 1982. Form and function of the duetting of the Yellow-breasted Apalis *Apalis flavida*. *Scopus* 6: 95–100.

LEWIS, A.D. & POMEROY, D.E. 1989. *A bird atlas of Kenya.* Rotterdam: Balkema.

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## SHORT COMMUNICATIONS

### Status of the Crab Plover *Dromas ardeola* in the Sudan

The status of the Crab Plover *Dromas ardeola* in the Sudan given by Cave & Macdonald (1955) was "Rather uncommon, doubtfully breeding on the Red Sea coast." After various field trips to the Sudan Red Sea coast between the autumn of 1980 and spring of 1983, more information had come to light (Nikolaus 1987).

The Crab Plover is a breeding visitor to Sudan arriving in early April, when it is regularly seen in parties of up to 40 around Suakin (19°05N, 37°20E) feeding in shallow tidal bays. Around noon small parties often depart further north. It was found breeding on Two Islets, Suakin Archipelago (18°35N, 37°45E) by R.J. Moore (R.J. Moore and M.A. Balsarotti, pers. comm., and 1983), who found several used burrows in June 1983. It is probable that it nests on a few other islands as well. From August onwards, Crab Plovers, leading young birds, are found all along the coast, at least as far north as 21°30N (south of Halaib). Egg laying should take place between the end of May and early June. In 1982 there was, on average, one young bird per ten adults.

The adult birds begin wing moult at the end of June–beginning of August and leave for the south between September and the middle of October, being halfway through the moult. There is no indication, however, that they suspend their moult.

Weights (g) of birds arriving in April are (n = 9) 295.6 (265–345); departing birds between August and October weighed, adults: (n = 12) 336.7 (270–390), first year birds (n = 5) 281 (255–310).

Approximately 500 Crab Plovers spend the breeding season in the Sudan, and of this number, 50 pairs were breeding successfully in 1982.

#### References

Cave, F.O. & Macdonald, M.A. 1955. *Birds of the Sudan.* Edinburgh: Oliver & Boyd.

Moore, R.J. & Balsarotti, M.A. 1983. Observations of sea birds nesting on islands of the Sudanese Red Sea. *Bulletin of the British Ornithologists' Club* 103: 65–71.

Nikolaus, G. 1987. Distribution atlas of Sudan's birds with notes on habitat and status. *Bonner Zoologische Monographien* 25: 1–322.

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*Scopus* 12: 87, March 1989 Received 31 January 1989

### NOTICE—MALAWI RARITIES COMMITTEE

A Rarities Committee has been formed to deal with additions to the list of avifauna found in Malawi, sightings of rare birds and extensions of the known range of any species. Anyone finding or seeing a bird in one of these categories is requested to apply to the address below for a rare bird form. To ascertain what is unknown or rare in Malawi or any part thereof, see *The birds of Malawi* (Benson, C.W. & Benson, F.M., 1977. Limbe (Malawi): Montfort Press).

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**Second nest record for Archer's Ground Robin *Dryocichloides archeri***

Masterson (1981) was the first to describe the nest and eggs of Archer's Ground Robin *Dryocichloides archeri*. He found the nest and two eggs on 17 January 1959 in the Rwenzori Mountains of western Uganda. Here we describe the second nest and set of eggs. Since *D. archeri* is a little known species, and because the nest and eggs we located differed considerably from those found by Masterson, we make special note of this record.

The following is Masterson's (1981) description of the nest and eggs:

> "The nest was a neat cup of rootlets and tendrils let into a depression about 1.2 m up on the side of a great mass of moss that clung to the trunk of one of the senecios. There was no outer bulk to the nest as the moss itself provided the support for the cup. When taken, the eggs were a pale blue, freckled with a few small insipid brown spots, mostly about the middle and towards the top, but not forming any distinct ring of markings. They measured 24.4 x 15.7 and 23.5 x 16.0 mm."

Masterson collected one of the parent birds so there can be no mistake as to the species.

On 28 October 1987 we found a *D. archeri* nest at 2260 m altitude a.s.l. in the Impenetrable (= Bwindi) Forest of south-western Uganda (0°53–1°08S, 29°35–29°50E). The nest was situated 1.3 m above the ground on a ledge that had been created by a road cut. The ledge was about 3.5 m high at this place. The nest was located in a crevice on the top of a small clump of grass. Except for this grass, there was no vegetation on the ledge for at least 15 m to either side of the nest. The nest was overhung about 0.5 m by a protruding ledge and appeared to be completely protected from rain. Because of the road, the area in front of the nest was open for about 8 m. This nest was considerably more substantial than the one described by Masterson, although the basic materials used to construct it were similar. Rather than locating the nest on a mass of moss, the bird(s) had carried considerable fresh moss filaments and some fine rootlets to the site, weaving them together to create the bowl of the nest. The nest cup was lined with a few dried grass blades and rootlets. The nest had the following dimensions: greatest outside diameter 18 cm, shortest outside diameter 11 cm, cup depth 2.5 cm, cup diameter 3.2 cm.

When found, the nest held two eggs but one had been punctured and was empty. Both were grey-green but so heavily flecked and stippled as to appear almost pale brown, especially towards the ends. Thus, the eggs differed considerably in colour from those found by Masterson. Both eggs were unusually symmetrical and lacked distinctive broad and pointed ends. One egg was 25 x 18 mm—somewhat larger than those measured by Masterson.

We had considerable difficulty seeing the adult on the next day. It consistently flew off into dense cover before we could approach to within 10 m. On 14 November, therefore, we returned at 20:00 (after dark) and, using a flashlight, got an excellent look at the incubating adult for 2 min from 0.7 m.

On checking the nest on 2 December we found that it had been abandoned. The one egg and nest were collected and deposited in the National Museum, Nairobi.

**Acknowledgements**

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Council, the President's Office, and Forest Department for permission to work in the Impenetrable Forest.

**Reference**

MASTERSON, A.N.B. 1981. Notes from the Rwenzori Mountains, including a description of the nest and eggs of Archer's Ground Robin *Dryocichloides archeri*. *Scopus* 5: 33–34.

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*Scopus* 12: 88–89, March 1989 Received 12 October 1988

## First nest record, and other notes, for the Scaly-breasted Illadopsis *Trichastoma albipectus*

Although the Scaly-breasted Illadopsis *Trichastoma albipectus* is one of the more common, tame and vocal bird species in the rainforests of eastern Zaïre, southern Sudan, Uganda and western Kenya, its drab coloration and the dense undergrowth in which it occurs, make it difficult to observe. There are apparently no breeding records for *T. albipectus* and its nest and egg remain undescribed (Chapin 1953, Mackworth-Praed & Grant 1960, Brown & Britton 1980). On 25 November 1983 I found the nest and eggs of this species at Kanyawara, Kibale Forest, western Uganda (0°34N, 30°21E) at an altitude of 1500 m.

I saw a small brown bird perch briefly at a height of 1 m and then drop to the ground. Searching the area, I flushed the bird off its nest. It was subsequently flushed several more times during my other visits to the site. I was able to approach to 1 m of the incubating adult and place my hand to within 15 cm of it. The bird would flit from the nest suddenly, land about 1 m away and move on the ground, disappearing into the dense undergrowth. When I moved away from the nest the adult returned within a few minutes. It never flew to the nest but rather walked in from several metres away. Although I observed the bird clearly on the nest several times, it was not possible to view its underparts. On 27 November I mist-netted an adult at the nest and made positive identification prior to releasing it.

The nest was located in primary forest at the bottom of a large valley. Here there was a dense ground cover of ferns and large forbs (e.g., *Palisota schweinfurthii*, *Pollea condensata*, *Piper capensis*, *Aframomum* sp.) to a height of about 80 cm. The understory was fairly open while the middle and upper stories were well developed, creating dense shade on the ground. The most common tree species were *Celtis durandii*, *Olea welwitschii* and *Strombosia scheffleri*. The nest was under a small fern in a slight indentation on damp, but not wet, ground. It was a loose, shallow structure of brown, damp, rotting tree leaves (mostly those of *Teclea nobilis* and *Bosqueia phoberos*) lined with dead leaves of *C. durandii*. A few rootlets had been placed at the bottom of the nest cup. A large fallen *P. schweinfurthii* leaf prevented access to the nest from one side as well as providing some shelter from rain. The nest was extremely well concealed. The nearest

tree was a medium sized *C. durandii* 1.1 m away. A 3-m wide, 0.5-m high boulder was situated 0.7 m from the nest. Two eggs were present. Both were white, blotched light to dark brown. The blotching was densest towards the broad end of the egg. The nests and eggs have been described for three other species of *Trichastoma—T. cleaveri*, *T. fulvescens* and *T. rufipennis* (Chapin 1953, Mackworth-Praed & Grant 1960, J. Skorupa, pers. comm.). These three species also make nests of dead leaves on or near the ground, and lay two eggs which are whitish (or pinkish white) and blotched. On 11 December two nestlings were found in the nest. They had a light covering of dark grey down and the primaries were starting to come in. When the nest was next visited on 19 December the nestlings were gone, presumably victims of a predator. The nest remained intact, however.

On 16 December 1983, at another site in Kibale Forest, I clearly observed one fledgling *T. albipectus* moving with two foraging, calling, adults. This trio was watched off and on for more than an hour. I estimated that the fledgling had hatched in October or November.

Four species of *Trichastoma* occur in East Africa (*T. albipectus*, *T. fulvescens*, *T. pyrrhopterum*, *T. rufipennis*). All are insectivorous and confined to the undergrowth of rainforests. Combining the data from this note with those in Mackworth-Praed & Grant (1960), Friedmann (1966), Friedmann & Williams (1970), Britton (1980), and Taylor (1983), there are 25 'breeding records' for this genus in East Africa (i.e., the observations of eggs, nestlings, fledglings, enlarged gonads). The distribution of the estimated egg-laying dates is as follows: 5 in November, 1 in December, 1 in February, 9 in April, 8 in May, 1 in July. Although these data are limited, it may be significant to note that 24 of the 25 breeding observations occurred during the seven months from November to May, and primarily during the second half of the two wettest periods (i.e., November–December and April–May). These are apparently periods of relatively high insect abundance in many East African rainforests (Brown & Britton 1980, Nummelin 1986). Chapin's (1953) data for *Trichastoma* spp. in the Ituri Forest of Zaïre also suggest breeding centred on the two wet seasons.

From November 1983 to September 1984 I made more than 50 observations of *T. albipectus* in Kibale Forest which are summarized below.

Chapin (1953) describes the call of *T. albipectus* in the northern Ituri and Semliki Forests as three to five distinct, short, ascending whistles introduced by one or two low chirps or clucks, audible only at close range. This is a good description of one of the two calls I heard given by this species in Kibale. Call 1 is comprised of two loud, liquid, high-pitched, drawn-out peeps (*peeeeep-peeeeep*). This call is given by foraging, possibly immature, birds and can be heard by the human ear at a distance of at least 100 m. It was heard on only two occasions; on one of these, it was repeated about five times at intervals of approximately 30 s.

In contrast to Call 1, Call 2 is frequently heard and exhibits considerable intra- and inter-individual variation. This is the call described by Chapin (1953). It consists of one to three soft, squeaky chirps (*twit*) followed by one to four loud, lively, high-pitched whistles (*tweee*). The first whistle seems to begin as a chirp but immediately becomes a whistle (*twittweee*). Occasionally a soft *wheet* is given about 2 s prior to the chirps. Calls with *wheets*, multiple chirps and/or one or four whistles are uncommon. The most

frequently heard call is one chirp plus two or three whistles. The entire call lasts about 2 s and can be rendered *twit—twittweee-tweee-tweeeee* (where each '-' represents about 0.2 s). Of the variations notes, the shortest is *twit—twittweee* while the longest and most complex is *wheet———twir———wheet———twit—twittweee-tweee-tweeeee*. The total time covered by this last call is about 7 or 8 s.

Each note of Call 2 is louder than the preceding one. The whistles are much louder than the chirps. The last note is unexpectedly loud for such a small bird. The human ear can hear the chirps and *wheets* up to a distance of about 50 m, and the last whistle up to 200 m. Thus, the closer one gets to the caller the more of its call one hears. Determining the direction of the caller becomes difficult beyond 100 m. It is common for one *T. albipectus* to repeat Call 2 every 5–35 s (usually every 6–16 s) for more than 1 h. This call is usually given while the bird moves continuously about foraging, but one preening, stationary bird was seen calling for 5 min from the top of a 10-cm high mound.

In Kibale Forest, five or more *T. albipectus* are sometimes heard giving Call 2 at the same time and often they seem to be counter-calling. When one bird begins calling others seem to be stimulated to start calling also. Call 2 is most often given during the 3–4 h after dawn but may be heard during all daylight hours.

During each month, for nearly one year (November 1983 to September 1984), calling *T. albipectus* were noted at several specific locations. It appears that these birds are resident and calling on territories and/or home ranges year-round. Callers may be within 5 m of one another and seem to confine their activities to an area of 0.8–1.2 ha. Two of these sites were revisited in October 1987 and calling individuals were still present.

Members of this species were usually seen alone, in pairs, or in groups of three. The largest group observed numbered four. On at least two occasions when three birds were together (less than 5 m from one another), two were adults and one was immature. These observations suggest that *T. albipectus* moves in family groups and that flocks of unrelated conspecifics may not occur.

*T. albipectus* does most of its foraging on the ground but sometimes moves up to a height of 2 m for a horizontal distance of 10 m or more. When foraging, the birds frequently flip over leaves with their bills and occasionally scratch the ground with their feet in search of invertebrates. In Kibale Forest, this species is common in valley bottoms, on hillsides and on ridge tops. It is difficult to say which of these locations is preferred. What seems more important in terms of habitat selection is that there should be a thick ground layer and/or understory. Exposed ground, even a narrow footpath, is avoided or quickly flown over.

**Acknowledgements**

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**References**

Britton, P.L. (ed.). 1980. *Birds of East Africa.* Nairobi: EANHS.

Brown, L.H. & Britton, P.L. 1980. *The breeding seasons of East African birds.* Nairobi: EANHS.

CHAPIN, J.P. 1953. The birds of the Belgian Congo. Part 3. *Bulletin of the American Museum of Natural History* 75A: 1–821.

FRIEDMANN, H. 1966. A contribution to the ornithology of Uganda. *Bulletin of the Los Angeles Museum of Natural History and Science* 3: 1–55.

FRIEDMANN, H. & WILLIAMS, J.G. 1970. The birds of the Kalinzu Forest, southwestern Ankole, Uganda. *ibidem* 195: 1–27.

MACKWORTH-PRAED, C.W. & GRANT, C.H.B. 1960. *African handbook of birds; birds of eastern and north eastern Africa.* Vol. 2. London: Longmans Green & Co.

NUMMELIN, M. 1986. The seasonal fluctuations of forest floor insect densities on the areas of different forestry practices in Kibale Forest, western Uganda. Abstract. First International Conference of Tropical Entomology, Nairobi.

TAYLOR, P.B. 1983. E.A.N.H.S. Nest Record Scheme: 1982. *Scopus* 6: 129–142.

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## First record of the Shoebill *Balaeniceps rex* in Malawi

On 7 February 1988 one of us (MR) observed a Shoebill *Balaeniceps rex* standing on the track next to a dam near Chelinda (10°35S, 33°48E), Nyika National Park, at an altitude of about 2200 m. It was a dull, cloudy morning with slight drizzle, following days of rain, but the bird was clearly seen, between 06:20 and 06:45, from a distance of 10 m, despite the poor light. The record has been accepted by the Malawi Rarities Committee.

The immediate impression was of a large (about 1 m high), dark grey stork with black wing tips. As it was wet, it may have appeared darker than it in fact was. It had a broad head and a short, thick neck which was held hunched between the shoulders, but its most striking character was the bill. This was horn-coloured, fairly short and extremely broad, being about two-thirds as wide as it was long, with a ridge running down the centre from the forehead to the hooked tip. The legs were long and thin, with prominent 'knee' joints and were dark coloured, although with a possible pink tinge.

After standing stationary for 20 min, the bird stretched its neck, moved slowly to the bank at the side of the road and nuzzled the grass, whereupon the observer departed. No photographs were taken since, the weather being what it was, the camera had been left at home.

That the first definite record of a Shoebill in Malawi should come from the Nyika Plateau is somewhat strange, since the habitat there is hardly suitable for the species. However, there have been previous and later sightings of possible or probably Shoebills in Liwonde National Park (*c.* 14°50S, 34°20E), where the dense reed and papyrus marshes round Lake Malombe and along the edge of the Shire River constitute ideal habitat.

In September 1987 an observer obtained a fleeting glimpse of a possible Shoebill in

thick papyrus swamp about 2 km upstream of the Kamuzu Barrage (which is in the town of Liwonde) and Robert Nyirenda, a game scout working in Liwonde National Park, has sent in a report concerning three separate sightings of a Shoebill in the Park, in December 1987 and in January and March 1988. This report is now being considered by the Rarities Committee in Malawi, but the probability that Shoebills have occurred there is great, especially as (according to Mr Nyirenda) the species is known to Malawians living in the area by the names of *Kokote* (Chichewa) and *Kongo-mupale* (Yao).

Shoebills occur in north-eastern Zambia, in south-eastern Zaïre (Maclean 1984) and in various swamps in western Tanzania (Britton 1980). The nearest Tanzanian swamp to Malawi is Lake Rukwa and a line drawn from there to Liwonde passes very close to the Nyika Plateau, but birds flying from any of the other swamps in Tanzania, Zaïre or Zambia would also pass close to the Nyika. The Shoebill soars to great heights (Maclean 1984) and considering that for several days prior to the Nyika sighting there had been low cloud and heavy rain, it seems quite possible that a Shoebill flying to or from the Shire River near Liwonde could have been blown off course and been caused to land on the plateau due to poor visibility. That the bird was not seen after the weather had cleared up, suggests that it departed as soon as conditions were favourable.

This first record is self-evidently that of a vagrant bird, but it seems likely that in the large areas of dense swamp in Liwonde National Park the species does occasionally occur; perhaps more frequently than the few apparent sightings suggest.

**References**

Britton, P.L. (ed.). 1980. *Birds of East Africa.* Nairobi: EANHS.

Maclean, G.L. 1984. *Roberts' birds of southern Africa.* 5th edition. Cape Town: John Voelcker Bird Book Fund.

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*Scopus* 12: 92–93, March 1989 Received 22 November 1988

### First record of the Rufous Bush Chat *Cercotrichas galactotes* in Malawi

On 13 December 1987 a Rufous Bush Chat *Cercotrichas galactotes* was netted at Nchalo, Malawi (16°16S, 34°55E) in an area of semi-arid bush and grassland at an altitude of 60 m. The subspecies was not determined, because of the very worn state of the plumage, but it was either *familiaris* or *syriacus*, most probably the former (Dr D.J. Pearson *in litt.*, who also considers that it was a first year bird, on account of its pale-edged wing coverts and flight feathers). The description was assessed by referees in Kenya who are familiar with the species and the record has been accepted by the Rarities Committee in Malawi.

The occurrence of this Middle Eastern migrant in southern Malawi was entirely unexpected. It normally winters in arid bush and grassland in Somalia (see, e.g., Pearson 1989) and northern and eastern Kenya and the furthest south that it has been recorded previously was in the extreme north-east of Tanzania (Britton 1980). However, weather

conditions in Central and southern Africa during the latter half of 1987 were rather peculiar and many unexpected or rare species were seen in Malawi and elsewhere. Presumably the appearance of this chat, over 1000 km south of its normal wintering grounds, can be ascribed to the weather.

## References

BRITTON, P.L. (ED.). 1980. *Birds of East Africa.* Nairobi: EANHS.

PEARSON, D.J. 1989. Palaearctic migrants in the middle and lower Jubba valley, southern Somalia. *Scopus* 12: 53–60.

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*Scopus* 12: 93–94, March 1989 Received 22 November 1988

### Calling by the Red-chested Cuckoo *Cuculus solitarius* in relation to rainfall

In many parts of Africa the Red-chested Cuckoo *Cuculus solitarius* is known as the 'rain-bird', as it is believed that its call announces rain or is related to rainfall. This notion is so strong that Williams (1969) thought fit to include in his species description that it "Often calls immediately before rains break and known locally as the "rain-bird"—its call being rendered as "it-will-rain"." (See also Rowan (1983) on beliefs pertaining to this and related cuckoo species in southern Africa.) During a study period of four years in East Africa the author became interested in the influence on the local ecology of rainfall and in the predictability of this important ecological variable (Prins 1988, Prins & Loth 1988).

The accurate prediction of the moment of incipient rainfall, and especially of the start of the rainy season, is of paramount importance for farmers, for example: it is a common observation that the coming of the rains, or their failure, is one of the major topics of conversation in rural communities in East Africa. Meteorologists are not very well able to predict the rains (see, e.g. Johnson 1962, Brown & Cocheme 1969, Griffiths 1972, Tyrell & Coe 1974, Fleer 1981) and here I want to address the question of whether the Red-chested Cuckoo's calling fares any better in this regard.

## Methods

From December 1983 to January 1985 rainfall was checked nearly every day at Ndala Research Camp in Lake Manyara National Park, Tanzania (3°30S, 35°45E) and it was also noted whether or not the Red-chested Cuckoo called. A day with rain was defined as a day (24 h) with 0.1 mm of rain or more. Observations on rainfall and calling were made on a total of 404 d. Association between calling and absence or presence of rain on the same day was analysed through $\chi^2$ calculations per month and for the whole period. The same type of analysis was used to investigate whether the birds called significantly more (or not) on a day preceding a day with (or without) rain; for this purpose there were 401 pairs of observations available. Yates-continuity corrections were not applied, following Everitt (1977).

Table 1. *Association between calling of the Red-chested Cuckoo and rainy days*

| Month | Percentage of days | | Association between calling and | | |
|---|---|---|---|---|---|
| | with rain | with calls | rain on the same day $\chi^2$ value | rain on the next day $\chi^2$ value | n |
| Dec 1983 | 48 | 90 | 0.300 | 0.373 | 29 |
| Jan 1984 | 38 | 97 | 0.633 | 0.731 | 29 |
| Feb 1984 | 29 | 100 | (0.000) | 0.395 | 28 |
| Mar 1984 | 23 | 97 | 0.302 | 0.360 | 31 |
| Apr 1984 | 63 | 77 | 0.150 | 0.232 | 30 |
| May 1984 | 11 | 92 | 3.140 | 0.046 | 25 |
| Jun 1984 | 0 | 67 | (0.000) | (0.000) | 21 |
| Jul 1984 | 12 | 0 | (0.000) | (0.000) | 26 |
| Aug 1984 | 0 | 0 | (0.000) | (0.000) | 31 |
| Sep 1984 | 3 | 0 | (0.000) | (0.000) | 30 |
| Oct 1984 | 29 | 10 | 2.284 | 0.030 | 31 |
| Nov 1984 | 43 | 87 | 1.885 | 0.192 | 30 |
| Dec 1984 | 16 | 100 | (0.000) | (0.000) | 31 |
| Jan 1985 | 23 | 97 | 0.302 | 0.360 | 31 |
| Whole period | 24.7 | 65.1 | 12.988 | 16.046 | 404 |
| | | | $P<0.001$ | $P<0.001$ | |

Notes: The Red-chested Cuckoo or 'rain-bird' did not call significantly more on days with rain than on days without, nor did it call significantly more on days preceding a day with rain (all monthly $\chi^2$ values are not significant). Bracketed figures represent data sets in which there was no variation with regard to calling (i.e. the birds called every day or not at all). For the whole period there was a significant association between calling and incidence of rain but this can be explained by the near absence of calling during the dry season, which lasts in northern Tanzania from 1 June to 1 November.

**Results and Discussion**

In Table 1 the results are displayed: there is no indication that there was a significant association between the calling of the Red-chested Cuckoo and the presence or absence of rain on a given day if the data are analysed by month, as all monthly $\chi^2$ figures are too low. In the same vein, there is no indication that the cuckoos called more frequently on days that were followed by rain than when the following day was dry. Calling of the 'rain-bird' did not predict the coming of rain on a short-term basis.

For the whole period there was a significant association between calling and rain on the same day, and between calling and rain on the next day (Table 1). This interaction can be explained by the total absence of calling during the major part of the dry season, as the last call was heard on 23 June 1984 and the first one again on 27 October 1984 (the dry season is defined as starting on 1 June and ending on 31 October—see Prins & Loth 1988). When only data from outside the period 23 June to 26 October are used to examine an

association between calling and rainfall, the $\chi^2$ value is 0.710 (n = 307, df = 1, n.s.) in the case of calling and rain on the same day, and 0.005 (n = 305, df = 1, n.s.) in the case of days with rain and calling on the preceding day.

It thus can be concluded that there is neither a reason to call the Red-chested Cuckoo 'rain-bird', as its calling outside the dry season is not associated with rain, nor can its calls be used to predict the chance of rainfall the next day. Its first calling at the end of the dry season, however, appears to herald the beginning of the short rains but data would have to be collected over many years to elucidate the predictive value of its first call.

Whether the first calls are associated with the arrival of the birds from elsewhere is unclear; they were rarely seen during the rainy period and never during the dry season. The periods of calling in Africa south of the equator (see Rowan 1983, p. 312 *et seq.*) suggest a general association between calling and the rainy season. If the absence of calling means the absence of Red-chested Cuckoos in a given area, then it could be suggested that the species moves with the Intertropical Convergence Zone from south to north. However, if the birds are sedentary, as in the Nairobi, Kenya area (van Someren, cited by Rowan 1983, p. 312), calling does not reflect a migration pattern but will be associated with breeding in the best season, i.e. the rainy season.

**References**

Brown, L. & Cocheme, S. 1969. *A study of the agro-climatology of the Highlands of East Africa.* Rome: FAO.

Everitt, B.S. 1977. *The analysis of contingency tables.* London: Chapman & Hall.

Fleer, H.E. 1981. Teleconnections of rainfall anomalies in the tropics and subtropics. *In* Lighthill, J. & Pearce, R.P. (eds), *Monsoon dynamics*, pp. 5–18. Cambridge: Cambridge University Press.

Griffiths, J.F. 1972. East Africa. *In* Griffiths, J.F. (ed.), *Climates of Africa—world survey of climatology.* Vol 10. Amsterdam: Elsevier.

Johnson, D. 1962. Rain in East Africa. *Quarterly Journal of the Royal Meteorological Society* 88: 1–19.

Prins, H.H.T. 1988. Plant phenology patterns in Lake Manyara National Park. *Journal of Biogeography* 15: 465–480.

Prins, H.H.T. & Loth, P.E. 1988. Rainfall patterns as background to plant phenology in northern Tanzania. *ibidem* 15: 451–463.

Rowan, M.K. 1983. *The doves, parrots, louries and cuckoos of southern Africa.* Cape Town: David Philip.

Tyrell, J.G. & Coe, M.J. 1974. The rainfall regime of Tsavo National Park, Kenya and its potential phenological significance. *Journal of Biogeography* 1: 187–192.

Williams, J.G. 1969. *A field guide to the birds of East and Central Africa.* 4th impression. London: Collins.

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*Scopus* 12: 94–96, March 1989 Received 23 November 1988

**An important coastal wader feeding area in southern Somalia**

The coast of southern Somalia from the Kismaayo area northeast to Mogadishu is characterized by long sandy beaches, with small stretches of rock and seaweed patches associated with coral headlands. It lacks extensive intertidal coral feeding areas for waders such as those typical of much of the Kenya coast. There is no protective reef and beaches are subject to strong wave action, Numbers of Palaearctic waders are therefore rather low. For example, I was able to count only 400–450, mainly Sanderling (scientific names are given below), Turnstone and Greater Sandplover, on two drives along 25 km of beach from Marka northeastwards during November 1987. Contrasting with this picture is a tidal lagoon at Kismaayo which holds thousands of waders, and which must represent an important wintering and passage stopover site.

Kismaayo lagoon is approximately circular and about 2 km across, opening directly to the sea through a narrow neck between coral headlands. It consists of exposed sandflats at low tide, with a few scattered mangroves, but at high tide it is completely covered. I counted waders in the area at and after high tide on 26 March 1987, when waders were concentrated in a few large gatherings on the steep surrounding beach, and were beginning to move back to the edge of the flats. Approximately 4000 waders were present, with counts of individual species as follows:

| | |
|---|---|
| Curlew Sandpiper *Calidris ferruginea* | 2500 |
| Sanderling *Calidris alba* | 300 |
| Little Stint *Calidris minuta* | 300 |
| Greater Sandplover *Charadrius leschenaultii* | 200 |
| Mongolian Sandplover *Charadrius mongolus* | 200 |
| Turnstone *Arenaria interpres* | 200 |
| Grey Plover *Pluvialis squatarola* | 60 |
| Terek Sandpiper *Xenus cinereus* | 50 |
| Ringed Plover *Charadrius hiaticula* | 50 |
| Crab Plover *Dromas ardeola* | 50 |
| Greenshank *Tringa nebularia* | 30 |
| Whimbrel *Numenius phaeopus* | 15 |
| Redshank *Tringa totanus* | 8 |
| Common Sandpiper *Actitis hypoleucos* | 4 |
| Curlew *Numenius arquata* | 3 |
| Kentish Plover *Charadrius alexandrinus* | 3 |
| Little Ringed Plover *Charadrius dubius* | 1 |

Similar numbers were seen on a subsequent visit on 11 November 1987, when two Oystercatchers *Haematopus ostralegus* and two Bar-tailed Godwits *Limosa lapponica* were also present.

The numbers at Kismaayo were almost as high as those which utilize the best known Kenya coast tidal flats site at Mida Creek, where roosting counts of wintering waders have been within the range 4000–6000 (Bryant 1980, Pearson 1984). At Mida, the Curlew Sandpiper is again the predominant species, with many Sandplovers and Little Stints. Here, though, the larger waders—Grey Plover, Whimbrel, Curlew, Crab Plover and

Greenshank—are more numerous, and there are few Sanderlings or Turnstones. Moreover, Kentish Plover is not found regularly this far south.

Between Kismaayo and the Kenya border there are other coastal sites that might hold important numbers of waders, notably the large lagoons at Bur Gabo, and these need to be investigated. North of Kismaayo, however, the feeding possibilities for species such as Curlew Sandpiper and Little Stint are perhaps very limited for hundreds of kilometres along the east-facing Somalia coast.

## References

BRYANT, D.M. 1980. Waders on the coast of Kenya: January 1979. *Wader Study Group Bulletin* 28: 28–30.

PEARSON, D.J. 1984. Some counts of wintering waders on the south Kenya coast. *Scopus* 8: 93–95.

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*Scopus* 12: 97–98, March 1989 Received 28 September 1988

## Observations on the behaviour and call of Hartlaub's Bustard *Eupodotis hartlaubii*

In mid-November 1984, observations were made of three male Hartlaub's Bustards *Eupodotis hartlaubii* in tall grassland with scattered *Acacia drepanolobium* close to Lion Dip in Nairobi National Park, Kenya. The bustards were easy to observe from a motor vehicle at distances down to 10 m.

Several species of bustards Otididae, belonging to the genus *Eupodotis*, are well known from dramatic aerial displays which are often referred to as 'rocket' or 'parachute' flights (Urban *et al.* 1986). Such a display has not, however, been described for Hartlaub's Bustard (Osborne *et al.* 1984). Nevertheless, it was in part due to these flights that our attention was drawn to the birds. The displaying males were visible over long distances, their flights revealing striking white plumage in the wings that was largely hidden at rest. The bustards flew up steeply to 15–20 m, and then descended with a glide, their wings widely spread and slightly raised, their legs dangling.

Virtually nothing is known of the breeding behaviour of Hartlaub's Bustard (Urban *et al.* 1986) and although we are unable to throw any light on its context, we describe here a call sequence in detail. Males adopted an alert stance, sufficiently distinct to allow an observer to expect calling to follow. The head was then drawn slowly down on to the back,

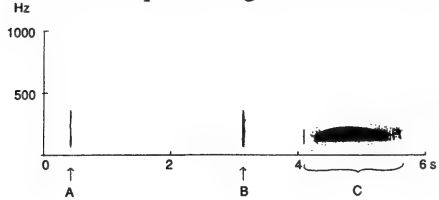


Fig. 1. *Sonogram of the call of a male Hartlaub's Bustard* Eupodotis hartlaubii

while the skin on the neck became swollen and loosened to produce a pouched effect. The remainder of the sequence occurred in three distinct stages. First, the bill opened as if to gulp in air, and a barely audible click was made. The the head was quickly raised, the neck continuing to swell further, and a short *tok* call was made, apparently with the bill closed (although a photograph on page 30 of Osborne *et al.* (1984) reveals that he bill may be open). Finally, with the neck fully extended and widely swollen, and the head and bill pointed up, a deep drawn out boom was given. During this last call, the neck deflated, the deflation continuing and the bill being lowered before the bird returned to a normal standing posture or walked off. It is interesting to note that this sequence is the approximate reverse of that shown by the Black-bellied Bustard *E. melanogaster* when calling (illustrated on page 178 of Urban *et al.* (1986)).

The calls carried poorly and were only audible at close quarters. Indeed, we were only alerted to the first click after listening to the tape recording we made. A sonogram (Fig. 1) confirmed that the call had three elements: the first was short and vibrated (A), and the second short and low (B), while the third was longer, vibrated and preceded by a short click (C), its pitch increased and then decreased slowly (Chappuis *in litt.*).

An entirely different call was heard when the bird was disturbed by the car and just before or after a display flight. Again the call was hard to hear, but sounded like a gentle *u-kuk-kuk.*

The three males performed a similar sequence, with some possible variation in the strength of the third element. At no time did we observe a female bustard in the vicinity of a calling male and the extremely quiet nature of the call is puzzling. The advertisement call of the Black-bellied Bustard can be heard over at least 100 m in still air (pers. obs.). It is possible, however, that there were females nearby for they are cryptically patterned and might have been overlooked in the long grass.

**Acknowledgements**
Thanks to Claude Chappuis who kindly prepared and interpreted the sonogram for this note, and to Paul Goriup for his comments.

**References**

Osborne, P., Collar, N. & Goriup, P. 1984. *Bustards: Booklet published to commemorate the International Symposium on Bustards, Dubai, U.A.E.* Dubai Wildlife Research Centre, I.C.C.E. and I.C.B.P.

Urban, E.K., Fry, C.H. & Keith, S. 1986. *The birds of Africa,* Vol II. London: Academic Press.

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*Scopus* 12: 98–99, March 1989 Received 27 May 1988

### First record of the Barred Warbler *Sylvia nisoria* in Malawi

On 7 January 1989 a Barred Warbler *Sylvia nisoria* was caught and ringed at Nchalo (16°16S, 34°55E) in the lower Shire valley of Malawi in an area of short, dry grassland and scattered bushes, with *Acacia/Combretum* thicket nearby. On 9 January a second bird was caught in the same net. These are the first records of the species from Malawi. The weather at the time was extremely hot, sunny and dry. Rain had been falling in Lilongwe (13°59S, 33°47E) from 1 January and in Blantyre (15°47S, 35°00E) from 5 January, but did not reach Nchalo until 20 January.

Britton (1980) states that the Barred Warbler is locally common in north and east Kenya in woodland, bushland undergrowth and low scrub in semi-arid country. Many have been ringed at Ngulia, Kenya (3°00S, 38°13E) and the species has been recorded as far south in Tanzania as Dodoma (6°00S, 36°00E). It may occur further south in Tanzania, as that country has not been well explored ornithologically, but even so, a range extension of over 10° southwards is somewhat unexpected.

A Rufous Bush Chat *Cercotrichas galactotes* caught at Nchalo in December 1987 (Hanmer 1989) was assumed to have been assisted in its migration southwards by strong winds, but this could not have been the case with the Barred Warblers. From early December 1988 to late January 1989 the winds, although northerly, were very light. It is possible that the Intertropical Convergence Zone developed to the north of the birds in late December and the heavy rain which it produced forced them to keep moving southwards ahead of it in search of drier conditions.

#### References

Britton, P.L. (ed.) 1980. *Birds of East Africa.* Nairobi: EANHS.

Hanmer, D.B. 1989. First record of the Rufous Bush Chat *Cercotrichas galactotes* in Malawi. *Scopus* 12: 93–94.

*Mrs Dale B. Hanmer, Sucoma, Private Bag 50, Blantyre, Malawi*

*Scopus* 12: 100, March 1989 Received 28 February 1989

### Seasonality of Banded Martin *Riparia cincta* flocks in Kenya

Lewis & Pomeroy (1989) summarized the evidence for the migrant status of the Banded Martin *Riparia cincta* in Kenya, and found that the species appeared to be migrating or wandering in the September–November period. In the course of particularly extensive travel in Kenya during 1986–88, flocks of these martins have been observed on the following occasions:

**Amboseli National Park (2°30S, 37°00E)**

18 August 1986: common, over 100 seen.
22 October 1987: numerous, hundreds seen.
15 November 1987: over 100 still present, but fewer than during the October visit.
18 January 1989: 5 or 120 only.

**Maasai Mara Game Reserve (1°17S, 35°03E)**
28 August 1987: over 100 seen.
9 December 1988: none present.

**Lake Nakuru National Park (0°22S, 36°05E)**
19 September 1988: over 50 seen.
2 November 1988: 50 seen.
7 December 1988: none seen.

**Nairobi National Park (1°17S, 36°49E)**
25 October 1988: several flocks of *c.* 20 birds each.

These observations show that flocks of Banded Martins are present in the August–November period, but are virtually dispersed by December. A total of 490 have been ringed in East Africa (Backhurst 1988)—most of them between late July and late October at Lake Nakuru (G.C. Backhurst, pers. comm.). Three breeding records from central and western Kenya are March, May and July (EANHS Nest Record cards). Sessions (1966) found the species mainly as a February–July visitor to Mau Narok (0°41S, 35°57E), breeding in June. Thus the flocks reported here seem to occur in the non-breeding season.

**References**

Backhurst, G.C. 1988. Eastern African ringing report 1981–1987. *Scopus* 12: 1–52.

Lewis, A.D. & Pomeroy, D.E. 1989. *A bird atlas of Kenya.* Rotterdam: Balkema.

Sessions, P.H.B. 1966. Notes on the birds of Lengetia Farm, Mau Narok. *Journal of the East Africa Natural History Society and National Museum* 26: 18–48.

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*Scopus* 12: 100–101, March 1989 Received 2 March 1989

## August and October arrivals of the Caspian Plover *Charadrius asiaticus* in south west Kenya

Caspian Plovers *Charadrius asiaticus* are common during the northern autumn and winter on the short grass plains between the Mara River and Mara Buffalo Camps in the north of the Maasai Mara Game Reserve, Kenya (1°11S, 35°06E). These upland plains form the northern limits of one of this plover's two main wintering areas in Africa (Urban *et al.* 1986). This note discusses fluctuations in the Caspian Plover's abundance on the Mara plains as observed during frequent visits in the years 1986 to 1988.

Britton (1980) and Urban *et al.* (1986) both make the point that flocks of this species reach Kenya during early August each year, but that the main arrival does not take place until October.

What is not clear from these accounts is the magnitude of the August arrival. During the second half of the month, counts over an area of some 30 $km^2$ in the vicinity of the Mara River and Mara Buffalo Camps can exceed 1000 individuals. The great majority, if not

all, of these birds leave the area during the first half of September, presumably moving further south. Additional arrivals occur in the October–November period, with continuing presence on the plains through to February and March. Counts of the birds wintering on this 30 km$^2$ area can reach 400.

These fluctuations compare exactly with the data of Nikolaus (1987) from Sudan, where there is a distinct August passage along the Nile, prior to the arrival of wintering birds in October.

The August and October arrivals presumably represent two, separately migrating populations. Since this plover leaves its breeding grounds in August, these first arrivals in Africa would seem to have made a direct, unbroken flight (Cramp & Simmons 1983). August arrivals are known from Sudan, Ethiopia and Somalia, south to Zambia and southern Africa (Nikolaus 1987, Urban *et al.* 1986).

The Caspian Plovers that arrive in Africa during September and October have either left their breeding grounds later than the early August migrants (birds breeding at more southerly latitudes might depart later than those from further north); or have broken their flight in the Middle East. Cramp & Simmons (1983) mention large mid August–October flocks in Iraq.

**References**

Britton, P.L. (ed.). 1980. *Birds of East Africa.* Nairobi: EANHS.

Cramp, S. & Simmons, K.E.L. 1983. *The birds of the western Palearctic.* Oxford: OUP.

Nikolaus, G. 1987. Distribution atlas of Sudan's birds with notes on habitat and status. *Bonner zoologische Monographien* 25: 1–322.

Urban, E.K., Fry, C.H. & Keith, S. 1986. *The birds of Africa,* Vol II. London: Academic Press.

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*Scopus* 12: 101–102, March 1989 Received 8 March 1989

## Two commensal feeding associations observed in Kenya Hamerkop *Scopus umbretta* and African Buffalo *Syncerus caffer*

On 16 November 1987, while driving around the swamps of Amboseli National Park (2°30S, 37°00E), I came upon an African Buffalo wallowing in a mud hole. A Hamerkop was deliberately stalking around the buffalo, catching jumping or flying prey items that the rolling buffalo disturbed. The buffalo paid no attention whatsoever to the bird, even when the latter was only 10–20 cm from its muzzle.

On 24 September 1988, I watched a buffalo crossing Musiara marsh, in the north of the Maasai Mara Game Reserve (1°17S, 35°03E). As it came towards me through the marsh vegetation, a Hamerkop persistently fluttered around it, often immediately around its head, taking food items flushed up by the beast's progress. Again, the mammal paid no attention to the bird.

Standard reference works make no mention of this association, while Dean & MacDonald (1961), in their review of such phenomena, quote one example, of a

Hamerkop catching insects disturbed by grazing cattle in Zimbabwe.

**Marsh Sandpiper *Tringa stagnatilis* and Avocet *Recurvirostra avosetta***

On 8 February 1988, on lagoons at Lake Magadi (1°52S, 36°17E), David Fisher and I watched a Marsh Sandpiper persistently feed in the wake of a feeding immature Avocet. The Avocet's slow, meandering progress left a track of dark suspended sediment in the shallow water, and the sandpiper followed this trail at distances of less than one metre from the Avocet, presumably taking food items disturbed by the other bird's progress. In addition to material disturbed by its feet, the Avocet's characteristic side-to-side bill motion through the bottom sediment would cause more disturbance than the passage of other shorebirds, and thus make it a more profitable species to follow.

Cramp & Simmons (1983) mention that Marsh Sandpipers in their winter range are noted for taking food items disturbed by the activities of other bids, particularly ducks, egrets and other shorebirds. Reynolds (1972) reported such an association from Nairobi, where a Marsh Sandpiper fed in the wake of a pair of dabbling Hottentot Teal *Anas hottentota*.

**Acknowledgements**

I am very grateful to John Fanshawe for notification of the *Ostrich* reference.

**References**

Cramp, S. & Simmons, K.E.L. 1983. *The birds of the western Palearctic*. Oxford: OUP.

Dean, W.R.J. & MacDonald, I.A.W. 1981. A review of African birds feeding in association with mammals. *Ostrich* 52: 135–155.

Reynolds, J.F. 1972. Feeding association between Marsh Sandpiper and Hottentot Teal. *EANHS Bulletin* 1972: 189.

*Adrian D. Lewis, Box 25296, Nairobi, Kenya*

*Scopus* 12: 102–103, March 1989 Received 2 March 1989

## REVIEWS

**The birds of Ghana** by L.G. Grimes, 1987. London: BOU Check-list No. 9. Size 156 x 252 mm, softback, pp. 276, plus 16 halftone plates of habitats and several line maps. ISBN 0 907446 08 6. Price £16 in UK (£18 overseas) from the British Ornithologists' Union, c/o British Museum (Natural History), sub-department of Ornithology, Tring, Herts HP23 6AP, England.

This excellent book stretches the meaning of the word 'check-list', but this is all to the good. The extremely thorough preliminary matter of some 50 pages covers the usual aspects pertinent to the birds of a country—climate, vegetation zones, geology and topography—as well as the political history, ornithological history, the future of ornithology of the country and a comparison of the avifaunas of Ghana and Nigeria (a check-list of Nigerian birds, by J.H. Elgood, was the fourth in this BOU series, published in 1982). In addition, there are sections on biological seasons in forest and savanna, breeding and migration The halftone plates of habitats are excellent.

The bulk of the book is the Systematic List. The scientific nomenclature follows C.M.N.

White's check-lists with the Bannerman alternatives in brackets. A few names have been carried over from White (e.g. *Sterna tschegrava* and *Luscinia suecica*) which have been changed since under the rules of the ICZN. The omission of authors' names of species saves no space and strikes an slightly odd note in a work of such high scholarship. However, these are my only criticisms of the entire work. A selection of English names is given which should satisfy most people. An excellent feature as far as the present reviewer is considered is that an alphabetical order is used within sub-families and genera; sub-families are arranged 'systematically' within their families.

The status of each species is indicated by easy-to-understand abbreviations (defined on p. 55) in the heading. The brief text for each species contains details of habitat preference, abundance and sometimes other biological data; sub species occurring are noted. A separate heading for breeding follows where appropriate and here details are given for recorded breeding in neighbouring countries if nothing is recorded for Ghana—a useful feature. Formal references abound throughout each species account as do the names of people (listed under the Acknowledgements section) who supplied data to the author.

After the Systematic List there is a 21-page list summarizing the status of all the birds recorded; this could be used as a 'tick-list'. There are then eight appendicies. The first three relate to ringing. Appendix 1 gives details of Palaearctic migrants ringed and retrapped in the same and subsequent seasons at Tafo by M. Lockwood. Appendix 2 lists the 18 foreign recoveries of Eurasian Swallows *Hirundo rustica* ringed at Tafo, while Appendix 3 (7 pp.) lists published recoveries of foreign-ringed birds to Ghana. Appendix 4 analyses species by migratory status and habitat; the fifth appendix lists the whereabouts of specimens of Ghanaian species. Appendix 6 gives titles of theses and reports by Aberdeen University Ghana expedition members, Appendix 7 lists weights of Ghanaian birds from seven sources and the eighth appendix is a list of taxa described from specimens taken in Ghana. The last appendix is a gazetteer of places mentioned in the text. The book ends with a comprehensive list of references, and indices to English and generic names. Dr Grimes must be heartily congratulated for producing a model check-list, very well presented and printed.

G.C. Backhurst

**The birds of Africa. Volume III**, edited by C. Hilary Fry, Stuart Keith and Emil K. Urban, 1988. London: Academic Press. Overall size 245 x 318 x 46 mm, pp. xvi + 611, 32 colour plates, many line drawings and maps. ISBN 0 12 137303 7. UK price £71.50.

The third volume in this important series completes the non-passerine birds from parrots to woodpeckers. The colour plates by Martin Woodcock are excellent as are Ian Willis' line drawings liberally provided throughout the text. Printing and binding are first class. Volumes I and II were reviewed in *Scopus* (7: 100–101, 11: 23–24).

This is a book which will be bought as a matter of course by all those seriously interested in African birds. It contains a wealth of useful information and references to other published work where more detail can be found. Having said that, it is regrettable that mistakes have been let through in a book which should be the last word (for some years) on African birds. There are many omissions and errors in the distribution maps (e.g. in north-east Africa), ICZN rules of nomenclature continue to be ignored (e.g. *Glaucidium sjöstedti*) and there are other minor mistakes in scientific names (e.g. *Tricholaema lachrymosa*, *Merops bullocki*). Ringing recoveries of the two kingfishers *Halcyon leucocephala* and *Ceryle rudis* have been muddled and distorted. In spite of these criticisms, this book, and the other volumes—already published and forthcoming—should be in every African bird enthusiast's library.

G.C. Backhurst

they must be clearly written, and sent in duplicate too. Both English and scientific names of birds should be given when the species is first mentioned, thereafter only one name should be used; they should be those of *Birds of East Africa* (Britton, P.L. (ed.) 1980, Nairobi: EANHS) unless the species is not treated in that work. Metric units should be used. Contributions will be welcomed on floppy disk—please contact the Editor for details.

Original black and white photographs and line illustrations should not be larger than A4 (210 x 297 mm). Line illustrations should be on good quality white paper or board, or on tracing material; lettering should be of professional quality or marked lightly in pencil. Each illustration should be numbered (Fig. 1, etc.) and be provided with a legend typed on a separate sheet of paper. All references cited should be listed at the end of the contribution following the form used in this issue. Names of periodicals must be given in full and, in the case of books, the town of publication and the publisher should be given.

Authors of 'papers' receive five copies of their contribution free of charge. Extra copies, which will be supplied at cost, must be ordered when the MS is accepted. All contributions should be sent to the Editor, G.C. Backhurst, Box 24702, Nairobi, Kenya.

## East African Bird Report

This normally forms the third issue of *Scopus* and each report covers one calendar year and relates principally to the birds of Kenya, with notes on any records received from Tanzania and Uganda. Records of Afrotropical and Oceanic birds should be sent to D.A. Turner, Box 48019, Nairobi; Palaearctic bird records should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Report.

Sightings of rare birds may be telephoned through to any OSC member (numbers inside the front cover) in the hope that the bird(s) may be seen by others. Criteria covering the submission of Bird Report records are given in *Scopus* Supplement, June 1982, and copies may be obtained, free of charge, from D.A. Turner. Records of rare birds are assessed by the independent and internationally-based East African Rarities Committee.

*Scopus* 12 (3/4), March 1989

## Contents



A leaflet on The birds of Africa, Volumes I–III is enclosed with this issue

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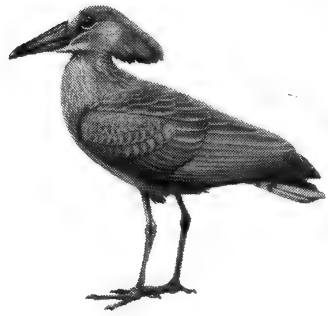

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**East African Bird Report 1988**

# *SCOPUS*

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*Continued inside back cover*

*Scopus* 12 (5): 105–106, May 1990

# East African Bird Report 1988

THE format of this report follows that established for the previous one. A general review for Kenya, together with systematic lists and migrant dates is followed by records from Tanzania and one 1987 record from Uganda. We are very aware that we receive only a small proportion of the potential records from these last two countries, but hope to hear more in future from the various expeditions and surveys now being planned and carried out there. We hope too that observers resident in Tanzania and Uganda will begin sending us their records again.

The East African List and the three national lists are currently being reviewed, revised taxonomically and rearranged in systematic order. When this has been completed we shall issue revised lists of Scarce and Requested species and new guide-lines for report contributors.

## Kenya—general review

The year began dry in most areas. In the rift, Lakes Nakuru and Elmenteita were reduced to mere springs and dry soda flats for the first time in almost 30 years. At Lakes Naivasha and Baringo, however, there were extensive muddy edges with an abundance of birds. Migrant wader counts during January and February gave figures of approximately 12 000 and 4000 respectively for these two lakes. Lake Turkana was at its lowest ever recorded level at this time, but emerging mudflats in the Omo Delta area near Todenyang supported tens of thousands of waders. Migrant ducks were in thousands at Naivasha, but there were few elsewhere, and such potential refuges as Solai and Ol Bolossat were dry.

The long rains changed the situation dramatically almost everywhere in the country. These began early, about the third week of March, and were the heaviest for at least seven years. By May, lakes Nakuru and Elmenteita had practically refilled. In the west and central areas there was much more flooded swampy grassland than usual, and associated birds of interest included Streaky-breasted Pygmy Crakes *Sarothrura boehmi* (p. 110 and *Scopus* 14: 30), Red-chested Pygmy Crakes *S. rufa*, Striped Crakes *Porzana marginalis*, Lesser Moorhens *Gallinula angulata*, African Crakes *Crex egregia* and, in the Mara, a party of at least seven Rufous-bellied Herons *Ardeola rufiventris*.

A belt of sedge was quickly established round Lake Naivasha, and by June this contained many breeding ducks, as well as Little Bitterns *Ixobrychus minutus payesii* and African Water Rails *Rallus caerulescens*. After further rain during August the

overall rise at Lake Naivasha amounted to over one metre, while that at Baringo was over three times that amount. At the same time the main inflow to Lake Turkana, from rain in Ethiopia, was the greatest for many years, and caused a substantial rise in its level and the partial refilling of Ferguson's Gulf.

October was generally a dry month, and the short rains were delayed in central and eastern areas until well into November. At Ngulia, night mists failed to develop until late that month, and migrant ringing was limited to just 11 days over the December new moon. This short period, however, produced a catch of over 8300 Palaearctic migrants, the second highest annual total ever, which included the first Chiffchaff *Phylloscopus collybita* from this site (see p. 127).

There were no additions to the national avifauna in 1988. A Great Grey Shrike *Lanius excubitor* found during February was 600 km south of any previous record in Africa, but the site was in the Ilemi Triangle, an area administered by Kenya, but shown on most maps as part of the Sudan (*Scopus* 13: 134). Green Crombecs *Sylvietta virens* were seen from September at a newly found site near Busia (*Scopus* 14: 31–32), and although the only previous records of this species, from Kakamega Forest (*Scopus* 4: 47), now seem doubtful, it is nonetheless already listed for Kenya. Other noteworthy Afrotropical species included Blue Swallow *Hirundo atrocaerulea* (*Scopus* 13: 125–126), Brown Twinspot *Clytospiza monteiri*, Red-shouldered Cuckoo Shrike *Campephaga phoenicea*, Red-headed Lovebird *Agapornis pullaria* and Black-shouldered Nightjar *Caprimulgus nigriscapularis*, all from the same Busia site. Also, Black-rumped Button Quails *Turnix hottentota* near Kitale, singing Stripe-breasted Seed-eaters *Serinus reichardi* on the Kongalai and Tambach escarpments and Quail Plovers *Ortyxelos meiffreni* in Tsavo East NP and Kapedo were of considerable interest.

*D. J. Pearson, Chairman, Ornithological Sub-Committee*
*East Africa Natural History Society, 1976–1990*

## List of observers

WA: W. Anderson
ALA: A.L. Archer
DEGB: D.E.G. Backhurst
GCB: G.C. Backhurst
ZB: Z. Bhatia
JB: J. Bishop
MACC: M.A.C. Coverdale
JRPC: J.R.P. Cumberlege
JD: J. Dawson
EAdL: E.A. de Leyser
CCHE: C.C.H. Elliott
JF: J. Falkland
BWF: B.W. Finch
DF: D. Fisher
ADF-W: A.D. Forbes-Watson
JG: J. Goodhart
RG: R. Grainger
LG: L. Grant
PH: P. Hemphill
MH: M. Hemphill
SH: S. Hemphill
IL: I. Loeffler
RJ: R. Juliusburger
PMBK: P.M.B. Kasana
GSK: G.S. Keith
RK: R. Knocker
ADL: A.D. Lewis
IL: I. Loeffler
GN: G. Nikolaus
DJP: D.J. Pearson
TP: T. Potterton
DKR: D.K. Richards
WR: W. Russell
CR: C. Ryall
MS: M. Sinclair
RPGS: R.P.G. Speir
TS: T. Stevenson
DAT: D.A. Turner
DEW: D.E. Wolfe
PW: P. Wootton
DAZ: D.A. Zimmerman

## Species Report

This report covers the three East African countries separately although this year no records have been received from Uganda, and only very few from Tanzania. Records are included under one or more categories, indicated by code letters after the English name as explained below. Categories follow the East African Rare Bird List, *Scopus* Supplement of June 1982. Nomenclature in the accounts which follow is that of *Birds of East Africa*, P. L. Britton (ed.) Nairobi: East Africa Natural History Society, unless stated otherwise.

**S(A):** **Scarce** species in category **A** (five or fewer previous records from East Africa); all records of such species are published.

**S(B):** **Scarce** species in category **B** (six to twenty-five previous records from East Africa); all records of such species are published.

**R:** Species of interest whose status in East Africa requires clarification, and for which all records are **Requested**. Records may be listed or summarized in full each year, or reviewed after several years.

**E:** Records showing an **Extension** of range, or from areas where the species is decidedly uncommon to scarce.

**N:** Records included for their **Numerical** interest, either of particularly large numbers of of careful counts.

**D:** Records of migrants where **Dates** are of interest.

**B:** Records of **Breeding** interest, from new or unusual areas or involving interesting numerical elements.

**M:** Records of **Miscellaneous** interest.

*Records were collated by D. A. Turner and D. J. Pearson*

## Kenya: Afrotropical and Oceanic species

PODICIPEDIDAE GREBES

***Podiceps cristatus* Great Crested Grebe** M: 2 Dundori Lake above Nakuru 6 Jul (DAT, DF), 1 Lake Kisima, south of Maralal, 31 Oct (ADL).

***Podiceps nigricollis* Black-necked Grebe** R: a male and female near Kiambu 19 Mar (JRPC), hundreds Lake Elmenteita, Aug–Sep (MACC), 1 Limuru 19 Oct (PW), 1 Lake Naivasha 27 Dec (JD).

DIOMEDEIDAE ALBATROSSES

***Diomedea* sp. albatross sp.**: singles off Shimoni 16 Aug, 10 and 17 Oct (PH, MH).

PROCELLARIIDAE PETRELS, SHEARWATERS

***Pachyptila vittata* Broad-billed Prion** S(A): 1 dead on beach at Watamu 3 Aug (LG). From skull measurements race *desolata* is indicated.

***Puffinus pacificus* Wedge-tailed Shearwater** S(B): 1 off Shimoni 10 Aug (SH), 1 near Lamu 4 Sep (RJ).

PHAETHONTIDAE TROPICBIRDS

***Phaethon lepturus* White-tailed Tropicbird** S(B): 1 off Shimoni 20 Sep (PH, MH).

SULIDAE BOOBIES

***Sula dactylatra* Masked Booby** R: 1 dead on beach Malindi 4 Dec (JG).

***Sula sula* Red-faced Booby** S(B): 1 brown morph off Shimoni 22 Aug (PH, MH), 1 juv off Shimoni 14 Sep (PH, JF), 1 dead on beach at Malindi Sep (RK).

FREGATIDAE FRIGATEBIRDS

***Fregata minor* Greater Frigatebird** S(B): 1 Tenewe Is, Lamu 4 Sep (RJ); 1 believed to be this species off Shimoni 9 Oct (PH, MH).

ARDEIDAE HERONS, BITTERNS

***Ixobrychus minutus payesii* African Little Bittern** R: 1 Githumbwini Dam, Thika 21 May (DJP), present Thika late May (DJP, MACC), 6 Lake Baringo 17 June (TS), 2–3 Lake Naivasha 26 Jun (DJP), 4 Lake Baringo 8 Jul (DAT, DF), 3 Lake Naivasha 13 Jul (DAT, DF), 2 Kisumu 17 Jul (TS), 1–3 daily Lake Baringo 26–28 Jul (DW), 4 Lake Baringo (Molo River area) 3 Sep (JRPC); 2–3 resident near Kiambu (JRPC).

***Ixobrychus sturmii* Dwarf Bittern** R: 1 Lake Baringo 14 Jul (RJ), 1 near Governors' Camp, Mara GR 2 Sep (TS).

***Ardeola idae* Madagascar Squacco Heron** R: recorded from 13 May (Kiambu, JRPC) to 29 Sep (2, Mara GR, TS) at a number of localities including Nairobi NP, Athi River ponds and Karara, 70 km N of Malindi; (various observers including ADL, TS, DAT, DF, JRPC, DJP, DAZ).

***Ardeola rufiventris* Rufous-bellied Heron** R: >7 Mara GR 30 Jun (BWF), 5 Mara GR (near Serena) 11 Jul (DAT, DF), several imms Musiara swamp, NW Mara, Jul–Nov (BWF *et al.*), 1 juv Olore Orok, Mara GR 16 Aug (DKR), 1 Musiara, Mara GR 24 Sep (ADL), 2 Mara GR 29 Sep (TS), 6–8 Musiara swamp, Mara GR Oct–Nov (DKR).

***Egretta ardesiaca* Black Heron** R: 2 Shimoni 23 Feb (PH, MH), 1 Lake Baringo 15 Nov (DKR), 1 Tana Bridge 27 Nov (ADL).

***Egretta gularis* African Reef Heron** R: 1 white phase Lake Naivasha 4 Mar (DAT).

CICONIIDAE STORKS

***Anastomus lamelligerus* Open-billed Stork** M: 1 Amboseli NP 2 Jul (DAT, DF).

***Bostrychia olivacea* Green Ibis** R: several Kieni Forest, southern Aberdares, at dusk and dawn throughout the year (DAT).

ANATIDAE DUCKS AND GEESE

***Netta erythrophthalma* Southern Pochard** MB: pair with 4 ducklings near Thika 6 Aug (ADL).

***Nettapus auritus* African Pygmy Goose** R: 3 Lake Jipe 23 Apr (DAT), pair Shimba Hills 7 Aug (DW), >6 Tiwi Pond, south coast, 20 Oct (CR, JD).

***Oxyura maccoa* Maccoa Duck** M: 3 Lake Kisima S of Maralal 31 Oct (ADL).

***Thalassornis leuconotus* White-backed Duck** MB: 10 Marsabit Lodge Lake 29–31 Jan (BWF), 1 Lake Jipe 23 Apr (DAT), pair with 3 young near Thika 5 Jul (DAT, DF), pair with 5 young near Thika 6 Aug (ADL), 1 near Karatina 6 Aug (ADL).

ACCIPITRIDAE BIRDS OF PREY

***Neophron monachus* Hooded Vulture** M: common around Garsen 24 Dec (DAT) and several north to Wenje.

***Circaetus fasciolatus* Southern Banded Snake Eagle** R: 1 Diani Forest 8 Aug (DW).

***Accipiter minullus* Little Sparrowhawk** R: singles Mathews Range 3 Apr (JRPC), 1 Baringo 27 Apr (CR, JD), Diani Forest 6 Aug (DW), Shimba Hills NP 7 Aug (DW), pair present throughout the year Tigoni, Limuru (JD).

***Accipiter ovampensis* Ovampo Sparrowhawk** R: only records received were from the Mara GR: a pair resident Oloolulo escarpment in the NW Mara throughout the year (BWF), 1 on 3 Aug (TS) and 1 near Cottar's Mara Camp (E Mara) 13 Nov (BWF, WR).

***Aquila verreauxi* Verreaux's Eagle** RB: pair resident and breeding Oloolulo escarpment NW Mara (BWF, DAT).

***Buteo tachardus* Mountain Buzzard** ME: 1 Ilout, N Ndotos 17 Jul (MACC).

***Hieraaetus spilogaster* African Hawk Eagle** E: 1 Uran 18 km NW of Sololo 29 May (TS).

***Aviceda cuculoides* Cuckoo Hawk** R: 1 Ololua Forest, Karen 17 Apr (JB), Shimba Hills NP 7 Aug (DW), Watamu 15 Aug (JD), 1 Karen 7 Sep (PW), 1 Lake Nakuru NP 24 Sep (TP), 1 Malindi 22 Oct (TS).

***Chelictinia riocourii* Swallow-tailed Kite** RN: >12 Todenyang 14 Feb (DJP), >20 Meru NP early Mar (ADL, JRPC).

***Macheiramphus alcinus* Bat Hawk** R: 1 Kakamega 1 Nov (DAT), 2–3 throughout the year Lake Baringo (TS).

FALCONIDAE FALCONS

***Falco alopex* Fox Kestrel** R: >2 Lokitaung 16 Feb (DJP), pair near Lokichoggio 27 Mar (DAT), 2 Kapedo 30 Oct (TS), 1 near Loiengalani 29 Dec (CR).

***Falco chicquera* Red-footed Falcon** M: 1 near Shimoni 22 Oct (JD).

***Falco cuvieri* African Hobby** R: 1 Loiengalani 3 Feb (BWF).

***Falco dickinsoni* Dickinson's Kestrel** M: 1 Meru NP 2 Aug (RJ).

***Falco rupicoloides* White-eyed Kestrel** M: fairly common Dida Galgalla desert 31 Jan (BWF).

PHASIANIDAE QUAILS, FRANCOLINS

***Coturnix delegorguei* Harlequin Quail** E: Uran 18 km NW of Sololo 28–29 May (TS).

***Francolinus coqui* Coqui Francolin** M: present Sokoke Forest 9 Nov (ADL).

***Francolinus hildebrandti* Hildebrandt's Francolin** M: 1 at base of cliffs, Lake Baringo 28 Jul (DW).

***Francolinus jacksoni* Jackson's Francolin** M: several on upper moorlands of Mt Kenya at 4000 m in Jan (DAT).

***Francolinus levaillantii* Red-winged Francolin** R: present in the area 25 km N of Webuye 21 Sep (DJP, BWF, DAT).

***Francolinus sephaena* Crested Francolin** M: Uran, 18 km NW of Sololo 28–29 May (TS).

***Ptilopachus petrosus* Stone Partridge** R: present Kongelai 18 Apr (CR).

NUMIDIDAE GUINEAFOWLS

***Acryllium vulturinum* Vulturine Guineafowl** M: Uran, 18 km NW of Sololo 28–29 Mar (TS), >25 near Mtito Andei, Tsavo East NP, 29 Jun (DAT, DF), >12 Karawa,

70 km N of Malindi 20 Aug (DAT, DAZ), several near Garsen 23 Dec (DAT).

*Guttera edouardi* **Crested Guineafowl** M: >30 Shimba Hills NP 19–20 Oct (TS).

*Numida meleagris* **Helmeted Guineafowl** M: Uran, 18 km NW of Sololo 28–29 May (TS).

TURNICIDAE BUTTON QUAILS, QUAIL PLOVER

*Ortyxelos meiffreni* **Quail Plover** R: 1 near Voi Lodge 9 Aug (TS) and 18 Aug (DAT, DAZ), 1 near Aruba Dam, Tsavo East NP 18 Aug (DAT, DAZ), 1 Kapedo 15 Nov (TS, DAT).

*Turnix hottentota* **Black-rumped Button Quail** R: pair near Kiminini, 20 km S of Kitale 25 Aug and 9 Nov (DAT, DAZ, TS).

*First record for many years.*

*Turnix sylvatica* **Button Quail** M: a few Tsavo West NP 28–29 Nov (DAT).

GRUIDAE CRANES

*Balearica pavonina** **Black Crowned Crane** E: *c.* 10 Todenyang 14 Feb (DJP, MACC), 1 Kerio delta (near examples of next species) 19 Feb (DJP, MACC).

*Balearica regulorum** **Grey Crowned Crane** E: 1 Kerio delta 19 Feb (DJP, MACC), see previous species.

*Nomenclature follows *The birds of Africa*; treated as one species by Britton (1980).

RALLIDAE RAILS, CRAKES

*Crex egregia* **African Crake** R: >5 Nairobi NP 18 May and 1 there 21 May (DJP), 1 Lake Baringo 16 Jun (TS).

*Gallinula angulata* **Lesser Moorhen** M: 2 Lake Jipe 23 Apr (DAT), present Thika late May (DJP, MACC), breeding Githumbwini Dam, Thika, late May to early Jun (DJP), 1 Mara GR 12 Nov (BWF, WR).

*Porphyrio alleni* **Allen's Gallinule** R: *c.* 50 Lake Baringo Jul–Aug (TS), 8 Baringo 28 Jul (BWF), 1 Thika 12 Sep (TS).

*Porphyrio porphyrio* **Purple Gallinule** M: 7–8 Lake Jipe 22–24 Apr (DAT). Numbers becoming much reduced in recent years.

*Porzana marginalis* **Striped Crake** R: 1 Githumbwini dam, Thika 21 and 25 May (DJP, MACC, BWF), male Karawa, 70 km N of Malindi, 20 Aug (DAT, DAZ), female Nairobi NP 22 Oct (WA).

*Porzana pusilla* **Lesser Spotted Crake** R: 1 Lake Naivasha 24 Nov (DW).

*Rallus caerulescens* **African Water Rail** MB: pair with 2 young Lake Naivasha 26 Jun (DJP), 1 juv Nyahuhuru 25 Jul (DW), 5 and 2 juvs Lake Naivasha 26 Sep (TS).

*Sarothrura boehmi* **Streaky-breasted Pygmy Crake** S(B): several Nairobi NP 2–20 May (DAT, DJP), last heard 26 May. See *Scopus* 14: 30.

*Sarothrura elegans* **Buff-spotted Pygmy Crake** R: 3 calling Kakamega Forest 22–23 April (CR).

*Sarothrura pulchra* **White-spotted Pygmy Crake** R: recorded at several localities in Busia District throughout the year (DAT, DJP, BWF).

*Sarothrura rufa* **Red-chested Pygmy Crake** R: 1–2 Githumbiuni dam, Thika 21 and 25 May (DJP, MACC).

*Fulica cristata* **Red-knobbed Coot** E: 2 on flood-water near Aitong, Mara GR 22 Mar (BWF).

HELIORNITHIDAE FINFOOTS

***Podica senegalensis* African Finfoot** R: 1 Naro Moru 14 Sep (TS).

OTIDIDAE BUSTARDS

***Eupodotis ruficrista* Buff-crested Bustard** M: 2–3 Lokichoggio 26–27 Mar (DAT).

***Neotis denhami* Denham's Bustard** M: 1 near Narok 10 Mar (ADL), 4 Aitong, Mara GR, throughout the year (ADL).

***Neotis heuglini* Heuglin's Bustard** M: several near road from Marsabit to Loiengalani 1 Feb (BWF).

***Otis kori* Kori Bustard** M: 1 Lokichoggio 27 Mar (DAT), 1 near Naro Moru 30 Nov (ADL).

JACANIDAE JACANAS

***Microparra capensis* Lesser Jacana** R: 1 Mara GR 9 Mar (ADL), 2 Lake Jipe 23 Apr (DAT).

ROSTRATULIDAE PAINTED SNIPES

***Rostratula benghalensis* Painted Snipe** R: 1 near Marigat 7 Jul (DAT, DF), 4 Lake Nakuru 7 Aug (DJP), 2 Mara GR 30 Sep (TS), 1 Lake Nakuru 12 Oct (TS), 2 Amboseli 17 Oct (TS), 1 caught at night, Ngulia 6 Dec (DJP).

CHARADRIIDAE PLOVERS

***Charadrius pallidus* Chestnut-banded Sandplover** E: 1 Amboseli 17 Oct (TS).

***Vanellus lugubris* Senegal Plover** M: pair Olooloo escarpment, Mara GR 20 Jan (BWF).

***Vanellus senegallus* Wattled Plover** E: 1 Lake Baringo 7 Mar (TS).

RECURVIROSTRIDAE STILTS, AVOCETS

***Himantopus himantopus* Black-winged Stilt** B: breeding Lake Elmenteita 24 May and Lake Nakuru 7 Aug (DJP).

BURHINIDAE THICKNEES

***Burhinus senegalensis* Senegal Thicknee** R: 47 Lake Baringo 30 Mar to 20 Apr (TS, CR).

GLAREOLIDAE COURSERS, PRATINCOLES

***Rhinoptilus chalcopterus* Violet-tipped Courser** R: 1 Watamu 14 Jan (BWF), 1 near Mzima Springs, Tsavo West NP 24 Apr (DAT).

LARIDAE GULLS, TERNS

***Anous stolidus* Common Noddy** RB: *c.* 400 with large young Tenewe Is 4 Sep (RJ).

***Sterna anaethetus* Bridled Tern** RB: *c.* 500 with large young Tenewe Is 4 Sep (RJ).

***Sterna fuscata* Sooty Tern** RB: *c.* 1000 with large young Tenewe Is 4 Sep (RJ).

***Sterna repressa* White-cheeked Tern** R: *c.* 10 Tenewe Is 4 Sep (RJ).

RYNCHOPIDAE SKIMMERS

***Rynchops flavirostris* African Skimmer** R: 1 Lake Jipe 23 Apr (DAT), 6 Sabaki River mouth 3 Aug (JB), 1 Lake Baringo 3 Sep (JRPC).

PTEROCLIDAE SANDGROUSE

***Pterocles gutturalis* Yellow-throated Sandgrouse** N: >200 Mara GR 10 Jul (DAT, DF).

***Pterocles lichtensteinii* Lichtenstein's Sandgrouse** R: resident at Baringo throughout the year (TS), male Ol Jogi near Nanyuki 29 May (JRPC).

***Pterocles quadricinctus* Four-banded Sandgrouse** R: a few near Lokomorenyang, Ilemi triangle, 17 Feb with previous species (DJP, MACC, ALA, ADF-W), 6 drinking with Lichtenstein's at Kodich dam, Kacheleba 14 Apr (BWF).

PSITTACIDAE PARROTS

***Agapornis pullaria* Red-headed Lovebird** R: resident in several localities near Busia (DAT, DJP, BWF, TS).

***Poicephalus rufiventris* Orange-bellied Parrot** M: Uran, 18 km NW of Sololo 28–29 May (TS), 1 N of Rumuruti 1 Sep (DAT, DAZ).

MUSOPHAGIDAE TURACOS

***Corythaixoides personata* Bare-faced Go-away Bird** E: 1 Uran, 18 km NW of Sololo 29 May (TS) was the first record of the nominate race from Kenya. *C. leucogaster* was also present.

***Musophaga rossae* Ross's Turaco** E: >6 in company with *Tauraco hartlaubi* near Kabarnet 3 Sep (DAT, DAZ), 4 near Tinderet 3 Nov (DAT).

***Tauraco fischeri* Fischer's Turaco** M: present Tana River Primate Reserve 23–24 Dec (DAT).

***Tauraco leucolophus* White-crested Turaco** M: records from Kongelai escarpment 2 Sep, Kerio Valley 3 Sep and 31 Oct; Mungatsi, Busia District 2 and 20 Sep (DAT, DJP, BWF, DAZ).

***Tauraco porphyreolophus* Violet-crested Turaco** M: several resident Milili estate, Ulu Hills, Machakos District (RG) and 2 pairs Mua Hills (BWF).

CUCULIDAE CUCKOOS

***Cercococcyx montanus* Barred Long-tailed Cuckoo** RE: several birds Kieni Forest, southern Aberdares; calling from Sep onwards (DAT).

***Clamator glandarius* Great Spotted Cuckoo** R: recorded as follows: Mara Jan–Feb (BWF), Elmenteita 2 Mar (MACC), Tsavo West NP 25 Mar (DJP), Athi Plains 31 Mar (DJP), Kajiado 12 Apr (DJP), Naivasha 7 May (DJP), Baringo 8 Jul (DAT, DF), Baragoi 28 Nov (DJP, MACC).

***Clamator jacobinus* Black and White Cuckoo** R: Ngueni 26 Mar, Simba 10 Apr, Makindu 10 Apr, Uran, 18 km NW of Sololo 28–29 May, Ol Jogi (Nanyuki) 29 May, Baringo 8 Jul, Ngulia 4–14 Dec (8 ringed), Marsabit 28 Dec (numerous observers).

***Clamator levaillantii* Levaillant's Cuckoo** R: 1 Naro Moru 27 Jan and 9–10 Feb (ADL, BWF), 1 Lake Naivasha 29 Mar, 1 and 7 May (MS, BWF, DAT), 1 near Malindi 21 Aug (DAT, DAZ).

***Cuculus clamosus* Black Cuckoo** R: Mathews Range 3 Apr (JRPC), Kongelai 18 Apr (CR), Pokot plains 20 Apr (CR), Uran, 18 km NW of Sololo 28–29 May (TS), Ol Jogi, Nanyuki 28–31 May (JRPC), Ngobit 1–2 Jun (JRPC), 4 Lake Naivasha 13 Jul (DAT, BWF), several Karisia Hills 26 Nov (MACC, DJP).

***Cuculus gularis* African Cuckoo** R: 1 Pokot plains 20 Apr (CR, JD), 2 Lake Baringo 27 Apr (CR), 1 Nairobi NP 12 Jun (JB), 2 Lake Baringo 12 and 27 Jul (RJ, DW), juv Lake Naivasha 8 Sep (MACC), 1 Aruba, Tsavo East NP 28 Dec (JD).

***Cuculus rochii**** **Madagascar Lesser Cuckoo** R: singles near Busia and Kitale 24 and 25 Aug (DAT, DAZ).

*Follows *The birds of Africa*; treated as a race of *C. poliocephalus* by Britton (1980).

***Centropus grillii*** **Black Coucal** R: 2–3 in swampy depression 25 km N of Webuye 25 Aug and 21 Sep (BWF, DJP, DAT).

***Centropus senegalensis*** **Senegal Coucal** M: several in the Mumias–Bungoma–Busia area throughout the year (BWF, DJP, DAT).

TYTONIDAE BARN OWLS

***Tyto capensis*** **Cape Grass Owl** R: 1 Kiminini, near Kitale Aug–Nov (DAT, DAZ, TS).

STRIGIDAE OWLS

***Bubo capensis*** **Cape Eagle Owl** M: pair at McKinder's Camp, Mt Kenya at 4350 m Jan (DAT), pair resident near Ngobit throughout the year (DAT, BWF).

***Glaucidium capense*** **Barred Owlet** R: pair Tana River Primate Reserve 23 Dec (DAT).

CAPRIMULGIDAE NIGHTJARS

***Caprimulgus clarus*** **Slender-tailed Nightjar** R: 1 ringed Ngulia 6 Dec (DJP, GCB).

***Caprimulgus climacurus*** **Long-tailed Nightjar** R: 1 Lokichoggio 26 Mar (DAT, IL).

***Caprimulgus donaldsoni*** **Donaldson-Smith's Nightjar** R: several Karawa–Garsen 23 Dec (DAT).

***Caprimulgus fraenatus*** **Dusky Nightjar** R: singles ringed Ngulia 5 and 6 Dec (GCB, DJP).

***Caprimulgus inornatus*** **Plain Nightjar** R: singles ringed Ngulia 5, 6 and 14 Dec (GCB, DJP).

***Caprimulgus nigriscapularis**** **Black-shouldered Nightjar** R: 1 Mungatsi, Busia District 7–8 Nov and 3 there on 3 Dec (TS).

*Follows *The birds of Africa*; treated as a race of *C. pectoralis* by Britton (1980).

***Caprimulgus natalensis*** **White-tailed Nightjar** R: several Mungatsi, Busia District throughout the year (DJP, DAT, BWF, TS).

***Caprimulgus tristigma*** **Freckled Nightjar** R: several calling Kabarnet 30 and 31 Oct (DAT) and several calling Kapedo 14 Nov (DAT, TS).

***Macrodipteryx longipennis*** **Standard-winged Nightjar** R: a few males displaying Lokichoggio 26–27 Mar (DAT).

***Macrodipteryx vexillarius*** **Pennant-winged Nightjar** R: several on the Olooloo escarpment Mara GR in late Jan (BWF).

APODIDAE SWIFTS

***Apus horus*** **Horus Swift** R: 5 Ol Jogi, Nanyuki 29 May (JRPC), 7 near Kiambu 11 Nov (JRPC), 3 near Tigoni 11 Nov (JD).

***Schoutedenapus myoptilus*** **Scarce Swift** R: a few near Kiambu 3 Feb and 27 Nov (JRPC) 1 Olooloo escarpment, Mara GR 22 Feb (BWF), >5 Kitich, Mathews Range 2 Apr (JRPC), a few Tigoni 12 Nov (JD).

***Telecanthura ussheri*** **Mottle-throated Spinetail** E: singles Mountain Lodge, Mt Kenya 17 Jan and 30 Nov (ADL).

ALCEDINIDAE KINGFISHERS

***Ceryle maxima*** **Giant Kingfisher** E: 1 Kerio Valley river gorge below Kabarnet 31 Oct (DAT).

*Halcyon albiventris* **Brown-hooded Kingfisher** M: 1 near Mountain Lodge, Mt Kenya 3 Nov (BWF, WR), 2 Chyulu Hills forest 30 Nov (DAT), several Tana River Primate Reserve 23 Dec (DAT).

*Ispidina picta* **Pygmy Kingfisher** M: 1 near Kiambu 21 Jul (JRPC).

CORACIIDAE ROLLERS

*Coracias abyssinica* **Abyssinian Roller** R: abundant Lokichoggio area 26–27 Mar (DAT, IL).

*Coracias naevia* **Rufous-crowned Roller** E: Uran, 18 km NW of Sololo 28–29 May (TS).

*Eurystomus glaucurus* **Broad-billed Roller** N: >20 feeding together above Alupe, near Busia 20 Sep might possibly have been migrants returning to Madagascar (DAT, DJP, BWF).

PHOENICULIDAE WOOD HOOPOES

*Phoeniculus granti* **Violet Wood Hoopoe** M: several around Lokichoggio 26–27 Mar (DAT), pair nesting Tana River Primate Reserve 23 Dec (DAT).

*Phoeniculus somaliensis** **Black-billed Wood Hoopoe** R: Uran, 18 km NW of Sololo 28–29 May (TS).

*Nomenclature follows *The birds of Africa*; included as a race (*somaliensis*) of *P. purpureus* by Britton (1980).

BUCEROTIDAE HORNBILLS

*Bycanistes bucinator* **Trumpeter Hornbill** M: 1 Chania Falls, Thika 8 Nov (DW).

*Tockus hemprichii* **Hemprich's Hornbill** R: Uran, 18 km NW of Sololo 28–29 May (TS), 2 Kongelai escarpment 2 Sep (DAT, DAZ).

*Bucorvus abyssinicus* **Abyssinian Ground Hornbill** R: Uran, 18 km NW of Sololo 28–29 May (TS).

CAPITONIDAE BARBETS

*Buccanodon leucotis* **White-eared Barbet** M: pair near Mountain Lodge, Mt Kenya 3 Nov (BWF, WR), >6 Chyulu Hills 30 Nov, 1 Dec (DAT).

*Gymnobucco bonapartei* **Grey-throated Barbet** M: resident in small numbers Olooloo escarpment, NW Mara GR (BWF), 2 Soy near Eldoret 26 Aug (DAT, DAZ).

*Lybius melanopterus* **Brown-breasted Barbet** M: 1 near Wundanyi, Taita Hills, 17 Sep (DAT), pair Tana River Primate Reserve 23 Dec (DAT).

*Trachylaemus purpuratus* **Yellow-billed Barbet** M: common resident around Lolgorien (BWF).

PICIDAE WRYNECKS, WOODPECKERS

*Jynx ruficollis* **Red-throated Wryneck** R: records from Red Hill, Nairobi, Tigoni, Moi's Bridge, Nyahuruhu, Lake Nakuru and Mara GR (DW, CR, JD).

*Campethera abingoni* **Golden-tailed Woodpecker** M: a few pairs (race *kavirondensis*) resident in the north western Mara GR (BWF, DAT).

*Campethera cailliautii* **Little Spotted Woodpecker** M: several pairs of the race *nyansae* resident in north western Mara GR (BWF, DAT).

*Denropicos poecilolaemus* **Uganda Spotted Woodpecker** R: 1 Mungatsi, Busia District 19 Sep (DAT, DJP, BWF).

***Denropicos poecilolaemus* Uganda Spotted Woodpecker** R: 1 Mungatsi, Busia District 19 Sep (DAT, DJP, BWF).

***Picoides obsoletus* Brown-backed Woodpecker** R: present throughout the year near Kiambu (JRPC), the Nairobi area Apr, Aug, Oct, Nov, Dec (PW), Kongelai escarpment 2 Sep (DAT, DAZ).

ALAUDIDAE LARKS

***Eremopterix signata* Chestnut-headed Sparrow Lark** M: >20 Meru NP 8 Aug (ADL), several small groups Tsavo East NP Aug (DAT, DAZ), 2–3 near Kapedo 15 Nov (DAT, TS).

***Mirafra africanoides* Fawn-coloured Lark** M: 1 NW Mara GR 30 Mar (BWF).

***Mirafra albicauda* Northern White-tailed Bush Lark** M: several Nairobi NP 7 Apr (BWF), 1 Mara GR 4 Nov (ADL).

***Mirafra cantillans* Singing Bush Lark** M: *c.* 20 Lake Baringo Jun and Jul (TS), several Suswa plains 9 Jul (DAT, DF).

HIRUNDINIDAE SWALLOWS

***Hirundo angolensis* Angola Swallow** M: >10 Nyahururu 25 Jul (DEW), 2 Naro Moru 7 Aug (ADL), 3 Mogotio 16 Nov (DEW), few Mara River all year round (BWF, DAT).

***Hirundo atrocaerulea* Blue Swallow** R: >12 Mungatsi, 22 km W of Mumias 22, 24, 25 Aug (BWF, DAT, DAZ, GSK, ADF-W).

*Second Kenya record and first for over 50 years; see* Scopus *13: 125–126.*

***Hirundo griseopyga* Grey-rumped Swallow** M: 5 near Iten 4 Dec (ADL).

***Hirundo semirufa* Rufous-chested Swallow** M: a few NW Mara GR Feb–May (BWF), generally absent there between Jun and Oct but 1 on 11 Jul (DAT, DF); a few reappeared in Nov (BWF).

***Psalidoprocne pristoptera* Black Rough-wing** M: 2 Shimba Hills NP 11 Mar (DAT), 1 Sokoke Forest 9 Nov (ADL).

***Riparia cincta* Banded Martin** M: *c.* 50 Lake Nakuru NP 19 Sep, 2 Nov (ADL), several scores Nairobi NP 25 Oct (ADL).

DICRURIDAE DRONGOS

***Dicrurus ludwigii* Square-tailed Drongo** M: several Tana River Primate Reserve 23–24 Dec (DAT).

ORIOLIDAE ORIOLES

***Oriolus chlorocephalus* Green-headed Oriole** M: >3 Shimba Hills NP 7 Aug (DEW), and *c.* 20 there 19–20 Oct (TS).

CORVIDAE CROWS

***Corvus albicollis* White-necked Raven** M: 2 Hells Gate gorge 13 Jul (DAT, DF); scarce away from the Tsavo–Voi area.

REMIZIDAE PENDULINE TITS

***Remiz caroli* African Penduline Tit** M: unoccupied nest Lake Nakuru NP 7 Jul (DAT, DF), 2 Kongelai escarpment 2 Sep (DAT, DAZ).

TIMALIIDAE BABBLERS

***Turdoides hindei* Hinde's Pied Babbler** R: 4–5 near Maua 30 Oct (ADL), >10 there 10 Nov (DKR).

***Turdoides melanops*** **Black-lored Babbler** M: 6 near Mweiga 4–5 Mar (JRPC).

***Turdoides plebejus*** **Brown Babbler** R: 6 Rumuruti 1 Sep (DAT, DAZ), 6–7 resident near Mogotio all year (BWF, DAT).

CAMPEPHAGIDAE CUCKOO SHRIKES

***Campephaga phoenicea*** **Red-shouldered Cuckoo Shrike** E: 1 Mungatsi, Busia District 7–8 Nov (BWF, DAT).

***Campephaga quiscalina*** **Purple-throated Cuckoo Shrike** M: 1 near Lolgorien 2 Jan (DAT, BWF), 1 Karisia Hills 26 Nov (MACC, DJP).

PYCNONOTIDAE BULBULS

***Andropadus gracilirostris*** **Slender-billed Greenbul** M: common resident in NW Mara GR forested areas (BWF).

***Andropadus milanjensis*** **Stripe-cheeked Greenbul** M: >6 Chyulu Hills 30 Nov (DAT).

***Andropadus virens*** **Little Greenbul** M: fairly common in dense scrub near Lolgorien (BWF).

***Chlorocichla flavicollis*** **Yellow-throated Leaflove** E: 2 Soy near Eldoret 26 Aug (DAT, DAZ).

***Chlorocichla laetissima*** **Joyful Greenbul** E: 5 Olooloo escarpment NW Mara GR 4 May, later found to be resident there and near Lolgorien (BWF).

TURDIDAE THRUSHES

***Cercomela familiaris*** **Red-tailed Chat** M: 1 Kongelai escarpment 21 Feb (MACC), common Olooloo escarpment NW Mara GR all year round (BWF, DAT).

***Cercotrichas hartlaubi*** **Brown-backed Scrub Robin** M: 1 Naro Moru 20–21 Jul and 2 there 9–10 Nov (DEW).

***Cossypha natalensis*** **Red-capped Robin Chat** M: present Kichwa Tembo, NW Mara GR from Jun to Dec 1987 and a single bird staying through Jan (88), a few apparently resident at Lolgorian (BWF).

***Cichladusa arquata*** **Morning Thrush** M: >6 lower slopes of the Shimba Hills 7 Aug (DEW).

***Dryocichloides poliopterus*** **Grey-winged Ground Robin** M: 2 Kitale 19 Apr and 1 Saiwa Swamp NP 21 Apr (CR).

***Monticola rufocinerea*** **Little Rock Thrush** R: 3 near Ngobit 2 Jun and 6 Jul (JRPC, DAT, DF), 1 Arsim, N Ndotos, 18 Jul (MACC), pair Hells Gate NP 4 Aug (DEW), 3 below Tambach, Kerio Valley, 1 Nov (DAT).

***Neocossyphus rufus*** **Red-tailed Ant Thrush** M: 1 Shimba Hills outside the forest 7 Aug (DEW).

***Oenanthe bottae*** **Red-breasted Wheatear** R: >20 Todenyang 15 Feb (DJP, MACC, ALA, ADF-W).

***Sheppardia gunningi*** **East Coast Akalat** R: 1 Sokoke (*Afzalia* zone) 2 Apr (CR), male displaying to female Sokoke 20 Aug (DAT, DAZ).

***Turdus fischeri*** **Spotted Ground Thrush** R: 1 Diani Forest 8 Aug (DEW).

***Turdus pelios*** **African Thrush** M: several pairs resident Lake Nakuru NP (ADL, DAT).

***Turdus piaggiae* Abyssinian Ground Thrush** M: pair Marsabit mountain 30 Jan (BWF), 2 Karisia Hills, Maralal 26 Nov (DJP, MACC).

***Turdus tephronotus* Bare-eyed Thrush** M: present Tsavo East NP (Mtito Andei) 29 Jun (DAT, DF), 1 near Samburu Lodge 23 Jul (DEW).

SYLVIIDAE WARBLERS

***Apalis jacksoni* Black-throated Apalis** MB: pair and nest Kakamega Forest 18 Nov (DEW).

***Apalis melanocephala* Black-headed Apalis** M: 1 Ngong Forest 9 Aug (DEW).

***Bradypterus baboecala* Little Rush Warbler** M: records from Cottars Mara Camp, Musiara swamp, Mara GR, Muthaiga (Nairobi), (DEW, ADL, MS).

***Bradypterus carpalis* White-winged Warbler** M: 2 displaying at Kendu Bay 9 Apr (BWF).

***Bradypterus cinnamomeus* Cinnamon Bracken Warbler** M: 1 Hells Gate NP 4 Aug (DEW).

***Camaroptera simplex* Grey Wren Warbler** ME: race *undosa* present Oloololo escarpment NW Mara GR Mar–May and Dec (BWF, DAT).

***Cisticola aberrans* Rock-loving Cisticola** R: 4–6 pairs Oloololo escarpment NW Mara GR, one seen carrying faecal sac, late Feb (BWF).

***Cisticola fulvicapilla* Tabora Cisticola** M: common resident NW Mara GR and Lolgorien (BWF).

***Cisticola woosnami* Trilling Cisticola** M: very common resident NW Mara GR (BWF, DAT).

***Eremomela icteropygialis* Yellow-vented Eremomela** M: 2 Samburu 16 Sep (TS).

***Eremomela pusilla* Green-backed Eremomela** M: few Kongelai escarpment 25 Aug and 2 Sep (DAT, DAZ).

***Eremomela scotops* Green-capped Eremomela** M: several pairs resident NW Mara GR (BWF, DAT).

***Hyliota flavigaster* Yellow-bellied Hyliota** R: several pairs resident NW Mara GR, 2 Kongelai escarpment 2 Sep (DAT, DAZ).

***Parisoma lugens* Brown Parisoma** M: pair near Timau 31 Aug (DAT, DAZ).

***Schoenicola platyura* Fan-tailed Warbler** M: 6–7 Kiminini, near Kitale Aug and Sep (DAT, DAZ, DJP, BWF), 1 Chyulu Hills 1 Dec (DAT).

***Sylvietta isabellina* Somali Long-billed Crombec** 1 Lokitaung 16 Feb (DJP *et al.*), 1 Samburu GR 16 Sep (TS), 1 Dida Galgalla desert 26 Dec (JB).

***Sylvietta leucophrys* White-browed Crombec** M: 1 Naro Moru Lodge 21 Jul (DEW).

***Sylvietta virens* Green Crombec** E: several Mungatsi, Busia District 20 Sep and 7–8 Nov (DAT, DJP, BWF, TS). See *Scopus* 14: 31–32.

MUSCICAPIDAE FLYCATCHERS

***Muscicapa caerulescens* Ashy Flycatcher** M: 2 pairs resident Mara River Camp 14 Oct (TS, DAT).

***Muscicapa gambagae* Gambaga Flycatcher** R: 1 Baragoi 27 Nov (MACC, DJP).

***Muscicapa lendu* Chapin's Flycatcher** S(B): 1 Kakamega Forest 7 Nov (BWF, WR).

***Myioparus plumbeus* Lead-coloured Flycatcher** M: 2 Lake Baringo 8 Jul (DAT, DF).

***Batis orientalis* Grey-headed Batis** R: female near Laisamis 30 Jan (BWF).

***Platysteira peltata* Black-throated Wattle-eye** M: pair Elmenteita in acacia woodland 29 May (DJP, MACC).

***Erythrocercus holochlorus* Little Yellow Flycatcher** M: few Tana River Primate Reserve 23–24 Dec (DAT).

***Trochocercus cyanomelas* Crested Flycatcher** M: 1 Chyulu Hills 30 Nov (DAT).

MOTACILLIDAE WAGTAILS, PIPITS

***Anthus caffer* Little Tawny Pipit** R: 1 Cottars Mara Camp 24 Nov (DEW).

***Anthus melindae* Malindi Pipit** M: >6 Karawa, 70 km N of Malindi 20 Aug (DAT, DAZ).

***Anthus similis* Long-billed Pipit** M: Several pairs resident on the slopes of Oloololo escarpment NW Mara GR (BWF, DAT), 1 Chyulu Hills 1 Dec (DAT).

***Anthus sokokensis* Sokoke Pipit** R: 1 in *Brachystegia* woodland, Sokoke Forest, 23 Aug (ADL).

***Macronyx sharpei* Sharpe's Longclaw** M: 2–3 Timau grasslands 31 Aug (DAT, DAZ), several resident South Kinangop plateau (several observers).

***Tmetothylacus tenellus* Golden Pipit** E: many including several imms Karawa, 70 km N of Malindi 20 Aug (DAT, DAZ), 1 imm Ngong Hills (Magadi Road) 29 Oct (BWF, WR).

MALACONOTIDAE BUSH SHRIKES

***Dryoscopus pringlii* Pringle's Puffback** M: a pair near Wamba 12 Nov (DEW), 1 near Mtito Andei 28 Nov (DAT).

***Laniarius barbarus* Black-headed Gonolek** M: present Kakamega Forest 24 Mar (BWF).

***Malaconotus multicolor nigrifrons* Black-fronted Bush Shrike** M: present Kieni Forest, southern Aberdares 6 Feb (DAT), a few near Kabarnet 3 Sep (DAT, DAZ).

***Malaconotus ruficeps* Red-naped Bush Shrike** R: pair near Taru, 80 km SE of Voi, 17 Nov (BWF, WR).

***Tchagra minuta* Marsh Tchagra** M: several around Mungatsi, 25 km E of Busia, and Bungoma in Sep (DAT, DJP, BWF).

LANIIDAE SHRIKES

***Corvinella corvina* Magpie Shrike** M: 1 Cottars Mara Camp 21 Sep (ADL), 9 together there on 13 Nov (BWF, WR).

***Lanius somalicus* Somali Fiscal** M: 3 near Kapedo 15 Nov (DAT, TS).

PRIONOPIDAE HELMET SHRIKES

***Prionops poliolopha* Grey-crested Helmet Shrike** R: 1 Kedong Valley 23 Mar (BWF), *c.* 10 Elmenteita 15 May (MACC).

***Prionops retzii* Retz's Helmet Shrike** M: common Kibwezi Forest 9–10 Aug (DAT, ADF-W, GSK), >20 Chyulu Hills, 1 Dec (DAT).

STURNIDAE STARLINGS

***Cinnyricinclus femoralis* Abbott's Starling** R: 1 Naro Moru track, Mt Kenya NP 26 Jan and 21 Jul (BWF, DEW), an adult and young Kieni (Aberdares) 25 Mar (BWF) and 2 in same area 22 Apr, 10 and 21 Aug (BWF, JB).

***Cinnyricinclus sharpii* Sharpe's Starling** R: a few Aberdare NP 10 and 11 Mar (JRPC).

***Lamprotornis chalcurus* Bronze-tailed Starling** R: several around Lokichoggio 26–27 Mar (DAT).

***Lamprotornis chloropterus* Lesser Blue-eared Glossy Starling** ME: >10 Kongelai escarpment 2 Sep (DAT, DAZ), 10 (including imms) Buffalo Springs, Samburu GR 2 Nov (BWF, WR).

***Lamprotornis corruscus* Black-breasted Glossy Starling** ME: 2 Kibwezi Forest 9 Aug (DAT, GSK, ADF-W).

***Onychognathus salvadorii* Bristle-crowned Starling** M: several around Lokichoggio 26–27 Mar (DAT).

***Poeoptera kenricki* Kenrick's Starling** M: common Meru forest 8 Oct (DAT), a male and 2 females Aberdare NP 9 Oct (DKR).

***Speculipastor bicolor* Magpie Starling** R: a few Lokichoggio 26–27 Mar (DAT), 5 Lake Baringo 27 Jul (DEW), several Buffalo Springs GR 2 Sep (CR), 4 near Marigat 16 Nov (DEW), many north of Garsen 22–24 Dec (DAT), 5 near Archer's Post 25 Dec and 2 Dida Galgalla desert 27 Dec (JB).

***Spreo albicapillus* White-crowned Starling** M: 15 near Maikona and a few near North Horr 1 Feb (BWF).

***Spreo shelleyi* Shelley's Starling** R: 1 Karawa, 70 km N of Malindi 20 Aug (DAT, DAZ).

***Buphagus africanus* Yellow-billed Oxpecker** M: 5 near Mtito Andei 3 Oct (ADL).

NECTARIINIDAE SUNBIRDS

***Anthreptes longuemarei* Violet-backed Sunbird** E: a pair resident near Kapenguria (BWF, DJP, DAT) was the second record for Kenya.

***Anthreptes neglectus* Uluguru Violet-backed Sunbird** M: 2 Shimba Hills NP 11 Mar (DAT) and 3 there on 7 Aug (DEW).

***Anthreptes reichenowi* Plain-backed Sunbird** M: pair and 2 young Diani Forest 6 Aug (DEW).

***Nectarinia bouvieri* Orange-tufted Sunbird** E: present, including a displaying male, Alupe, near Busia, 21 Sep (BWF, DJP, DAT).

***Nectarinia famosa* Malachite Sunbird** E: an adult male NW Mara GR 24 Feb (BWF).

***Nectarinia habessinica* Shining Sunbird** M: several Kongelai escarpment 12–14 Apr (BWF), 1 Samburu GR 16 Sep (TS).

***Nectarinia pembae* Violet-breasted Sunbird** M: several Karawa, 70 km N of Malindi 20 Aug (DAT, DAZ).

ZOSTEROPIDAE WHITE-EYES

***Zosterops abyssinica* Abyssinian White-eye** M: 1 Kongelai escarpment 2 Sep (DAT, DAZ).

PLOCEIDAE WEAVERS

***Anomalospiza imberbis* Parasitic Weaver** R: 1 Muthaiga (Nairobi) 22 Apr (ADL, MS), 3 Webuye–Kitale road 21 Sep (DAT, DJP, BWF), 6 Mungatsi, Busia District 7–8 Nov (TS), >15 Thika road, Nairobi, 29 Dec (JB).

***Euplectes diadematus*** **Fire-fronted Bishop** R: several Lake Jipe Apr (DAT), 10 near Mtito Andei 20 Jun (DAT, DF), 20 Sabaki dunes 22 Oct (TS), 2 males with a mixed flock of *E. afer* and *E. franciscanus* Lake Baringo 5 Nov (BWF, WR).

***Euplectes hartlaubi*** **Marsh Widowbird** M: male Kakamega 17 Jul (TS) and 2 there on 24 Sep (TS), *c.* 12 S of Kitale Sep–Nov (BWF, DJP, DAT, DAZ).

***Euplectes hordeaceus*** **Black-winged Red Bishop** M: 1 in breeding plumage Kakamega 14 Aug (ADL).

***Euplectes orix*** **Southern Red Bishop** E: male in breeding plumage Lake Naivasha 13 Jul (DAT, DF).

***Ploceus golandi*** **Clarke's Weaver** R: 3 males and 1 female Sokoke Forest 3 Apr (CR) and > 12 there 21 Aug (DAT, DAZ).

***Ploceus heuglini*** **Heuglin's Masked Weaver** R: a breeding colony in an exotic pine at Kiminini, near Kitale Aug–Sep (DAT, DAZ, DJP, BWF).

***Ploceus nigerrimus*** **Vieillot's Black Weaver** M: a few Ng'iya area, Siaya 10–11 Apr (BWF).

***Ploceus rubiginosus*** **Chestnut Weaver** B: hundreds breeding at Lake Baringo 3 Sep (DAT, DAZ).

***Quelea erythrops*** **Red-headed Quelea** M: 1 (non-breeding) netted Ahero Rice Scheme near Kisumu 3 Feb (CCHE).

*First record of this species in Kenya for many years.*

***Plocepasser superciliosus*** **Chestnut-crowned Sparrow Weaver** ME: few Kerio Valley below Kabarnet 3 Sep (DAT, DAZ).

***Passer castanopterus*** **Somali Sparrow** R: common around Maikona, NW of Marsabit 1 Feb (BWF).

***Passer domesticus*** **House Sparrow** E: present at Watamu and Malindi (Nov) and at least 6 at Salama, only 70 km SE of Nairobi in Jan and Feb (ADL, DEW).

***Hypochera purpurascens*** **Jameson's Firefinch Indigobird** R: 1 Ngulia Bandas, Tsavo West NP 22–23 Apr (DJP), male Kongelai escarpment 2 and 21 Sep (DAT, DAZ, BWF), male Kerio Valley 1 Nov (DAT).

***Vidua fischeri*** **Straw-tailed Whydah** M: 1 Rumuruti 1 Sep (DAT, DAZ).

ESTRILDIDAE WAXBILLS

***Amandava subflava*** **Zebra Waxbill** M: >30 Webuye–Kitale 21 Sep (DAT, DJP, BWF), 2 near Iten 4 Dec (ADL).

***Clytospiza monteiri*** **Brown Twinspot** M: several resident Mungatsi, Busia District (TS, BWF, DJP, DAT).

***Estrilda melanotis*** **Yellow-bellied Waxbill** M: 4 Muthaiga, Nairobi, 22 Apr (ADL, MS).

***Estrilda rhodopyga*** **Crimson-rumped Waxbill** M: small numbers NW Mara GR Jan (BWF).

***Hypargos niveoguttatus*** **Peters' Twinspot** M: abundant Kibwezi Forest 9–10 Aug (DAT, ADF-W, GSK).

***Lagonosticta rara*** **Black-bellied Firefinch** M: pair Bungoma–Kakamega road 15 Apr (BWF), a few Mumias–Busia road 24 Aug (DAT, DAZ).

***Mandingoa nitidula* Green-backed Twinspot** M: 3 NW Mara GR late Feb (BWF), 1 Gedi 19 Aug (DAT, DAZ).

***Ortygospiza atricollis* Quail Finch** M: 12 Lake Baringo 17 Jun (TS).

***Uraeginthus cyanocephalus* Blue-capped Cordon-bleu** E: present Kodich Dam, Kacheleba, Apr (BWF).

***Amadina fasciata* Cut-throat** M: 2 Naro Moru River Lodge 28 Nov is 680 m higher than the altitudinal upper limit given by Britton (1980).

FRINGILLIDAE FINCHES, BUNTINGS

***Serinus donaldsoni* Grosbeak Canary** M: nominate birds: singing male near Lake Baringo 27 Jul (DEW), female N of Rumuruti 1 Sep (DAT, DAZ), 2 males Ndotos 29 Nov (DJP, MACC). Southern birds *S. d. buchanani*: a few near Emali 3 Jul (DAT, DF).

***Serinus koliensis* Papyrus Canary** R: 3 Kisumu 20 Nov (DEW), several resident Kendu Bay and Kisumu papyrus swamps (BWF, TS, DAT).

***Serinus reichardi* Stripe-breasted Seed-eater** R: several Kongelai escarpment Aug–Nov, including active nest 21 Sep (DAT, DAZ, DJP, BWF), 2 below Tambach, Kerio Valley, 1 Nov (DAT), 1 at the Isiolo/Meru junction on the Nanyuki–Meru road 3 Nov (BWF).

## Kenya: Palaearctic species

***Ciconia nigra* Black Stork** R: recorded from Lewa Downs (Jan), Limuru (Mar), Oloololo, Mar GR (Mar), Samburu (Nov) and Naivasha (Nov) (BWF, CR, DKR, DEW).

***Platalea leucorodia* Eurasian Spoonbill** R: 1 Safariland, Lake Naivasha 28 Feb, 3 and 8 Apr (BWF, DJP).

***Anas acuta* Pintail** N: >1000 Thika OPs 23 Nov (BWF).

***Anas crecca* Teal** R: 9 Allia Bay, Lake Turkana 29 Jan (DJP), 3 Lake Paradise, Marsabit 31 Jan (BWF).

***Anas penelope* Wigeon** R: records only received from Lake Turkana localities as follows: 1 Ileret 25 Jan, 21 Allia Bay 29 Jan, 30 Loiengalani 1–3 Feb (BWF, DJP, MACC, ALA).

***Anas querquedula* Garganey** D: an oversummering female at Thika OPs 9 Aug (BWF).

***Aythya fuligula* Tufted Duck** R: 13 Loiengalani 1 Feb (BWF).

***Circus macrourus* Pallid Harrier** D: 1 male Amboseli 10 Jun (DKR).

***Aquila nipalensis* Steppe Eagle** D: a few already moving south 5 km S of Maralal 31 Oct (ADL).

***Aquila pomarina* Lesser Spotted Eagle** R: recorded from the usual localities until 10 Apr (max 6) and from 30 Oct (max *c.* 30 Ngulia 3 Dec) (many observers); also 1 Elmenteita 15 May (MACC, DEGB, DJP).

***Hieraaetus pennatus* Booted Eagle** R: singles recorded from the usual areas until 26 Mar and from 12 Nov (several observers); 1 Todenyang 16 Feb (DJP, MACC, ALA).

***Pernis apivorus* Honey Buzzard** R: few records received. Singles Kakamega 18 Apr and 3–4 May (BWF), 2 moving S Kakamega 23 Sep (TS), 7 moving south at Timau 14 Nov (DJP), 1 Kakamega 5 Dec (ADL).

***Falco amurensis* Amur Falcon*** R: few records received. 1 Athi Plains 10 Apr (DJP), 3 Kamboyo, Tsavo West NP 18 Apr (DJP), >5 Kibwezi 11 Nov (DJP).

* Called Eastern Red-footed Falcon by Britton (1980)

***Falco concolor* Sooty Falcon** R: 1 Mara GR 21 Jan (DKR), 3 Buffalo Springs 1 Nov (BWF, WR), 1 Kamboyo, Tsavo West NP 11 Nov and 1 Ngulia 13 Nov (DJP, MACC).

***Falco eleonorae* Eleonora's Falcon** R: 1 Kichwa Tembo, Mara GR 24 Feb (BWF), 1 Likori 18 Apr (DJP), 1 Shimba Hills 19 Oct (TS), 1 near Iten 1 Nov (DAT), 1 Kakamega 7 Nov (BWF, WR).

***Falco subbuteo* Hobby** D: recored on both passages until 10 Apr and from 30 Oct (many observers).

***Crex crex* Corncrake** R: the only record is of one flushed by a lion *Panthera leo* in Nairobi NP 24 Apr (BWF).

***Haematopus ostralegus* Oystercatcher** R: 1 Malindi 5 and 20 Apr, 7 Mida Creek 22 Apr and 1 there on 26 Jul, 1 Watamu 16 Aug, 1 Sabaki mouth 23 Aug (RJ), 5 Shelley Beach 21–26 Dec (several observers). Inland, 1 Lake Baringo 27 Oct (TS) and 4 Nov (BWF, WR), 1 Lake Nakuru 7 Dec (ADL).

***Charadrius alexandrinus* Kentish Plover** R: on western shore of Lake Turkana, 3 Kataboi 12 Feb, >8 Todenyang 14 Feb (DJP, MACC, ALA).

***Chardrius asiaticus* Caspian Plover** D: first recorded Mara GR 8 Aug (ADL). N: on mudflats on western shore of Lake Turkana, *c.* 1360 counted at Todenyang 14 Feb and 150 Kerio delta 19 Feb (DJP, MACC, ALA).

***Charadrius dubius* Little Ringed Plover** N: 25–30 present Lake Naivasha Jan–Feb (DJP). At Lake Turkana, >70 Todenyang area 14 Feb and 47 Kerio delta 19 Feb (DJP, MACC, ALA). D: last spring record, 3 Apr Lake Naivasha (DJP).

***Charadrius leschenaultii* Greater Sandplover** E: inland, 1 Kerio delta 19 Feb (DJP).

***Charadrius mongolus* Mongolian Sandplover** E: inland, 1 Todenyang 15 Feb (DJP), 2 Lake Nakuru 16 Nov (DEW).

***Pluvialis fulva** Pacific Golden Plover*** R: 1 Lake Naivasha 31 Jan and 8 Apr (DJP), 1 in breeding plumage Malindi 10 Aug (TS), 1 Lake Elmenteita 4 Dec (MACC).

* Nomenclature follows Connors (*Auk* 100: 607–620)—also adopted by the BOU Records Committee (see *Ibis* 128: 601–603)—who splits the 'Lesser Golden Plover' as *P. fulva* and *P. dominica*. Only the former has been recorded in Kenya and East Africa. It was called *P. dominica fulva*, the Lesser Golden Plover, by Britton (1980).

***Pluvialis squatarola* Grey Plover** E: inland, 1 Lake Naivasha 30 Jan (DJP), 16 counted Todenyang area 13–14 Feb (DJP, MACC, ALA), 1 Lake Nakuru 2 Nov (ADL), 1 Lake Baringo 4 Nov (BWF, WR), 2 Lake Elmenteita 4 Dec (MACC).

***Numenius arquata* Curlew** E: inland, a few groups of up to 4 on the north-western shores of Lake Turkana 12–19 Feb (DJP, MACC, ALA), 1 Lake Magadi 21 Aug (DJP), up to 6 Lake Elmenteita 25 Sep to 4 Dec (MACC).

***Numenius phaeopus* Whimbrel** E: inland, 1 Lake Naivasha 13 Mar (DJP), 4 Lake Elmenteita 24 Sep and 1 there 8 Dec (MACC). N: *c.* 200 feeding Mwamba Creek at the end of Wasini Is. 4–6 Mar (*per* MH, PH).

***Tringa erythropus* Spotted Redshank** R: recorded until 25 Apr, max *c.* 20 Lake Naivasaha (several observers) but no end of year records.

***Tringa totanus* Redshank** R: inland, singles Lake Turkana at El Molo Bay 2 Feb (BWF) and Kataboi 12 Feb (DJP, MACC, ALA); 1 Lake Nakuru 7 Aug (DJP).

***Xenus cinereus* Terek Sandpiper** E: inland, 1 Lake Naivasaha 7 May (DJP).

***Gallinago gallinago* Common Snipe** D: last spring record, 16 Apr Lake Naivasha (DJP).

***Gallinago media* Great Snipe** R: 1 Nairobi NP 13 May (TS, DJP, MACC, DAT); 1 Lake Naivasha 6 Nov (DJP), 14 Mungatte 7–8 Nov (TS, BWF, WR).

***Calidris alba* Sanderling** E: inland, 1 Lake Elmenteita 5 Oct (MACC).

***Calidris minuta* Little Stint** N: >22 000 Todenyang 14 Feb (DJP, MACC, ALA).

***Calidris temminckii* Temminck's Stint** R: recorded in usual areas until 25 Apr and from 15 Oct (max *c.* 45–50 Lake Naivasha Jan–Feb, 40 Lake Baringo Feb, 32 Kerio delta 19 Feb) (several observers). In the Ilemi Triangle, 1 Lokomorenyang 17 Feb (DJP, MACC, ALA, ADF-W, BWF, WR).

***Limosa lapponica* Bar-tailed Godwit** R: inland, 2 Lake Nakuru 21 Sep (TS), 1 Lake Elmenteita 14 Oct and 4 Dec (MACC). N: on the coast, up to 8 Shelley Beach 21–26 Dec (DJP).

***Limosa limosa* Black-tailed Godwit** R: recorded in the usual areas. N: *c.* 350 Lake Naivasha Jan–Feb with 90 still there in early Apr (DJP). At the end of the year, largest count >35 Lake Naivasha 25 Nov (DKR).

***Arenaria interpres* Turnstone** E: inland, 1 Lake Elmenteita 7 Oct (MACC), 1 Lake Baringo 15 Nov (DEW, DKR).

***Phalaropus lobatus* Red-necked Phalarope** R: inland, 2 Lake Nakuru 2 Nov (ADL), 3 there 16 Nov (DEW), and 15 there 7 Dec (*per* ADL).

***Larus argentatus* Herring Gull** R: inland, a grey-backed, pink-legged adult Loiengalani 2 Feb (BWF).

***Larus ichthyaetus* Great Black-headed Gull** S(B): 4, including an adult in breeding plumage, Loerangak 13 Feb (DJP, MACC, ADF-W).

***Larus ridibundus* Black-headed Gull** E: 15 Isiolo OPs 29 Jan (BWF).

***Apus apus* Eurasian Swift** N: >1000 moving S over Mara GR grasslands 23 Nov; scores over Sokoke Forest 27 Nov (DEW).

***Coracias garrulus* Eurasian Roller** D: 1 'oversummering' Tsavo West NP 25 Jul (DJP). Passage under way by 28 Oct with *c.* 40 moving S Meru NP (ADL).

***Upupa epops epops* Hoopoe** R: recorded until 12 Apr and from 29 Nov as follows: 4 Samburu GR, singles Lake Baringo, Kongalai, Lokitaung, Lodwar and Ileret (several observers).

***Jynx torquilla* Eurasian Wryneck** R: 1 Chyulu Hills, 30 Nov (DAT) is the southernmost East African record.

***Delichon urbica* House Martin** M: steady passage (5–10 $min^{-1}$) a few kilometres south of Maralal 31 Oct (ADL); >400 migrating high over cliffs at Lake Baringo 14 Nov (DEW).

***Irania gutturalis* Irania** E: 1 in acacia N of El Molo Bay 29 Nov (CR).

***Luscinia luscinia* Sprosser** ED: 4 Lake Baringo after a storm 19 Apr (TS).

*Luscinia megarhynchos* **Nightingale** E: 2 Arsim Valley, Ndotos, 28 Nov (DJP, MACC).

*Oenanthe pleschanka* **Pied Wheatear** M: adult males of the white-throated form Samburu GR, Jan (BWF), Lake Naivasha, Feb (DJP, BWF) and Samburu GR, Nov (ADL).

*Phoenicurus phoenicurus* **Redstart** R: 1 Baragoi 27 Nov (DJP, MACC), 1 Balo, 35 km north of Loiengalani, 30 Nov (CR).

*Saxicola rubetra* **Whinchat** E: 1 Kamboyo, Tsavo West NP, 25 Mar (DJP); 3 Naro Moru 29 Nov (ADL).

*Acrocephalus arundinaceus* **Great Reed Warbler** N: *c.* 25 Lake Baringo after a storm on 19 Apr (TS).

*Acrocephalus griseldis* **Basra Reed Warbler** N: Ngulia: 32 ringed between 4 and 14 Dec, max 10 on 14th (GCB, DJP, GN).

*Hippolais icterina* **Icterine Warbler** R: 1 Nairobi NP 8 Apr (CR).

*Hippolais languida* **Upcher's Warbler** E: 1 Lokitaung 16 Feb (DJP), 1 Lokomorenyan, Ilemi Triangle, 17 Feb (DJP), 1 a few kilometres north of El Molo Bay 30 Nov (CR).

*Hippolais olivetorum* **Olive-tree Warbler** R: Ngulia: two ringed, 4 and 7 Dec (GCB, DJP, GN), 1 Lake Baringo 17 Dec (TS).

*Locustella fluviatilis* **River Warbler** N: Ngulia: 180 ringed between 4 and 15 Dec, max 36 on 7th, (GCB, DJP, GN).

*Phylloscopus collybita* **Chiffchaff** R: 1 ringed Ngulia 7 Dec (DJP, GCB, GN, MS) was the first for this site (see p. 127).

*Phylloscopus sibilatrix* **Wood Warbler** R: 1 ringed Ngulia 6 Dec (DJP, GCB, GN) was the third for this site; 1 Oloololo escarpment 31 Dec (MACC, AGWA, BWF).

*Sylvia nisoria* **Barred Warbler** N: large numbers—scores together locally—in *Salvadora* thicket N and W of the Ndotos, late Nov (DJP, MACC).

*Ficedula albicollis* **Collared Flycatcher** R: an adult male *F. a. semitorquata* Oloololo escarpment during Jan–Feb (BWF); 1 Kiminini, S of Kitale, 21 Sep (DJP, BWF).

*Anthus cervinus* **Red-throated Pipit** D: 2 Mara GR 14 Sep. N: *c.* 150 by Musiana airstrip 9 Dec (ADL).

*Motacilla cinerea* **Grey Wagtail** D: an early bird Kakamega Forest 23 Sep (TS).

*Lanius minor* **Lesser Grey Shrike** D: 1 Buffalo Springs 1 Nov (BWF, WR) and 1 Athi River 4 Nov (DJP).

*Lanius nubicus* **Nubian Shrike** S(B): 1 Lake Baringo 26 Oct and 14–15 Nov (DKR, DEW).

*Lanius senator* **Woodchat Shrike** S(B): 1 Oloololo 2 Jan (DAT, BWF), 1 Lake Bogoria 3 Mar (DAT), 2–3 Lokichoggio 26 Mar (DAT).

## Kenya: Palaearctic back records

*Hippolais olivetorum* **Olive-tree Warbler** R: recorded at Nguuni, N of Mombasa, and presumably wintering, as follows: 12 Jan, 8 Mar and 25 Mar 1986; 17 and 24 Feb, 2 Mar and 8 Mar 1987; all single birds except for 2 on the last date (CR).

***Sylvia atricapilla* Blackcap** E: 1 Nguuni, Mombasa, 8 Mar 1987 (CR).
***Motacilla cinerea* Grey Wagtail** ED: 1 Nguuni, Mombasa, 1 Mar 1985 (CR).

## First and last dates of some Palaearctic migrants in Kenya

| Species | last recorded | first recorded |
|---|---|---|
| *Cuculus canorus* | 10 Apr Emali | 2 Nov Nakuru |
| *Apus apus* | — | 19 Sep Mungatsi |
| *Merops apiaster* | 12 Apr Kajiado | 20 Sep Alupe |
| *M. persicus* | 25 Mar Ngulia | 12 Nov Ngulia |
| *Coracias garrulus* | 28 Oct Meru NP | 23 Apr Ndara |
| *Delichon urbica* | 30 Apr Oloolulo | 27 Sep Kieni |
| *Riparia riparia* | 7 May Naivasha | 19 Sep Mungatsi |
| *Oriolus oriolus* | 22 Apr Mida | 22 Oct Meru NP |
| *Irania gutturalis* | 25 Mar Mtito Andei | 4 Dec Ngulia |
| *Luscinia luscinia* | 19 Apr Baringo | 8 Nov Emali |
| *L. megarhynchos* | 27 Mar Kibwezi | 5 Nov Athi River |
| *Oenanthe oenanthe* | 27 Mar Lokichoggio | 1 Sep Rumuruti |
| *O. pleschanka* | 27 Mar Lokichoggio | — |
| *Monticola saxatilis* | 12 Apr Kajiado | — |
| *Saxicola rubetra* | 14 Apr Kajiado | 2 Nov Alupe |
| *Acrocephalus arundinaceus* | 19 Apr Baringo | 8 Nov Sultan Hamud |
| *A. schoenobaenus* | 16 May Athi River | — |
| *A. scirpaceus* | 16 May Athi River | — |
| *Hippolais pallida* | 24 Apr Athi River | 31 Oct Nairobi |
| *Phylloscopus trochilus* | 2 May Athi River | 30 Sep Nairobi |
| *Sylvia atricapilla* | 22 Mar Nairobi | 5 Nov Athi River |
| *S. borin* | 24 Apr Athi River | 20 Sep Mungatsi |
| *S. communis* | 19 Apr Baringo | 4 Nov Nairobi |
| *S. nisoria* | 10 Apr Emali | — |
| *Muscicapa striata* | 23 Apr Mtito Andei | 20 Sep Mungatsi |
| *Anthus cervinus* | 25 Apr Naivasha | 6 Nov Naivasha |
| *A. trivialis* | 31 Mar Nairobi | 12 Nov Ngulia |
| *Motacilla flava* | 25 Apr Naivasha | — |
| *Lanius collurio* | 24 Apr Tsavo West | 31 Oct Nairobi |
| *L. isabellinus* | 10 Apr Emali | 7 Nov Nairobi |
| *L. minor* | 23 Apr Sultan Hamud | (first spring bird 27 Mar) |

## Tanzania: Palaearctic species

The only records received, all from DKR, are given below.

*Circus pygarus* **Montagu's Harrier** D: 1 Ngorongoro 23 Jul was presumably oversummering.

*Hieraaetus pennatus* **Booted Eagle** R: 1 Ngorongoro 28 Jan.

*Pernis apivorus* **Honey Buzzard** R: 1 Serengeti 1 Feb.

*Falco concolor* **Sooty Falcon** R: 1 Serengeti 5 Feb.

*Falco subbuteo* **Hobby** D: wintering birds Ngorongoro 29 Jan (2 birds), Serengeti 5 Feb and Manyara 1 Mar.

*Coracias garrulus* **Eurasian Roller** N: common Serengeti between Ndutu and Narbi 1–6 Feb.

*Irania gutturalis* **Irania** NE: common Manyara 1–3 Mar.

*Hippolais languida* **Upcher's Warbler** NE: common Manyara 1–3 Mar.

## Tanzania: Back records

*Crex egregia* **African Crake** D: 1 Serengeti NP 19 Apr 1987 (JF).

*Vanellus spinosus* **Spur-winged Plover** E: a few Selous GR 11–12 Aug 1987 (ZB), 2 Lake Manyara NP 4 Sep 1987 (ZB). A very uncommon bird in Tanzania.

*Lybius guifsobalito* **Black-billed Barbet** E: 2 Musoma 22 Aug 1986 (RPGS). *First record for Tanzania, see* Scopus *14: 31.*

*Mirafra nigricans* **Dusky Bush Lark** E: 1 Madaba airstrip 25–26 May 1986 (EAdeL).

## Uganda: Back record

*Egretta gularis* **Western Reef Heron** R: 1 near Katwe, Lake Edward 28 Apr–15 Dec 1987 (PMBK).

# Ringing and migration at Ngulia, Tsavo, autumn 1988

G. C. Backhurst and D. J. Pearson

The long-running study of migration continued at Ngulia Lodge this year. Visits were made in the small-moon period in November but all the nights were clear and no netting was done because of the lack of birds. The season's activities were confined to December when eleven nights were spent at the Lodge between 3rd and 15th. Perfect mist conditions occurred on nine nights and three were clear; some netting was carried out in the bush on two of the mornings following clear nights.

An efficient ringing team, including three participants from West Germany, enabled a high Palaearctic ringing total (8389) to be achieved with comparative ease. The average number ringed for each of the nine misty nights was 928.

Because no cover was possible in the October and November small-moon periods, numbers of early species were understandably low. Full details of all Palaearctic birds ringed are given in Table 1. Marsh Warbler[1] was the dominant species on every night except one, 12 December, when Sprosser was in lead position with an unexpected 36 per cent (320 ringed) compared with 27 per cent for Marsh (242 ringed) and 30 per cent for Whitethroat (266 ringed). All three major species were caught in well over average numbers. The River Warbler ranked fourth, as usual, with a catch of 180, virtually spot on the sixteen-year average. Numbers of all minor species except Irania, Willow Warbler and Garden Warbler were well below average and a number of species which are regularly caught in 'normal' years—albeit in minute numbers—did not feature at all this year's catch.

If one considers species that are at all likely to be caught in mist-nets, there are very few Palaearctic ones still to be added to the Ngulia list. However, this season one that has long been on the list of possibles did turn up: a Chiffchaff, netted in the bush on 7th. It was interesting that the other scarce Kenya *Phylloscopus* species, the Wood Warbler, was caught on the previous morning, also in the bush. This example was only the third for Ngulia.

In spite of the high overall number ringed—the second highest annual total—there were no retraps from previous seasons and no foreign controls.

Afrotropical birds were poorly represented although a Painted Snipe *Rostratula benghalensis* at night on 6th was only the third for Ngulia. Only six Afrotropical nightjars *Caprimulgus* spp. (cf. 69 the previous year) and 20 Harlequin Quails *Coturnix delegorguei* were caught. For the second year running no Button Quail *Turnix sylvatica* was ringed.

**Acknowledgements**

We are most grateful to the Warden of Tsavo National Park (West) for allowing us to ring birds at Ngulia. Thanks go to the management of the Lodge and African Tours and Hotels Ltd for assistance with accommodation. This year the Ngulia Ringing Group, in addition to the authors, comprised Maggie and Kathryn Pearson, Norbert Kempf, Gerhard and Minna Nikolaus, Mary and Keith Sinclair, Anna Forbes-Watson, June Dirks, Neil Davidson, Linda Westbrook, Miles Coverdale, Daphne Backhurst and Tony Potterton.

[1]Scientific names of Palaearctic species are given in Table 1

Table 1. *Numbers of Palaearctic night migrants ringed at Ngulia Safari Lodge between October and February in the years 1969–1989**

| Species | 1988/89* total | %† | Total 1969–1989 |
|---|---|---|---|
| Eurasian Nightjar *Caprimulgus europaeus* | 1 | 6 | 258 |
| Eurasian Swallow *Hirundo rustica* | 5 | 57 | 146 |
| Golden Oriole *Oriolus oriolus* | 1 | – | 14 |
| Rufous Bush Chat *Cercotrichas galactotes* | 5 | 9 | 898 |
| Irania *Irania gutturalis* | 120 | 126 | 1658 |
| Sprosser *Luscinia luscinia* | 1696 | 171 | 17662 |
| Nightingale *L. megarhynchos* | 15 | 44 | 564 |
| Isabelline Wheatear *Oenanthe isabellina* | 1 | 19 | 84 |
| Northern Wheatear *O. oenanthe* | 1 | 14 | 113 |
| Pied Wheatear *O. pleschanka* | 1 | 33 | 50 |
| Basra Reed Warbler *Acrocephalus griseldis* | 32 | 70 | 768 |
| Marsh Warbler *A. palustris* | 4244 | 234 | 33346 |
| Sedge Warbler *A. schoenobaenus* | 1 | 19 | 86 |
| Reed Warbler *A. scirpaceus* | 1 | 23 | 71 |
| Upcher's Warbler *Hippolais languida* | 5 | 25 | 328 |
| Olive-tree Warbler *H. olivetorum* | 2 | 10 | 326 |
| Olivaceous Warbler *H. pallida* | 12 | 50 | 398 |
| River Warbler *Locustella fluviatilis* | 180 | 99 | 3127 |
| Chiffchaff *Phylloscopus collybita* | 1 | – | 1 |
| Wood Warbler *P. sibilatrix* | 1 | – | 3 |
| Willow Warbler *P. trochilus* | 119 | 135 | 1531 |
| Blackcap *Sylvia atricapilla* | 1 | 31 | 53 |
| Garden Warbler *S. borin* | 29 | 92 | 540 |
| Whitethroat *S. communis* | 1868 | 126 | 25645 |
| Barred Warbler *S. nisoria* | 15 | 40 | 616 |
| Spotted Flycatcher *Muscicapa striata* | 9 | 20 | 719 |
| Red-backed Shrike *Lanius collurio* | 8 | 15 | 876 |
| Red-tailed Shrike *L. isabellinus* | 14 | 31 | 748 |
| Hybrid *L. collurio* x *L. isabellinus* | 1 | – | 10 |
| Number of species | 28 | | 28 |
| Total ringed | 8389 | | 90639 |

* 1988/89 season—but no ringing was done in January or February 1989.

† The autumn 1988 total expressed as a percentage of the mean of the 16 years 1972–1973 to 1987–1988 for each species.

*Footnote opposite*

Footnote to Table 1

Totals of Palaearctic species ringed in previous autumn seasons but not in 1988/89 are as follows:

Little Bittern *Ixobrychus m. minutus* 4, Eleonora's Falcon *Falco eleonorae* 1, Corncrake *Crex crex* 7, Spotted Crake *Porzana porzana* 1, Great Snipe *Gallinago media* 1, Eurasian Cuckoo *Cuculus canorus* 2, Asiatic Lesser Cuckoo *C. poliocephalus* 1, Eurasian Scops Owl *Otus scops* ssp. 5, Eurasian Roller *Coracias garrulus* 46, Sand Martin *Riparia riparia* 6, Rock Thrush *Monticola saxatilis* 126, Redstart *Phoenicurus phoenicurus* 3, Whinchat *Saxicola rubetra* 3, Great Reed Warbler *Acrocephalus arundinaceus* 35, Icterine Warbler *Hippolais icterina* 4, Savi's Warbler *Locustella luscinioides* 2, Red-throated Pipit *Anthus cervinus* 1, Tree Pipit *A. trivialis* 23, Yellow Wagtail *Motacilla flava* 3.

From December 1969 a total of 90 913 Palaearctic night-migrating birds of 47 species (plus one hybrid) has been ringed at Ngulia during southward passage between the months of October and February.

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## Index to authors

## Index to scientific genus and species names

all organisms mentioned are listed

*Indexes prepared by Graeme Backhurst*

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## East African Bird Report

This normally forms a separate issue of *Scopus* and each report covers one calendar year and tends to relate principally to the birds of Kenya. Records from Tanzania and Uganda are listed in separate sections. Records should be sent to D. A. Turner, Box 48019, Nairobi as early in the new year as possible to ensure the speedy production of the Report.

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