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# *SCOPUS*

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*Edited by*

GRAEME BACKHURST

# SCOPUS

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*Continued inside back cover*



# SCOPUS

## FURTHER NOTES ON SOME BIRDS NEW TO SOUTH SUDAN

G. Nikolaus

This is an addition to an earlier paper (Nikolaus 1979) on birds new to the South Sudan. Notes on localities are only given if they are not mentioned in the 1979 paper but all localities are shown on the map (Fig. 1). In the accounts which follow, birds new to the Sudan as a whole are marked with two asterisks; those not mentioned by Cave & Macdonald (1955), but published elsewhere for the Sudan, are given two asterisks in round brackets.

The species accounts are arranged geographically as in the 1979 paper.

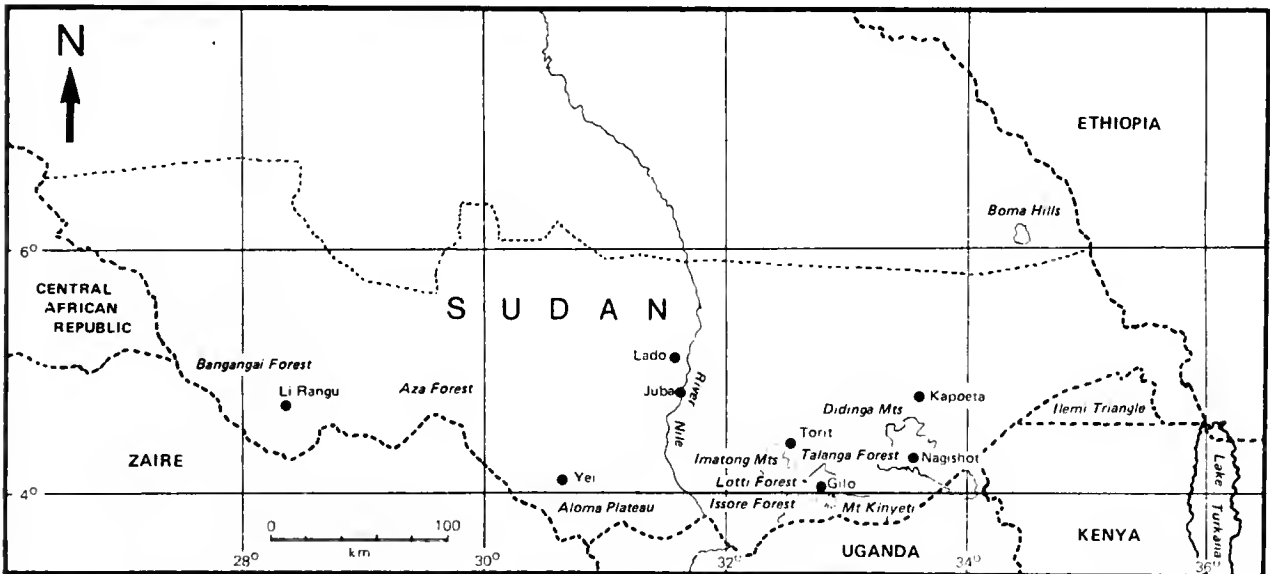


Fig.1 Map of the South Sudan

### ILEMI TRIANGLE, from Kapoeta to Lake Turkana

#### **\*\*MEROPS SUPERCILIOSUS** Madagascar Bee-eater

Ten Madagascar Bee-eaters were seen at the end of May near the Kenyan border on a tree in hilly open grassland. The birds were hawking for insects and did not show any signs of migration. At the beginning of June, what were probably the same birds were seen again just outside the township of Kapoeta in

similar habitat about 50 km from the first locality. There is a skin of a Madagascar Bee-eater in the British Museum from Bongo (4°38'N, 31°23'E), 27 miles (43 km) SW of Juba (C.H. Fry *in litt.*).

(\*\*) *PASSER GONGONENSIS* Parrot-billed Sparrow

I follow Hall & Moreau (1970) in regarding this as a species distinct from *P. griseus*, the Grey-headed Sparrow. A male and a female were collected by Donaldson-Smith on 16 December 1900 in Akara country near Magoth (Sharpe 1901). Although not mentioned by Cave & Macdonald (1955), the locality is plotted by Hall & Moreau (1970). This species was noticed twice in December 1978 and 1979 near the Kenya/Sudan border. Both times a couple was seen in open dry thornbush country. In the less arid region west of Kapoeta the species is replaced by the Grey-headed Sparrow.

(\*\*) *LONCHURA GRISEICAPILLA* Grey-headed Silver-bill

This species was mentioned by Hartlaub (1882) writing on Emin Pascha's collections from Lado (5°06'N, 31°30'E, 1 male) and Tarangole (4°30'N, 32°45'E, 1 male, 1 female), 25 km east of Torit. Unfortunately, most of these collections, including these skins, were destroyed in Bremen by the curator. Recent observations show that this species is not uncommon in the dry acacia grassland from Juba to Lake Turkana: Juba/Lado, January and March, 7 to 10 birds; 20 km east of Torit, September 1979, 2 birds seen; 40 km east of Kapoeta, 17 December 1979, 10 birds then another 2 birds.

IMATONG MOUNTAINS

Additional localities: Lotti Forest (4°03'N, 32°32'E) 1250 m  
Issore Forest (3°55'N, 32°47'E) 1400 m

[*TRICHASTOMA RUFIPENNIS* Pale-breasted Illadopsis

The inclusion of this species by Cave & Macdonald (1955) was based on two misidentified Scaly-breasted Illadopsis *T. albipectus* specimens now in the British Museum. Also, with the recent intensive use of mist nets in the Talanga-Lotti and Issore forests only *T. albipectus* and the Brown Illadopsis *T. fulvescens* have been found. Thus *T. rufipennis* should be deleted from the Sudan list.

\*\**ACCIPITER RUFIVENTRIS* Rufous Sparrowhawk

On 3 April 1980 in Gilo/Itibol at the Kinyeti River, a sparrowhawk perched on a small tree for a short time before disappearing again in the low undergrowth, chasing a small bird. It was very similar to a large Eurasian Sparrowhawk *A. nisus* but the chestnut below was less distinctly barred. I identified it as *A. rufiventris*, a species which was to be expected in this habitat. Snow (1978) mentions another record from Kapoeta, which is, however, an error (D.W. Snow *in litt.*).

\*\**SCHOUTEDENAPUS MYOPTILUS* Scarce Swift

This bird is a very common visitor to all forest regions from Talanga up to Mt Kinyeti. It arrives at the end of March for breeding and stays until late September. Between ten and fifty birds are often seen, mainly in the mornings and evenings, frequently favouring cliffs. They are much smaller and have a much more rapid flight and a deeper forked tail than the Eurasian Swift *Apus apus*, which is seen together with it at the beginning of April. Good views of some low-flying examples showed that they were plain sooty black with a slightly paler throat. With all these observations I am confident that they were Scarce Swifts even though I did not secure a specimen.

**INDICATOR MACULATUS** Spotted Honeyguide

This species was first seen on 4 January 1980 at Gilo/Itibol around my house, where it spent the whole day. The following description was taken: back dark olive-green with some bronze, much white in the tail giving it an appearance similar to Klaas' Cuckoo *Chrysococcyx klaas*; below brownish olive with broad white, or pale, round spots on the breast and flanks, becoming paler below; size of Scaly-throated Honeyguide *I. variegatus* or Klaas' Cuckoo; call a loud woe-woe like that of a small falcon or similar to the call of the Long-crested Eagle *Lophaetus occipitalis*, but a little higher pitched. The rather similar Scaly-throated Honeyguide is fairly commonly seen in this locality. Nine examples of this species were also collected by the Chicago Field Museum Expedition in March 1977 in Bangangai (Traylor & Archer 1982).

**\*\*TURDUS FISCHERI** Spotted Ground Thrush

One subadult female was caught and collected on 11 October 1979 in the Lotti primary forest on the first of three days of mist-netting (wing 110 mm, weight 62 g, skin now in the Naturkundemuseum Stuttgart). The species is possibly a resident of the Imatongs, perhaps undergoing seasonal vertical movements. The other known localities are coastal Kenya (distance 1200 km, Britton 1980), south Zaire (distance 1600 km, Benson & Benson 1975), southern Malawi (distance 2200 km, Benson 1950) and coastal South Africa (distance 3500 km, Hall & Moreau 1970). In all these localities it is very much endangered by the destruction of its forest habitat. The racial status of the Imatong specimen will be discussed elsewhere (Nikolaus in press).

**\*\*BATHMOCERCUS ALFREDI** Bamboo Warbler

The Bamboo Warbler appears to be a not uncommon resident around Gilo/Itibol. It favours low thick secondary growth in forest clearings with some grass, where it always stays near the ground. It is best recognized by a short ticking call, similar to that of the Redstart *Phoenicurus phoenicurus*. Two birds were collected in October 1979 and December 1980 (wings 58 mm and 61 mm, now in the Naturkundemuseum Stuttgart) and two more were ringed in April 1980 (wings 56 mm and 60 mm), while another escaped from a mist net in January 1981. One of the ringed birds seemed to be in immature plumage (wing 56 mm). It was much paler grey below with an almost unmottled neck and chest, the under tail-coverts buff. The primaries and tail feathers were heavily worn.

Besides the two birds ringed in April 1980 there were four more sight records made in that month at the same locality. The reason for the great abundance of this normally rarely noticed species could be a recent bush fire in large parts of the area in connexion with heavy forest clearing for agriculture.

The nearest other known localities for this species are Bugoma Forest in Uganda (Britton 1980) and Bulcha in Ethiopia (Ash 1977).

**CLYTOSPIZA DYBOWSKII** Dybowsky's Twinspot

So far this species has only been recorded once from Li Rangu (4°45'N, 28°22'E) near the Zaire border, where its status is unknown (Cave & Macdonald 1955). The Chicago Field Museum Expedition collected a female at Bangangai in March 1977 (M.A. Traylor, *in litt.*).

On 12 October 1979 one couple was noticed at Lotti, just on the edge of the primary forest near tall grass, and a female in breeding condition was collected (now in the Naturkundemuseum Stuttgart). This is the first record from east of the Nile and it extends the species' range about 250 km east from the previously known distribution in Zaire (Chapin 1954, Hall & Moreau 1970).

ALOMA PLATEAU, south of Yei

Kajiko North (3°47'N, 30°35'E), c.1000 m

The Aloma Plateau is mainly open tree savanna with open tall grassland, including small evergreen bowl forests and rocky hills. Along the main road the land is used for farming and for teak and tea plantations.

*TERPSIPHONE VIRIDIS* Paradise Flycatcher

The South African race *\*\*plumbeiceps* is a well known inter-African migrant. It reaches the South Sudan in the non-breeding season. A male was caught and collected on 16 July 1978 near a small stream in a teak estate in Kajiko North. The skin is now in the Bonn Museum.

#### ACKNOWLEDGEMENTS

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SOME RESULTS OF THE FIELD MUSEUM 1977 EXPEDITION  
TO SOUTH SUDAN

M.A. Traylor Jr & A.L. Archer

In February and March 1977 the Field Museum of Natural History mounted a collecting trip to the forested areas of the southern Sudan. The objective of the trip was to collect a representation of the montane forest birds from east of the Nile, and of the equatorial forest birds from west of the Nile along the Zaire border, two areas that were not represented in the museum collections. The party was led by ALA, ably assisted by R.M. Glen and A.A.E. Williams. The senior author was able to join them for two weeks in the early part of the trip. Active collecting was from 19 February to 25 March, and despite the delays and problems associated with political difficulties at the time, a total of 791 specimens of 178 species was collected. Of these, 14 were new records for the Sudan and this proportionately high figure underlines the importance of using mist nets when collecting in forested areas, a technique previously unused in the Sudan.

Three collecting sites were occupied, two in the Imatong Mts and one west of the Nile:

Gilo, Imatong Mts, c.2100 m, 4°02'N, 32°51'E. This was in an area of tall montane forest. It was being actively logged while the party was there which made for ready access but also meant that there was considerable disturbance. Collecting dates were 19 February to 3 March.

Talanga Forest, about 8 km west of Katire, Imatong Mts, c.950 m, 4°01'N, 32°43'E. This was about 800 ha of lowland forest, much of it untouched, although logging had begun. Some of the trees were magnificent, reaching an estimated 50 to 60 m in height. Collecting dates were 4 to 10 March.

Bangangai Forest, 80 km WNW of Yambio, c.730 m, 4°51'N, 27°45'E. A fine stand of virgin forest in the forest-savanna mosaic north of the equatorial forest. Collecting dates were 16 to 25 March.

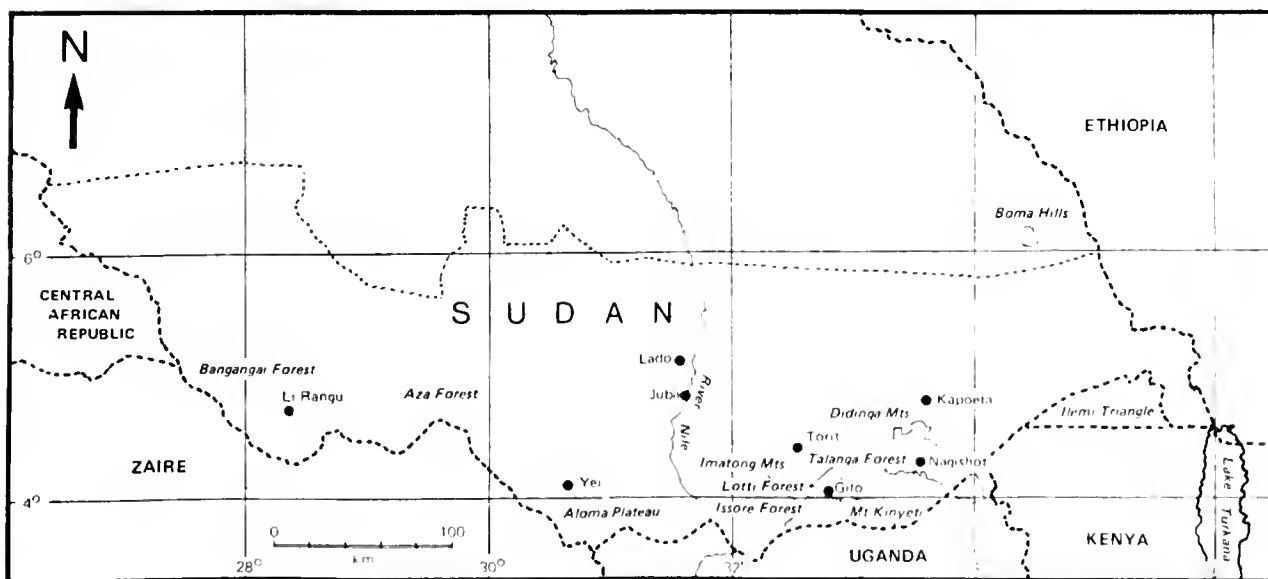


Fig.1 Map of the South Sudan

The present paper gives distributional or taxonomic information on 31 species from the collection, 14 of them being new records from Sudan. All the new records are from Bangangai Forest, although one of them, *Nectarinia seimundi*, was also taken in Talanga Forest. Friedmann (1978) has recently published on the birds of a similar isolated area of forest along the Ouossi River in southeastern Central African Republic, about 350 km west of Bangangai Forest. Of our 14 records from Sudan, 10 were reported from the Ouossi River, seven of them for the first time from that country. No new races are described in our paper, but two, *Pogonocichla stellata pallidiflava* and *Alethe poliocephala giloensis*, have recently been named from our Gilo material by Cunningham-van Someren & Schifter (1981). The new records from Sudan are marked with an asterisk.

**\*ACCIPITER TOUSSENELII CANESCENS** Red-chested Goshawk

Bangangai Forest, 1 male, 19 March

This bird is in immaculate fresh plumage, and a perfect match for a male from Gabon. It is the first record of *toussenelii* from Sudan. We follow Prigogine (1980) in considering *toussenelii* a species separate from *tachiro*. The bird was taken in forest undergrowth while trying to steal a small bird from a mist net.

**ACCIPITER TACHIRO SPARSIMFASCIATA** African Goshawk

Gilo, 1 male, 21 February

This specimen must be referred to *sparsimfasciata* because of its large size, wing 220 mm, blackish upperparts and finely barred underparts. The only previous record of the species from Sudan is of the Ethiopian race *unduliventer* which occurs in the Boma Hills (Cave & Macdonald 1955). This bird was also taken while robbing a mist net.

**APUS PALLIDUS ?ILLYRICUS** Pallid Swift

Bangangai Forest, 1 female, 24 March

Cave & Macdonald (1955) record the Pallid Swift as a common winter visitor at least as far south as Dafur. The present specimen, taken from a mixed flock with eastern Eurasian Swifts *Apus apus pekinensis*, extends the known wintering range of *pallidus* to southwestern Sudan. It has been assigned to *illyricus* as the darkest race. The Bangangai bird is as dark as *pekinensis* and can only be separated from that form by the shallow tail fork, 23 mm, compared to 28-31 mm for female *pekinensis* (Brooke 1969) and the smaller difference between the two outer rectrices, 3.8 mm compared to 7.5-9.0 mm. Lack (1956) records dark specimens of *pallidus* in the British Museum, previously called *pekinensis*, from Uganda and Somalia.

**\*ISPIDINA LECONTEI** Dwarf Kingfisher

Bangangai Forest, 2 males, 2 females, 17-24 March

This is the first record for Sudan. Friedmann (1978) has recently recorded it from the Ouossi River, southeastern Central African Republic.

**\*HALCYON BADIA** Chocolate-backed Kingfisher

Bangangai Forest, 2 males, 17 and 21 March

This is the first record for Sudan; also recorded by Friedmann (1978) from the Ouossi River, Central African Republic.

**TRACHYPHONUS PURPURATUS** ssp. Yellow-billed Barbet

Gilo, 1, 19 February

Bangangai Forest, 1 male, 1 female, 22 and 23 March

The only previous Sudan record was from Issore, Imatong Mountains (Cave & Macdonald 1955), but Friedmann has recorded the species at the Ouossi River, so its occurrence in the Bangangai Forest was to be expected. Friedmann called

his birds nominate *purpuratus*, and Cave & Macdonald (1955) called theirs *elgonensis*; we find it difficult to make the distinction.

*INDICATOR MINOR* Lesser Honeyguide

*minor*: Gilo, 2 males 1 female, 22 and 23 February

*riggenbachi*: Bangangai Forest, 1 female, 21 March

The female from Bangangai Forest is a well marked *riggenbachi* as would be expected; this is the race listed for southwestern Sudan by both Friedmann (1955) and White (1965). The occurrence of *minor* at Gilo is a surprise, since Friedmann (*op. cit.*) lists the equally distinctive *diadematus* from southeastern Sudan. However, all the Sudanese localities listed by Friedmann are in the dry lowlands, and presumably nominate *minor* is confined to montane forest in the Sudan. The race *diadematus* differs from *minor* in being darker above and below, and in having the edges of the dorsal feathers greenish rather than golden. Two Ethiopian specimens show these characters clearly, while the Gilo birds are indistinguishable from a long series from Kenya.

\**INDICATOR MACULATUS STICTITHORAX* Spotted Honeyguide

Bangangai Forest, 4 males, 4 females, 1 unsexed, 17-24 March

The first record of the species from Sudan; also recorded by Friedmann (1978) from southeastern Central African Republic. Five of the nine specimens are in wing moult, presumably post-nuptial moult following breeding.

*INDICATOR EXILIS PACHYRHYNCHUS* Least Honeyguide

Gilo, 9 males, 5 females, 22 February to 3 March

Bangangai Forest, 2 males, 1 female, 21 and 23 March

This species was previously recorded in Sudan only from west of the Nile in the Bahr-el-Ghazal. The fine series from Gilo shows that it is common from east of the Nile, at least in montane forest. Twelve of these Gilo birds were taken by Rob Glen at a single nest of bees about 12m up in a hollow tree on 22 and 23 February. The three specimens of *minor* were also taken at the same time and place. Glen's field notes for 22 February read, "There was a great procession of Honey-guides coming to the hive, and all were going into the hole. I collected five specimens in about one hour whilst checking some nets in the vicinity." In all a total of 39 honeyguides of four species was collected. This seemingly high number was necessary due to the great similarity in the field of the species *exilis*, *pumilio*, *willcocksii*, *meliphilus*, and *minor*. A method described by Archer & Glen (1969) was used for trapping honeyguides and again demonstrated the existence of a far higher density of these birds than is normally evident.

\**CAMPETHERA NIVOSA HERBERTI* Buff-spotted Woodpecker

Bangangai Forest, 1 male, 20 March

The first record of the species from Sudan; also recorded by Friedmann (1978) from southeastern Central African Republic.

\**CHLOROCICHLA SIMPLEX* Simple Greenbul

Bangangai Forest, 1 male, 16 March

Although this is the first record of the species from Sudan, it is known from the adjoining Haut Uele district of Zaire (Chapin 1953).

\**CRINIGER CALURUS EMINI* Red-tailed Greenbul

Bangangai Forest, 2 males, 1 female, 20-24 March

The first record of the species from Sudan; also recorded from southeastern Central African Republic by Friedmann (1978).

*ALETHE DIADEMATA WOOSNAMI* Fire-crested Alethe

Bangangai Forest, 5 males, 4 females, 1 imm male, 1 imm female, 1 imm unsexed, 17-22 March

Previously known from Sudan from only a single young bird from Bangangai (Cave & Macdonald 1955). The present series shows that it is abundant at Bangangai Forest, and Friedmann (1978) also noted it as common in southeastern Central African Republic.

*\*STIPHRORNIS ERYTHROTHORAX XANTHOGASTER* Forest Robin

Bangangai Forest, 3 males, 1 female, 1 juv female, 17-23 March

The first record of the species from Sudan; also listed by Friedmann (1978) as common in southeastern Central African Republic.

*COSSYPHA NATALENSIS GARGUENSIS* Red-capped Robin Chat

Talanga Forest, 5 males, 4 females, 7-10 March

Bangangai Forest, 2 males, 18 and 21 March

Britton (1971) summarized what is known about the migratory movements of this species. All his records of *garguensis* from southern Sudan and southern Ethiopia were from the period 15 November to 28 May, but he noted that Cave & Macdonald (1955) considered it a common resident in southern Sudan. However, the circumstances under which our birds were taken at Talanga Forest make it almost certain that they were migrants. Collecting at Talanga Forest began on 4 March, and for the first three days no specimens of *C. natalensis* were either seen or netted. However, on the morning of 7th, four were taken from the nets in the first hour, and they remained abundant from then on. While an occasional specimen might have been overlooked before 7th, the species could not have avoided being seen or taken if present in the numbers seen later, and there must have been a major influx on the night of 6/7 March. All were in fresh plumage; the males had enlarged gonads but the females showed no sign of sexual activity. Friedmann (1978) reported that both sexes taken in southeastern Central African Republic in early June had gonads much enlarged. These recent data certainly suggest that there is some migratory movement, with birds arriving in March to breed in the northern rains.

This surmise has been confirmed by G. Nikolaus (*in litt.*) who has very kindly permitted us to cite his data. He found most *natalensis* from Talanga and Aza forest (4°42'N, 29°50'E) in breeding condition from the end of June to the end of August, with egg-laying in August at Talanga. Birds in the beginning of October in the Lotti Forest (4°03'N, 32°32'E) had, with one exception, renewed their primaries in post-nuptial moult. The species was absent in (at least) December, January and February. However, to the east of the Imatongs, at Nagishot (4°15'N 33°35'E) in the Didinga Mountains, he found *natalensis* in January of both 1978 and 1979, with one female coming into breeding condition on 1 January 1978. It may be that the material available to Britton from southern Sudan and southern Ethiopia included birds from the Didingas, and that this population has an entirely different breeding and migration pattern from that of the Imatongs west.

The populations at Bangangai Forest and at the Ouossi River, Central African Republic are surprisingly isolated, there being no records from adjoining northeastern Zaire's Uele and Ituri districts (Chapin 1953).

*TRICHASTOMA CLEAVERI (ALBIPECTUS) BARAKAE* Scaly-breasted Illadopsis

Talanga Forest, 1 male, 7 March

Bangangai Forest, 1 male, 1 female, 17 and 25 March

This species was previously known from Sudan only from the Imatongs. Its presence at Bangangai was to be expected, since Friedmann (1978) has recorded it from southeastern Central African Republic and it is widespread in northeastern Zaire (Chapin 1953). Meise (1978) has recently reviewed the African species of *Trichastoma* and has united *albipectus* with *cleaveri*. We believe that he is right in considering the colour differences between them superficial, and they should be considered one species.



**\*TRICHASTOMA PUVELI STRENUIPES** Puvel's Illadopsis

Bangangai Forest, 5 males, 1 unsexed, 17-23 March

This is apparently the first record of the species from Sudan, although one of the localities in Hall & Moreau (1970) appears to fall within Sudan. It extends somewhat the range of this isolated eastern population of *puveli*, previously known only from the Haut Uele district of Zaire.

**APALIS JACKSONI JACKSONI** Black-throated Apalis

Gilo, 1 male, 25 February

The only previous record from Sudan was from the Didinga Mountains (Cave & Macdonald 1955).

**APALIS RUFOGULARIS NIGRESCENS** Buff-throated Apalis

Bangangai Forest, 1 female, 20 March

Previously known in Sudan only from the Aloma Plateau (Cave & Macdonald 1955).

**\*CAMAROPTERA CHLORONOTA TOROENSIS** Olive-green Camaroptera

Bangangai Forest, 4 males, 19-23 March

We can find no previous record for Sudan, although Hall & Moreau (1970) indicate a specimen from the Didingas. This would be an unusual locality for this lowland forest species, and we question it. On the other hand, *chloronota* was to be expected in the Bangangai Forest, particularly since Friedmann (1978) recorded it from southeastern Central African Republic.

**EREMOMELA BADICEPS BADICEPS** Brown-crowned Eremomela

Talanga Forest, 3 males, 2 females, 1 imm male, 5-10 March

These are virtually topotypes of Hall's (1949) *latukae* from Katire in the Imatongs. However, on comparing this present series with over 50 *badiceps* from Gabon and Cameroon, we are unable to recognize the diagnostic characters of *latukae*, and consider it a synonym of *badiceps*.

**\*MACROSPHENUS FLAVICANS HYPOCHONDRIACUS** Yellow Longbill

Bangangai Forest, 1 male, 25 March

This is the first record of the species from Sudan, and it has also been recorded recently by Friedmann (1978) from southeastern Central African Republic.

**HYLIA PRASINA PRASINA** Green Hylia

Talanga Forest, 4 males, 5-7 March

Bangangai Forest, 3 males, 2 females, 20-25 March

Cave & Macdonald (1955) recorded this species from Talanga, but the Bangangai specimens are the first from west of the Nile.

**\*TROCHOCERCUS NIGROMITRATUS** Dusky Crested Flycatcher

Bangangai Forest, 2 males, 18 and 22 March

These are the first records for Sudan; Friedmann (1978) has reported the species from southeastern Central African Republic.

**\*TROCHOCERCUS NITENS NITENS** Blue-headed Crested Flycatcher

Bangangai Forest, 1 female, 23 March

The first record from the Sudan.

**\*NECTARINIA SEIMUNDI TRAYLORI** Little Green Sunbird

Talanga Forest, 3 males, 2 females, 3 juv males, 1 juv female, 5-10 March

Bangangai Forest, 1 male, 24 March

These are the first records from Sudan. The occurrence of *seimundi* in Bangangai Forest is not surprising since it is known from the Bas Uele district of Zaire and has been reported recently from southeastern Central African Republic by Friedmann (1978). However, its presence, particularly in abundance, at Talanga Forest, is unexpected, since the Imatongs are relatively isolated from the nearest sites in western Uganda (Britton 1980). Also, it is hard to

to see how Cave & Macdonald (1955) could have overlooked such an abundant bird. Possibly it is a recent immigrant.

*MALIMBUS RUBRICOLLIS RUBRICOLLIS* Red-headed Malimbe

Talanga Forest, 4 males, 1 imm female, 5-8 March

Bangangai Forest, 1 imm male, 20 March

Previously recorded by Cave & Macdonald (1955) only from the foothills of the Imatongs and the Aloma Plateau.

*NIGRITA CANICAPILLA* Grey-headed Negrofinch

race *schistacea*: Talanga Forest, 1 male, 6 March

race *canicapilla*: Bangangai Forest, 1 male, 23 March

Cave & Macdonald (1955) have already recorded *schistacea* from the foothills of the Imatongs. However, this is the first record of the nominate race from Sudan; it has white tips on the greater coverts, no white tips in *schistacea*.

*MANDINGOA NITIDULA CHUBBI* Green-backed Twinspot

Gilo, 1 male, 2 females, 1 imm male, 1 imm female, 21 February to 2 March

Talanga Forest, 4 males, 1 female, 1 juv female, 3-9 March

The only previous Sudan specimen was from the Dongotona Mountains (Cave & Macdonald 1955), but Cave (1974) gives a sight record from Okaru, 1050 m, about 90 km northwest of the Imatongs, in an area where one would hardly expect suitable forest. It is difficult to believe that Cave & Macdonald could have overlooked *nitidula* in the Imatongs if it had been anywhere near as common when they were collecting there in the late thirties. Like *Nectarinia sei-mundi*, its status must have changed in the last 40 years.

Although we use the name *chubbi* for these birds, they are not typical of that race. None of the five males shows any orange wash on the throat or breast, the character used to distinguish *chubbi* from nominate. However, *chubbi* is a notoriously variable race, and it may be chance that nothing but green-chested males were collected.

*PYRENESTES OSTRINUS* Black-bellied Seed-cracker

race *rothschildi*: Bangangai Forest, 1 female, 1 juv female, 17 and 20 March

race *ostrinus*: Bangangai Forest, 1 male, 1 imm male, 1 juv female, 18-22 March

Cave & Macdonald (1955) listed *frommi* (as *maximus*) from Li Rangu near Bangangai, and from Yei. However, this is the first time that the smaller-billed races have been found in Sudan. The mandible width for specimens listed above are *rothschildi* 12.9 and 12.1 mm, and *ostrinus* 16.2, 17.2 and 15.1 mm respectively. As Hall & Moreau (1970) have pointed out, birds with large, medium or small sized bills have been taken at the same localities, possibly interbreeding, and the propriety of using subspecific names is questionable. Large-billed birds, *frommi*, are usually confined to savannas bordering the equatorial forest, while the smaller-billed types are more characteristic of the forest itself. Friedmann (1978) also had birds of both the *ostrinus* and *rothschildi* types from the Ouossi River in southeastern Central African Republic. The subspecific names may be useful descriptive terms, but they do not have the geographical meaning usually associated with such names.

*CRYPTOSPIZA SALVADORII SALVADORII*  $\supseteq$  *KILIMENSIS* Abyssinian Crimson-wing

Gilo, 2 males, 2 females, 5 juv females, 1 juv unsexed, 19 February to 2 March

Cave & Macdonald (1955) and White (1963) both consider the populations from the Imatongs to be *kilimensis*. Our adults from Gilo, however, are markedly darker than birds from Kenya, and presumably show an approach to nominate *salvadorii* of Ethiopia. White says that birds from Uraguess in northern Kenya are intergrades between nominate and *kilimensis*, so it would not be unexpected to find the same situation in the Imatongs.

Two sight records in Bangangai, both by Andy Williams, are of interest and new to the Sudan:

*CHRYSOCOCCYX FLAVIGULARIS* Yellow-throated Green Cuckoo

This bird was watched and followed by Williams for over an hour; he knew its call and had previously collected specimens from Bwamba Forest in Uganda.

*MEROPS BREWERI* Black-headed Bee-eater

This very distinctive species was identified once in tall trees on the forest edge. J.S. Kingdon (pers. comm.) recorded over 15 sightings of *breweri* while spending a week at Bangangai during March 1982.

#### ACKNOWLEDGEMENTS

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#### CORRECTIONS

In the Short communication 'A breeding record for Cassin's Hawk Eagle *Hieraetus africanus*' by Joseph P. Skorupa, *Scopus* 5, the rendition of the call on p.53 should have been *wee-wee-wee-....ree-hee*.

In the paper 'Further range extensions and other notable records of forest birds from Tanzania' by S.N. Stuart and F.P. Jensen, *Scopus* 5, the following mistakes need to be corrected:

- p.108: *Bycanistes bucinator* is repeated
- p.111: *Malaconotus alius*, last line of account, delete the word 'seen'
- p.112: Acknowledgements, 3rd line, K. Gribben should be K. Gribbin
- p.115: Appendix 2, *Andropadus* not *Anropadus*  
Area 6 was not listed in the Key, it is the Uluguru Mts

## STORM-PETRELS HYDROBATIDAE OFF THE KENYA COAST

P.B. Taylor

While residing at Mombasa in 1981, I made regular offshore trips in game-fishing vessels from both Mombasa and Mtwapa Creek for the purpose of observing pelagic birds. Monthly excursions between June and December resulted in a number of sightings of storm-petrels, and I was able to positively identify individuals of three species: Wilson's Storm-petrel *Oceanites oceanicus*, Leach's Storm-petrel *Oceanodroma leucorhoa* and Matsudaira's Storm-petrel *Oceanodroma matsudairae*. This paper summarizes details of my records of these species and reviews their status and distribution in the Indian Ocean.

In addition to the records given here, I have a very few observations of unidentified birds, details of which are not included. All my observations were made using x10 binoculars.

*OCEANITES OCEANICUS* Wilson's Storm-petrel

6 June 1981: C. Taylor and I obtained excellent views of two single birds about 1½ km beyond the reef at Mombasa. The birds were both in flight and were seen at distances down to about 50 m. The weather was clear and the sea calm with a slight swell. The birds were small for storm-petrels, and were sooty black above and below, including the underwings. The greater upper wing-coverts were slightly paler than the rest of the upperwings and both birds had a prominent and slightly crescent-shaped white rump patch. The colour of the belly and undertail coverts was not seen. The tails were square-ended and the legs were long, the feet projecting beyond the tail and appearing all-dark. The wings were rounded and the birds flew low over the water with shallow wing-beats on almost straight wings, with frequent glides. The legs were sometimes dangled. The quite strong fluttering and gliding flight was reminiscent of swallows Hirundinidae, or even of Little Swift *Apus affinis*.

5 July 1981: about 3 km off Mombasa, in fairly calm weather, a single bird flew past the boat low over the water at about 50 m range. In size and general appearance it was very similar to the June birds, diagnostic features seen including the curved white rump, pale upperwing diagonal, square-ended tail, long legs, and quite strong fluttering and gliding flight.

6 September 1981: a single bird was observed about 1½ km beyond the reef off Mombasa, and later in the morning a second was seen close to the reef. All diagnostic features were seen, and the second bird was also observed by R.A.M. McVicker.

In addition to my Mombasa records, other 1981 sightings of this species have been reported as follows:

19 May 1981: Mr and Mrs A. Braguine (per D.A. Turner), while swimming to shore from a shipwreck, observed a few white-rumped storm-petrels in groups of four to five birds (all observations may have been of the same group of birds) some 4 km off Kipini. The birds were seen at very close range as they fluttered around the swimmers, and the verbal description given to D.A. Turner fits Wilson's Storm-petrel exactly.

27 December 1981: D.A. Turner, accompanied by the author, saw two single Wilson's Storm-petrels from a game-fishing vessel some 7-8 km off Watamu.

Wilson's Storm-petrel was not admitted to the East African avifauna by Britton (1980) because the reported occurrences in Kenyan waters of small white-rumped storm-petrels were not considered sufficiently well documented (Britton 1981).

In April 1980 a single Wilson's Storm-petrel was seen off Malindi and was, at that time, the only acceptable East African record (Britton 1981).

Cramp & Simmons (1977) give detailed information on the movements of this species. It is known to migrate north to all oceans from its antarctic and sub-antarctic breeding grounds beginning in late February to early March. In the Indian Ocean it winters in the tropics and arrives off eastern Africa in mid April; concentrations build up in August - October off Arabia prior to rapid withdrawal in early November. Return to antarctic seas is accomplished in November and December.

In view of the known distribution and movements of this species, its presence off the East African coast in the period April to September is not unexpected, and the 1981 Kenyan records suggest that it may well be of regular occurrence during this period. On my pelagic trips off Mombasa in early October, November and December 1981 I recorded no individuals of this species, possibly because the wintering population had by then largely left this area. The two birds seen in late December off Watamu were possibly non-breeding individuals which had not migrated southwards.

#### *OCEANODROMA LEUCORHOA* Leach's Storm-petrel

4 October 1981: a single bird was seen about 5 km offshore from Mtwapa Creek at 08:30 hrs. The sea was very calm, there was hardly any wind and the weather was clear, with good light. The bird was first seen flying very low over the water towards the boat, and I subsequently obtained very good views of it. C. Taylor saw it more briefly but confirms the main points of my description, as do the crew, who first saw it. Total observation time was about 6 min. The bird was obviously a storm-petrel but its flight resembled neither Wilson's nor Matsudaira's: its wings were long and it flew with an easy, rather buoyant tern-like action, sometimes changing to shearwater-like gliding and banking on straight wings. I judged the flight to be rather fast for a storm-petrel. The bird passed about 40 m from the boat and then circled round for a few minutes with strong deep wing-beats. It paused once and almost settled, the wings remaining raised, and also once hovered in a tern-like manner. It then flew off low over the water and was lost to sight.

The overall upperside colour was dark sooty brown. There was a white rump patch, which had irregular and poorly-defined edges and which was longer than the corresponding white patch of Wilson's; it had an ill-defined dark area down the middle, widest and most noticeable at the anterior end and giving a somewhat Ruff (*Philomachus pugnax*)-like effect in dividing the white patch into two curved-edged areas. The white extended to the lateral under-tail coverts. The underside was similar in colour to the upperside and the underwings were sooty brown. The upperwings showed a broad pale band across the coverts, but this band was not very prominent. The tail was forked, but this feature was sometimes not easy to see, especially at long range. Bill and eye were dark, leg colour was not noted and the feet were not visible beyond the tail tip. The bird was larger than Wilson's Storm-petrel but smaller and less bulky than Matsudaira's, with proportionately longer wings.

Leach's Storm-petrel breeds in the north Atlantic and north Pacific Oceans and migrates to winter in regions of tropical convergences (Cramp & Simmons 1977). It occurs off west Africa from November, and a few pass further south to reach Cape seas. Mackworth-Praed & Grant (1957) state that it occurs in the Red Sea, the Gulf of Aden and "probably further south along East African seaboard in non-breeding season", but Smith (in Moreau 1972) considers that the Red Sea records require proof and gives no records for the Gulf of Aden and only one for East Africa, that of Parsons (1969). Cramp & Simmons (1977) consider that this species is a vagrant to the Indian Ocean and give only two

records: the bird found dead south of Mombasa in February 1967 (Parsons 1969), and one found dead at Sharjah in the Persian Gulf in June 1969 (Lapthorn, Griffiths & Bourne 1970). In addition, Britton (1980) mentions two records of 'possibles' off the Kenya coast - two birds off Kilifi in December 1973 and one off Watamu in April 1978. The first of these records is very doubtful (D.A. Turner pers. comm.) and the second may only be regarded as a possible Leach's.

Thus, on the present evidence, Leach's Storm-petrel would appear to be no more than an extremely rare vagrant to the Indian Ocean. There is no evidence that the Indian Ocean birds originate from the north Atlantic breeding population and indeed Cramp & Simmons (1977) consider that such birds are more likely to originate from the Pacific than the Atlantic.

#### *OCEANODROMA MATSUDAIRAE* Matsudaira's Storm-petrel

5 July 1981: at about 11:00 hrs, some 3 km off Mombasa, a single storm-petrel was seen about 100 m from the boat flying about 1 m above the water. The weather was clear with a light breeze and the sea had a moderate swell. The bird approached to within at least 50 m of the boat and was seen to be large for a storm-petrel, markedly larger and bulkier than a Wilson's which I had been watching a few minutes earlier at a similar range under similar conditions. It was entirely sooty-brown in colour, with no pale on the rump or underparts, and had the bill, legs and eyes dark. The colour was well seen when the sun caught the bird at various angles in flight, and the underparts were also well seen. There was a paler area along the upperwing coverts and pale bases to the primaries, but none of the pale colouring was very well defined.

The flight was rather heavy and lethargic, with slow wing-beats (deeper than those of Wilson's) and glides. The wings appeared rather wide at the base and the tail was well forked. The flight was quite straight and the bird only occasionally circled and swerved. The head was rounded with a high forehead. The legs did not project beyond the end of the tail in flight.

The bird flew past and turned across the bows before disappearing among the wave troughs. Total time of observation was about 3 min, from the flying bridge of the vessel. My fellow-passengers did not see the bird as they were all below decks at the time.

22 August 1981: at about 10:30 hrs, 7 km off Mombasa a single bird was watched for about 3 min. It was first located sitting on the water at 200 m and allowed approach to within 40-50 m before flying off. The weather was fine, with a moderate breeze and a fair swell. The bird was entirely sooty brown with dark eye and bill and short dark legs. The head was rounded and the tail deeply forked. While sitting, the bird occasionally flapped its wings, when the pale on the upperwing coverts and primary bases showed up quite well. When it rose, it made a few short flights rather lethargically and with slow wing-beats. It then flew low and straight past the boat and 'into the sun'. It settled briefly and then flew off again before we could turn the boat to follow it.

As in the first observation, no passenger was on the flying bridge with me when the bird appeared, but the crew obtained close views of this second bird and commented, even on observations made with the naked eye, on the bird's forked tail, all-brown colour, large size and slow flight.

These descriptions have been examined by J.C. Sinclair who is of the opinion (*in litt.*) that both birds were Matsudaira's Storm-petrels and that their size alone, combined with the forked tail, rules out any other known species of storm-petrel. The observed details agree entirely with the field descriptions of Matsudaira's given by Bailey, Pocklington & Willis (1968), who

observed storm-petrels which they identified as this species in the Indian Ocean during the International Indian Ocean Expedition voyages of 1963 to 1965. They tentatively identified Matsudaira's at sea by its large size, long forked tail, pale primary shafts, wide wings and normally sluggish flight. Some of their sight records were supported by the capture of specimens and they were able to state that Matsudaira's could be separated at sea from the only other all-brown storm-petrel known to occur in the Indian Ocean, Swinhoe's Storm-petrel *Oceanodroma monorhis*, by differences in size and flight action. One other all-brown species, Tristram's Storm-petrel *Oceanodroma tristrami*, could conceivably occur in the Indian Ocean but there are no records, and the authors state that this species differs from *matsudairae* in having no white bases to the primary shafts. In view of the apparently distinctive field characters of *matsudairae*, I am satisfied that my Kenyan records refer to this species.

Matsudaira's Storm-petrel breeds on the Volcano Islands in the subtropical western Pacific Ocean from January to early June, and had not been definitely recorded in the Indian Ocean before the observations of Bailey *et al.* (1968). These authors' records suggest that the species regularly migrates from the Pacific to the Indian Ocean in the non-breeding season and is most common in the western Indian Ocean between June and September (my two records fall within this period). Bailey *et al.* (1968) give a sight record of Matsudaira's as near to the African continent as 2°05'S, 41°59'E (16 September 1963), but they regard this record, and all others west of 50°E, as doubtful (most identifications being based on the size of the birds). The most westerly records which they consider positive sightings are of single birds at 3°56'N, 50°18'E (10 August 1964), 5°04'S, 50°30'E (21 April 1965) and 4°41'N, 52°19'E (14 August 1964), and of three birds at 1°00'S, 51°48'E (24 April 1965).

Thus, my two records from near Mombasa constitute the first fully-documented records from African coastal waters. In view of the findings of Bailey *et al.* (1968) it is likely that this species is of regular occurrence near the East African coast from June to September.

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AUTUMN PASSAGE OF MARSH WARBLERS *ACROCEPHALUS PALUSTRIS* AND  
SPROSSERS *LUSCINIA LUSCINIA* ON THE SUDAN RED SEA COAST

G. Nikolaus and D.J. Pearson

The Marsh Warbler *Acrocephalus palustris* breeds in temperate Europe west to England, and in the southern boreal and steppe zones of the U.S.S.R. east to the Urals; the Sprosser *Luscinia luscinia* breeds at similar latitudes from Denmark east to Novosibirsk (Voous 1960). Both species spend the months January to March in southeastern Africa (Pearson & Backhurst 1976, Dowsett-Lemaire 1979), and their European populations migrate southeastwards to enter Africa through the Middle East (Moreau 1961, Zink 1973). During November-December, these two species occur in large numbers on passage through eastern Kenya, but records from further north are fewer, and information on arrival in Africa is limited. This note reports substantial early autumn numbers of both species on the Sudan Red Sea coast.

OBSERVATIONS IN 1980 AND 1981

In 1980, GN studied Palaearctic migration in the Sudan Red Sea Province from 5 October to 25 November. Passerines were mist-netted at three sites: in coastal mangrove scrub 15 km south of Suakin (at 18°50'N, 37°25'E); in a minute watered garden 5 km west of Suakin, surrounded by hot leafless semi-desert; and 40 km inland, in riverine acacia west of Erkowit, in the Red Sea Hills (at 18°45'N, 37°10'E). Three hundred and eighty four passerine migrants ringed included one Sprosser, and not a single Marsh Warbler, although 15 Reed Warblers *Acrocephalus scirpaceus* were caught and a number of Bluethroats *Luscinia svecica* were recorded.

In 1981, GN netted the same sites from 2-10 August and (together with DJP) from 32 August to 18 September. The Erkowit site was also worked by Col. R. Holman and Col. E.D.V. Prendergast from 27-30 September. Migrants were at times quite abundant along the sea shore and in the Red Sea Hills, but were practically never seen in the intervening arid coastal hinterland. One thousand and seventy Palaearctic passerines were ringed during August and September; Marsh Warbler (151 ringed) and Sprosser (93) were the two principal species caught. Marsh Warblers were netted in the Suakin garden as early as 6-9 August (17 on 6th), when the only other migrant passerine present was the Olivaceous Warbler *Hippolais pallida*. Up to over 30 Marsh Warblers were present in the garden daily during the first half of September, when the species was also common in coastal mangroves and even in Port Sudan gardens. At Erkowit, Marsh Warblers were not seen in August, but were common in tamarisk thickets, and even in acacia, on 7-10 and 16-18 September, with a few still there on 27-30th. Sprossers were noted from 1-18 September. They probably outnumbered Marsh Warblers in coastal mangrove early in September, and were also seen in town gardens. This was the most abundant migrant at Erkowit on 7-10 September (none was seen there on 29-31 August); numbers had decreased greatly by 16 September, and none was seen at the end of the month.

Thus, Marsh Warbler passage appeared to extend throughout August and September, with a peak early in September; Sprosser movement was more limited to the first three weeks of September. In both species, young birds were prominent in catches throughout these periods. Numbers of some related species during August-September 1981 are interesting for comparison. Other *Acrocephalus* warblers caught included 43 Reed Warblers (almost all adults; first on 2 September), 14 Great Reed Warblers *A. arundinaceus* (first on 6 September) and two Basra Reed Warblers *A. griseldis* (see Nikolaus 1981). Only two Night-

ingales *Luscinia megarhynchos* were caught (one an eastern *hafizi*) with one other seen, and Bluethroats (two caught) were limited to small numbers from 9 September.

#### DISCUSSION

Knowledge of the initial autumn arrival and subsequent movements of Marsh Warblers and Sprossers in northeastern Africa has been complicated by the difficulty of their separation in the field from Reed Warblers and Nightingales respectively. The picture has been somewhat clarified in recent years, however, by mist-netting in Egypt (Watson 1973), Ethiopia (Ash 1973, 1980 and *in litt.*), Saudi Arabia (M.C. Jennings *in litt.*) and the Sudan (GN unpubl., and this study). The Marsh Warbler is not known in autumn in Libya (Bundy 1976). It appears to be scarce in Egypt (Watson 1973), but is fairly common at Riyadh, Saudi Arabia, occurring in about equal numbers with Reed Warblers (M.C. Jennings *in litt.*). In the Sudan, there are two autumn specimen records from Darfur (Lynes 1925), and a few records between 4 September and 2 October from Khartoum (A. Pettet, unpubl. ringing data; authors' unpubl. obs.), but there are no records known to us from the south, where Reed Warblers occur and winter commonly. In Ethiopia, Ash (1981) reported 77 Marsh Warblers ringed in twelve years; most records here are from the rift valley westwards, during September, and the species is usually outnumbered by the Reed Warbler. Smith (1957) had no passage records from the Eritrean coast.

For the Sprosser, Bundy (1976) gives no autumn records for Libya, but the species would seem to be common, outnumbering the Nightingale, on passage through eastern Egypt (Watson 1973). It is present in small autumn numbers, together with the Nightingale, at Riyadh (M.C. Jennings *in litt.*). In the Sudan, it is known from the Khartoum area during September-October, but not from Darfur where Lynes (1925) recorded passage Nightingales. We know of only one record from the south, between Torit and Kapoeta, where GN saw and caught several on 2 November 1979. In Ethiopia, Sprossers occur in autumn mainly in the west, during late September and October, and are usually outnumbered by Nightingales. Again, Smith (1957) had no Eritrean records.

In view of the lack of records from the southern part of the Red Sea, the occurrence of Marsh Warblers and Sprossers among the principal autumn passerine immigrants on the Sudan coast further north is particularly interesting. It is unfortunate that Madden (1930), in his account of migration on this coast, should have failed to record the Marsh Warbler, and should have mistaken Sprossers for Nightingales, as he would appear to have done. The Marsh Warbler may tend to enter Africa via a more easterly route than the Sprosser (more predominantly through Arabia as opposed to Egypt), but subsequent southward movements of the two species appear to more or less coincide. Both clearly spend the period late September to early November in northeastern Africa. In the case of the Marsh Warbler, Dowsett-Lemaire (1979) has argued that the main area concerned is in Ethiopia west of the rift.

For birds entering Africa through eastern Egypt, or across the northern part of the Red Sea, an initial destination in northwestern Ethiopia and adjacent border areas of the Sudan can be readily envisaged. Birds grounded on the Sudan Red Sea coast in September were 300-400 km north of the nearest reasonably green areas between Kassala and Asmara. Thence southwards, the western Ethiopian highlands and the valleys of the Upper Atbara, Rahad, Dinder and Blue Nile rivers could provide abundant resources until late October for migrants preparing for flights to central Kenya and beyond.

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## SHORT COMMUNICATIONS

TWO OBSERVATIONS OF NESTING IN THE EASTERN RACE OF THE GREEN IBIS *BOSTRYCHIA OLIVACEA AKELEYORUM* The eastern race of the Green Ibis is confined to the montane forests of central Kenya and northeastern Tanzania. It is not a commonly recognized bird and the following nesting records have been obtained from the Aberdare Mountain range of central Kenya.

The first, made by A. Dyer in 1959 (pers. comm.), is from the headwaters of the Pesi River which flows off the northern end of the Aberdares. The nest was constructed at a fork in a slender branch about 10 cm in diameter which extended laterally over a pool about 2 m downstream of a small waterfall. The nest was slightly over 2 m above the water surface, made of large twigs, between 20 and 40 cm across and was strikingly flimsy for a bird as large as a Green Ibis. The birds were observed building and at the nest site on more than one occasion, but egg-laying and rearing were not seen. The altitude of the location was 2700 m asl. At this point the Pesi River is a very small stream with a flow seldom more than 2 m in width. In this sector of the Aberdares, which is relatively dry (being in the range's rain shadow), the Green Ibis is not often seen below 2600 m. The habitat vegetation was mixed *Juniperus/Podocarpus* forest.

The second observation, made by the author, was in July and September 1981. This was on a small stream near the Thiririka River on the southeastern slopes of the Aberdares in mixed *Podocarpus/Ocotea* forest. As with Dyer's observation, the nest was over water immediately downstream of a small waterfall. It was about 4 m above the water, precariously placed on a very slender branch only 2 cm in diameter, and partially supported by several even smaller branchlets and a liane. This nest was also only 30-40 cm across, flimsy enough to see through in places, and also made of large twigs. When first seen in late July it appeared to be empty, though what was taken to be a leaf seen through the nest from below could have been an egg. This is likely, as when next visited the nest contained two half-fledged nestlings. This was in the first week of September 1981. The location was estimated to be at 2400 m asl.

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THE STATUS AND DISTRIBUTION OF THE ARABIAN BUSTARD *OTIS ARABS* IN NORTHEASTERN AFRICA, AND ITS POSSIBLE OCCURRENCE IN NORTHERN KENYA The Arabian Bustard is widely distributed across sub-Saharan Africa from Senegal east to northeastern Ethiopia and the southwestern corner of Arabia (Snow 1978). In general appearance it is somewhat similar to the Kori Bustard *Otis kori*, though they have only been recorded occurring together in two very isolated areas - along the Awash River in northeastern Ethiopia, and in the extreme southeastern Sudan and the adjacent Turkana district of northwestern Kenya (Snow 1978).

In the light of a number of recent reported sight records of this bird in northern Kenya on the eastern side of Lake Turkana, I feel that it is germane at this stage to review the status and distribution of the species in northeastern Africa and comment on its possible occurrence in northern Kenya.

In Ethiopia, Urban & Brown (1971) state that the Arabian Bustard is a frequent to uncommon resident, occurring only in northeastern Ethiopia and the nearby Dahlak Islands in the Red Sea. Similarly, Snow (1978) does not record it in Ethiopia south of 9°N, and J.S. Ash (pers. comm.) did not record it from southern Ethiopia despite visits there in recent years. In Somalia, it is known from only a few records from the extreme north, close to the present-day border with Djibouti (J.S. Ash, pers. comm.).

In Sudan, however, the Arabian Bustard is more widespread; it has been reported in the north as quite common on the grasslands to the south of Kassala, (Archer & Godman 1937), while in the south, the dark brown-backed race *butleri* occurs sparingly in southeastern areas just reaching Kenya in extreme north-western Turkana, where V.G.L. van Someren collected a pair in January 1932, which have remained to this day the sole accepted record for Kenya. More recently, G. Nikolaus (pers. comm.) has also recorded this species from the Sudan/Kenya border regions during the months of December and January.

In view of its apparent total absence from southern Ethiopia and virtually the whole of Somalia, it is considered highly unlikely that this species would occur in northern Kenya in the area lying to the east of Lake Turkana, so that reports of large bustards from this area are more likely to refer to either the Kori Bustard *O. kori* or Heuglin's Bustard *Neotis heuglini*, both of which are quite common and widespread throughout northeastern Kenya.

On a point of field identification, the Arabian Bustard is smaller than the Kori, and best identified by the terminal feathers of the median and upper wing coverts which, at the bend of the closed wing, appear pure white, as opposed to chequered black and white in the Kori Bustard.

#### ACKNOWLEDGEMENTS

I am grateful to J.S. Ash and G. Nikolaus for their comments on the current status and distribution of the species in Ethiopia, Somalia and the Sudan.

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PECTORAL SANDPIPER *CALIDRIS MELANOTOS* AT MOMBASA At 07:10 hrs on 28 September 1981 I visited one of the small dams in grassland on the Bamburi Portland Cement Company's land (Nguuni Property) near Mombasa. From the dam wall I saw a Pectoral Sandpiper feeding in shallow water alongside a Green Sandpiper *Tringa ochropus* and near Little Stint *C. minuta*, Curlew Sandpiper *C. ferruginea* and Common Sandpiper *Actitis hypoleucos*. I watched the Pectoral Sandpiper for about 8 min, using x10 binoculars at ranges from 40 m down to 25 m. The sun was low but shone full on the dam from behind me.

The bird fed at the water's edge on hard and soft substrates, from shallow water and in short-grassed mud near the margin, picking up food with vertical dabbling movements of the bill. When I eventually attempted to approach the bird it flew immediately and was soon lost to sight. I returned later the same day with other observers and searched the area, but the bird could not be relocated and it was not seen again.

It was identified as an adult on the basis of the upperside colour and pattern (dull darkish brown, with buff fringes to the mantle, scapular and covert feathers, forming indistinct pale mantle and scapular lines; edges of scapulars and tertials more richly-coloured than those of mantle and coverts) and the greyish-brown breast wash. These features are characteristic of autumn adults (Prater, Marchant & Vuorinen 1977, D. Britton 1980).

The possibility of the bird being a Sharp-tailed Sandpiper *C. acuminata* was excluded on the following observed characters: dull brown crown with dark streaks, superciliary stripe prominent to above the eye but narrower behind

the eye, colour of the upperparts, greyish buff throat and breast with heavy dark streaking ending abruptly at the lower breast, and the dark slightly down-curved bill with an ochre base. All these features fit Pectoral Sandpiper but not Sharp-tailed (D. Britton 1980). Full field notes have been lodged with the EANHS Ornithological Sub-committee, Nairobi.

I am very familiar with the Pectoral Sandpiper from Europe and I also saw the species in Zambia in November 1978 and November 1979 (Taylor 1980). This species is the most frequently recorded (mainly) Nearctic vagrant wader in sub-Saharan Africa but it has only been recorded once before in East Africa: an adult male collected at Lake Naivasha in May 1952 (Britton 1980).

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- P.B. Taylor, Box 25138, Nairobi
- Scopus 6: 20-22, March 1982

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FURTHER RECORDS OF SLENDER-BILLED GULL *LARUS GENEI* AT LAKE TURKANA Britton (1980) gives three records of the Slender-billed Gull for East Africa, all from Lake Turkana, while Berg-Schlosser (1979) records one from Lake Nakuru.

On 25 November 1981 at Ferguson's Gulf, Lake Turkana, I observed two adult, one 2nd winter and one 1st winter *Larus genei* for almost 2 h. These birds were in company with 11 adult and three sub-adult Black-headed Gulls *L. ridibundus*. Pearson (1977) draws attention to the more obvious field marks for separating these two species. It is hoped that the following, less obvious though useful, characteristics will be of further use to observers unfamiliar with *genei*.

#### HEAD

*Adults*: the long neck, white head and long pale orange-red bill of *genei* are immediately noticeable in the field. The eye of *genei* appears small and at close quarters is seen to be pale yellow. The Black-headed Gull has a more rounded head, a large conspicuous black eye with white lids and an obvious dark mark behind the eye. At close range *genei* has a faint grey mark behind the eye, however, this is never as obvious as in *ridibundus*, and at any distance, the head of *genei* appears all-white. The 2nd winter *genei* differed in having a dark tip to the bill, the basal two thirds being exactly the same orange-red as the adults' bills. The bill of *ridibundus* is of medium length, blood-red at the base with an extensive black tip.

*1st winter*: 1st winter birds have the same long neck and bill as adults but differ in having a suffused dark tip to the bill and a dark mark behind the eye. The eye itself appears small and dark (although it was not seen at close range); in contrast, even at a distance, *ridibundus* has a large black eye. Both species have a dark mark behind the eye. The bill of sub-adult *ridibundus* may be blood-red, orange-red, or dull yellowish orange, but there is always an extensive black tip.

#### WINGS

*Adults*: identical to *ridibundus*, although if seen together in flight, *genei* appears slightly longer winged.

*2nd winter*: as adult but with faint, very narrow, brown crescent shaped line

across the greater coverts.

*1st winter*: the wings of *genei* have a narrow brown crescent shaped line on the greater coverts and other brown markings in a band parallel to the trailing edge of the secondaries. *L. ridibundus* is similar although the brown marking on the coverts appears as a broad line, being altogether more extensive than on *genei*. The extent of brown markings on the wings of both species does vary considerably, and, as such, is of limited use in the field.

#### TAIL

*Adults*: white.

*Sub-adults*: white with a dark brown terminal band. *L. genei* is slightly longer tailed - this is most noticeable when the birds are fluttering and hovering above the water, the tail is often spread and appears slightly wedge-shaped. In contrast, *ridibundus* usually keeps the tail closed, when it appears shorter and neater.

#### UNDERPARTS

One of the adult *genei* was in breeding plumage, the underparts being washed pink; the other adult showed a smaller area of pink restricted to the belly. All the *ridibundus*, and the 1st and 2nd winter *genei*, were white below.

#### LEGS

The legs of the *genei* were orange-red, exactly the same colour as the bill. The legs of *ridibundus* show considerable variation in colour and may be blood-red, pale orange or dirty yellowish.

#### BEHAVIOUR

Although *genei* and *ridibundus* were seen together during feeding activity, when resting they usually separated, *genei* sitting on the water and *ridibundus* standing on the shore. Most remarkable was *genei*'s three distinctive feeding methods. They either flew leisurely above the water, frequently stopping, hovering, and then dropping head first into the water from a height of about 2m. This behaviour was distinctly tern-like. At other times, for periods of up to 3min at once, they flapped and ran on the surface, petrel-like. Then, suddenly they would stop and plunge their heads under water. No food was seen to be caught by this method. Finally, three birds sat close together on the water and did an energetic duck-like upending, at the same time plunging their heads under the water. In contrast, *ridibundus* fed by either sitting on the water and pecking at the surface, or by flying low over the water and occasionally swooping down to take food from the surface.

It seems probable that the Slender-billed Gull occurs annually at Lake Turkana in small numbers and it should also be looked for on other rift valley lakes as well as at the coast.

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- Terry Stevenson, *Lake Baringo Club, Box 47557, Nairobi*

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**SLENDER-BILLED GULL *LARUS GENEI* AT MOMBASA** On 10 October 1981 C. Taylor and I visited Ras Iwetine, Mombasa, to observe the roost of shorebirds at high tide (about 14:00 hrs). About 1000 waders were present together with some 50 terns (most being Common Terns *Sterna hirundo* with a few White-cheeked *S. repressa* and Roseate *S. dougallii*). Soon after our arrival a single gull flew in and landed on the wet sand left by the receding tide. This gull was readily

identifiable as an adult Slender-billed, *Larus genei*, and we observed it closely for about 30 min, using x10 binoculars and a telescope at ranges down to 25 m.

In view of the past confusion in East Africa between *L. genei* and the Black-headed Gull *L. ridibundus* (see Pearson 1977), it is thought advisable to give a full description of the Mombasa bird here. The gull appeared to be slightly larger than *ridibundus* (which was not present for comparison) and was very pale in overall colour. The legs and the long, slender bill were bright orange, the bill having a slightly darker tip visible only through the telescope at high magnification. Head, neck and underside were white, unmarked except for a small and very faint patch of pale grey on the ear-coverts, visible only with the telescope. A pale pinkish flush, noticeable only at close range, suffused the entire breast and underside. The mantle and upperwing coverts were very pale grey with no markings, and the projecting primary tips were black. The iris was pale yellow.

The general shape of the bird was distinctive. Its neck was very long and thin when fully extended, and when retracted it produced a distinct bulge above the breast. This long neck, together with the markedly elongated flat forehead, the small head and the long thin bill, gave the bird a very different appearance from a 'normal' gull, e.g. *ridibundus*; a good description of this effect is given by Grant (1978) who describes *genei* as appearing almost "giraffe-necked" and having a peculiar "snout" appearance about the head.

Having seen all field characters on the standing bird we approached it, causing it to fly. It circled around for a few minutes before moving off along the shore. In flight its upperwing pattern was seen to be very similar to that of *ridibundus*, with a prominent white wedge on the outer primaries and primary coverts, black tips to the primaries and an otherwise pale grey upperwing. A similar primary pattern was seen on the underwing, but with a diffuse dark wedge extending along the inner primaries. The rest of the underwing was very pale grey. The tail was white, rather long and with a rounded tip. The flight was buoyant and the neck bulge was easily visible. The bird did not call.

Although neither of us had seen *genei* before, our observations made the identification conclusive. On plumage characters the bird was a full adult, and was notable for having the pink flush on the underside, a character which is normally only present in summer plumage (Grant 1978). The bill colour was also possibly paler than is normal in an adult, Grant (1978) giving adult bill colour as "dark red or orange-red, looking black at a distance": its colour more approached that given by Grant for first-winter birds.

Britton (1980) gives only three acceptable sight records of *genei* for East Africa, all from Lake Turkana, Kenya, in the period December-January. A further record is documented by Berg-Schlosser (1979), who saw a single adult at Lake Nakuru in February 1978. The Mombasa bird is thus the first reported coastal occurrence of this rare gull in East Africa.

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P.B. Taylor, Box 25138, Nairobi

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Continued from inside front cover

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# *SCOPUS*

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# SCOPUS

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Contributions should be typed in 1½ or double spacing on one side of the paper only, with wide margins all round, and should be submitted in duplicate. Exceptionally, clear hand-written MSS will be considered but these too should be sent in duplicate. Both English and scientific names of birds should be given when the species is first mentioned, thereafter only one should be used. English and scientific names 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 on separate sheets at the end*. Metric units should be used. If non-metric units were used in the original observation or experiment, the approximate metric equivalent should be given in brackets.

Illustrations should be on bristol board, good quality white paper or tracing material, in line - i.e. black on white, and should not be larger than 19 x 23 cm. Lettering (in black) will be the responsibility of the author and should be done neatly in Letraset (or similar), no larger than 14 point (3.9 mm). Each illustration should be numbered (Fig. 1, etc) and be provided with a legend typed on a separate sheet of paper. Photographs will also be considered.

*Continued inside back cover*

# SCOPUS

## STUDIES OF BIRDS IN A SEMI-ARID AREA OF KENYA

### II. BIRD PARTIES IN TWO WOODLAND AREAS

D.E. Pomeroy & B. Tengecho

The phenomenon of bird parties has been described by Winterbottom (1943, p. 437) as "the practice of tropical insectivorous birds of gathering together into parties composed of several different species, often belonging to quite distinct families." Moynihan (1978), in Senegal, referred to these groups as "mixed flocks of different species of birds"; and Greig-Smith (1978) termed them "mixed species flocks." The phenomenon also occurs with temperate birds, especially tits and warblers (Da Prato 1981) but apparently it is less widespread than in the tropics. In Africa, most published studies refer to woodlands but parties also occur in forests (Hamel 1980, Start 1971, Vernon 1980). Here a bird party is taken to mean different species of birds moving actively in the same direction, often calling, and usually feeding.

#### METHODS

Bird parties were studied in two localities in southern Kenya, namely Selengei (2.12S 37.10E), where observations were made in 1980, and Masalani (2.18S 38.05E) where observations were made between September 1979 and July 1981. Both localities are semi-arid and are grazed mainly by domestic livestock. Selengei is on the Kapiti Plains and is open woodland, with *Acacia tortilis* being the commonest tree. The vegetation at Masalani is denser bushed woodland, including species of *Commiphora* and *Acacia* trees and a few emergents such as baobabs *Adansonia digitata*.

Bird parties were located in these two areas by following tracks and paths. Whenever a party was encountered, all the species present were recorded over a period of a few minutes. The composition of parties changes with time (Vernon 1980) but the density of the vegetation, especially at Masalani, precluded following the parties, nor was it possible to count all the individuals. During each period of observation at Masalani, all 'party species' (see below) were recorded whenever they were seen, whether in a party or not.

The weights and principal food of many of the species involved are given by Lack (1980), whose observations were supplemented by those of the present study. Data on population densities were obtained by line transects (Pomeroy & Muringo in press and in prep.).

Some species join parties more often than others, and indeed there is probably a continuum between those that rarely do and those that often do. To facilitate analysis, an arbitrary distinction was made between these two groups; and another as to the minimum number of species that constituted a

TABLE 1

Species observed in bird parties. At Masalani, only species recorded three or more times out of 32 are included; and at Selengei at least twice out of 14 parties. Names follow Britton (1980)

Species	Masalani		Selengei		Diet <sup>1</sup>	Colour <sup>3</sup>
	Times recorded in parties	Times recorded not in parties	Density <sup>1</sup>	Density <sup>1</sup>		
Chestnut-bellied Kingfisher <i>Halcyon leucocephala</i>	3	3	0	0	I	
Woodhoopoe sp. <i>Phoeniculus</i> sp.	3	4	0	0.06	I	*
Abyssinian Scimitarbill <i>P. minor</i>			0	0.06	I	*
Von der Decken's Hornbill <i>Tockus deckeni</i>	4	6	0.67	0.36	IF	+
Spotted-flanked Barbet <i>Lybius lacrymosus</i>	19	23	0.74	-	IF	+
d'Arnaud's Barbet <i>Trachyphonus darnaudii</i>	7	17	1.5	0	IF	
Cardinal Woodpecker <i>Dendropicos fuscescens</i>	5	3	0.17	0	I	
Drongo <i>Dicrurus adsimilis</i>	22	28	0.71	0.27	I	*
White-bellied Tit <i>Parus albiventris</i>	3	1	0	0	I	+
Rufous Chatterer <i>Turdoides rubiginosus</i>	3	1	0	0.12	I	
Northern Brownbul <i>Phyllastrephus strepitans</i>	10	1	0.8	0	I	
Common Bulbul <i>Pycnonotus barbatus</i>	5	14	0.26	0	I	
White-browed Scrub Robin <i>Cercotrichas leucophrys</i>	3	7	0.37	0	IF	
Yellow-breasted Apalis <i>Apalis flavida</i>	14	1	0.57	0.09	I	
Grey-backed Camaroptera <i>Camaroptera brachyura</i>	5	4	0.26	0.03	I	
Grey-Wren Warbler <i>C. simplex</i>	10	14	0.63	0.03	I	
Tiny Cisticola <i>Cisticola nana</i>			-	0.09	I	
Yellow-bellied Eremomela <i>Eremomela icteropygialis</i>	6		-	0	I	
Tawny-flanked Prinia <i>Prinia subflava</i>	8	1	0	0	I	
Red-faced Crombec <i>Sylvietta whytii</i>	4	4	0.14	0	I	
Southern Black Flycatcher <i>Melaenornis pammelaina</i>	4	1	0	0.03	I	*
Cin-spot Batis <i>Batis molitor</i>	13	3	0.36	-	I	+
Black-backed Puffback <i>Dryoscopus cubla</i>	4	1	0.02	0	I	+
Slate-coloured Boubou <i>Laniarius funebris</i>	14	18	1.1	0.54	I	*
Grey-headed Bush Shrike <i>Malaconotus blanchoti</i>			0	0	I	
Sulphur-breasted Bush Shrike <i>M. sulfureopectus</i>			0	0.09	I	
Brubru <i>Niilaus afer</i>	4	0	0.02	0.09	I	+
Rosy-patched Shrike <i>Rhodophoneus cruentus</i>			-	0	I	

Black-headed Tchagra <i>Tchagra senegala</i>					2	0	0	I
Collared Sunbird <i>Anthreptes collaris</i>	4	2	0			0		IN
Eastern Violet-backed Sunbird <i>A. orientalis</i>	9	5	0.08			0		IN
Amethyst Sunbird <i>Nectarinia amethystina</i>	3	4	0.1			0		IN *
Hunter's Sunbird <i>N. hunteri</i>	3	2	0			0		IN *
Smaller Black-bellied Sunbird <i>N. nectarinioides</i>	5	8	0.19			0		IN *
Red-headed Weaver <i>Anaplectes rubriceps</i>	3	2	0.1		13	0	0.75	I
Masked Weaver <i>Ploceus intermedius</i>	5	3	0			0		IG
Golden Weaver <i>P. subaureus</i>	9	10	1.1			0		IG
White-headed Buffalo Weaver <i>Dinemellia dinemelli</i>			0		6	0	0.69	IG
Grey-headed Sparrow <i>Passer griseus</i>	3	2	0.43			0		IG
Black-cheeked Waxbill <i>Estrilda erythronotus</i>			-		2	0		G
Red-billed Firefinch <i>Lagonosticta senegala</i>	3	2	0.07			0		G
Green-winged Pytilia <i>Pytilia melba</i>	7	2	1.8			0	0.12	G
Red-cheeked Cordon-bleu <i>Uraeginthus bengalus</i>	5	9	0.7			0		G

## Notes

<sup>1</sup> Density in birds per hectare; a zero indicates presence in an area although the species did not appear in transects; a dash (-) indicates that the species was not recorded in the area.

<sup>2</sup> I = insects, IF = insects and fruit, IN = insects and nectar, G = grain, IG = insects and grain (from Lack 1980 and authors' observations)

<sup>3</sup> \* = black, + = pied (as predominant colouration)

a party. The two groups were defined as follows, taking lower figures for Selengei because it is a more open habitat and the parties there were smaller.

	At Masalani	At Selengei
Parties defined as containing at least	5 species	4 species
Party species defined as those recorded in at least	3 parties	2 parties

## RESULTS

A total of 32 parties was observed at Masalani, involving 65 species; at Selengei, 14 parties involving 36 species were recorded. Table 1 includes all the party species as defined above. Amongst the four most frequent of the party species at each site, three were common to both, namely the Drongo<sup>1</sup>, Yellow-breasted Apalis and Slate-coloured Boubou.

A number of the party species at Masalani occurred frequently away from parties, sometimes more frequently than they did in parties, for example, Spotted-flanked Barbet, Common Bulbul, Slate-coloured Boubou and Grey Wren Warbler. On the other hand, a few species were recorded only in parties, such as White-bellied Tit and Brubru; or mostly in parties, as with Northern Brownbul, Yellow-breasted Apalis, Tawny-flanked Prinia, Chin-spot Batis and Green-winged Pytilia.

Table 1 also shows the estimated population densities of the party species. The frequency with which they were observed in parties was proportional to their abundance in the area (Spearman's rank correlation for density compared to party scores: for Masalani  $R = 0.79$ ,  $P < 0.001$ ; for Selengei  $R = 0.89$ ,  $P < 0.001$ ).

The sizes and diets of both party species and the commoner non-party species are summarized in Fig. 1; typically species joining parties were smaller and mainly insectivorous (Table 2). The proportion of party species which were black or pied was similar to that for non-party species at Masalani, whilst at Selengei rather few party species were black or pied.

The frequency with which parties were encountered varied with the time of day. They were fewer in the early and late hours, and commonest between 11:00 and 15:00 hours (Fig. 2). The average number of species seen in a party at Masalani was 8.5 and at Selengei 7.1 (Fig. 3). The highest number of species recorded in parties was 21 at Masalani, and 15 at Selengei. There was no appreciable difference in the number of species in parties at different times of day.

## DISCUSSION

In common with other observers, we found that parties consisted mostly of small insectivorous species, particularly those that feed by gleaning, probing or flycatching. Relatively few of the larger or herbivorous species join parties. Single-species flocks are also quite common in woodlands: some of these species join parties as well, but a similar proportion do not.

The observations in this paper were all made during dry seasons, which are the non-breeding seasons for most party species (Brown & Britton 1980). Parties are thought to be uncommon in the wet seasons, but would be harder to observe in the thicker vegetation. In other woodland areas, parties have been observed in both wet and dry seasons (see, for example, Winterbottom 1943, Greig-Smith 1978).

However, in a forested area of Kenya, parties were only observed in the dry season, as at Masalani and Selengei: as soon as the rains came, breeding

<sup>1</sup>Scientific names are given in Table 1



TABLE 2

Comparison of party species (as defined in the text) with those not normally joining parties

Sample size (No. of species)	Party species		Non-party species		
	Masalani	Selengei	Masalani	Selengei	
Sample size (No. of species)	33	18	24	26	
predominantly insectivorous	65	78	44	48	
percent small (i.e. of spp. average weight which 50 g) were	97	78	40	33	
	predominantly black or pied	38	17	32	33

Note

The non-party species considered in this table were the same as for Fig. 1 (q.v.)

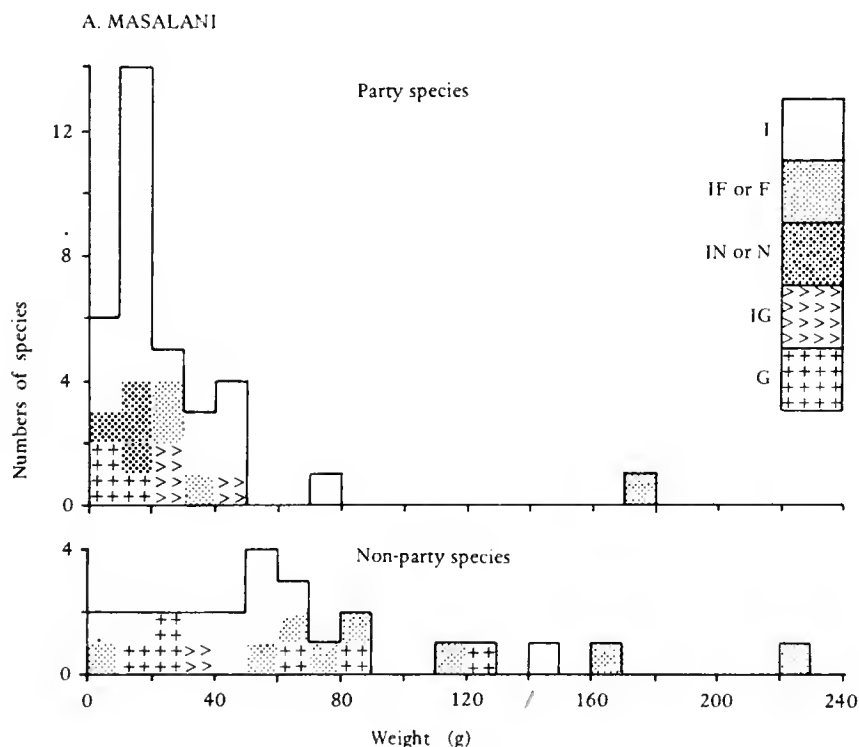


Fig. 1. The numbers of species in relation to size (as expressed by weight) and diet at two sites. Weights mainly from Lack (1980); diets from Lack (1980) and personal observations. 'Party species' are defined in the text; non-party species were all others with a mean population density estimated as  $0.05 \text{ ha}^{-1}$ .

Overall this gives approximately equal numbers of party and non-party species

Continued on p. 30

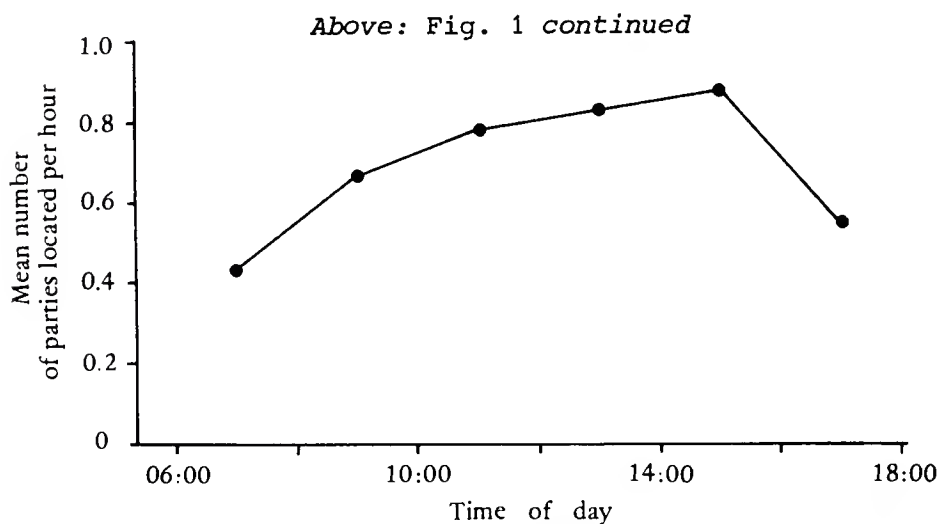
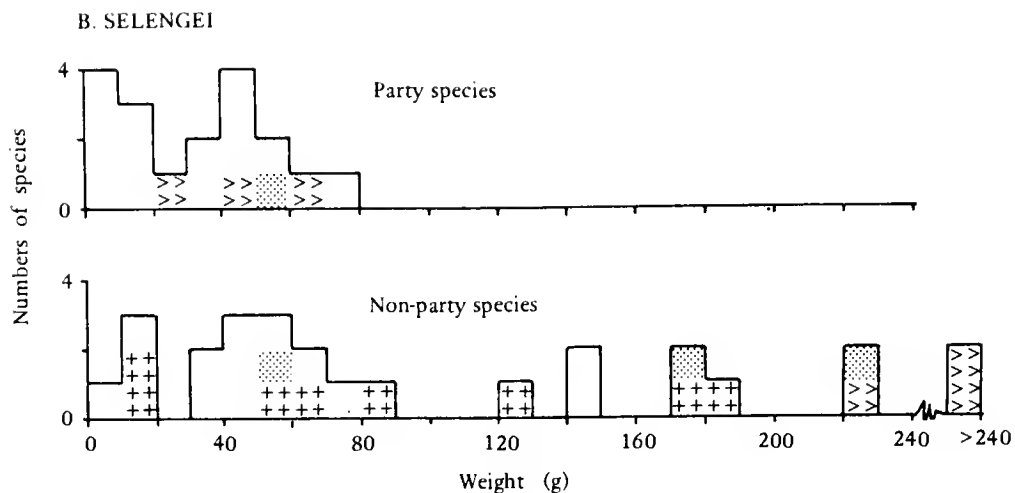


Fig. 2. Variation in numbers of parties located in two-hour periods at Masalani

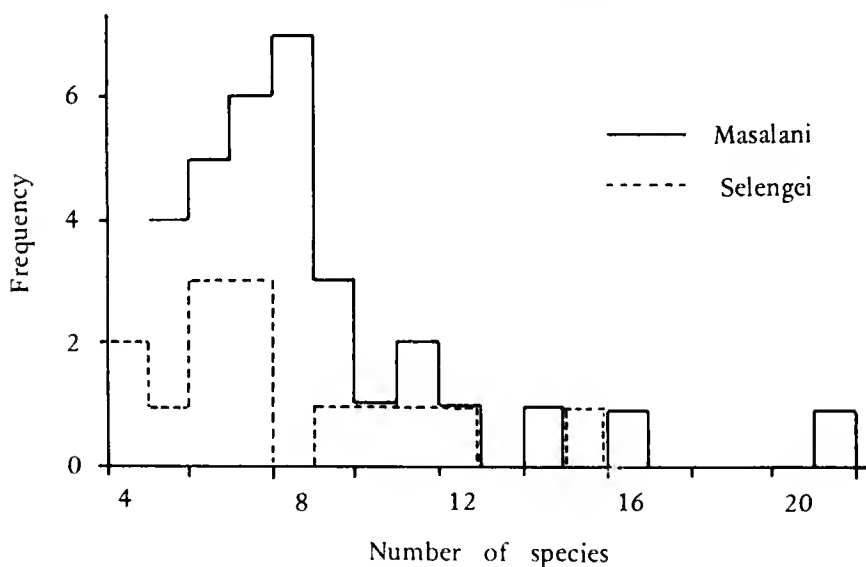


Fig. 3. The frequencies of parties with various numbers of species at Masalani and Selengei. Parties were defined as having an arbitrary minimum of species - 4 at Selengei and 5 at Masalani

began and the parties broke up (Start 1971). Parties at Masalani began to form early in the morning, and increased in frequency until mid-afternoon, and then declined. This, together with the fact that any one party contained only a small proportion of the party species, suggests that most species only join parties for a relatively short time, and then leave. This in turn implies that the advantages of joining a party are comparatively small for most species. If the advantages were greater, then more species would be expected to join, and to remain in parties for more of the time.

The possible advantages of belonging to a party have been discussed frequently, for instance by Greig-Smith (1978) and Vernon (1980), both of whom provide reviews. The reasons most commonly given are that joining a party reduces an individual's chances of predation, whilst enhancing the probability of finding food. As with other authors, we failed to obtain conclusive evidence in support of either theory. Greig-Smith (1978) makes the point that where food sources are patchy, the chances of locating them probably increase with the size of the party. In the wooded areas that we studied, food is likely to have been patchy in the dry seasons; sources of insects such as trees in leaf or flower being widely scattered and interspersed by more open areas or leafless trees. But once the food is found, the presence of a party may increase the competition for it. This could be the reason why most species only join parties for some of the time.

We found that the average number of species joining parties was usually between five and ten, which is similar to those recorded elsewhere in tropical Africa, although Vernon (1980) found an average of 12 at one locality in Zimbabwe. However, whilst parties observed by Greig-Smith (1978, Table 1) had an average size of about seven, the numbers of species were greatest early and late in the day, and least between 12:30 and 16:30. We found similar numbers of species throughout the day, but with fewer parties early and late.

Other studies have shown the importance of 'nuclear species' in mixed parties. These birds are often tits, *Parus* species, or other black and white birds, which move in conspicuous species-groups, followed by other members of the party. In West Africa, the Black Tit *Parus leucomelas* is an important nuclear species (Greig-Smith 1978) whilst in a Nairobi forest the only nuclear species was the White-bellied Tit (Start 1971). Both of these species are noisy and have conspicuous black and white flight patterns. The White-bellied Tit is the only member of the genus to occur at Masalani, but it is uncommon there, and has never been recorded at Selengei. Their absence may account for bird parties being comparatively infrequent and inconspicuous at our sites. Indeed, there were apparently no nuclear species at our sites, although two of the four commonest party species at both Selengei and Masalani were the Drongo and Slate-coloured Boubou, both of which are black. However, they usually appeared to be peripheral members of the party. Both are believed to hold territories throughout the year, and hence would not follow a party for long.

The incidence of bird parties also seems to decrease as one progresses from forest to woodland and then to more open habitats. Thus, whilst parties were comparatively common (and conspicuous) in the forest where Start (1971) made his observations, they were less noticeable at Masalani and Selengei, and apparently absent in Tsavo East, for Lack (1980) does not mention them.

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CO-OPERATIVE FEEDING OF CONSPECIFIC AND *CLAMATOR JACOBINUS*  
YOUNG BY *TURDOIDES RUBIGINOSUS*

Thomas R. Huels

Co-operative breeding, characterized by the presence of helpers (*sensu* Skutch 1961), may be typical of most chatterers and babblers (*Turdoides* spp.), as all but one (*T. nipalensis*) of the 25-plus species are reported to live in groups of three or more birds (Gaston 1977). However, co-operative breeding has been documented for only eight species in the genus (Grimes 1976, Zahavi 1976), including but two (*T. squamiceps*, Zahavi 1974; *T. caudatus*, Gaston 1978) of the eight species in the *Turdoides fulvus* species-group (*sensu* Hall & Moreau 1970). No such reports exist for the African members of this group, the chatterers *T. aylmeri*, *T. fulvus* and *T. rubiginosus*.

Two occurrences of co-operative feeding of young by Rufous Chatterers *T. rubiginosus*, one involving a fledgling Black and White Cuckoo *Clamator jacobinus* and the other conspecific fledglings, are reported here.

Friedmann (1964) discussed the host records of the three races of *Clamator jacobinus*: *serratus* of southeastern Africa, *pica* of southwestern and sub-Saharan equatorial Africa, Afghanistan, Pakistan and northwestern India, and the nominate race of southern India. In southeastern Africa bulbuls, shrikes and bush shrikes are the normal hosts of the Black and White Cuckoo (Friedmann 1964, Payne & Payne 1967, Jensen & Jensen 1969, Liversidge 1971). One species of greenbul (*Andropadus importunus*), three species of bulbul (*Pycnonotus barbatus*, *P. capensis* and *P. nigricans*), one species of shrike (*Lanius collaris*), and one bush shrike species (*Malaconotus zeylonus*) accounted for 82 percent of the 123 cases of *C.j. serratus* parasitism known to Friedmann (1964).

*Turdoides* and *Garrulax* babblers are the normal hosts of Asian *C.j. pica* and *C.j. jacobinus* (Baker 1942, Friedmann 1964, Gaston 1976). Seven Asian babblers (three species of *Turdoides* and four species of *Garrulax*) accounted for 89 percent of the 106 cases of *C.j. pica* parasitism known to Friedmann (1964).

Although 25 of the 35 host species listed by Friedmann (1964) were babblers, host records for African *C.j. pica* were sparse. Only five species, a bulbul (*Pycnonotus barbatus*), a bush shrike (*Malaconotus zeylonus*) and three babblers (*T. fulvus*, *T. rubiginosus* and *T. leucopygius*) were listed by him as hosts of the African population of *pica*. The records of parasitism of *T. rubiginosus* by *C. jacobinus* consisted of two nests, each of which contained three Rufous Chatterer eggs and one or two Black and White Cuckoo eggs (Friedmann 1948).

#### OBSERVATIONS

Between June 1973 and August 1976 I observed Rufous Chatterers and Black and White Cuckoos in a dry *Commiphora*-*Acacia* woodland along the Athi River at Bushwhackers Safari Camp, 10.5 km north and 17 km east of Kibwezi, Machakos District, Kenya (2.19S 38.07E). The Rufous Chatterers exhibited the typical *Turdoides* behaviour of living in family-sized groups. Groups varied little in size from month to month and usually consisted of from five to seven individuals. In August 1974 four of five adults and one juvenile of a six-member group were captured and colour-ringed. Two of the four adults and the individual ringed as a juvenile were still visiting my camp as part of a seven-member group in July 1976. Noisy confrontations between groups of

chatterers, presumably territorial encounters, were common throughout the year.

On the morning of 18 May 1974 I observed seven Rufous Chatterers allopreening at my campsite. All five of the adults appeared to preen each other as well as the two fledglings. When this group began to forage I followed them to determine if more than two adults fed a fledgling. All seven individuals remained together as they moved from one dense clump of shrubs to another. Although dense cover made observation difficult, it appeared that all five adults were feeding the young. In one instance two individuals fed one fledgling while a third adult fed the other fledgling.

The Black and White Cuckoos were seasonal residents at Bushwhackers. Absent during the May to October long dry season, their return to the area occurred shortly after the November-December rains began. Also present, and presumably breeding, in the area during the wet seasons were two other species of *Clamator*, Levaillant's *C. levaillantii* and the Great Spotted *C. glandarius*. All three *Clamator* species were often seen with a conspecific showing interest in nest.

On 24 and 25 January 1976 I observed a fledgling Black and White Cuckoo with a group of three adult Rufous Chatterers. The nearly full grown cuckoo followed the chatterers as they moved in a follow-my-leader fashion from one clump of bushes to another. The cuckoo usually perched low in a bush and begged as it watched the chatterers forage in the leaf litter below. Whenever a chatterer found food, the cuckoo moved to a branch closer to that individual and increased the intensity of its begging. In spite of its apparent eagerness to receive food, the cuckoo never landed on the ground to solicit food. On several occasions, when the adults found a concentration of Isopterans, all three Rufous Chatterers successively fed the fledgling cuckoo.

## DISCUSSION

These observations of Rufous Chatterers further support the postulated widespread occurrence of co-operative breeding in *Turdoides* (Grimes 1976, Zahavi 1976) and the frequent parasitism of this genus by *Clamator jacobinus* in some areas. In Asia the frequent parasitism of *Turdoides* species by *C. jacobinus* is well documented (Baker 1942, Friedmann 1964, Gaston 1976). In southeastern Africa *C. jacobinus* uses bulbuls, shrikes and bush shrikes, instead of *Turdoides* which are there parasitized by *C. levaillantii* (Friedmann 1964, Payne & Payne 1967, Jensen & Jensen 1969, Steyn 1973). Although the records of brood parasitism for sub Saharan equatorial Africa are scant compared to those for southern Africa, here both *C. levaillantii* and *C. jacobinus* use, and may prefer, the nests of *Turdoides* species (Friedmann 1964, Serle 1977, Plumb 1979, Brown & Britton 1980).

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SOME NEW BIRDS AND EXTENSIONS OF RANGE  
FOR SOUTHWEST TANZANIA

R. Stjernstedt and D.C. Moyer

These records are from two weeks spent bird watching, mainly around Tatanda, 100 km south of Sumbawanga and 20 km north of the Zambian border, from 29 November to 14 December 1981. From Tatanda an excursion was made to Mbisi Forest from 30 November to 4 December, and to the Maji Moto-Rungwa area of the Rukwa Valley from 5 to 7 December. Mbisi Forest is at 2200 m altitude on the lip of the Rukwa Scarp just north of Sumbawanga. It is characterized by the unusual preponderance of a candelabra tree, *Euphorbia lobosifolia*. The part of the Rukwa Valley visited is mainly *Acacia tortilis* woodland at 800 m.

Species new for East Africa as a whole have two asterisks.

*POLIOHIERAX SEMITORQUATUS* PYGMY FALCON

One seen near Rungwa. The White-headed Buffalo Weaver *Dinemellia dinemelli*, whose nests the Pygmy Falcon uses, does not seem to occur here, so the bird seen was presumably a wanderer.

*AVICEDA CUCULOIDES* CUCKOO HAWK

Observed once in the Rukwa Valley and once in miombo woodland on the plateau at Mwai. Britton (1980) suggests that it is only common or regular at the coast.

*SAROTHRURA ELEGANS* BUFF-SPOTTED PYGMY CRAKE

One heard and tape recorded at Mbisi Forest. Britton (1980) indicates that in Tanzania it is only recorded from Zanzibar, Pemba, the Usambaras and the Ulugurus.

*CAPRIMULGUS NATALENSIS* WHITE-TAILED NIGHTJAR

Heard calling on marshy ground at Matai on the road from Tatanda to Sumbawanga. New for Tanzania but not unexpected as it occurs in the Northern Province of Zambia.

*MEROPS HIRUNDINACEUS* SWALLOW-TAILED BEE-EATER

Britton (1980) says "most records for the dry months April-September." A loose party found in acacia at Rungwa on 6 December.

*LYBIUS FRONTATUS* Miombo Pied Barbet

This species is quite common around Tatanda, occurring sympatrically with *L. lacrymosus* the Spotted-flanked Barbet. The Spotted-flanked Barbet is, however, more characteristic of acacia woodland, nearby towards Lake Sundu as well as being extremely abundant in the Rukwa Valley. The only previous East African record of the Miombo Pied Barbet is from Songea, but it is common in Zambia north to Mbala, where RS is very familiar with it. Confusion could arise with the Red-fronted Barbet *L. diadematus*, a bird of acacia woodland, which occurs as near as Mbeya on the Buhoro Flats. Mackworth-Praed & Grant (1962) treat *frontatus* as a race of *diadematus* and use the same illustration of the latter for the nominate race in Series I and for *frontatus* in Series II (1962), and even use the same description, referable to *diadematus*. There are a number of points of difference, warranting their treatment as two good species, and these are fully described in Snow (1978). The only illustration of *frontatus* is in Benson et al. (1971).

*TRACHYPHONUS VAILLANTII* LEVAILLANT'S BARBET

Widespread in both acacia and miombo biomes in Rukwa and Ufipa. Britton (1980)



does not mention it from southwest Tanzania, but does record it from the rest of the country.

**CAMPETHERA NUBICA** NUBIAN WOODPECKER

Common and noisy in the Rukwa Valley. The strident calling clearly differentiates it from Bennett's Woodpecker *C. bennettii*, which is regarded as a member of the same superspecies by Snow (1978) and should occur here, but in miombo.

**HIRUNDO DAURICA** RED-RUMPED SWALLOW

A common occupant of culverts and buildings around Tatanda. Care was taken to eliminate the possibility of the Rufous-chested Swallow *H. semirufa* by noting the absence of white in the tail, black under tail coverts, and the demarcation of the blue-black crown in the region of the eyes. Britton (1980) only mentions the Red-rumped Swallow from northeastern Tanzania.

**RIPARIA CINCTA** BANDED MARTIN

A common bird on open hillside outside Mbisi Forest. Britton (1980) does not record it from nearer than Tukuyu.

**DRYOCICHLOIDES BOCAGEI** BOCAGE'S GROUND ROBIN

In riverine forest under Chito Hill, near Tatanda, singing. Common in similar habitat just across the border at Mbala, but unrecorded for Tanzania apart from the endemic race *kungwensis* at Kungwe-Mahari.

**\*\*SYLVIETTA RUFESCENS** LONG-BILLED CROMBEC

Observed several times around Tatanda. New for East Africa but common at Mbala in Zambia. The presence of a grey stripe through the eye serves to distinguish it from the similar Red-faced Crombec *S. whytii*.

**\*\*SYLVIETTA RUFICAPILLA** RED-CAPPED CROMBEC

Seen in miombo woodland on a rocky outcrop near Sopa. The grey overall colouration with contrasting rufous patch on the cheeks make it quite distinct from the other crombecs, as does the song, a shrill whistled phrase. New for East Africa but common in Zambia right up to the border.

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GAZETTEER

Buhoro Flats	8.30S 34.30E	Chito Hill	8.34S 31.28E
Lake Sundu	8.31S 31.38E	Maji Moto	7.14S 31.23E
Matai	8.18S 31.32E	Mbala	8.50S 31.24E
Mbisi Forest	7.54S 31.42E	Mwai	7.25S 31.38E
Rungwa	7.20S 31.40E	Sopa	8.29S 31.28E
		Tatanda	8.32S 31.31E

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WILSON'S PETRELS *OCEANITES OCEANICUS* OFF SOMALIA

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As there are no previous land-based observations of Wilson's Petrel *Oceanites oceanicus* from Somalia, although its presence off-shore has been documented by Archer & Godman (1937) and Bailey (1968, 1971), some recent records are listed and related to the general situation for this species in the Indian Ocean.

Bailey (1968), when summarizing data of his own and of other observers, concluded that most Wilson's Petrels arrive in the seas off southern Arabia in May and June after broad-front migration across the Indian Ocean. The northern migration contrasts with the return in November, which seems to be concentrated off the coasts of India and Sri Lanka.

Bailey (1971) adds that "very few have been recorded south of 10N along the coast, so it is unlikely that they follow the east African coast on either migration."

## PREVIOUS RECORDS IN SOMALIA SEAS

All previous records have been considered by Bailey (1968, 1971), so they are only briefly summarized here without referenceto the original authority:

1935: large concentrations off Cape Guardafui in November.

1963: 1 off Guardafui at 12.24N 51.00E on 12 November.

1964: a few close to the coast from the equator to Guardafui, but mostly between Ras Mabber and Hafun, in August. More off Guardafui in September, but very few off Ras Hafun. Bailey estimated that 37 per cent were within 20 nautical miles (36 km) of land.

## RECENT OBSERVATIONS

My own observations from the coast of Somalia partly support Bailey's conclusions, but also suggest that there may be a previously unsuspected large northerly coastal passage in the northern spring. This would not have been detected by Bailey for he was not sailing in Somalia seas at that time of the year. My records during the period August 1978 to December 1981 are as follows, and are all from the east coast except where stated:

1979: Gezira (1.57N 45.11E), one feeding close inshore and flying off north, 25 April; ten flying north singly in 1½h on 28 July (none on 30 July or 5 August in 3½h). Mait Island, in the Gulf of Aden, five single birds on 20 May seen from a small boat.

1980: Hafun (10.25N 51.20E), one on 27 April; Habo (11.47N 50.32E), in the Gulf of Aden, one flying east on 2 May; Gezira, three, probably this species, flying north on 24 May and four flying south on 3 July; Mogadishu (2.03N 45.21E), one flying north on 24 November.

1981: Gezira, many flying north on 3-5 May, some very close in within the reef. A few were feeding, but most flew rapidly north singly (twice two together) and low (when undoubtedly many more were missed in the swell): 21 in 80 min on 3rd, 52 in 120 min on 4th, 50 in 90 min on 5th; there was only one in 60 min on 6th, but two flew north on 25th. A small petrel seen feeding on 20 June was probably not *oceanicus*. Later in November, one flew south on 10th, one was feeding on 12th, and another bird flying south on 17th was small with a fluttering flight and was not *oceanicus*.

Mogadishu, single birds feeding on 8 and 15 May and 18 November.

Obviously, definite identification could not be obtained for every bird, but it was clearly established for many, so that it is reasonable to assume that most were this species. Wilson's Petrel looks to me a larger bird and a stronger flier than either Storm Petrel *Hydrobates pelagicus* or Leach's Storm Petrel *Oceanodroma leucorhoa*. Its flight when feeding is less fluttery or bat-like, and it is very strong and rapid when in direct flight. It may plane for quite long distances between periods of powerful flapping flight. The white rump is conspicuous, but the square tail is less easily discernible. The feet projecting beyond the tail are clearly seen in close views, but I have never seen a trace of yellow on them even at close ranges through a telescope; this much-cited characteristic must usually be of little value in the field.

#### THE WEST INDIAN OCEAN SITUATION

The first definite record of Wilson's Petrel in Kenya was on the early date of 6 April in 1980 (Britton 1981), but earlier records of small storm petrels in Kenya in April (1) and November (flocks) in Britton (1980), probably referred to this species. Thus, based on information in Bailey, together with the new data given above, it would seem that Wilson's Petrels move north from their southern breeding areas on a broad front across the Indian Ocean from April to June. There is evidence for coasting movements off western India, eastern Somalia and, possibly more than the records suggest, from Kenya. Both these coastlines serve to funnel birds into the Arabian Sea area, which is the main non-breeding season area for this population. During this non-breeding season from May to October, these birds also seem to range fairly widely westwards, occurring in large numbers off NE Somalia and in the Gulf of Aden (Archer & Godman 1937), and a few move into the Red Sea (Cramp & Simmons 1977), and even south into the Mogadishu area (pers. obs.). Return migration is in November, and is probably rapid, with the main concentration off India and Sri Lanka, and with smaller numbers only in the west of southern Somalia, the Seychelles, and probably Kenya. The large numbers off Guardafui in November, however, do not fit into this pattern, unless they make a lot of trans-oceanic easting. At both seasons most of the migrating birds will have the advantage of tail winds in the two monsoon periods.

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## SHORT COMMUNICATIONS

PELICAN MIGRATION IN THE KENYA RIFT VALLEY On 5 December 1981 I was bird-watching on the floor of the rift valley to the northwest of Mt Suswa, Kenya (1°07'S, 36°11'E). At 14:15hrs the day was clear and hot but, despite the strong southeast wind, my attention was drawn by a dull roaring sound that pervaded the air. On peering at the sky directly overhead, the sound was found to emanate from long V-formations of large birds that were moving steadily northwards. They were high enough to appear only as dark spots to the naked eye but, with the aid of binoculars, they were identified as White Pelicans *Pelecanus onocrotalus*, and 1200 were counted gliding north in long linear waves. Another 400 followed a few minutes behind the main mass, and this second flock paused briefly to soar and gain height in a thermal just north of the B3 road, before following the first flock on out of sight to the north. No further flocks were seen.

These aquatic birds were presumably migrating across the dry Suswa area between rift valley lakes, from either Natron or Magadi in the south, to Naivasha, Elmenteita or Nakuru to the north. Britton (1980) mentions an occurrence of many thousands of this species at Lake Natron, but I know of no such record from the much smaller Lake Magadi. If Natron was indeed the source of these birds, then they would have moved over 115 km north from its northern tip. This distance estimate coincides well with a 110 km northerly movement from Lake Natron, observed from a motor glider (Britton *op. cit.*). An origin at the northern tip of Lake Magadi would still entail a northerly movement of over 70 km.

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'WHITE-TAILED' WHITE-HEADED BARBET IN CENTRAL WESTERN KENYA Britton (1980) gives the range of the nominate race of the White-headed Barbet *Lybius leucocephalus* as extending from Uganda into western Kenya from Kisumu to Mt Elgon. This race is distinctive, with its blackish body colour, black tail, and white-spotted wing-coverts. The Kenyan highland race *senex*, distinguished by its largely white body, white tail, and brown back and wings lacking white spots, is reported from central Kenya west to Lumbwa (=Kipkelion) by Britton (1980).

On 8 December 1981 we observed a White-headed Barbet with a white tail and dark underparts feeding in a large fig tree at the base of a slope bearing cutover scrub and above sugar cane fields along the old Muhoroni-Koru road, 6½ km east-northeast of Muhoroni. The calls of this were the raucous notes we have recorded from *L. leucocephalus albicauda* along the southern Ewaso Nyiro River; this is the race of southernmost Kenya, not to be expected in western Kenya except in South Nyanza.

On 10 December we returned to the same fig tree and found it occupied by three identically plumaged white-tailed, dark-bodied birds calling (the "Chip Display Call" of Horne & Short, MS). We tape-recorded their voices as they displayed, and then collected one (now in the National Museum, Nairobi) which proved to be a male with enlarged testes, completely typical of *albicauda*. In over eight days in the Koru area we failed to find other White-headed Barbets.

Further data are needed on the distribution of these subspecies. The area between Kisumu and Londiani has been altered considerably by man, and sites favoured by *L. leucocephalus* (e.g. large fig trees along water courses) are

scattered. We are uncertain whether *albicauda* has recently invaded the region from the south, or whether previous observers, noting the white tail, have reported *albicauda* as *senex*. These are easily distinguished by the colour of the underparts and the presence or absence of spotting on the wing coverts. Additionally, we report that the vocalizations of *albicauda* are louder, harsher, more raucous and less musical than the chip-like calls of *senex* (they are easily distinguishable in the field). Observers in western Kenya ought to check each White-headed Barbet seen so that the ranges of the well marked races can be elucidated.

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**BREEDING OF MAGPIE STARLINGS *SPECULIPASTOR BICOLOR* IN KENYA** The Magpie Starling ranges from southern Ethiopia and Somalia to northern Kenya. As it seems to be very irregular in most localities, it may be regarded as a nomadic species. Having no regular migratory routine infers opportunistic breeding, i.e. breeding whenever the environmental conditions and its physiology permit. However, no breeding outside Somalia is known, even in Kenya where it is regularly seen in wooded and bushed country in the north (Mackworth-Praed & Grant 1960, Britton 1980).

In 1981 the first breeding Magpie Starlings were found in Kenya. According to Newsletter No.63, National Museum of Kenya, Section of Ornithology, Dick Allen found the first clutch of five eggs at Ol Donyo Sabachi and, a little later, on 11 June, two colonies, one with possibly ten pairs and two active burrows in a cliff face and the other with three occupied burrows and nine adult birds present, feeding on caterpillars. All observations were from the Huri Hills area (3°30'N, 37°47'E). Shortly after the findings of Dick Allen, on 13 June we found another burrow of Magpie Starlings near Kurungu Lodge at South Horr (2°06'N, 36°55'E). The adults fed the nestlings with caterpillars. The hole was in a steep river bank about 3m above the river bed. The breeding sites in the Huri Hills and South Horr were at least 150 km apart.

In 1981, long and heavy rains occurred in the northern part of Kenya. Some areas had their first rain since 1977. At the time the Magpie Starlings were breeding, the South Horr Valley and the Huri Hills were all green and were rich in insect life.

These observations of breeding far away from the species' regular breeding grounds support the suggestion that it is an opportunistic breeder. At both breeding sites the Magpie Starlings used the exceptionally good conditions following the heavy rains. Although Magpie Starlings may not breed every year in Kenya, they may be regular breeders after heavy rains.

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GIANT PETREL *MACRONECTES* SP. IN TANZANIA Britton (1980) did not admit the Giant Petrel *Macronectes giganteus* to the avifauna of East Africa despite its published occurrence as a vagrant at Mafia Island, Tanzania (White 1965) and Shimoni, Kenya (Mann 1976). When contacted in 1978, shortly before his death, C.M.N. White (*in litt.*) was unable to provide details of the Mafia record; in 1980, E. Risley (*pers. comm.*) regarded his Shimoni sighting as by no means certain. In a hand-written letter to R.H.W. Pakenham, dated 8 August 1941, R.E. Moreau detailed specimens received from D.W.I. Piggott, resident in Mafia: "last week he also sent me an astonishing specimen, fearfully high as the brain had not been removed, but actually an addition to the East African avifauna - the head of a Giant Petrel got in Chole Bay." It is not clear whether the specimen was sent or received 'last week', nor how long it might have taken (under war-time conditions) to travel the 300 km from Mafia to Amani. Nevertheless, it is reasonable to assume that it was obtained during the austral summer, probably in July.

At the time of Moreau's determination, *Macronectes* was regarded as monotypic, as indeed it often is today (e.g. Gruson 1976, McLachlan & Liversidge 1978). On the other hand, many authors (e.g. Cramp & Simmons 1977) accept that *halli* (Mathews 1912), distinguishable on breeding habits and slight morphological characters, is a species distinct from *giganteus*. Both are listed for southern Africa by Brooke & Sinclair (1978).

This specimen from Chole Bay (7.57S 39.46E) provides the only evidence of the occurrence of *Macronectes* in the tropical Indian Ocean. It is noteworthy that virtually all records of visitors from the southern oceans in East African waters have been in the austral summer, between April and September (Britton 1980, Sinclair 1981, Taylor 1982).

#### ACKNOWLEDGEMENTS

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HOUSE MARTINS *DELICHON URBICA* ASSOCIATING WITH A BREEDING COLONY OF RED-THROATED CLIFF SWALLOWS *HIRUNDO RUFIGULA* IN ZAMBIA From 1975 to 1980 I made regular observations of a breeding colony of Red-throated Cliff Swallows *Hirundo rufigula* which I discovered in 1975 at the waterworks dam on the Kafubu River near Ndola, Zambia (13.05S 28.35E). I established that the birds normally arrived towards the end of the rains in March, bred throughout the dry season, and departed at the start of the rains in November. Some 60 to 100 mud nests were usually present, built under the overhang at the top of the dam wall. In the 1978 breeding season, the colony was larger than usual and about 65 additional nests were built under an overhang on the wall alongside the spillway below the dam, in a very exposed situation. In early October 1978 these exposed nests were systematically damaged by local people but the nests on the dam wall remained undisturbed.

#### OBSERVATIONS

At 06:30 on 7 October 1978 I visited the colony and observed that about 120 House Martins *Delichon urbica*, both adults and first-year birds, were present at the dam together with the more usual Eurasian Swallows *Hirundo rustica* and Sand Martins *Riparia riparia*. The Eurasian Swallows and Sand Martins were either perching on the dam wall or hawking insects over the lake, but the House Martins appeared to be attracted to the Cliff Swallow nests, at which there was great activity, with adults feeding young and bringing nest-lining material, and with fledged young around the nests. The House Martins fluttered around the nests, mixing freely with the Cliff Swallows, and also clung to the outside of some nests. No aggression was shown by either species despite this close association, and the House Martins did not attempt to enter any entire nests, whether occupied or not.

The greatest House Martin activity was at the exposed part of the colony on the spillway wall, where several nests had been damaged, their entrance spouts being broken off and the grass-lined interiors exposed. Each broken and deserted nest was occupied by a House Martin and these birds spent their time rearranging the nest lining material around themselves and also occasionally pecking at the broken edges of the nests, as well as just resting quietly. Other House Martins clung to the outside of these nests, and were seen to engage in gentle mutual bill-pecking with the nest occupants. No attempts were made to eject the occupants, but whenever a bird left a nest and did not return quickly, its place was taken by another House Martin. Both adults and first-year birds were involved in these activities. Some House Martins flew down to a dirt track where Cliff Swallows and Angola Swallows *H. angolensis* were collecting dry grass, but the House Martins were not seen to collect grass themselves.

The dam wall also held small numbers of nesting Angola Swallows, Striped Swallows *H. abyssinica*, White-rumped Swifts *Apus caffer* and a large colony of Little Swifts *A. affinis*. The House Martins showed no interest in the nests of these species, although the other swallows were breeding at the time.

I revisited the colony on 11 October at first light (05:30) and found that no House Martins were present, although the breeding species were becoming active. By 07:00, however, over 100 House Martins had appeared and were again associating with the Cliff Swallows. At dusk on the same day, when the breeding birds were going to roost, no House Martins were present. A visit early on 16 October revealed that no House Martins were there at first light, but about 100 appeared at 06:15 and again associated with the colony. In the evening of 20 October no House Martins remained in the area.

I was unable to establish conclusively where the Kafubu House Martins roosted, but in this area I have sometimes seen this species flying to roost with other hirundines in a small reedbed on the Kafubu River below the dam.

At the extensive reedbeds in the nearby Itawa swamps, Ndola, small numbers of roosting House Martins may be found in October and November with the roost of Eurasian Swallows, which may reach 2 to 3 million birds at this time of year (pers. obs.).

Most House Martins move southward through Zambia during October and November, and the birds at Kafubu in October 1978 were the first sizeable flock which I had seen that season. Return passage is not well-defined but most birds have passed through by late April (Benson *et al.* 1971) although some are still present until late May (Taylor 1979). My only 1979 record of northward passage birds at Kafubu Dam was of a flock of 90+ on 7 April, the birds being present in the early morning. These birds showed no interest in the activities of the recently arrived Cliff Swallows which were busily inspecting old nests and beginning to construct new ones.

#### DISCUSSION.

The association of House Martins with nests of other hirundines in Zambia has also been recorded by other observers. On 9 October 1978 R.J. Dowsett (*in litt.*) observed several House Martins at a colony of Cliff Swallows at Kitwe, some 45 km NW of Ndola, his observations being made during the day. Fellowes (1971) records observations at Kitwe on 4 October 1970, when about six House Martins from a flock of 50 were seen near nests of Striped Swallows and two House Martins actually entered these nests at dusk. These observations, together with my own, which were also made in October, suggest that association with nests may not be an unusual occurrence at this time of year in Zambia.

Fellowes' observations indicate that roosting in the nests of the Striped Swallows at Kitwe is likely to have occurred, but my own observations show that at Kafubu the House Martins made no attempt to roost in the Cliff Swallow nests, although they showed strong interest in the activities of the breeding birds and even entered broken nests during the day. Furthermore, at Kafubu the House Martins were not attracted to the nests of Striped Swallows, possibly because the Cliff Swallow nests were more numerous and the activity around them very great. Mead & Pepler (1975) observed that in Britain House Martins were often attracted to Sand Martin breeding colonies by the activity of the latter species. The extent to which nests may be used for roosting is thus unclear, but my observations at Ndola suggest that House Martins usually roost in reedbeds with other hirundines, even when deserted nests suitable for roosting are readily available.

Roosting sites of House Martins in Europe are poorly documented, and it appears that little is known of this bird's roosting habits. Mather (1973) and Mead & Pepler (1975) give a few instances of individuals apparently roosting in Sand Martin holes, although such roosting was inferred rather than proven. Elms (1972) records House Martins seen in night roosts of hirundines in Hampshire reedbeds, but Harms (1974) notes that on the Elbe in Germany House Martins joined flocks of hirundines over reedbeds towards dusk but were not actually trapped in the reedbed roosts. Franchimant (1976) saw 1-2 House Martins in daytime hirundine roosts on the Meuse at Liège but did not know if the birds were present at night. Finally Hughes (1980) records an instance of five birds perching in a climbing clematis in the evening; they were still present after dark but it was not known if they spent the night there.

Although association with colonies of other hirundines is a known aspect of House Martin behaviour in both Europe and Africa, I have been unable to discover any reference to such intense activity at breeding colonies as was shown by the Kafubu birds. Possibly these birds, newly arrived from breeding in the Palaearctic, still retained strong affinity for nests and breeding activities: it is noteworthy that the flock on northward passage showed no interest in the colony. The behaviour at the broken nests could have been



stimulated by the fact that these nests, as well as being unoccupied and undefended, were, of all nests present, most similar in general shape to the House Martins' own nests. The Cliff Swallow nest is retort-shaped with a spout running horizontally from the top of the nest chamber and then bending downwards so that the entrance is vertical. Broken nests had no spout and were open either at the side or the top of the chamber; they thus resembled House Martin nests, which are enclosed structures of mud under eaves with a narrow entrance hole between the top and the eaves. The nest of the Striped Swallow is similar in shape to that of the Cliff Swallow but the entrance spout is horizontal; at Kafubu there were no broken nests of this species. The nest of the Angola Swallow is similar to that of the Eurasian Swallow.

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EURASIAN CUCKOO *CUCULUS CANORUS* OVERSUMMERING IN EAST AFRICA The Eurasian Cuckoo *Cuculus canorus* is a widespread and sometimes numerous Palaearctic passage migrant to East Africa. According to Britton (1980) specimens from Mikindani, in coastal Tanzania at 10S, provide the only evidence of overwintering or oversummering. Researches instigated by D.C. Seel (*in litt.*) have revealed that the July date given by Britton (1980) is erroneous.

A male collected by Th. Andersen on 6 June 1965, now in Leiden, was mentioned by Britton (1978). Details of a second specimen collected by Andersen on 7 March 1963, now in the Los Angeles County Museum of Natural History, were made available to C.F. Mann (*in litt.*) some years ago. Due to a transcription error, arising from the different conventions for recording dates in the United States and parts of Europe, the date of collection (7/3/63) had been interpreted as 3 July. It is clear from my examination of thousands of his labels that Andersen (a Dane) used the day-month-year system consistently.

Britton (1980) omitted to mention a specimen collected on 6 June (no year or locality) by van Someren (1932). This female, now in the Field Museum of Natural History, Chicago, was collected at Nairobi on 6 June 1922 (D. Willard *in litt.*).

Thus, specimens collected on 6 June 1922 and 6 June 1965, at Nairobi and Mikindani respectively, provide the only evidence of oversummering of the Eurasian Cuckoo in East Africa.

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**EAST AFRICAN BREEDING RECORDS FOR *COSSYPHA CYANOCAMPTER* AND *ONYCHOGNATHUS FULGIDUS*** A recent review of East African breeding records revealed that, as of June 1976, no records for the Blue-shouldered Robin Chat *Cossypha cyanocampter* nor the Chestnut-winged Starling *Onychognathus fulvidus* were known (Brown & Britton 1980). Both species are found in lowland forests of West and Central Africa, their ranges extending eastward into the forest patches of western Uganda (Hall & Moreau 1970). During recent field studies of primate ecology in the Kibale Forest, Uganda (0.13 to 0.41N and 30.19 to 30.32 E) breeding records were obtained for these two species, the details of which are given below.

***COSSYPHA CYANOCAMPTER*** A single nest was located in the dense undergrowth of secondary forest on 9 May 1980. The nest cup was constructed wholly of fine grass fibres and live green moss filaments. Placement of the nest was 0.5 m above the ground on top of a large decaying log, with some of the moss growing on the log being woven directly into the nest cup without detaching the moss filaments from the log. The position was well shaded, in a dense tangle of *Acanthus pubescens* shrubs and *Mimulopsis* spp. vines. Two nestlings were present, sparsely covered in rust-orange natal down, the older of which had just opened its eyes.

The date of this record agrees with the March to August breeding season cited for birds of northeastern Zaire (Mackworth-Praed & Grant 1973). The nest cup itself differed from northeastern Zaire records in that dead leaves and stems were not used in its construction.

***ONYCHOGNATHUS FULGIDUS*** On 21 September 1981 a pair of birds was observed making repeated feeding visits to a nest located in a cavity in the underside of a Crowned Eagle's *Stephanoaetus coronatus* nest, the cavity being formed by the interstices of the large sticks at the base of the eagle's nest. The eagle's nest was located approximately 22.5 m from the ground (visual estimate) in an isolated *Aningeria altissima* in secondary forest. An eagle chick had been fledged on 1 February 1981 and was still receiving all its food from the adults on the nest platform at the time the starlings were actively nesting in the underside of the nest. The starlings appeared to be unaffected by the eagles' presence.

This record agrees with the observation that *O. fulgidus* is a cavity nester not dependent on rocky terrain for breeding (Hall & Moreau 1970). The September date neither refutes nor supports the observation that this species probably breeds at any season in tropical Africa (Mackworth-Praed & Grant 1973).

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Joseph P. Skorupa, Graduate Group in Ecology, University of California, Davis CA 95616, U.S.A.

Scopus 6: 46-47, June 1982

Received 19 May 1982

FURTHER RECORDS OF THE GREY-CRESTED HELMET SHRIKE Lewis (1981) summarized the status of the Grey-crested Helmet Shrike *Prionops poliolorpha*, and commented on its rarity over much of its East African endemic range. The following records have been submitted in response to a request published in the *EANHS Bulletin* for information on the species.

A party of eight, including adults and immatures, was seen on 21 July 1979 in *Acacia drepanolobium*-grassland on the southwestern slopes of Mt Longonot (0.55S 36.27E) (JH, JK). This is the first record from the Naivasha-Kedong area since 1926, when E.H. Ward collected a male from 'Sterndale', Naivasha (National Museum collection, Nairobi). The date and geographical location of the Longonot sighting, together with the presence of immature birds, support Lewis' (*op. cit.*) suggestion that recent occurrences of the species at Lake Nakuru can be explained by post-reproductive dispersal of highly mobile foraging groups, that may regularly move northeastwards around the southern end of the Mau escarpment, from their breeding areas in the Serengeti-Mara and Loita-Loliondo regions of the Kenya-Tanzania borders.

The other recent records come from the Mara-Narok area, reinforcing the view of this as the species' current resident stronghold. On 10 October 1980, a foraging flock of between nine and 12 individuals was seen 10 km east of Lemek (1.06S 35.23E) on the Lemek-Narok road (JC, CC), while a flock of seven was present 5 km east of Buffalo Camp, Masai Mara, on 28 December 1981, and in the general area for at least a week on either side of that date (JD, JH, EP).

Reichenow (1900-1905) quotes three records of the species from early collectors in what is now northern Tanzania, and subsequent authors (Sclater 1930, Mackworth-Praed & Grant 1960, White 1962, Hall & Moreau 1970) use these to extend the species' range as far southwestwards as the Tabora area (5.01S 32.48E). In this context, and in view of the noisy and prominent character of this species, it is worth noting that recent extensive ornithological accounts of the Tabora area (Reynolds 1968, Walton 1981) fail to record its presence, thus arguing against the suggestion (Lewis *op. cit.*) that the absence of more recent records from this area might reflect a paucity of observers.

## ACKNOWLEDGEMENTS

I am grateful to the East Africa Natural History Society for publishing the request for information in their *Bulletin*, and to Callie Crees, Jim Crees, Jock Dawson, Jean Hayes, John Kerr and Enid Phillips for their vigilance and kind response.

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- Received 20 May 1982

## NOTICE

### SECOND SYMPOSIUM ON AFRICAN PREDATORY BIRDS

The Natal Bird Club, a branch of the Southern African Ornithological Society, will be holding a symposium on African Predatory Birds from 22-26 August 1983. The first symposium on this topic was held in Pretoria in August 1977.

Four sessions are planned:

- The role of captive breeding in conservation
- The effects of pesticides, particularly in the Third World
- The energetics of large predators
- The biology of rare and poorly known species.

The meeting will be held in the Golden Gate National Park in the Orange Free State. Further information and application forms are obtainable from Dr John Mendelsohn, Durban Museum, Box 4085, Durban, South Africa 4000.

Any 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. 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 publication should be given in the text in the normal way. All contributions should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi, Kenya.

#### WORKS WHICH SHOULD NOT BE LISTED UNDER 'REFERENCES'

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#### EAST AFRICAN BIRD REPORT

This forms the fifth issue of *Scopus* and each report covers one calendar year. Records of Afrotropical Region (i.e. Ethiopian Region and Malagasy Sub-Region) and Oceanic birds should be sent to D.A. Turner [tel. 48772], Box 48019, Nairobi; records of Palaearctic Region birds to B.S. Meadows [tel. 48535], Box 30521, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Bird Report. Reports of rare birds may be phoned through to any OS-C member.

#### BIRDS OF EAST AFRICA

Copies of this 270 page book are available from D.A. Turner, Box 48019, Nairobi at the following post-paid prices. All cheques should be made out to 'Birds of East Africa'. Those overseas *MUST* remit in Sterling, US\$ or the equivalent in a convertible currency; drafts in Kenya Shillings cannot be accepted.

By surface mail to East Africa or to anywhere in the world: Shs. 130/-, £8.00 or US\$17.00. Airmail, Africa: £11.50 or US\$24.00. Airmail to Europe: £12.00 or US\$25.00. Airmail to the Americas, Australia and the Far East: £13.50 or US\$28.00.

The 40 page *Check-list of the birds of Kenya* is also available from D.A. Turner. Post-paid: surface: East Africa Shs. 12.00, anywhere in the world £0.70 or US\$1.50. Airmail to anywhere in the world £1.00 or US\$2.20.

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East Africa Natural History Society

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# SCOPUS

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Occasional Supplements are published in *Scopus*. The first, published in December 1979, was a *List of species for which records are particularly requested for the East African Bird Report 1979*. The present list forms the second supplement.

The third supplement, *Birds of Somalia, their habitat, status and distribution*, will be published in 1983.

All supplements are supplied free to subscribers.



## EAST AFRICAN RARE BIRD LIST

This list is in two parts, the rare birds and those of special interest whose status in East Africa still requires clarification; this second category is designated 'Requested Species'.

## Part 1: Rare Birds

Category S(A): those species which are considered to be exceedingly rare, and which have been recorded in East Africa on five or less occasions.

Category S(B): those species which are considered to be rare, for which there are more than five but less than 25 accepted records for East Africa.

An asterisk (\*) after the category indicates that there have been no records of the species since 1960.

The order and names follow *Birds of East Africa*, and scientific names are only given for species recorded after the book's deadline - 31 December 1978 or, in a few cases, early in 1979.

## 1.1 AFROTROPICAL AND OCEANIC SPECIES

<i>Birds of East Africa</i> Number	Species	Category
5	Black-browed Albatross	S(A) *
6	Jouanin's Petrel	S(A) *
-	Pintado Petrel <i>Daption capense</i>	S(A)
-	Giant Petrel species <i>Macronectes</i> sp.	S(A) *
7	Audubon's Shearwater	S(B)
-	Wilson's Storm Petrel <i>Oceanites oceanicus</i>	S(B)
8	Leach's Storm Petrel	S(A)
9	White-tailed Tropicbird	S(B)
10	Red-tailed Tropicbird	S(A)
13	Gannet	S(A) *
15	Brown Booby	S(A)
16	Red-footed Booby	S(A)
20	Lesser Frigatebird	S(A)
21	Greater Frigatebird	S(A)
22	Bittern	S(A) *
81	Ruddy Shelduck	S(A)
104	Chestnut-flanked Goshawk	S(A)
136	Long-tailed Hawk	S(A)
155	Taita Falcon	S(B)
168	Chestnut-naped Francolin	S(A)
174	Forest Francolin	S(B)
177	Smith's Francolin	S(B)
178	Nahan's Francolin	S(B)
179	Handsome Francolin	S(B)
200	Nkulenga Rail	S(A)

<i>Birds of East Africa Number</i>	<i>Species</i>	<i>Category</i>
209	Chestnut-tailed Pygmy Crake	S(B)
210	Streaky-breasted Pygmy Crake	S(B)
212	Chestnut-headed Pygmy Crake	S(A)*
223	Arabian Bustard	S(A)*
232	Forbes' Plover	S(B)
301	Brown Skua	S(A)
311	White-eyed Gull	S(A)
316	Lesser Noddy	S(B)
338	White-naped Pigeon	S(B)
343	Western Bronze-naped Pigeon	S(A)
387	Olive Long-tailed Cuckoo	S(A)
411	Long-eared Owl	S(A)
415	Fraser's Eagle Owl	S(B)
418	Chestnut Owlet	S(A)
426	Bates' Nightjar	S(A)
446	Forbes-Watson's Swift	S(B)
489	Little Green Bee-eater	S(A)
521	Black Dwarf Hornbill	S(A)
526	White-crested Hornbill	S(A)*
536	Miombo Pied Barbet	S(B)
547	Red-rumped Tinkerbird	S(A)
567	Kilimanjaro Honeyguide	S(B)
568	Dwarf Honeyguide	S(A)
570	Willcocks' Honeyguide	S(B)
571	Zenker's Honeyguide	S(A)
586	Gabon Woodpecker	S(A)
595	African Green Broadbill	S(A)
599	Green-breasted Pitta	S(B)*
611	Sun Lark	S(A)*
616	Collared Lark	S(B)
618	Dusky Bush Lark	S(B)
620	Friedmann's Bush Lark	S(B)
626	White-throated Swallow	S(A)*
629	Larger Striped Swallow	S(A)*
631	Pearl-breasted Swallow	S(A)*
638	Mascarene Martin	S(B)
650	Black-winged Oriole	S(A)
687	Dusky Babbler	S(B)
692	Blue Cuckoo Shrike	S(A)
694	Grauer's Cuckoo Shrike	S(A)
712	Simple Greenbul	S(A)
713	Bearded Greenbul	S(A)
717	Yellow-throated Nicator	S(B)
726	Sassi's Olive Greenbul	S(A)
733	White-tailed Greenbul	S(B)
745	Northern Bearded Scrub Robin	S(A)
758	Bocage's Ground Robin	S(A)
765	Dappled Mountain Robin	S(B)
-	Swynnerton's Forest Robin	
	<i>Swynnertonia swynnertoni</i>	S(A)
794	Black-eared Ground Thrush	S(A)

Bird of East Africa Number	Species	Category
797	Prigogine's Ground Thrush	S(A)
800	Forest Ground Thrush	S(B)
803	Kivu Ground Thrush	S(B)
814	Kungwe Apalis	S(B) *
816	White-winged Apalis	S(B)
820	Karamoja Apalis	S(B)
831	Bamboo Warbler	S(A) *
868	Tana River Cisticola	S(B)
882	Grauer's Warbler	S(B)
884	Short-tailed Warbler	S(A)
895	Grey Longbill	S(A) *
901	Tit Hylia	S(A) *
-	Long-billed Crombec <i>Sylvietta rufescens</i>	S(A)
-	Red-capped Crombec <i>Sylvietta ruficapilla</i>	S(A)
941	Gambaga Flycatcher	S(B)
943	Chapin's Flycatcher	S(B)
947	Böhm's Flycatcher	S(B)
969	White-bellied Crested Flycatcher	S(B)
985	Buffy Pipit	S(B) *
1002	Red-eyed Puffback	S(A)
1011	Uluguru Bush Shrike	S(B)
1016	Lagden's Bush Shrike	S(A)
1053	Sharp-tailed Glossy Starling	S(A) *
1086	Pygmy Sunbird	S(B)
1095	Splendid Sunbird	S(A)
1113	Angola White-bellied Sunbird	S(A)
-	Rufous-winged Sunbird <i>Nectarinia</i> sp. nov.	S(A)
1127	White-bellied Sunbird	S(B)
1152	Red-bellied Malimbe	S(A) *
1156	Maxwell's Black Weaver	S(A)
1190	Southern Brown-throated Weaver	S(A)
1220	Dusky Twinspot	S(A)
1248	Pale-fronted Negrofinch	S(A)
1251	Locust Finch	S(B) *
1253	Lesser Seed-cracker	S(B)
1272	Southern Rock Bunting	S(B) *
1286	Streaky-headed Seed-eater	S(B)
1289	Black-eared Seed-eater	S(B) *

## 1.2 PALAEARCTIC SPECIES

56	Eurasian Spoonbill	S(B)
71	Gadwall	S(B)
73	Northern Pochard	S(B)
75	White-eyed Pochard	S(B)
103	Levant Sparrowhawk	S(A) *
108	Eurasian Sparrowhawk	S(B) *
112	Greater Spotted Eagle	S(B)
113	Imperial Eagle	S(B)
149	Saker Falcon	S(B)
157	Barbary Falcon	S(A) *
162	Red-footed Falcon	S(B)

<i>Birds of East Africa Number</i>	Species	Category
205	Little Crake	S(A) *
206	Spotted Crake	S(B)
240	Lesser Golden Plover	S(B)
265	Pintail Snipe	S(A)
266	Jack Snipe	S(B)
268	Dunlin	S(A)
269	Knot	S(A)
271	Pectoral Sandpiper	S(A)
273	Long-toed Stint	S(A)
-	Red-necked Stint <i>Calidris ruficollis</i>	S(A)
276	Asiatic Dowitcher	S(A)
280	Buff-breasted Sandpiper	S(A)
284	Grey Phalarope	S(A)
302	Long-tailed Skua	S(A)
303	Arctic Skua	S(A)
304	Pomarine Skua	S(A)
308	Slender-billed Gull	S(B)
310	Great Black-headed Gull	S(B)
312	Mediterranean Gull	S(A)
313	Little Gull	S(A)
319	Black Tern	S(A)
330	Sandwich Tern	S(B)
352	Turtle Dove	S(A)
410	Short-eared Owl	S(A)
451	Pallid Swift	S(A) *
576	Eurasian Wryneck	S(B)
600	Short-toed Lark	S(A)
893	Savi's Warbler	S(A)
894	Grasshopper Warbler	S(A)
907	Wood Warbler	S(B)
976	Tawny Pipit	S(B)
1037	Nubian Shrike	S(A)
1275	Ortolan Bunting	S(A) *

Total: 157 species

*Part 2: Requested Species*

2.1 AFROTROPICAL AND OCEANIC SPECIES

3	Black-necked Grebe
14	Masked Booby
23	Little Bittern
24	Dwarf Bittern
29	Madagascar Squacco Heron
31	Rufous-bellied Heron
35	Black Heron
37	African Reef Heron
39	White-backed Night Heron
41	Shoebill
52	Green Ibis
77	African Pygmy Goose
91	Lammergeyer

Birds of East  
Africa Number

## Species

---

99	Southern Banded Snake Eagle
107	Little Sparrowhawk
109	Ovampo Sparrowhawk
117	Verreaux's Eagle
119	Grasshopper Buzzard
121	Red-necked Buzzard
139	Cuckoo Hawk
141	Swallow-tailed Kite
143	Bat Hawk
145	Fox Kestrel
152	African Hobby
164	Blue Quail
165	Quail
176	Red-winged Francolin
180	Moorland Francolin
185	Ring-necked Francolin
186	Stone Partridge
191	Quail Plover
192	Black-rumped Button Quail
195	Wattled Crane
197	African Crake
202	Allen's Gallinule
204	Striped Crake
207	Lesser Spotted Crake
211	Buff-spotted Pygmy Crake
213	White-spotted Pygmy Crake
214	Red-chested Pygmy Crake
216	African Finfoot
226	Lesser Jacana
227	Painted Snipe
250	Brown-chested Wattled Plover
289	Senegal Thicknee
293	Egyptian Courser
295	Violet-tipped Courser
315	Common Noddy
322	Bridled Tern
327	Sooty Tern
329	White-cheeked Tern
331	African Skimmer
335	Lichtenstein's Sandgrouse
336	Four-banded Sandgrouse
344	Afep Pigeon
353	Vinaceous Dove
354	Black-billed Wood Dove
359	Bruce's Green Pigeon
363	Red-headed Lovebird
368	Brown-necked Parrot
370	Rose-ringed Parakeet
385	Dusky Long-tailed Cuckoo
386	Barred Long-tailed Cuckoo
392	Great Spotted Cuckoo
393	Black and White Cuckoo

Birds of East  
Africa Number

## Species

---

394	Levaillant's Cuckoo
396	Black Cuckoo
397	African Cuckoo
398	Lesser Cuckoo (Madagascar race)
400	Thick-billed Cuckoo
403	Black Coucal
408	Cape Grass Owl
417	Barred Owlet
420	Red-chested Owlet
421	Sokoce Scops Owl
422	White-faced Scops Owl
423	Madagascar Scops Owl
425	Pel's Fishing Owl
427	Slender-tailed Nightjar
428	Long-tailed Nightjar
429	Donaldson-Smith's Nightjar
431	Gabon Nightjar
432	Dusky Nightjar
433	Plain Nightjar
434	White-tailed Nightjar
435	Nubian Nightjar
438	Star-spotted Nightjar
439	Freckled Nightjar
440	Standard-winged Nightjar
441	Pennant-winged Nightjar
445	Black Swift
448	Horus Swift
453	Scarce Swift
458	White-headed Mousebird
460	Red-faced Mousebird
467	White-bellied Kingfisher
481	Böhm's Bee-eater
485	Swallow-tailed Bee-eater
486	Blue-headed Bee-eater
495	Abyssinian Roller
499	Racquet-tailed Roller
504	Forest Wood Hoopoe
522	Hemprich's Hornbill
525	Pale-billed Hornbill
527	Abyssinian Ground Hornbill
532	Whyte's Barbet
543	Black-backed Barbet
545	Red-faced Barbet
553	Speckled Tinkerbird
562	Least Honeyguide
565	Pallid Honeyguide
575	Red-throated Wryneck
587	Uganda Spotted Woodpecker
588	Stierling's Woodpecker
593	Brown-backed Woodpecker
596	African Broadbill
598	African Pitta

Birds of East  
Africa Number

## Species

---

603	Rufous Short-toed Lark
604	Spike-heeled Lark
622	Williams' Bush Lark
628	Blue Swallow
670	Spotted Creeper
676	Mountain Illadopsis
679	Hinde's Pied Babbler
684	Brown Babbler
695	White-breasted Cuckoo Shrike
699	Little Grey Greenbul
714	Red-tailed Greenbul
719	Toro Olive Greenbul
721	Grey-olive Greenbul
743	Brown-backed Scrub Robin
759	Iringa Ground Robin
760	Usambara Ground Robin
761	Grey-winged Ground Robin
768	Little Rock Thrush
774	Red-breasted Wheatear
787	East Coast Akalat
795	Spotted Ground Thrush
799	Groundscraper Thrush
822	Long-billed Apalis
842	Papyrus Yellow Warbler
846	Rock-loving Cisticola
874	Red-winged Grey Warbler
883	Red-winged Warbler
890	Southern Hyliota
891	Yellow-bellied Hyliota
952	Grey-headed Batis
955	Black and White Flycatcher
962	White-tailed Blue Flycatcher
974	Short-tailed Pipit
975	Little Tawny Pipit
983	Sokoce Pipit
1009	Papyrus Gonolek
1010	Red-naped Bush Shrike
1033	Emin's Shrike
1040	Souza's Shrike
1044	Grey-crested Helmet Shrike
1047	Abbott's Starling
1049	Sharpe's Starling
1054	Bronze-tailed Glossy Starling
1059	Purple Glossy Starling
1062	White-winged Starling
1071	Magpie Starling
1075	Shelley's Starling
1100	Shining Sunbird
1106	Miombo Double-collared Sunbird
1136	Parasitic Weaver
1142	Fire-fronted Bishop
1158	Orange Weaver

Birds of East  
Africa Number

Species

---

1167	Clarke's Weaver
1168	Heuglin's Masked Weaver
1178	Olive-headed Golden Weaver
1182	Fox's Weaver
1184	Compact Weaver
1188	Weyn's Weaver
1203	Somali Sparrow
1213	Jameson's Firefinch Indigobird
1217	Broad-tailed Paradise Whydah
1245	Chestnut-breasted Negrofinch
1250	Black-chinned Quailfinch
1255	Orange-winged Pytilia
1267	Magpie Mannikin
1287	Papyrus Canary
1291	Stripe-breasted Seed-eater

2.2 PALAEARCTIC SPECIES - LIST A

23	Little Bittern
47	Black Stork
65	Teal
68	Wigeon
74	Tufted Duck
100	Short-toed Eagle
115	Lesser Spotted Eagle
123	Long-legged Buzzard
127	Booted Eagle
140	Honey Buzzard
146	Eastern Red-footed Falcon
151	Sooty Falcon
154	Eleonora's Falcon
158	Peregrine Falcon (race <i>calidus</i> )
165	Quail
196	Corncrake
228	Oystercatcher
229	Kentish Plover
231	Little Ringed Plover
253	Curlew
255	Spotted Redshank
260	Redshank
263	Great Snipe
274	Temminck's Stint
275	Broad-billed Sandpiper
277	Bar-tailed Godwit
278	Black-tailed Godwit
285	Red-necked Phalarope
288	Stone Curlew
297	Black-winged Pratincole
305	Herring Gull
314	Black-headed Gull
325	Caspian Tern



Birds of East  
Africa Number

Species

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328	Common Tern
395	Eurasian Cuckoo
398	Lesser Cuckoo (n nominate race)
424	Scops Owl (Palaeartic races)
430	Eurasian Nightjar
444	Eurasian Swift
449	Alpine Swift (n nominate race)
502	Hoopoe (n nominate race)
762	Irania
781	Redstart
808	Basra Reed Warbler
885	Icterine Warbler
886	Upcher's Warbler
887	Olive-tree Warbler
892	River Warbler
904	Chiffchaff
920	Barred Warbler
930	Collared Flycatcher
992	White Wagtail
1038	Woodchat Shrike

2.2 PALAEARCTIC SPECIES - LIST B

62	Pintail	} <i>Except</i> highland and rift valley areas of
64	Shoveler	
114	Steppe Eagle	W and S Uganda; W Tanzania
156	Lesser Kestrel	Uganda and W Tanzania
234	Great Sandplover	Inland records
236	Mongolian Sandplover	Inland records
241	Grey Plover	Inland records
254	Whimbrel	Inland records
261	Terek Sandpiper	Inland records
267	Sanderling	Inland records
281	Turnstone	Inland records
480	Eurasian Bee-eater	Dec-Feb records Uganda and N Kenya
497	Eurasian Roller	Jan-Feb records W of the Kenya rift
651	Golden Oriole	Late Dec-early Mar records away from
742	Rufous Bush Chat	Away from SE and coastal Kenya [coast
763	Sprosser	<i>Except</i> central and E Kenya and Tanzania, Nov- Dec and late Mar-Apr
764	Nightingale	Uganda, N and W Kenya and Tanzania <i>except</i> the northeast
769	Rock Thrush	SW Uganda and NW Tanzania
775	Isabelline Wheatear	SW Uganda and Tanzania <i>except</i> the northeast
779	Pied Wheatear	W and S Uganda; Tanzania <i>except</i> the northeast
783	Whinchat	Kenya and east Tanzania
805	Great Reed Warbler	<i>Except</i> central and E Kenya during April
809	Marsh Warbler	<i>Except</i> central and E Kenya, Nov-early January

Birds of East  
Africa Number

Species

---

812	Reed Warbler	E Kenya and E Tanzania
886	Upcher's Warbler	Except inland SE Kenya
888	Olivaceous Warbler	S Uganda; S and W Tanzania
919	Whitethroat	N and W Kenya; N and W Uganda; W Tanzania
920	Barred Warbler	Except inland SE Kenya
977	Red-throated Pipit	Uganda and Tanzania
994	Grey Wagtail	Except highlands of Uganda, Kenya and N Tanzania
1030	Red-backed Shrike	Uganda, N Kenya and NW Tanzania during Jan-Feb
1034	Red-tailed Shrike	S Tanzania; NW Tanzania and SW Uganda
1036	Lesser Grey Shrike	Except April

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# *SCOPUS*

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*Edited by*

GRAEME BACKHURST

# SCOPUS

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*Continued inside back cover*

# SCOPUS

## THE MIGRATION AND WINTERING OF PALAEARCTIC *ACROCEPHALUS* WARBLERS IN KENYA AND UGANDA

D.J. Pearson

An earlier account (Pearson 1978) summarized the status, habitat requirements and distribution in Kenya and Uganda of the four visiting Palaearctic *Sylvia* warblers. Wintering and passage were mapped on a one square degree grid, employing two levels of established abundance. In the present account, the five visiting Palaearctic *Acrocephalus* species are dealt with similarly. The group is an interesting one. There are striking interspecific contrasts regarding status, migration routes, wintering distribution, wingmoult strategy and habitat preference. In the case of the Marsh Warbler *A. palustris*, Kenyan ringing has demonstrated the involvement of birds from west and central Europe as well as from Russia (Backhurst 1972, 1977, 1981). In the other species, however, birds reaching East Africa are probably all derived from populations breeding in Russia and southwest Asia.

The mapping system employed here is similar to that used before (Pearson 1978), except that the basic unit is the quarter square degree. Also, for conformity, the 'winter' period is taken throughout the two countries as 1 January to 20 March. Many migrant passerines are indeed sedentary in winter quarters over much or all of this period, but it is nevertheless inevitably a compromise. Thus, southward passage is still marked through southeast Kenya until mid January (e.g. Pearson & Backhurst 1976). Northward movement on the other hand is noticeable in some migrant warblers (but not *Acrocephalus*) from early March. Even in February, some passerines are still appearing in East African 'wintering' sites, whilst others are already beginning to move away. January to March coverage for wintering migrants has been considerably expanded in Kenya during the past four years. Current coverage is mapped here in Fig. 1, which, to facilitate comparison with Pearson (1978), employs the coarser one square degree grid.

The individual species are discussed below. Statements unsupported by references are based on Jackson (1938), Pearson (1972), Pearson (1973), Fry, Britton & Horne (1974), Hopson & Hopson (1975), Pearson & Backhurst (1976), Pearson, Britton & Britton (1977), Pearson, Backhurst & Backhurst (1979), annual accounts of migration at Ngulia Lodge for the years 1976 to 1980

published in *Scopus*, reports of the EANHS Ringing Scheme covering the seasons 1971/72 - 1980/81 published in the *Journal of the East Africa Natural History Society and National Museum*, and unpublished records of the author and the observers listed under Acknowledgements.

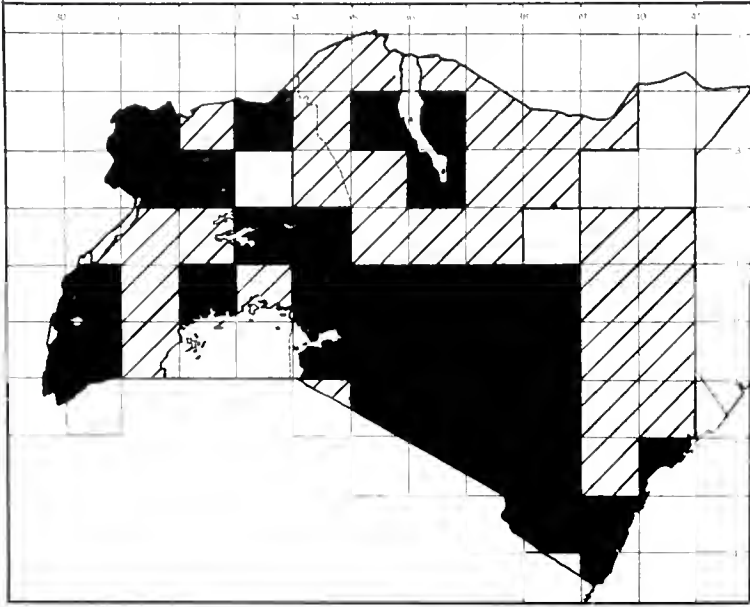


Fig. 1 (left) January-March coverage of square degrees for Palaeartic passerines during the period 1964-82 in Kenya and Uganda.  
 Black: 6 or more mornings' observation between 1 Jan and 20 March by the author and/or one or more observers listed under Acknowledgements.  
 Hatched: 1-5 mornings' observations (as defined above).  
 White: no recent observations (as defined above).

#### SEDGE WARBLER *ACROCEPHALUS SCHOENOBÆNUS*

The Sedge Warbler has a wider and more northerly breeding distribution than the other species reviewed here. It ranges from Britain and Ireland in the west to the Yenesei in the east, north to about 70°N in the USSR, and south to the Adriatic, the northern Black Sea coast and the Caucasus (Voous 1960). It winters widely in Africa from about 10°N to Namibia and Natal. In Kenya and Uganda, it is known as a passage migrant, far more abundant in spring than autumn, and as a locally abundant winterer (Fig. 2a).

The species seems to be confined in winter to the immediate vicinity of water, frequenting tall grass, sedges, thickets, low trees and even papyrus on the margins of lakes, dams and rivers. It is locally abundant on the shores of Lake Victoria and Lake Kyoga, and along the Nile, but less common in western Uganda. It also winters up to 2400 m on the dams of the western and central Kenya highlands, and abundantly on the Kenya rift valley lakes wherever there is suitable fringing vegetation. In eastern Kenya, however, it seems to be mainly restricted in winter to the lower Tana and Lake Jipe.

Although there are records as early as September (earliest, 17th), most Sedge Warblers arrive very late in the year. Autumn passage involves unmoulted birds in November, but also moulted and partially moulted birds in December. This movement has been noted on the western Uganda lakes, at Lake Bisina (east Uganda), at Lakes Nakuru and Naivasha and in the Nairobi area, but numbers recorded are small. Very few birds appear in autumn at Ngulia in Tsavo West. The large numbers of Sedge Warblers which reach southern Africa may pass mainly through eastern Zaire. Alternatively they may overfly Uganda and west-central Kenya; an unusual fall of migrants at Nairobi in rain and thick overcast on 19 December 1971 included scores of this species.

Most wintering birds appear late in December or in January; locally, arrivals have been noted as late as February. The great majority of these winterers arrive already in fresh plumage, and records of moult during January to March are few. Many winterers remain attached to precisely the same site for weeks at a time, but movements may be necessitated by March due to drying up of

lake margins. In Uganda, the Sedge Warbler (but not other species in the genus) concentrates, at times in hundreds, at the swarms of lakeflies (Chironomidae and *Chaoborus*) which periodically smother vegetation on the shores of Lake Victoria. Full song is heard frequently in the Kenya rift valley from the end of December and at Lake Victoria from the end of January, continuing in both areas to early April. Departure of winterers overlaps with the beginning of the northward passage movement, but ringing-retrapping results have indicated that it takes place mainly during the first half of April (Pearson 1972, Pearson, Backhurst & Backhurst 1979). Later records from Lake Victoria (to 1 May) and western Uganda (to 10 May) probably involve passage birds.

Spring passage is particularly marked in Kenya from the rift valley lakes to the coast. It occurs mainly from 10 April to 5 May, but birds commonly remain to mid May (latest 17th). During this movement, birds tend to appear in a wider range of habitats, including dry scrub and bushland, but the larger numbers are again associated with concentrations of insects near water. Weight studies (Pearson *et al.* 1979) have indicated the importance of some Kenyan spring passage sites as staging points for very long flights.

The generally long winglength of birds wintering and on passage in Kenya and Uganda indicates that the great majority at least are from breeding areas in Russia or Siberia. The single recovery of a Kenya-ringed bird was during August, from the northern shore of the Black Sea (Backhurst 1973).

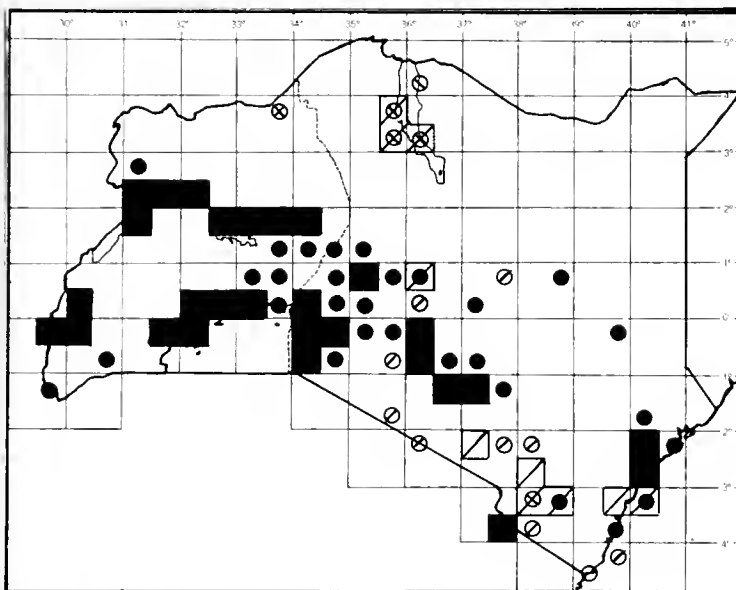


Fig. 2a. *Sedge Warbler Acrocephalus schoenobaenus*

Fig. 2 a,b,c,d,e. Recorded distribution of the five Palaeartic *Acrocephalus* species in Kenya and Uganda.  
 Large squares: frequent to abundant. Records indicate the annual presence of at least 100 individuals within the quarter square degree  
 Small circles: rare to uncommon, or known from few records.

Key

- ■ Recorded between 1 Jan and 20 Mar
- ▤ Recorded only Sep - Dec (autumn)
- ▥ Recorded only 21 Mar - May (spring)
- ⊗ ⊞ Recorded only in autumn and spring

Pre 1964 records are shown by small triangles

MARSH WARBLER *ACROCEPHALUS PALUSTRIS*

The Marsh Warbler breeds from northern France (and locally SW England) to the Urals, north in Russia to about 60°N, south to the northern Balkans and the Caucasus. It migrates entirely through the Middle East, and spends the late winter in SE Africa, from Kenya to Natal, and west to Zambia and locally Namibia (Voous 1960, Pearson & Backhurst 1976, Dowsett-Lemaire 1979). It is primarily a passage migrant in Kenya, abundant only in the east, and few remain to winter. In Uganda, it has rarely been recorded (Fig. 2b).

Southward passage occurs mainly during November and December, and the species is then often the most abundant Palaeartic passerine in greener parts of inland eastern Kenya where, clearly, many birds habitually break their migration. Movement appears to be practically confined to areas east of Lake Turkana, Laikipia and Mt Kenya. Birds are common in most years west to Thika and Nairobi, but the main movement would seem to be across eastern Ukambani and Tsavo, passing east of Mt Kilimanjaro. Thus, whereas birds are abundant west to Makindu and Taveta, they are rarely seen in the Amboseli, Namanga and Kajiado areas, or around Arusha in Tanzania (Beesley 1972). Large autumn concentrations have been noted north to the Ura River (in Meru) and Isiolo, whilst the few records from further north are from Archer's Post, Ololokwe, Chanler's Falls and Marsabit. To the west, there is the odd record from the Kinangop, Naivasha, Morendat and Kedong, but none from such well watched rift valley localities as Nakuru, Baringo and Lake Turkana. There are late November-December records from Nyanza and five from Kampala, all of birds caught for ringing. There is also an old report of a November bird at Masindi. M.P.L. Fogden (pers. comm.) did not encounter the species during intensive netting in southwest Uganda, but Vande weghe (1979) mentions four birds recently caught or collected in Rwanda. The eastern limits of the southward movement are poorly defined. The species is practically absent from the Kenya coast and the lower Tana valley, and has not been much noted east of Buchuma. Further north, there seem to be no records from Wajir, or even from Garissa, but the situation remains to be clarified.

There are few Kenya records of the Marsh Warbler for October (earliest 2<sup>nd</sup>). At Nairobi, and elsewhere on the eastern edge of the central highlands north

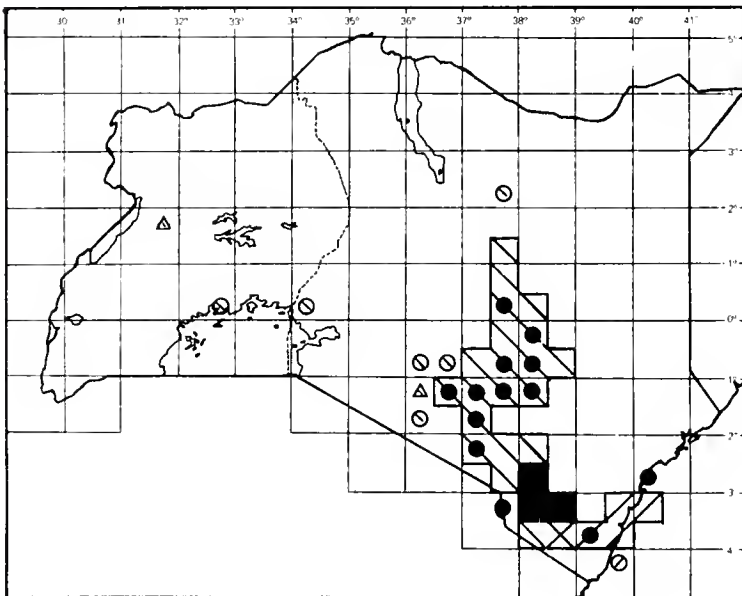


Fig. 2b. Marsh Warbler *Acrocephalus palustris*



to Isiolo, autumn records are mostly for the period 5-25 November. The main movement across Ngulia is later, from mid November to mid December, and peak numbers occur in the bushland from eastern Meru to Voi during December, when vegetation has leafed out and herbaceous growth has proliferated with the rains. Birds remain common in southeastern Kenya to mid January, and the main 'wintering period' plots for this area in Fig. 2b are a reflection of this late passage. Southward passage birds have unmoulted wing and tail feathers, although a few in early January have renewed their innermost primaries. Adults, however, have freshly renewed body plumage.

Marsh Warblers have recently been found overwintering in small numbers in southeastern and eastern Kenya; more appear to remain in years with protracted short rains'. Wintering seems to be regular at Isiolo (one site), Embu and Kitui, and perhaps in Meru, Machakos, Kibwezi and the lower Tana valley. There are also February/early March records from Kabete, Taveta, Mtito Andei, Tsavo (West) and Samburu (Coast Province). Assessment of an old February record from Mbarara (southwestern Uganda) would require re-examination of the specimen. Wintering birds, like autumn passage migrants, prefer moist leafy scrub and thickets, herbaceous undergrowth and overgrown ditches. The full varied song (see Dowsett-Lemaire 1979) is only rarely heard during the autumn passage period, and then at very subdued volume. Longer and louder sequences may be heard from mid February to mid April, at a time when birds are completing moult.

The spring passage is generally less noticeable than the autumn one. It again appears to be confined to eastern Kenya, but extends east to the coast and its hinterland. Records from Nairobi and elsewhere in central Kenya are far fewer than in November, and there are no April records from further north in the country. The relatively small number seen in Tsavo and Ukambani would suggest that most spring birds overfly the area. On two of the three observed occasions in mid to late April when weather conditions produced falls at Ngulia Lodge, Marsh Warblers were grounded there in hundreds. Kenyan spring passage records span the period 3 April to 5 May.

#### REED WARBLER *ACROCEPHALUS SCIRPACEUS*

This species has a rather more southerly and more extensive breeding range than the Marsh Warbler. The nominate race breeds through Europe (also in the Maghreb), north to England and southern Sweden; thence east to the Ukraine. The larger, paler eastern race *fuscus* ranges from the Near East, the Caucasus, northern Iran and the lower Volga east to Lake Balkhash and the Tien Shan (Vaurie 1959). The species winters in Africa, from Senegal east to Ethiopia, but south only to Zambia. In Uganda, it occurs abundantly in green thicket in the western rift valley in the vicinity of Lakes Edward, George and Mobutu. It is also common along the Nile, and in mixed rank grass/moist thicket situations, often on the edges of cultivation, near Lake Kyoga and in the Lake Victoria basin from Masaka and Kampala to Central and South Nyanza in Kenya. Elsewhere in west and central Kenya it winters locally up to 2000 m, mainly in riverine thicket along the upper Tana and upper Athi and their tributaries. Except in the Tana valley, and locally on the Galana, it seems to be absent from eastern areas (Fig. 2c).

In Uganda and Nyanza, a few birds arrive during September (earliest, 9th) and October, but the main influx occurs from November to early January. In central Kenya, the earliest records are from mid to late October, and most winterers appear to arrive in December. Autumn passage is nowhere obvious against the background of arrival of winterers. Birds presumably cross or overfly Uganda and western Kenya, but the species' minute representation in the Ngulia falls discounts any appreciable southward migration east of

Kilimanjaro. Birds which arrive up to November, and some of those in December and early January, are still in old plumage. However, most December and January arrivals are freshly moulted. Both moult groups include adult and first year birds. About half the birds wintering in southern and western Uganda arrive unmoulted; these renew their entire plumage during January to early March. By contrast, the great majority of birds wintering at Nairobi moult before arrival, and active moult is rarely recorded there.

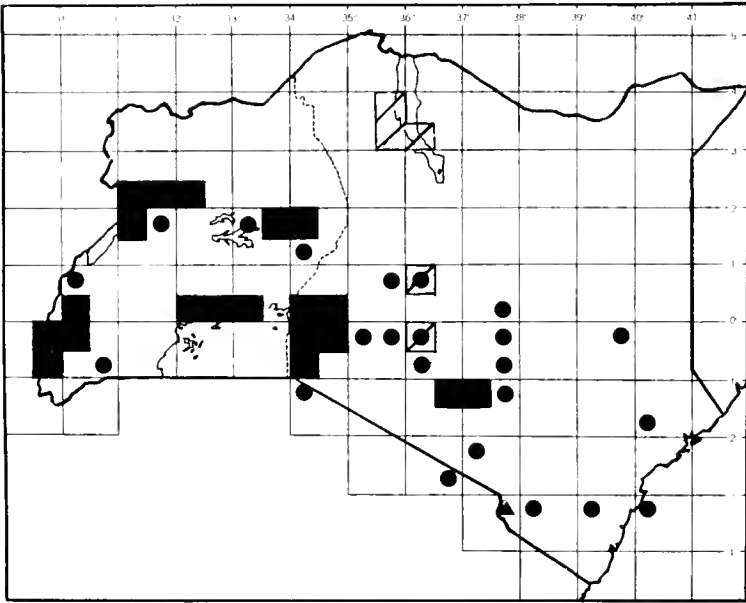


Fig. 2c. Reed Warbler *Acrocephalus scirpaceus*

Birds are vocal throughout the wintering period, but full song (earliest record 17 November) seems to be given only by moulted birds. This species is often highly sedentary in its winterquarters, and ringing-retrapping and colour ring observation in Uganda have shown that individuals utilize well defined but overlapping feeding territories over periods of up to five months (Pearson 1972, M.P.L. Fogden, pers. comm.). A very high proportion of surviving birds return to precisely the same wintering site in successive years.

In Uganda, most wintering birds depart during the first half of April; few are seen later (latest 1 May), and there is little indication of spring passage. In central Kenya, on the other hand, passage is evident, both in the rift valley (particularly at Lake Turkana) and at Nairobi, so that departure of local winterers is largely masked. Movement lasts from the end of March to mid May (latest 17 May), but is concentrated mainly from 5 to 30 April. There are a few spring records from Ngulia, but evidence of substantial movement east of the highlands is lacking.

It has been claimed (e.g. Jackson 1938, Vaurie 1959) that both races of the Reed Warbler reach East Africa, and indeed most birds caught for ringing can be placed in one of two colour categories. However, the proportion of the more warmly coloured birds (about one in four) is no higher in Uganda than in Kenya, and colour differences are not associated with any difference in wing-length or moult strategy. Even these warmly coloured birds are longer winged and paler, less dusky below, than birds from central and eastern Europe, and can be matched by some specimens from Arabia and the Caspian area. Shorter winged birds such as have been caught in autumn in northern Sudan (G. Nikolaus, pers. comm.) do not seem to reach East Africa, and it seems that all Kenyan and Ugandan winterers are probably referable to *fuscus*. Two Kenyan ringed birds have been recovered, one in early May in Astrakhan and the other on autumn passage in Saudi Arabia.

GREAT REED WARBLER *ACROCEPHALUS ARUNDINACEUS*

The species breeds between approximately 35° and 55°N throughout continental Europe and the USSR east to Kazakhstan, including Asia Minor, the Caucasus and the Maghreb (Voous 1960). It winters in Africa, from Senegal east to Ethiopia and Kenya, and south to northern Namibia and Natal. In Kenya and Uganda, wintering is somewhat local and involves small numbers, but the species is prominent as a spring passage migrant through central and eastern Kenya (Fig. 2d). It occurs in moist habitat with scattered green thickets, tall

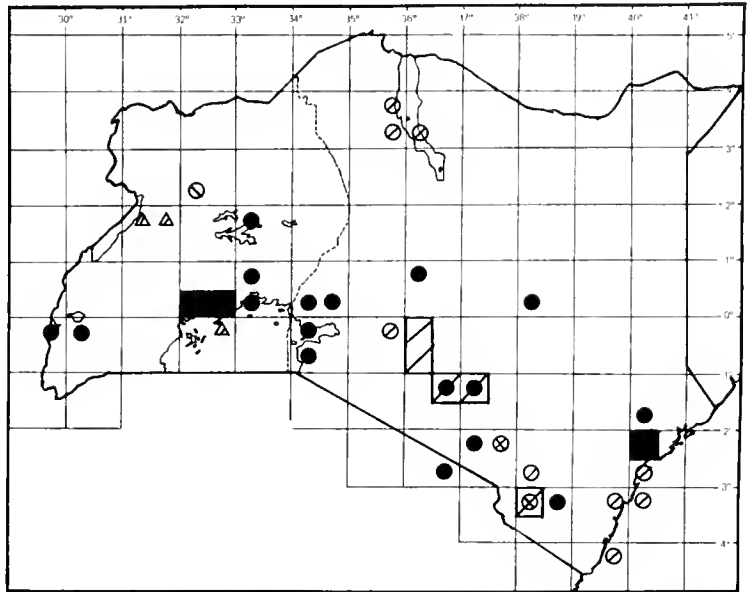


Fig. 2d. Great Reed Warbler  
*Acrocephalus arundinaceus*

rank grass, bulrushes or maize plantations, mainly near lakes or rivers, but with no special attachment to water. On passage it may frequent drier, more open situations.

In Uganda, the Great Reed Warbler is a regular winterer in the Lake Victoria basin, but there are surprisingly few records from the western lakes, or from Kyoga. In Kenya, it is common in parts of the lower Tana valley, but otherwise thinly and locally distributed in Nyanza, and up to 1600 m in the central highlands, north to Isiolo and east to Sultan Hamud.

The species enters southern Africa in large numbers, reaching Zambia and Zimbabwe by late November. It is surprisingly scarce, however, on southward passage in Kenya and Uganda. There are single November records from Butiaba and Kampala, and mid October and early November records (both birds unmoulted) from Nairobi. In addition, fresh-plumaged birds have occurred very occasionally at Ngulia Lodge between mid November and early January. The very low numbers grounded at Ngulia certainly indicate that few birds use a southward route through eastern Kenya. Many possibly overfly Uganda and western Kenya, but the main autumn route perhaps lies further west, through Zaire. This species is much in evidence in northern Sudan in September.

Apart from the presumed passage records mentioned above, arrival in Kenya and Uganda has not been noted until early December; winterers continue to occupy local sites throughout December and January. These birds are all in very fresh plumage, presumably acquired in the northern tropics (see Pearson 1975). Vigorous song is heard from the time of arrival onwards, and winterers are often sedentary in local territories for many weeks, although sometimes disappearing about February if conditions become too dry. Song ceases in late March, and local birds probably depart by early April. Indeed, there are few Uganda records after the first few days of this month. In Kenya, northward passage is evident from the end of March to the end of April (latest record 30 April), but occurs mainly from 5 to 25 April. Birds are noted regularly at

the rift valley lakes from Naivasha to Turkana, and in the Nairobi-Thika-Athi River area, and more occasionally east to Tsavo and the coast. The involvement of the species in falls at Ngulia in April (Pearson 1980) indicates a significant northward migration east of Kilimanjaro.

Birds breeding east of the Volga are assigned to the race *zarudnyi*; although typically paler than nominate birds these are not strikingly distinct in the breeding season. Some 30 per cent of Kenyan spring birds caught for ringing appear to be of this race, lacking warmth in the upperpart plumage and having white underparts with buff confined to the sides of the flanks; others conform convincingly with the characters given for the nominate race (Vaurie 1959), but some are intermediate and not readily assignable. Of ten wintering birds examined at Kampala, three were confidently assigned to *zarudnyi*.

#### BASRA REED WARBLER *ACROCEPHALUS GRISELDIS*

The Basra Reed Warbler breeds south of the Great Reed Warbler, its range restricted to Lower Iraq (Vaurie 1959). Its wintering appears to be confined to eastern Africa from Somalia south to Malawi and exceptionally Mozambique (Clancey 1975, Pearson et al. 1978, Ash 1978, Hanmer 1979, Ash & Miskell 1981).

There are two records from Uganda, both freshly moulted birds caught in Kampala in November. In Kenya, the species is known as a regular autumn passage migrant and winterer, but with records all from southern, and predominantly eastern areas (Fig. 2e). Most passage records are from Ngulia Lodge, where

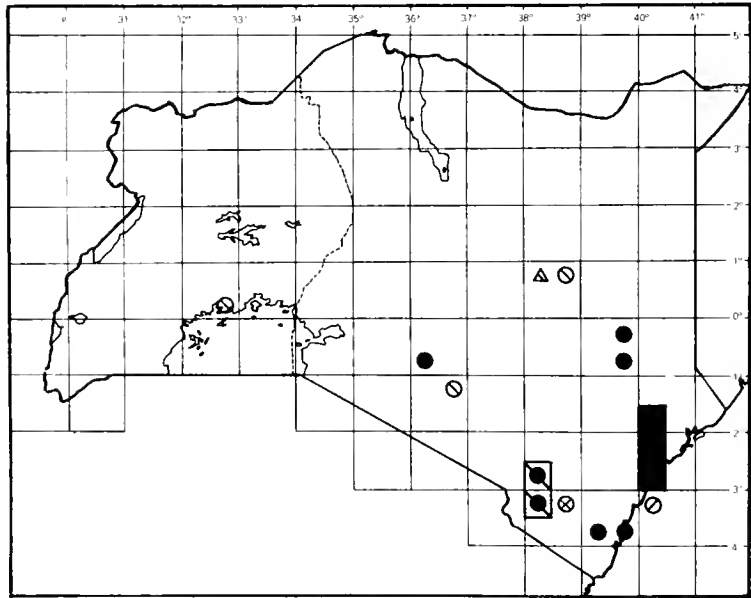


Fig. 2e. *Basra Reed Warbler*  
*Acrocephalus griseldis*

over 450 birds have been caught since 1969. Here, the main movement occurs from late November to mid December, with extreme dates 27 October and 13 January. Birds have also been recorded between November and early January at Athi River, Habaswein, Mtito Andei, Tsavo (West and East) and Bamburi. Most of these passage birds are fully moulted or have only a few outer primaries unmoulted; some 30 per cent, however, are still in old plumage.

The species winters in Kenya in the lower Tana valley, where it is widespread, and in places abundant, from Baomo to Karawa. Many freshly moulted birds are present here by early December, and departure appears to be late in March. Elsewhere, there are late January to early March records from Garissa (several birds at two sites), Mtito Andei (several times), Bamburi, Maji ya Chumvi and Naivasha. The usual winter habitat is moist green thicket with tall

TABLE 1  
Comparison of the status, wintering distribution, passage routes, habitats and wing moult timing of the five Palearctic *Acrocephalus* species

Species	Status in Kenya and Uganda	Wintering distribution	Passage route to and from southern Africa	Favoured habitat	Timing of wing moult in Kenya and Uganda winterers
<i>A. schoenobaenus</i>	Winterer and passage migrant esp. in spring	Uganda, Nyanza, W, central and SE Kenya	Uganda, W and central Kenya. Also E Kenya in spring	Moist thicket, low trees, tall grass, sedge & reeds next to water	Most before arrival
<i>A. palustris</i>	Passage migrant, esp autumn; very few winter	Inland SE Kenya	E Kenya (east of Mt Kilimanjaro)	Moist scrub, thicket, herbaceous undergrowth	After arrival (Jan - Mar)
<i>A. scirpaceus</i>	Winters; passage evident locally, esp in spring	Uganda, Nyanza & central Kenya highlands	Uganda, W and central Kenya	Moist scrub and thicket, rank grass	Most before, a few after arrival
<i>A. arundinaceus</i>	Spring passage migrant; small numbers winter locally	Uganda, central Kenya highlands, lower Tana	?Uganda (?E Zaire) In spring through central and E Kenya	Tall moist thicket tall grass, bulrushes	Before arrival (?Oct - Nov)
<i>A. griseldis</i>	Local winterer and autumn passage migrant	SE Kenya esp lower Tana	E Kenya	Moist thicket, tall grass, sedges often on ditches and flood water	Most before arrival

rank grass, often near or over drying flood pools; also saltbush *Sueda monoica* on seasonally inundated ground, tall grass and sedge along wet ditches and occasionally the herbaceous woodland undergrowth more typically favoured by the Marsh Warbler. In general, wintering Basra Reed Warblers seem to associate more with water than Marsh, Reed or Great Reed Warblers. Song is heard frequently during February and March.

There are very few Kenya records attributable to spring passage: singles at Bamburi, 7 April; Voi, 11 April; Watamu, 11 April and Ngulia, 13 April.

#### DISCUSSION

Table 1 summarizes aspects of wintering, migration and moult strategy in order to facilitate comparison of the five *Acrocephalus* species treated in this paper. The almost exclusively eastern Kenyan occurrence of the Marsh Warbler and the Basra Reed Warbler contrasts with the predominantly Ugandan/west-central Kenyan occurrence of the other three species, although the Great Reed Warbler and the Sedge Warbler do cross eastern areas on spring passage. The virtual separation of the Marsh and Reed Warbler, on passage as well as in winter quarters, is striking, and the sharp western limit for Marsh Warbler records, suggesting a channelling of passage by the mountain blocks of Ethiopia and Kenya, is especially interesting. Differences in habitat preference are generally subtle, except in the case of the Sedge Warbler, which, in contrast to the other species, invariably winters in waterside situations.

The main arrival of all five species in East Africa is late. The autumn stopover in the northern tropics clearly constitutes an important phase in the annual cycle of these warblers, possibly associated with their attachment to moist habitats. It certainly tends to be particularly well utilized in the group for the accommodation of moult processes.

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EAST AFRICAN CROWNED CRANE *BALEARICA REGULORUM GIBBERICEPS*  
 ECOLOGY AND BEHAVIOUR IN NORTHERN TANZANIA<sup>1</sup>

George W. Frame

Four morphologically distinct kinds of crowned cranes were recognized in Africa by Mitchell (1905). Walkinshaw (1964) reviewed and separated them into two species, each with two subspecies. They are the West African Crowned Crane *Balearica p. pavonina*, the Sudan Crowned Crane *B. p. ceciliae*, the South African Crowned Crane *B. r. regulorum* and the East African Crowned Crane *B. r. gibbericeps*. The division into two species is further supported by differences in their vocalizations, but there is no detectable vocalization difference between the two subspecies of *regulorum* (Archibald 1976). More recently, however, Snow (1978) concluded that all crowned cranes are conspecific as *B. pavonina*. I prefer to follow Walkinshaw's grouping here. The distribution of crowned cranes was reviewed by Walkinshaw (1964, 1973).

Recently there has been concern about the conservation status of crowned cranes (e.g. Parker 1971, Walkinshaw 1964, 1973). Unfortunately an accurate and comprehensive assessment is impossible, because little is known of their distribution, numbers, and breeding success in most African countries. Exceptions are Uganda and Kenya (see Pomeroy 1980a). The purpose of the present paper is to further document the distribution, numbers and breeding of the East African Crowned Crane in a part of northern Tanzania.

#### STUDY AREA

My observations of Crowned Cranes were made while I was carrying out other programmes of ecological research in the Serengeti National Park and the contiguous Ngorongoro Conservation Area, Tanzania. Most of the fieldwork in the Park was confined to the Serengeti Plains and the surrounding woodland edge. Within the conservation area the fieldwork was done in the calderas of Ngorongoro and Empakaai, and on the plateau in between. All these places are bounded by the co-ordinates 2.18' to 3.16'S and 34.42' to 35.53'E. For an overview of this area see Kruuk (1972) and Sinclair & Norton-Griffiths (1979).

The elevation of the Serengeti Plains is mostly 1600-1700 m above sea level, similar to the floor of Ngorongoro Crater which lies at 1700-1900 m. The top of Ngorongoro Crater's rim is about the same elevation as the floor of Empakaai Crater, 2225 m. Empakaai Crater's rim is the highest place among the study areas, varying from 2500-3200 m. A plateau of high-altitude grasslands designated as the Maasai Cattle Ranching Area covers the 50 km between the two calderas. Near the middle of the plateau, at Nainokanoka village, the elevation is 2650 m.

The rainy season in these areas is November to May. The mean annual rainfalls are as follows: Serengeti Plains 50-70 cm (Norton-Griffiths, Herlocker & Pennyquick 1975), Ngorongoro Crater 90 cm on the rim and 63-80 cm on the floor (Anderson & Herlocker 1973), Empakaai Crater about 100 cm on the rim (Frame, Frame & Spillet 1975), Nainokanoka village about 87 cm (Frame et al. 1975). Both calderas have more places of permanent water during the dry season than do the Maasai Cattle Ranching Area and the Serengeti Plains.

Temperatures are mild. On the Serengeti Plains the temperatures seldom exceed 32C in the hottest months, September and October, and seldom fall below 10C in the coldest months of July and August (Schaller 1972). At Ngorongoro

<sup>1</sup>This is a Serengeti Wildlife Research Institute Contribution



Crater the mean maximum is about 20C, with November being the hottest month; the mean minimum is about 4C in June and July (Anderson & Herlocker 1973). At Empakaai Crater the temperatures occasionally reach 25C in the hottest month, March, and fall to 5C in the coldest months of July and August, but frost occurs almost daily in August (Frame et al. 1975).

Short and medium grasslands (*sensu* Pratt, Greenway & Gwynne 1966) cover most of the Serengeti Plains, the floor of the two calderas, and the connecting plateau. These grasslands are interspersed with permanent and seasonal streams, swamps, alkaline lakes and waterholes. The vegetation was described by Anderson & Talbot (1965), Herlocker & Dirschl (1972), Kreulen (1975) and McNaughton (1979).

## METHODS

Whenever Crowned Cranes were sighted, I recorded the date, group size, location, vegetation, and other descriptive notes. Families were recognized in subsequent observations of not more than one week apart by their location, number in the family, and stage of chick development. Date of egg laying was observed either directly or by calculating back from the estimated age of the chicks.

Observations were made in all months of the year in each area. On the Serengeti Plains and in Ngorongoro Crater, I made observations from 1965-66 and 1972-78 by driving more than 50 000 km cross-country while carrying out large mammal research. At Empakaai Crater, Andrea Ami, Felecian Baraza, Daudi Ami and I recorded daily observations from January 1973 to March 1974 by observing with binoculars from the rim and by walking. In the Maasai Cattle Ranching Area, Lory Herbison Frame and I made 96 censuses using binoculars from prominent lookout points from September 1972 to March 1974. Also, occasional visits were made to the ranching area and Empakaai Crater from 1974-77.

Place names on the Serengeti Plains were determined from the Serengeti ecosystem landscape classification map (Gerresheim 1974), and elevations were obtained from geological maps (Geological Survey Department 1958, Geological Survey Division 1960). At Ngorongoro Crater and Empakaai Crater, and the cattle ranching area in between, the place names and elevations were taken from general survey maps (Directorate of Overseas Surveys 1965, 1966).

The month of egg laying was estimated from an incubation period of about 26 to 30 d (Walkinshaw 1964, 1981; Berger 1972). Ages of immature cranes were estimated from descriptions of chick development (Wyndham 1940, Walkinshaw 1964, 1973, Pomeroy 1980b). The young can fly when about three months old, and they separate from their parents at 7-10 months old. Young up to 12 months old are readily distinguished from adults (Pomeroy 1980b). Sexes appear similar, except that adult males are slightly larger than females (Walkinshaw 1973).

## RESULTS

### GROUP SIZE

I recorded 79 groups of cranes on the Serengeti Plains from Seronera to Olduvai Gorge<sup>1</sup>, and 85 groups on the floor of Ngorongoro Crater. The same groups were sometimes counted again on different days. The frequency of group sizes in the two areas is shown in Fig. 1. Crowned Cranes sometimes formed large flocks in Ngorongoro Crater, but not on the Serengeti Plains.

The same data were used to calculate the percentage occurrence of individuals in flocks larger than family size (Table 1). Nearly five times as many individuals occurred in flocks in Ngorongoro compared to those of the Serengeti.

<sup>1</sup>The current official spelling by the Ngorongoro Conservation Area Authority is 'Oldupai Gorge'.

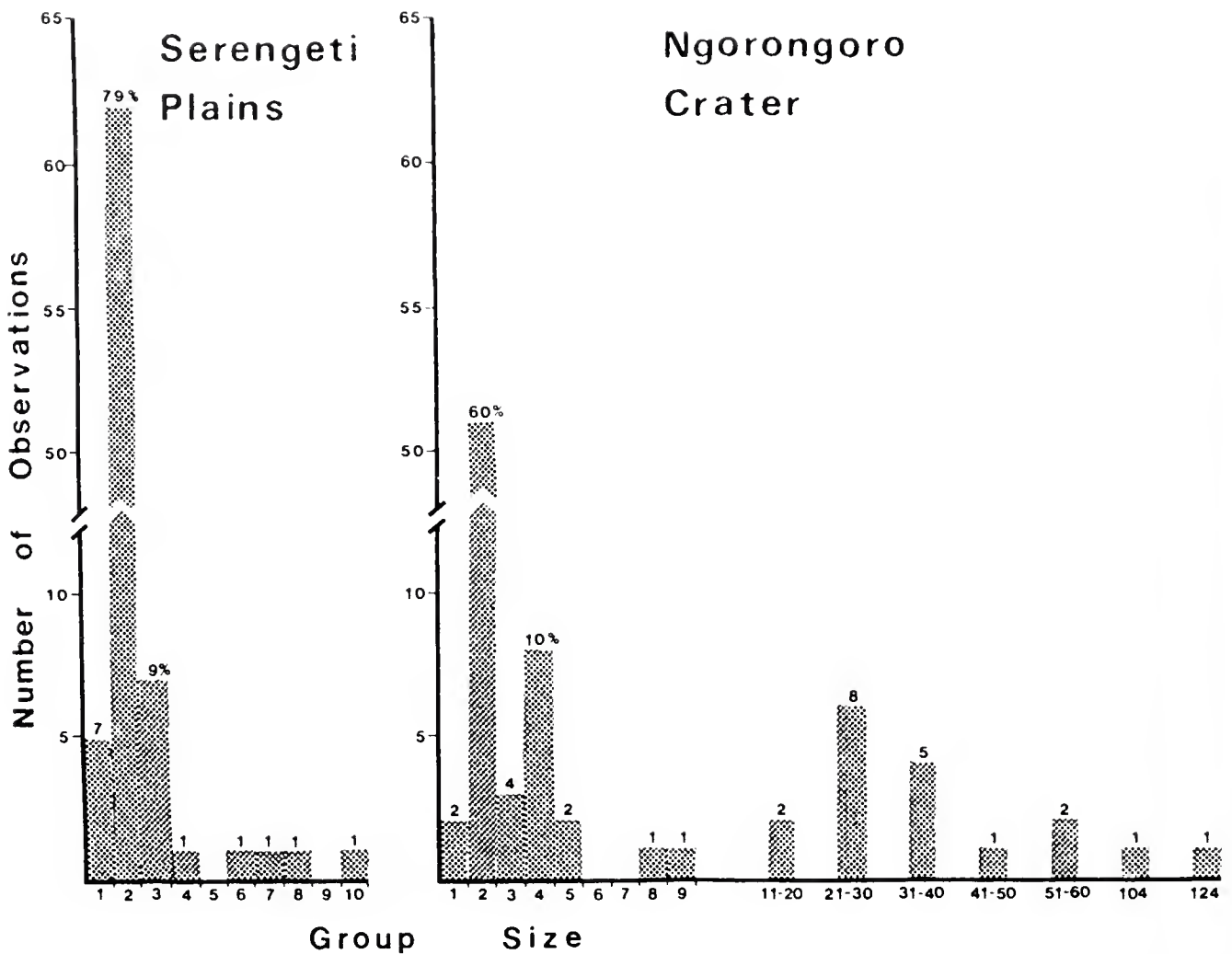


Fig. 1. Crowned Crane frequency of group sizes in two study areas in northern Tanzania: Serengeti Plains (79 observations), Ngorongoro Crater (85 observations). The number at the top of each bar is the percentage occurrence of that group size within the study area.

TABLE 1

Crowned Crane percentage occurrence of individuals in groups in two study areas in northern Tanzania

Group Size	Percentage Occurrence	
	Serengeti Plains <sup>1</sup>	Ngorongoro Crater <sup>2</sup>
Alone	3	0
Pair (or 1 adult with 1 chick)	67	12
Known and probable parents with offspring (all groups of 3, 4 or 5)	13	6
Flocks of 6 to 124	17	82
Totals	100	100

<sup>1</sup> 185 Crowned Cranes (including chicks) sighted in 79 observations.

<sup>2</sup> 874 Crowned Cranes (including chicks) sighted in 85 observations.

Crowned Cranes in groups of 2, 3, 4, or 5 sometimes were distinctly recognizable as one or two adults with offspring. In groups of these sizes, the proportion that clearly were adults with chicks less than 1 year old was 14 percent (10 of 70 groups) on the Serengeti Plains, and 8 percent (5 of 64 groups) in Ngorongoro Crater. The remaining groups were of unknown relationships.

#### SEASONAL DISTRIBUTION

Some cranes were present in all months of the year, both on the Serengeti Plains and in Ngorongoro. When the Plains were very dry (September and October) the cranes were scarce and I did not see any for as long as six weeks. The most I ever found\*in a day of travel on the plains was 24, the total of three groups (6, 8 and 10) on 12 July 1977, near the alkaline seasonal Lake Kaslya in the southern end of the Mbalangeti River drainage. Generally I found the cranes near waterholes, streams, or swamps, but when there was a green flush of grass after rain they went far into the grassland. The only months in which I saw flocks, i.e. any groups other than 1 or 2 adults or adults with chicks, were March, June and July.

In Ngorongoro Crater I saw pairs as well as flocks of from 22-104 cranes in the grasslands during April and May, well within the January to May nesting season. During the non-breeding season (June to December) I counted pairs and flocks of up to 124. Flocks in all seasons fed in the grasslands, often away from the waterholes, and sometimes interspersed with wildebeest *Connochaetes taurinus*, zebras *Equus burchelli*, and gazelles *Gazella thomsoni* and *G. granti*. On 11 September 1973 I saw 31 cranes in the parched short grassland on the central floor of the caldera, although the first rain shower in months did not occur until two days later. The flock of 124 cranes, seen on 24 September 1973, was feeding on the greening slopes of a hill in the north side of the Crater. The hill's medium grassland had been burned during the preceding season, and then, just over a week after the first rain, the green flush of grass attracted the large flock. Smaller flocks continued feeding in this green area during the subsequent months. I saw flocks in all months except December to February and June, but even then a few pairs and families were present.

A single pair of cranes was seen in the Maasai Cattle Ranching Area on 7 March and 26 April 1973, in a seasonally flooded medium grassland. This was in the southern end of the ranching area, 4 km northeast from the rim of Ngorongoro Crater, at about 2390 m altitude.

Cranes were never seen at Empakaai Crater during the study, despite extensive fieldwork there.

#### DIEL ACTIVITIES

The cranes on the Serengeti Plains usually rested at midday near water. Some pairs waded in the water apparently in search of small frogs, while others stood and preened, or slept standing, heads turned back on their shoulders.

I saw cranes roosting in *Acacia xanthophloea* trees three times on the Plains. Two of these sightings were on 27 May 1977. The first was at dawn, when two adults were standing in a treetop 30 m above the Wandamu River. The second was about one hour after sunrise, when two adults were standing in a treetop 5 m above a waterhole several kilometres north of the Simba Kopjes. The third sighting, at dawn on 21 December 1975, was of one adult standing in a treetop 10 m above the Seronera River. In all three cases the surrounding plains had grass about 1 m tall, so roosting in treetops provided safety from ambush by predators in the medium grass.

In Ngorongoro Crater I never saw cranes roosting in trees. I think it is likely that they remain in the short grasslands at the centre of the caldera overnight. For example, on 4 November at 05:35 I saw a flock of 104 on the

caldera floor. In the dim light of early dawn, about an hour before sunrise, the cranes were standing and feeding, and several were courting.

#### COURTSHIP

I saw courtship behaviour in February on the Plains, but my observations were inadequate to determine other months in which courtship occurs. One afternoon I watched two cranes in the green short grassland as they walked and fed about 10 m apart. The taller one, presumably the male, almost continuously made a raspy noise similar to, but shorter than, very loud cat purrs. After awhile the male began head bobbing, hopping around and bowing. Holding wings outstretched, he jumped vertically more than his own height, with his legs hanging straight down. They both bobbed their heads up and down, holding their bodies still and turning circles as they danced. Alternately they courted and fed, devoting a few minutes to each activity before switching. About an hour later they flew away, calling a bell-like *ah-aahow ah-aahow*, the unison call.

In Ngorongoro Crater I saw displays, which I believe were courtship, in August and November, and during the nesting season of January to May. Sometimes the courting pair was alone, and at other times two cranes in a flock engaged in courtship. Generally a courting pair seemed to be ignored by the others. Once in a group of four adults, two cranes courted while the other two watched intently, stretching their necks forward to follow the movements.

One pair of crowned cranes courting in Ngorongoro had an elaborate courtship involving an object (Lory Herbison Frame, pers. comm.). One of the pair, apparently the male, picked up a bunch of grass in his beak. A clod of earth dangled from the roots. As the crane sprang into the air, he tossed the grass high over his head. A few minutes later, when he bounced near the discarded tuft of grass, he picked it up again in his beak. At the top of his next bounce, he tossed it a second time, and then, soon after, a third time.

I saw one pair follow their courtship with mating. This occurred in February 1973, late in the morning. The pair had been feeding in the water of Gorigor Swamp in Ngorongoro. After courting for some time, the female stood at the water's edge and held her head and neck horizontal. The male stood on her back and copulated, using his wings for balance. After about half a minute he jumped to the ground.

#### NESTING AND YOUNG

In the two study areas I found a total of 9 families and 1 nest. For all these cranes, egg laying was during January to May. The alkaline waters where the nesting occurred and around where all the chicks remained had pH values between 7.4 and 9.1 (Frame et al. 1975). All families were at least several kilometres apart, or else in the same area in different years.

Four of the crane pairs with chicks were on the Serengeti Plains. Their estimated months of egg laying were January, February, April and May. All four families were seen within 50 m of waterholes along the Wandamu and Seronera Rivers (both fresh to slightly alkaline) at the western edge of the Serengeti Plains, and along the upper Mbalangeti River far out on the plains. Two of these families were in medium grassland and two were in wooded medium grassland, but all were among waterholes with occasional clumps of reeds suitable for hiding. Adults with chicks more than three-quarters grown sometimes fed in areas of green short grass up to 1.3 km from the nearest water. Often they associated with grazing pairs of Egyptian Geese *Alopochen aegyptiacus*.

When first seen on the Serengeti, the chicks ranged in size from one-eighth to seven-eighths grown. Three families had only one chick; the fourth had two chicks, but one chick disappeared when it was half-grown. In one of the families that had just a single chick, a parent died when the chick was seven-eighths grown; I found the missing parent's feathers, suggesting that it had been caught and eaten by a predator. The remaining parent occasionally called

a single *ah-aahow* during the next several days, which seemed to be directed to its missing mate. I saw this family being stalked by a cheetah *Acinonyx jubatus* about two weeks earlier. On another occasion I saw a spotted hyena *Crocuta crocuta* lying concealed near a waterhole, watching the approaching cranes.

I found one nest in Ngorongoro in a dense stand of reeds *Cyperus immensus* 3 m tall, in Gorigor Swamp. The reeds were separated from the medium grassland by a pool of turbid water (pH 9.1) about 2 m wide and 30 cm deep; the water on the other sides of the nest was more than 1 m deep and 30 m across. The nest, built on a grassy hummock, was in a clearing about 5 m in diameter. The clearing was surrounded on all sides by the tall reeds. The nest was constructed of a generous amount of dried reeds *Phragmites mauritianus*, arranged loosely to form a bowl. I first saw the nest with one egg on 21 January 1973. By 4 February there were three eggs. Their colour was almost white, with just the faintest tinge of blue, and there were no markings. A week later the eggs disappeared.

I also found five pairs of cranes with chicks in Ngorongoro. The estimated months of egg laying were three clutches in March and 2 in May. All five families were seen within 30 m of the Lemunge and Oljoro Nyuki streams (both fresh to slightly alkaline), and the unnamed stream (approximately pH 9) entering the southeast corner of Lake Magadi. They were in short grasslands, but close to shrubs and tall reeds suitable for hiding. When first seen, the chicks ranged in size from one-quarter to three-quarters grown. Two families had one chick, two had two chicks, and the other had three chicks.

Among the nine families of young and the one clutch of eggs that I saw in all areas combined, the number of chicks surviving to three months old ranged from zero to three per family (mode = 1, mean = 1.3, median = 1).

## DISCUSSION

Flocks of several hundred Crowned Cranes are commonly seen in many areas of Africa in the non-breeding season (Cawkell & Moreau 1963, Wyndham 1940, Pomeroy 1980a, Urban 1981). This gregariousness probably facilitates the formation of new breeding pairs among young adults (Walkinshaw 1964) and among older adults who have lost their mates. Crowned Cranes are believed to remain paired for life, and apparently they nest every year (Walkinshaw 1964). The biggest flock that I counted in Ngorongoro, that of 124, exceeds the group of 110 previously reported there (Pickering, Goddard & Fosbrooke 1966).

The reason why so many cranes were in flocks at Ngorongoro during the breeding season is unclear. Perhaps they were young adults, not sufficiently mature to breed. In most crane species breeding does not occur until four or five years old (Walkinshaw 1973). A pair of Crowned Cranes which successfully nested in a zoo, first showed reproductive behaviour when six years old (Berger 1972). Some adults at Ngorongoro might have tried to breed shortly before, but lost their eggs or chicks to predators or some other mortality factor. Also, it is possible that these cranes had bred elsewhere in East Africa at different times of year.

Walkinshaw (1964) found that the proportion of South African Crowned Cranes occurring in pairs was 59 percent, and 41 percent were in non-breeding flocks. The dissimilarities between Walkinshaw's results and mine (Table 1) on the Serengeti and in Ngorongoro might be more a reflection of the sampling routine rather than any real differences in grouping patterns. However, it seems likely that the absence of large flocks on the Serengeti compared to Ngorongoro is probably due to the Serengeti's more arid conditions. Apparently the crater provides more suitable feeding habitat throughout the year.

The flock of 31 cranes that I saw in the brown short grassland within the crater could have been eating seeds or invertebrates. Crowned Cranes are known to eat the leaves and seeds of sedges and grasses, millipedes, insects,

reptiles, crabs, and perhaps frogs (Mackworth-Praed & Grant 1962, Walkinshaw 1964, 1973, Pomeroy 1980a).

Although I suspect that large flocks of cranes, at least sometimes, remained in the short grasslands at night, I was unable to verify this. Walkinshaw (1964) observed Sudan Crowned Cranes flying from their roosts in the marshes on to the plains as early as 05:35, in daylight but about 35 min before sunrise, but he did not report any flights in the pre-dawn darkness. The same author (Walkinshaw 1973) also saw a South African Crowned Crane fly from its roost in a tree to the grassland at 05:35, but that was in December at a higher south latitude. Another difference was that the Sudan Crowned Cranes returned to the marshes after about 2 h of feeding, whereas the flocks of cranes that I watched in Ngorongoro remained in the grassland all day and were not seen leaving in the evening.

The courtship behaviour of the cranes reported here seemed identical to Walkinshaw's (1964) descriptions of courting in the South African birds, including their tossing of objects. The use of objects in courtship displays is common among other crane species (Walkinshaw 1973). The raspy purr-like vocalization that I heard from a courting male may be the first report of its occurrence in a courtship context. A similar or identical sound is used by adults to call their chicks (Walkinshaw 1964).

In the ten crane families that I saw, egg laying was during January to May at Ngorongoro Crater and in the Serengeti. On Lake Lagarja<sup>1</sup> two other nests had eggs in May, but one nest was destroyed by spotted hyenas (R. Kunkel, pers. comm.)<sup>2</sup>. These nestings were all when rains provided abundant food and perhaps increased protection from predators for the nests. Similarly, nesting of Crowned Cranes elsewhere in Africa generally occurs during the local rainy seasons (Walkinshaw 1964, 1973). In southern Uganda, however, where rainfall exceeds 5 cm per month in even the driest months of the year, nesting occurs in every month (Pomeroy 1980a).

South African Crowned Cranes nest in marshes with waters of pH 6.0 - 8.0 (Walkinshaw 1964), although Sudan Crowned Cranes are rarely seen around alkaline waters (Urban 1981). The East African Crowned Crane chicks and the nest that I found were in waters of pH up to 9.1. The absence of crane chicks at Lake Magadi (Ngorongoro) was probably less a consequence of its pH 10.2 than it was of the absence of suitable vegetation for finding food or gaining concealment. Crowned Crane chicks hide in dense vegetation when threatened (Walkinshaw 1964).

Breeding pairs of Crowned Cranes are territorial around their nest site (Walkinshaw 1973, Berger 1972). Good nesting habitat such as reedy swamps are small and scattered on the Serengeti and in Ngorongoro. This habitat patchiness combined with territorial behaviour explains why all the families I saw were widely separated. I saw no evidence of nesting in trees, such as has occurred in southern Africa (Steyn & Ellman-Brown 1974).

Mortality of eggs and chicks is high. The clutch size is normally two or three (Wyndham 1940, Walkinshaw 1964, 1981, Urban & Walkinshaw 1967, Pomeroy 1980a). Although clutch size is larger in highland areas, it still falls within this range (Pomeroy 1980a). Among the nine families of young and the one nest that I saw, the mean survival was 1.3 chicks per family. A first approximation

<sup>1</sup>The current official name by the NCA Authority is 'Lake Ndutu'.

<sup>2</sup>R. Kunkel adds the following observations from Lake Lagarja, at the western end of Olduvai Gorge, in 1971: the lake was exceptionally high that year. The Crowned Crane's nest, on a tiny island in May, was found by hyenas who were attracted to a wildebeest carcass floating nearby. The hyenas apparently ate the day-old chick and two eggs. The second nest, also in May, was too inaccessible to count the eggs or monitor their outcome.

of chick mortality can be got by assuming a mean clutch size of 2.6 (Walkinshaw 1973, Pomeroy 1980a) and using the above mean of 1.3 chicks per family to calculate a decrease of 50 percent in the number of chicks per family from egg laying to three months old in northern Tanzania. A similar mortality rate was calculated from data collected in Kenya and Uganda (Pomeroy 1980a). Additional mortality occurs by the loss of all eggs from some nests, and some pairs lose their entire families before the chicks are three months old. Thus it appears that survivorship among eggs and chicks combined is actually considerably less than 50 percent everywhere in East Africa.

The absence of Crowned Cranes in most of the Maasai Cattle Ranching Area and in all of Empakaai Crater is apparently because of some factor associated with the higher elevation - perhaps colder temperatures or absence of preferred foods. Both places seem unsuitable for breeding because of the lack of marshes with reeds. On the floor of Empakaai, however, the grasslands, streams, and soda lake are otherwise similar to those in Ngorongoro. By comparison, in Zaire, Chapin (1939) reported a nest with two chicks in a small marsh at 2200 m, which is nearly identical to the elevation of Empakaai's floor. As recently as 1962 Empakaai had extensive areas of reeds (H.A. Fosbrooke, pers. comm.) which disappeared when the lake level rose. The East African Crowned Crane occurs up to 3000 m in Kenya (Sessions 1967, Britton 1980) at Mau Narok, but my record of two pairs at 2390 m at the southern end of the ranching area may well be the highest for Tanzania.

#### CONCLUSIONS

Ngorongoro Crater has one of the highest concentrations of Crowned Cranes known anywhere in East Africa. But even in the crater they are not continuous residents, and few breed there. For nesting sites, Crowned Cranes must be largely dependent on scattered swamps and lakes, such as occur in the Serengeti and in the lowlands. Conservation of the species, therefore, probably requires preserving many of these small scattered habitats of reedy swamps.

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(Received 29 July 1982)

## SHORT COMMUNICATIONS

A FAMILY OF WHITE STORKS *CICONIA CICONIA* AT LAKE NAKURU: THE FIRST BREEDING RECORD FOR KENYA? On 17 and 18 July 1982 we saw a pair of adult White Storks *Ciconia ciconia* in immaculate plumage with two fledglings at the northern end of Lake Nakuru National Park. The young still had down on their heads. They were greyish in colour and their bills were brownish. Their primaries were drooping as if they were still growing and the young had just left the nest. They also kept in close contact with the adults, although no feeding was seen.

Judging from the plumage and behavioural descriptions in Cramp & Simmons (1977) and Bauer & Glutz (1966), the young birds must have been about two months old. Although this does not represent a definite breeding record for Kenya, one can assume that the breeding site was not far away as the young were still at a pre-migratory stage of development.

Breeding records are available for South Africa for the months from September to December (Mackworth-Praed & Grant 1957). The birds seen in Nakuru must have bred in May and so were perhaps members of the European population which, for some reason, stopped their migration and bred in this area.

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- John Dittami, Max-Planck-Institut, Box 33 Nakuru, Kenya and Volker Haas, Max-Planck-Institut für Verhaltensphysiologie, Abt. Wickler, D-8131 Seewiesen, West Germany

Scopus 6: 70, September 1982

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WINTERING WATERFOWL IN THE BALE MOUNTAINS, ETHIOPIA The Bale Mountains, also known as the Mendebö-Araenna Mountains, lie 265 km SE of Addis Ababa on the eastern side of the Great Rift Valley. The mountains contain the largest area of Afro-alpine vegetation in eastern Africa (Brown 1966).

Visits to the area in January 1976 and January 1977 revealed large aggregations of waterfowl. The ducks were using a series of small alpine tarns on the Sanetti Plateau (6.52°N, 39.57°E) between 3800 and 4200 m. Most of the tarns, which range in size from 1 to 75 ha, are less than a metre deep and may evaporate in dry years. Without external drainage, the small lakes appear to concentrate minerals, and the cloudy water with abundant algae and small crustaceans suggests a high productivity.

Twelve tarns on which rough counts were made contained a total of at least 2000 ducks in both years. Three more larger lakes, that were visible on aerial photographs, and probably at least as many smaller tarns, were not visited.

The species present and their relative abundance are given in Table 1. Wigeon and Pintail occurred on almost all the lakes. Shovelers were most numerous on the shallower ones. Teal were uncommon but widely distributed. By contrast, Tufted Ducks were seen only on two of the larger and deeper lakes. Many of the tarns were occupied by pairs of Ruddy Shelducks *Tadorna ferruginea* and the larger lakes often had three or four pairs. Yellow-billed Ducks *Anas undulata* were seen twice. These last two species and the Blue-winged Goose *Cyanochen cyanopterus* were all more common in the Ueb valley (6.51°N, 39.32°E) at about 3500 m.

Table 1

The proportion of different duck species and their minimum absolute numbers in the Bale Mountains in January 1976 and 1977

Species	Percentage	Numbers
Wigeon <i>Anas penelope</i>	30	600
Pintail <i>A. acuta</i>	30	600
Shoveler <i>A. clypeata</i>	25	500
Teal <i>A. crecca</i>	10	200
Tufted Duck <i>Aythya fuligula</i>	5	100

A large flock of Shovelers, observed on the same lake (called Lake Deemtu by Ash 1977) in both years, performed elaborate communal feeding behaviour. As many as 16 individuals would swim along, line astern, and clusters of 25-30 birds, all rotating on the spot were common. Communal feeding, in which followers can enhance their feeding by filtering water stirred up by the leaders' feet, is reported commonly in Shovelers (e.g. Dawson 1923, Todd 1979). However, I have found no references to lines of more than four or five birds. The very long lines seen in the Bale Mountains probably reflect a rich food source.

The species present and their relative abundance generally agree with the observations of Ash (1977) who counted waterfowl on Lake Deemtu in April 1975. However, he recorded one Garganey *Anas querquedula* and a flock of 52 Ruddy Shelducks. On no occasion did I see more than ten Shelducks in one place. It is interesting that the Palaearctic species listed in the Table were common on the alpine tarns above 3700 m but uncommon at lower altitudes, while the resident species (*A. undulata*, the Black Duck *A. sparsa* and *T. ferruginea*) were more common at lower elevations.

Records of Palaearctic migratory waterfowl to the east of the Bale Mountains are sparse (see Ash & Miskell (in press) for records from Somalia). Although the Ethiopian Rift Valley lakes support large numbers of wintering waterfowl (Moreau 1972) the Bale Mountains probably lie on the eastern boundary of the Nile Valley-Rift Valley migratory corridor.

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LARGE NUMBERS OF PALAEARCTIC DUCKS IN THE OMO DELTA, LAKE TURKANA On 3 March 1982 I spent half a day at Todenyang on the extreme NW shores of Lake Turkana, Kenya. The shoreline here is gently shelving and sandy, few birds were recorded other than small numbers of the common Palaearctic waders. Across a 1-km stretch of open water there begins a series of islands, rivers and marshes known as the Omo Delta; a flock of c.800 Shoveler *Anas clypeata* was roughly in the middle of the open stretch and I was told by the local Turkana people that "very many" came here in the evenings.

From the shore I observed huge flocks of ducks flying above the distant marshes and estimated that there were at least 60 000 birds, of which 90 per cent were Shoveler; the remainder were mostly Pintail *A. acuta* with smaller numbers of Garganey *A. querquedula*. The area where the ducks were landing was in Ethiopian territory and we were forbidden access by the local police; however, during a brief flight along the edge of this area later in the day, I estimated at least 100 000 birds seen. In all probability far more were present within the marshes extending to the north and east.

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FIRST NEST RECORD FOR PETIT'S CUCKOO SHRIKE *CAMPEPHAGA PETITI* In a recent review of breeding records for East African birds (Brown & Britton 1980) the authors were unable to locate any records for Petit's Cuckoo Shrike *Campephaga petiti* throughout its African range (cf. Hall & Moreau 1970) as of June 1976. I have searched the subsequent literature and there still appear to be no breeding records for this species. While conducting field studies on primate ecology in the Kibale Forest, Uganda (0.34'N, 30.21'E) I located a nest, the details of which are given below. Petit's Cuckoo Shrike is the only member of the Campephagidae reported to have been collected from Kibale (Friedmann 1966, Friedmann & Williams 1970), and a compilation of more than 20 worker-years of sight records at Kibale since 1970 also includes only this species (Skorupa *et al.*, unpubl. data). The species is common in secondary forest at Kibale, being clearly identifiable from congeners on the basis of adult female plumage (cf. Mackworth-Praed & Grant 1973).

A nearly completed nest cup was located on 7 June 1980, placed on a *Markhamia platycalyx* branch fork approximately 13m above the ground in a tree of 15m total height. The nest cup appeared to be totally constructed from lichens and mosses, with a female twice adding strands of moss to the nest during an hour of observation. I next visited the nest on 12 June and a female was found to be incubating (being clearly visible while sitting on the nest). Another visit on 13 June revealed that the nest had disappeared, presumably having been completely destroyed and resulting in failure of this breeding attempt. A group of foraging red colobus monkeys *Colobus badius* had moved through the nest tree in the time between my 12 June and 13 June observations as indicated by the presence of freshly foraged *M. platycalyx* leaves (missing only the basal section of their petioles, cf. Struhsaker 1975) on the ground below the tree. The monkeys may have destroyed the nest, as primate predation on bird eggs has been observed previously in the Kibale Forest (Waser 1977). The nest tree was located in a section of forest that had been extensively felled for timber between September 1968 and April 1969. Accordingly, the degraded nature of this habitat may have affected the probability of primates foraging in the nest tree within the interval of the nest cycle.

## ACKNOWLEDGEMENTS

My fieldwork was supported by the New York Zoological Society, World Wildlife Fund-U.S., and the International Union for the Conservation of Nature. I am grateful to T.T. Struhsaker for logistical support and to A.W. Diamond and L.A. Isbell for reading a draft of this note. I also wish to thank the President's Office of Uganda, Uganda National Research Council and Uganda Forest Department for permission to conduct fieldwork in the Kibale Forest.

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**THREAT DISPLAY OF THE YELLOW-BREASTED APALIS *APALIS FLAVIDA*** In June 1981, the removal of a large tree from my garden in Nairobi caused more light to fall on the eastern windows of the house, so that they suddenly became more reflective. A White-eyed Slaty Flycatcher *Melaenornis chocolatina* often attacked its reflection in the glass prior to the felling of the tree, but the subsequent increase in light values also induced this behaviour in an unidentified large sunbird *Nectarinia* sp., and in the Yellow-breasted Apalis *Apalis flavida flavocincta*.

A pair of the apalises halod a territory that includes part of the garden, and regularly pass this window on what appears to be part of an at least semi-routine foraging route. The threat behaviour took two forms, mobile and stationary. The mobile form was given by both members of the pair, though not simultaneously, by fluttering up and down in front of the windows, occasionally striking the panes with the beak; this was also the kind of display given by the flycatcher and the sunbird.

The stationary threat was seen only from the cock bird, and took place on fewer occasions than the fluttering. The male would perch on, and move agitatedly about, shrubs immediately adjacent to the window, making rapid turns and jerky movements, but with no specific posturing. The stationary threat occurred when the bird was perched quite close (c.30 cm) to the glass, when it would periodically produce a very rapid upwards and sideways sweep of the head, neck and upper torso, to almost throw itself into the following stance, which it would maintain for 3 - 10 s. The bird faced its reflection, stretching itself up to its full height; the neck was fully extended, and the bill pointed up and towards the glass at an angle of about 60° above the horizontal. The tail was simultaneously cocked over the back or vertically, while the bird

uttered a low, grating 2-3 s *churrr*, sometimes followed by four to six low monosyllabic clicks. On occasion it also took up this posture at right angles to the glass.

This threat call is similar to published accounts: Mackworth-Praed & Grant (1960) mention a churring alarm note while, for the race *golzi* in Tanzania, Chapin (1953) records a "low-pitched *churrr*, almost a buzzing". Roberts (1978) mentions the buzzing churr or a rapid *crit-crit-crit* as an alarm. Assuming the *crit* noises to be the monosyllabic clicks, the Nairobi bird sometimes produced both of these calls in one sequence.

Due to its strongly uptilted head, the *apalis*' white throat became very prominent during the display. The muscular movements involved in the production of the grating call erected and fanned out the feathers towards the base of this white patch making them very prominent indeed, presumably as a component of the threat. This erection and exposure of pale throat plumage due to, and during, the production of a low, muted call, also occurs in owls Strigidae (Sparks & Soper 1970) during short-range anger, begging and nest invitation calls.

The prominence of this pale throat patch and of the cocked tail during the *apalis*' threat may be related to Hall & Moreau's (1970) note of the possible use of the colour and patterning of these areas in interracial and interspecific recognition in this genus. In this case, however, with the bird perceiving its reflection as another individual of its own species and race invading its territory, there is the implication that these surfaces are also significant intraracially.

#### ACKNOWLEDGEMENTS

I am grateful to G.R. Cunningham-van Someren of the Department of Ornithology at the National Museum, Nairobi for the provision of reference literature and skins. D.J. Pearson kindly read and commented upon an earlier draft of the script.

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*Scopus* 6: 73-74, September 1982

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#### REVIEWS

*Endangered birds of the world - the ICBP bird Red Data Book*. Compiled by Warren B. King on behalf of ICBP and the Species Survival Commission of IUCN. Published by the Smithsonian Institution Press in co-operation with ICBP, Washington D.C., 1981. Price: paper \$8.95, cloth \$19.95.

This volume was first published in a loose-leaf format in two parts in 1978 and 1979 by IUCN in Morges, Switzerland. It is now available for the first time in a convenient, inexpensive paperbound edition. An idea of the book's scope can most easily be given by running through the seven sections:

1. Details of the five Red Data Book categories: Endangered (E), Vulnerable (V), Rare (R), Out of Danger (O) and Intermediate (I). The last category

refers to those birds that are suspected of belonging to one of the first three categories but for which insufficient information is currently available.

2. A list of the 182 families of birds in the world.

3. A list of the 437 threatened species and races, arranged in systematic order.

4. A list of the 95 species and races that were contained in the First Edition of the Red Data Book Volume 2, but which are omitted from this present edition.

5. Details of the 437 threatened birds, but arranged in a most convenient and easy referenced zoogeographical/geopolitical basis: Palaearctic, Ethiopian/Afrotropical, Oriental, Australasian, Nearctic, Neotropical, Oceanic and Oceanic Islands.

6. A list of the 164 birds known, or thought to have become extinct since 1600, arranged in systematic order.

7. Finally, and comprising the bulk of this most informative book, Data Sheets, in systematic order, for all 437 threatened birds giving a concise summary of what is known of each bird's status, distribution, population and habitat. This is then followed by details of conservation measures either already taken or proposed. The section ends with a list of the most important references.

This revised edition is invaluable to governments, organizations and individuals concerned with conservation of all endangered birds, and indeed to anyone with an interest in birds and, as such, the book is a highly recommended addition to all ornithological libraries.

D.A. Turner

*The birds of the Serengeti National Park Tanzania*. B.O.U. Check-list No. 5, by Dieter Schmidl Pp. 132, paper bound, London: British Ornithologists' Union. Price £11.00 (£10.00 to B.O.U. members during 1982) post free.

The B.O.U. series of check-lists was launched in 1976 to provide an outlet for annotated lists which had, by then, become unacceptable for publication in the Union's journal *Ibis*. Undoubtedly, a single volume list for a country, part of a country or, as in the case of the present work, a national park, is a convenience for residents or visitors to the area concerned.

Dieter Schmidl's list starts, after a Foreword by the series' editor Dr J.F. Monk, with an introductory section comprising Introduction, map of the Park and a more detailed map of the Seronera area, and accounts of the area's History, Geography and Geology, Climate, Vegetation, Habitats, the birds' Breeding Seasons and Migrations and, finally, a list of Acknowledgements.

The main part of the book is devoted to the systematic list of the 505 species recorded - 496 within the Park and another nine (in square brackets) which have been recorded almost in the Park. The order and nomenclature follows P.L. Britton (ed.) *Birds of East Africa*, and entries are frequently provided with alternative names as well as the Mackworth-Praed & Grant (1957, 1960) numbers. Each species is given an abbreviated status code (e.g. RB for Resident Breeder) which can be seen at a glance. The book ends with a Bibliography and two indices to bird names.

This book is a useful, carefully compiled volume, clearly set out. It seems very expensive for such a slim volume. It should be noted that there are indeed 132 pages and not 196 as stated in the leaflet enclosed with this *Scopus*.

G.C. Backhurst

## NOTICES

## PREPARATION OF A HANDBOOK OF AFRICAN SEABIRDS

I am compiling a handbook to the seabirds of Africa which will cover the entire Afrotropical region and the adjacent ocean areas from 80E to 20W and south to Antarctica. Some 130 species of seabirds breed within, or visit this area and each will receive a review which will be pitched at a level intermediate between that of Serventy *et al.*'s *Handbook of Australian seabirds* and Cramp & Simmons' *The birds of the western Palearctic*. Each species account will cover: taxonomy, field identification and plumage description, measurements and weight, nonbreeding distribution, and diet and feeding habits. In addition, the accounts of species which breed within the area will cover: breeding distribution and population, breeding and moulting seasons, behaviour and voice, breeding habitat and breeding biology.

The species accounts will be preceded by a series of chapters outlining seabird biology, with particular emphasis on the area and species covered by the book. These chapters will cover seabird feeding, ecology, breeding ecology, physiology, reproductive biology, migrations and movement, conservation and the history of the study of seabirds in the area.

Information on seabirds within the handbook area is very far from complete. Readers of *Scopus* will help greatly if they forward copies of recent articles or notes concerning African seabirds and especially articles which they have in press. Any information supplied will, of course, be fully acknowledged in the handbook which should appear in 1983/84.

A.J. Williams, State Museum, Box 1203, Windhoek, Namibia

## CORRECTION

In the short communication 'White-tailed' White-headed Barbet in central western Kenya by L.L. Short and J.F.M. Horne (*Scopus* 6: 40-41), two words were omitted from the second sentence in paragraph two; it should read as follows: The calls of this lone bird were the raucous notes we have recorded from *L. leucocephalus albicauda* along the southern Ewaso Nyiro River; this is the race of southernmost Kenya, not to be expected in western Kenya except in South Nyanza.

The authors also report that, since writing the article, they have learned of an unreported specimen of *Lybius leucocephalus* noted as *albicauda*, collected by Alec Forbes-Watson on 28 June 1961 at Songhor, north of Muhoroni, whence came their specimen. The Songhor bird is in the collection of the Louisiana State Museum of Zoology, Baton Rouge, Louisiana, U.S.A.

Ed.

## CONSTANTINE WALTER BENSON, O.B.E., M.A.

With deep regret we record the death of Con Benson this month. Con was a great friend of East Africa, its birds and its ornithologists, notably members of the OSC for whom no task was too much trouble for Con. We extend our sympathy to Molly who shared so much with him. A full Obituary will be published later.



Any 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. 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 publication should be given in the text in the normal way.

All contributions should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi, Kenya.

#### WORKS WHICH SHOULD NOT BE LISTED UNDER 'REFERENCES'

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#### EAST AFRICAN BIRD REPORT

This forms the fifth issue of *Scopus* and each report covers one calendar year. Records of Afrotropical Region (i.e. Ethiopian Region and Malagasy Sub-Region) and Oceanic birds should be sent to D.A. Turner [tel. 48772], Box 48019, Nairobi; records of Palaearctic Region birds to D.J. Pearson [tel. 47041], Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Bird Report. Reports of rare birds may be phoned through to any OS-C member.

#### BIRDS OF EAST AFRICA

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# SCOPUS

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East Africa Natural History Society

*Edited by*

GRAEME BACKHURST

# SCOPUS

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Tables, which should be numbered, *should appear in the typescript, NOT grouped on separate sheets at the end*. Metric units should be used. If non-metric units were used in the original observation or experiment, the approximate metric equivalent should be given in brackets.

Illustrations should be on bristol board, good quality white paper or tracing material, in line - i.e. black on white, and should not be larger than 19 x 23 cm. Lettering (in black) will be the responsibility of the author and should be done neatly in Letraset (or similar), no larger than 14 point (3.9 mm). Each illustration should be numbered (Fig. 1, etc) and be provided with a legend typed on a separate sheet of paper. Photographs will also be considered.

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## FIRST RINGING REPORT FOR THE SUDAN

*G. Nikolaus & G.C. Backhurst*

As far as is known, bird ringing started in the Sudan at Wadi Halfa on the Egyptian border on 11 February 1964. For two months from that date S. Mathiasson ringed a total of 245 Palaearctic migrants of 20 species using Stockholm Museum rings. In 1965 A. Pettet, resident in Khartoum, began ringing Palaearctic migrants with British Trust for Ornithology (London) rings; he continued until autumn 1966 and then again in the spring of 1977, ringing a total of 779 Palaearctics belonging to 35 species during the period.

Ringing on a much more substantial scale began early in 1978 when one of us (GN) started a more or less full time survey of the birds of South Sudan during which most birds caught were ringed with 'Nairobi' rings. The survey of the South has been completed now but work continues on the avifauna of the rest of the country and ringing forms a major component of the study.

In 1981 Col R.M. Holman did a certain amount of ringing in Khartoum and, later in the year, with Col E. Prendergast, joined GN and D.J. Pearson in an expedition to the Red Sea coastal area around Port Sudan where an extensive study of migration was made and a fair amount of ringing done. Work continued at this site during the southward migration in 1982 when over 4000 Palaearctic migrants were ringed.

A small independent ringing programme was carried out in the South by M.C. Rae in the first half of 1982 during which over 700 Red-throated Pipits *Anthus cervinus* were ringed. Meanwhile GN continues to ring birds at a variety of sites throughout the country. All species caught are ringed but emphasis is given to migratory forms, Palaearctic and Afrotropical.

Table 1 lists the birds of Palaearctic origin which have been ringed in the Sudan up to early December 1982; it includes the birds ringed with Swedish and British rings.

## RECOVERIES

The Sudan is the largest country in Africa with an area of over 2 500 000 km<sup>2</sup>. It has a wide range of habitats and many areas have yet to be fully explored ornithologically. The extent of the country's role in the Palaearctic-African migration system is only now beginning to be appreciated.

The geographical position of the country with relation to the western Palaearctic on the one hand, and eastern, central and southern Africa on the other, suggests that it will be populated or traversed by very large numbers of migrants. The low human population mitigates against recoveries of ringed birds although in certain areas local customs have the reverse effect. Unlike the situation in most sub-Saharan countries, the shooting of birds is a popular pastime, especially around Khartoum: White Storks *Ciconia ciconia* are shot for 'fun', often not even being retrieved, far less eaten. Many other storks perish from eating prey which has been poisoned during cotton spraying or quelea control.

The majority of the recoveries listed in Table 2 are White Storks. In strong contrast is the complete absence of the Eurasian Swallow *Hirundo rustica*.

Ringing in the Sudan is administered by the Eastern African Ringing Scheme and results are included in the scheme's reports (see Backhurst 1981). The purpose of this paper is to present all recoveries affecting the country, including those of White Storks which were omitted by Backhurst *op. cit.*, and to list all Palaearctic birds ringed.

TABLE 1

*Birds of Palaearctic origin ringed in the Sudan,  
1964 - December 1982*

<i>Ixobrychus minutus</i> Little Bittern . . . . .	1
<i>Ardea purpurea</i> Purple Heron . . . . .	1
<i>Ardeola ralloides</i> Squacco Heron . . . . .	1
<i>Anas acuta</i> Pintail . . . . .	1
<i>A. querquedula</i> Garganey . . . . .	8
<i>Coturnix coturnix</i> Quail . . . . .	24
<i>Crex crex</i> Corncrake . . . . .	2
<i>Gallinula chloropus</i> Common Moorhen . . . . .	1
<i>Porzana parva</i> Little Crake . . . . .	1
<i>P. porzana</i> Spotted Crake . . . . .	1
<i>Charadrius alexandrinus</i> Kentish Plover . . . . .	74
<i>C. asiaticus</i> Caspian Plover . . . . .	1
<i>C. dubius</i> Little Ringed Plover . . . . .	2
<i>C. hiaticula</i> Ringed Plover . . . . .	17
<i>C. leschenaultii</i> Great Sandplover . . . . .	92
<i>C. mongolus</i> Mongolian Sandplover . . . . .	13
<i>Pluvialis squatarola</i> Grey Plover . . . . .	2
<i>Actitis hypoleucos</i> Common Sandpiper . . . . .	36
<i>Tringa erythropus</i> Spotted Redshank . . . . .	1
<i>T. glareola</i> Wood Sandpiper . . . . .	214
<i>T. nebularia</i> Greenshank . . . . .	25
<i>T. ochropus</i> Green Sandpiper . . . . .	8
<i>T. stagnatilis</i> Marsh Sandpiper . . . . .	36
<i>T. totanus</i> Redshank . . . . .	23
<i>Xenus cinereus</i> Terek Sandpiper . . . . .	12
<i>Gallinago gallinago</i> Common Snipe . . . . .	81
<i>G. media</i> Great Snipe . . . . .	8
<i>Lymnocyptes minimus</i> Jack Snipe . . . . .	21
<i>Calidris alba</i> Sanderling . . . . .	1
<i>C. alpina</i> Dunlin . . . . .	154
<i>C. ferruginea</i> Curlew Sandpiper . . . . .	203
<i>C. minuta</i> Little Stint . . . . .	638

<i>C. temminckii</i> Temminck's Stint . . . . .	12
<i>Limosa limosa</i> Black-tailed Godwit . . . . .	3
<i>Philomachus pugnax</i> Ruff . . . . .	407
<i>Arenaria interpres</i> Turnstone . . . . .	8
<i>Himantopus himantopus</i> Black-winged Stilt . . . . .	4
<i>Recurvirostra avocetta</i> Avocet . . . . .	2
<i>Glareola pratincola</i> Common Pratincole . . . . .	4
<i>Larus fuscus</i> Lesser Black-backed Gull . . . . .	1
<i>Chlidonias hybridus</i> Whiskered Tern . . . . .	4
<i>C. leucopterus</i> White-winged Black Tern . . . . .	23
<i>C. niger</i> Black Tern . . . . .	3
<i>Gelochelidon nilotica</i> Gull-billed Tern . . . . .	4
<i>Sterna paradisaea</i> Arctic Tern . . . . .	1
<i>Oena capensis</i> Namaqua Dove . . . . .	35
<i>Streptopelia roseogrisea</i> Pink-headed Turtle Dove . . . . .	4
<i>S. senegalensis</i> Laughing Dove . . . . .	34
<i>S. turtur</i> Turtle Dove . . . . .	73
<i>Cuculus canorus</i> Eurasian Cuckoo . . . . .	10
<i>Otus scops</i> Scops Owl . . . . .	11
<i>Caprimulgus aegyptius</i> Egyptian Nightjar . . . . .	2
<i>C. europaeus</i> Eurasian Nightjar . . . . .	12
<i>Apus apus</i> Eurasian Swift . . . . .	1
<i>Alcedo atthis</i> Eurasian Kingfisher . . . . .	13
<i>Merops apiaster</i> Eurasian Bee-eater . . . . .	2
<i>M. persicus</i> Blue-cheeked Bee-eater . . . . .	5
<i>Upupa epops</i> Hoopoe . . . . .	97
<i>Jynx torquilla</i> Eurasian Wryneck . . . . .	11
<i>Calandrella brachydactyla</i> Short-toed Lark . . . . .	18
<i>Hirundo daurica</i> Red-rumped Swallow . . . . .	1
<i>H. rustica</i> Eurasian Swallow . . . . .	38
<i>Riparia riparia</i> Sand Martin . . . . .	22
<i>Oriolus oriolus</i> Golden Oriole . . . . .	76
<i>Cercotrichas galactotes</i> Rufous Bush Chat . . . . .	30
<i>Luscinia luscinia</i> Sprosser . . . . .	446
<i>L. megarhynchos</i> Nightingale . . . . .	39
<i>L. svecica</i> Bluethroat . . . . .	25
<i>Monticola saxatilis</i> Rock Thrush . . . . .	2
<i>M. solitarius</i> Blue Rock Thrush . . . . .	2
<i>Oenanthe deserti</i> Desert Wheatear . . . . .	13
<i>O. hispanica</i> Black-eared Wheatear . . . . .	9
<i>O. isabellina</i> Isabelline Wheatear . . . . .	25
<i>O. oenanthe</i> Northern Wheatear . . . . .	28
<i>O. pleschanka</i> Pied Wheatear . . . . .	3
<i>O. xanthopyrna</i> Red-tailed Wheatear . . . . .	5
<i>Phoenicurus ochuros</i> Black Redstart . . . . .	11
<i>P. phoenicurus</i> Redstart . . . . .	166
<i>Saxicola rubetra</i> Whinchat . . . . .	15
<i>S. torquata</i> Stonechat . . . . .	3
<i>Turdus philomelos</i> Song Thrush . . . . .	3
<i>Acrocephalus arundinaceus</i> Great Reed Warbler . . . . .	106
<i>A. griseldis</i> Basra Reed Warbler . . . . .	15
<i>A. palustris</i> Marsh Warbler . . . . .	1702
<i>A. schoenobaenus</i> Sedge Warbler . . . . .	34
<i>A. scirpaceus</i> Reed Warbler . . . . .	529
<i>A. stentoreus</i> Clamorous Reed Warbler . . . . .	8
<i>Hippolais icterina</i> Icterine Warbler . . . . .	15

<i>H. languida</i> Upcher's Warbler . . . . .	1
<i>H. olivetorum</i> Olive-tree Warbler . . . . .	1
<i>H. pallida</i> Olivaceous Warbler . . . . .	228
<i>Locustella fluviatilis</i> River Warbler . . . . .	72
<i>L. luscinioides</i> Savi's Warbler . . . . .	32
<i>Phylloscopus bonelli</i> Bonelli's Warbler . . . . .	11
<i>P. collybita</i> Chiffchaff . . . . .	18
<i>P. sibilatrix</i> Wood Warbler . . . . .	1
<i>P. trochilus</i> Willow Warbler . . . . .	495
<i>Sylvia atricapilla</i> Blackcap . . . . .	853
<i>S. borin</i> Garden Warbler . . . . .	541
<i>S. communis</i> Whitethroat . . . . .	466
<i>S. curruca</i> Lesser Whitethroat . . . . .	283
<i>S. hortensis</i> Orphean Warbler . . . . .	67
<i>S. mystacea</i> Ménétries' Warbler . . . . .	22
<i>S. nana</i> Desert Warbler . . . . .	2
<i>S. nisoria</i> Barred Warbler . . . . .	159
<i>S. rueppelli</i> Rüppell's Warbler . . . . .	1
<i>Ficedula albicollis</i> Collared Flycatcher . . . . .	4
<i>Muscicapa striata</i> Spotted Flycatcher . . . . .	145
<i>Anthus campestris</i> Tawny Pipit . . . . .	5
<i>A. crevinus</i> Red-throated Pipit . . . . .	770
<i>A. trivialis</i> Tree Pipit . . . . .	38
<i>Motacilla alba</i> White Wagtail . . . . .	25
<i>M. cinerea</i> Grey Wagtail . . . . .	16
<i>M. flava</i> Yellow Wagtail . . . . .	149
<i>Lanius collurio</i> Red-backed Shrike . . . . .	282
<i>L. excubitor</i> Great Grey Shrike . . . . .	12
<i>L. isabellinus</i> Red-tailed Shrike . . . . .	35
<i>L. minor</i> Lesser Grey Shrike . . . . .	36
<i>L. nubicus</i> Nubian Shrike . . . . .	113
<i>L. senator</i> Woodchat Shrike . . . . .	39
<i>Petronia brachydactyla</i> Pale Rock Sparrow . . . . .	5
<i>Emberiza caesia</i> Cretzschmar's Bunting . . . . .	16
<i>E. cineracea</i> Cinereous Bunting . . . . .	5
<i>E. hortulana</i> Ortolan . . . . .	114
Total birds ringed (of 124 species) . . . . .	10 940

Explanation of Table 2: the ringing and recovery data are arranged in ten columns as follows:

1. Scheme and ring number.
2. Age, in the EURING code: 1 = pullus, 2 = fully grown, year of hatching unknown, 3 = hatched during year of ringing, 4 = hatched before year of ringing, 5 = hatched during previous year, 6 = hatched before previous year. Sex: m = male, f = female.
3. Ringing date (day, month, year).
4. Co-ordinates of ringing site.
5. Country in which the bird was ringed.
6. Recovery date.
7. Mode of recovery: + = killed by man, x = found, v = caught by ringer, vv = sighting of distinctively marked bird, /?/ = unknown.
8. Co-ordinates of recovery site.
9. Recovery site. When in the Sudan, EP=Equatoria Province, BeGh=Bahr el Ghazal, UN=Upper Nile, Daf=Dafur, Kor=Kordofan, BN=Blue Nile, White Nile and Gezira, Kas=Kassala, RS=Red Sea, NP=Northern Province, Kht=Khartoum.
10. Great Circle distance (km) between ringing and recovery sites.



TABLE 2

Recoveries and controls of birds affecting the Sudan

\* = recovery supplied by the EURING Data Bank, Arnheim; ● = recovery also listed by Backhurst (1981)

1	2	3	4	5	6	7	8	9	10
Ciconia ciconia White Stork									
Helgoland									
*E5333	1	260672	5350N 0908E	FR Germany	001080	+	1230N 3330E	Abu Huggar/BN	5068
*H4256	1	170764	5354N 0922E	FR Germany	before 0580	x		(Khartoum Museum)	-
*5555	1	280677	5423N 0919E	FR Germany	before 0580	x		(Khartoum Museum)	-
*E5342	1	250672	5350N 0908E	FR Germany	000174	x	1829N 3140E	Karima/NP	4394
*E5703	1	250672	5345N 0933E	FR Germany	051072	+	1230N 3330E	Abu Huggar/BN	5058
*E5939	1	280675	5320N 1043E	FR Germany	030676	x	1424N 3332E	Wad Medoni/BN	4778
*2239	1	250772	5309N 0836E	FR Germany	000776	/?	1203N 2453E	Nyala/Daf	4797
*3114	1	230673	5346N 0846E	FR Germany	000574	x	1158N 3249E	Geigar/UN	5119
*3170	1	010773	5327N 0830E	FR Germany	spring 76	x	1235N 3245E	E1 Jebelein/BN	5020
*4902	1	230676	5350N 0908E	FR Germany	001076	+	1316N 3408E	Dinder/Kas	5026
*4959	1	270676	5353N 0922E	FR Germany	0377	x	1748N 3400E	Atbara/NP	5447
*6201	1	090777	5402N 0917E	FR Germany	030978	/?	1236N 3248E	E1 Jebelein/BN	5058
*H1410	1	120752	5316N 0829E	FR Germany	080454	+	0405N 3222E	Obbo/EP	5896
*H2236	1	260654	5226N 0801E	FR Germany	000954	+	1402N 3522E	Gadaref/Kas	4922
*H3493	1	300656	5231N 1048E	FR Germany	281263	+	1311N 3010E	E1 Obeid/Kor	4706
*H3950	1	250668	5427N 0921E	FR Germany	000869	x	1202N 2941E	Dilling/Kor	5039
*H4724	1	040759	5344N 0855E	FR Germany	201159	+	1533N 3235E	Khartoum	4728
*H6659	1	270664	5309N 0840E	FR Germany	000366	x	1425N 3320E	Hasaheisa/BN	4832
*H6712	1	130662	5341N 0926E	FR Germany	100871	x	1300N 2830E	Gabr Eldar/Kor	4830
*H6867	1	240662	5233N 1054E	FR Germany	220863	+	1401N 3524E	Gadaref/Kas	4812
*H7929	1	130767	5316N 0831E	FR Germany	000268	x	1311N 3010E	Um Kirioi/Kor	4857
*H9486	1	270665	5304N 0914E	FR Germany	150865	+	1801N 3054E	Ed Debba/NP	4332
*H9526	1	060764	5327N 0807E	FR Germany	200964	x	1910N 3027E	Dongola/NP	4274
*E3631	1	200672	5407N 1036E	FR Germany	spring 76	x	1235N 3245E	E1 Jebelein/BN	5007
*E3525	1	090775	5417N 1048E	FR Germany	010678	x	1740N 3356E	Abara/NP	4537
*E2646	1	280670	5307N 0855E	FR Germany	301171	+	1316N 3408E	Dinder/Kas	4970
*E2201	1	220770	5416N 0913E	FR Germany	170571	+	0950N 2730E	Bahr el Arab/Kor	5196
*E2180	1	230769	5427N 0929E	FR Germany	71	x	1126N 2910E	E1 Lagoua/Kor	5098
*E2006	1	090769	5423N 0919E	FR Germany	140170	+	1340N 2405E	Kabkabiya/Daf	4704
*E1095	1	110766	5252N 0902E	FR Germany	290969	+	1533N 3235E	Khartoum	4644

1	2	3	4	5	6	7	8	9	10
*E0036	1	170664	5350N 0913E	FR Germany	001166	+	1415N 3250E	Managil/BN	4870
*246050	1	040760	5423N 0919E	FR Germany	251060	+	1107N 2920E	Mashesha/Kor	5120
*243960	1	240661	5337N 1029E	FR Germany	011062	+	1742N 3400E	Albara/NP	4488
*244818	1	040760	5331N 1302E	DR Germany	001161	x	1413N 2758E	Umm Badr/Kor	4564
*244929	1	120768	5411N 1051E	FR Germany	before 70	+	1311N 3010E	El Obiid/Kor	4868
*21688-	1	080735	5337N 1024E	FR Germany	winter 36	+	1257N 3608E	Gallabat/Kas	5069
*227865	1	020739	5422N 0915E	FR Germany	200350	+	1225N 2914E	Abu Sabad/Kor	4988
*233314	1	130750	5328N 1007E	FR Germany	before 0162	x	1214N 2729E	Genna/Kor	4839
*236725	1	070755	5359N 0932E	FR Germany	030656	+	1741N 3400E	Zeidab/NP	4561
*238727	1	300557	5322N 1113E	FR Germany	150558	+	1331N 3338E	Sennar/BN	4859
*239078	1	190654	5329N 0829E	FR Germany	000555	x	0825N 2450E	Boro River/BeGh	5225
*240888	1	080758	5402N 1159E	DR Germany	summer 63	x	1530N 2752E	Hamrat el Sheikh/Kor	4504
*241167	1	300657	5232N 1052E	FR Germany	before 0460	x	1201N 2450E	Nyalla/Daf	4677
*242050	1	070756	5403N 0921E	FR Germany	051056	x	1930N 3331E	Abu Hamed/NP	4367
*242264	1	010756	5329N 0800E	FR Germany	summer 57	+	1331N 3338E	Sennar/BN	4994
*243140	1	200658	5335N 0749E	FR Germany	before 0172	+	1402N 3524E	Gadoref/Kas	5031
*H8959	1	190764	5346N 0800E	FR Germany	130964	x	2155N 3120E	Farrea/NP	4060
H4331	1	180765	5427N 0921E	FR Germany	140181	x	1508N 3252E	Kab el Gidad/Kht	4818
212801	1	230634	5315N 0825E	FR Germany	001134	x	1310N 3357E	Singa/BN	4990
20870?			Lost in the war		221242	x	-	Abaa el Beida	-
8915	1	010780	5259N 1111E	FR Germany	200582	+	1410N 3350E	Rahad Scheme/BN	4752
3427	1	290674	5338N 1046E	FR Germany	200282	x	0945N 2635E	Bahr el Arab/Daf	5076
Paris									
*A03260	1	170676	4806N 0718E	France	090180	+	1330N 3336E	Sennar/BN	4556
Arnhem									
*158007	1	220635	5312N 0618E	Netherlands	051135	+	1524N 3236E	Khartoum/Kht	4803
*117469	1	150632	5154N 0448E	Netherlands	310337	x	1248N 3124E	Um Ruwaba/Kor	4968
*176497	1	130746	5312N 0630E	Netherlands	210447	+	1400N 3218E	Ed Dueim/BN	4926
Radolfzell									
*B56512	1	160667	4048N 2624E	Turkey	220272	+	1324N 3354E	Es Suki/BN	3132
*B56341	1	100669	4106N 2512E	Greece	150671	+	1536N 3236E	Khartoum/Kht	2923
*B60020	1	020670	3954N 2242E	Greece	000872	+	1400N 3524E	Gadoref/Kas	3135
*BB12448	1	220663	4800N 0924E	FR Germany	000273	+	1336N 3206E	Zerzour/BN	4367
*BB17996	1	110764	4748N 1648E	Austria	250768	+	1312N 3012E	El Obeid/Kor	4043
*B58094	1	130670	4100N 2336E	Greece	201171	+	1400N 3524E	Gadoref/Kas	3212
*B61776	1	170670	4048N 2306E	Greece	150772	+	1400N 3524E	Gadoref/Kas	3210
*0206	1	050769	4930N 1100E	FR Germany	001069	+	1418N 3048E	Gabra/Kor	4313
*BB1026	1	060668	4036N 2136E	Greece	260869	+	1300N 3548E	Basunda/Kas	3367

1	2	3	4	5	6	7	8	9	10	
*BB13988	1	070669	3930N	2212E	Greece	250172	+	1336N 3242E	El Shawal/BN	3057
*B54591	1	120670	3930N	2212E	Greece	300671	+	1400N 3218E	Ed Dueim/BN	3002
BB1994	1	220753	5128N	1414E	DR Germany	290460	+	1735N 3410E	Atbora/NP	4356
BB8582	1	160657	5330N	1400E	DR Germany	290957	x	1401N 3524E	Gadaref/Kas	4772
BB4838	1	280653	5310N	1328E	DR Germany	000155	x	1308N 3240E	Kosti/BN	4761
BB7221	1	270654	5128N	1414E	DR Germany	250955	+	1348N 3328E	Sennar/BN	4526
BB10776	1	180759	5255N	1152E	DR Germany	120364	+	1253N 3127E	El Ghabsha/Kor	4775
BB14274	1	120762	5230N	1330E	DR Germany	100563	x	1243N 3038E	Er Rahad/Kas	4677
BB8139	1	130755	5320N	1350E	DR Germany	001055	x	1930N 3715E	Port Sudan/RS	4261
BB8549	1	220657	5238N	1221E	DR Germany	030364	+	1515N 3225E	Jeb. Aulia/Kht	4514
BB6223	1	050753	5154N	1355E	DR Germany	291053	+	1300N 3355E	Dar Agil/BN	4678
B2066	1	140751	5258N	1351E	DR Germany	030353	x	1550N 3608E	Aroma/Kas	4563
B53295	1	170657	5140N	1358E	DR Germany	021060	+	1415N 3125E	El Humara/Kor	4440
BB466	1	300657	4642N	1600E	Austria	before 0559	+	1310N 3357E	Singa/BN	4086
BB16030	1	150669	3932N	2240E	Greece	before 1180	x	-	(Khartoum Museum)	-
B53528	1	250656	4013N	2803E	Turkey	301157	+	1401N 3500E	Gadambelia/Kas	2989
O1694	1	280675	4903N	1021E	FR Germany	030477	+	1149N 3423E	Damazini/BN	4692
BB9640	1	290661	4758N	0830E	FR Germany	131172	+	1322N 3352E	Es Suki/BN	4501
BB14604	1	160762	4811N	1045E	FR Germany	before 0664	x	1310N 3240E	Kosti/BN	4386
B59325						000982	/?	1405N 3525E	Gadaref/Kas	
B62794	1	180670	3934N	2245E	Greece	000075	+	1430N 3330E	Shabunga/BN	2976
BB12112	1	030763	4751N	1651E	Austria	1975 - 1980	/?	-	(Khartoum Museum)	-
Rossitten										
BB8643	1	000636	5438N	1733E	Poland	before 0937	x	0455N 2928E	Maridi/EP	5628
B15799	1	240631	5235N	1005E	FR Germany	from 280538	x	1424N 3332E	Wad Medani/BN	4680
B81081	1	110742	5233N	1238E	DR Germany	271033	+	1345N 3230E	El Kawa/BN	4750
B75092	1	000739	5110N	1702E	Poland	170755	x	1359N 3153E	Ed Dueim/BN	4612
Hiddensee						summer	57	1330N 3337E	Sennar/BN	4443
A0052	1	250677	5250N	1205E	DR Germany	150279	+	1430N 2800E	Hamrat el Sheikh/Kor	4485
206687	1	260672	5127N	1322E	DR Germany	000076	x	1425N 3330E	Gezira/BN	4491
A0262	1	250678	5352N	1112E	DR Germany	151279	+	1130N 2600E	Hillat/Daf	4886
Varsovia										
B1401468	1	030772	5231N	1841E	Poland	before 0380	x	-	(Khartoum Museum)	-
B530311	1	040758	5306N	1530E	Poland	031160	+	1401N 3524E	Karadis/Kas	4683
B525966	1	050756	5128N	1716E	Poland	091056	+	1814N 3357E	Abidya/NP	3973
B530570	1	070672	5405N	2328E	Poland	171072	+	1232N 3408E	Wad el Nayal/BN	4711
B509377	1	sum 39	5037N	2615E	Ukrainian SSR, USSR	211239	+	0610N 3430E	Boma/UN	4998

1	2	3	4	5	6	7	8	9	10
B502281	1	270639	5107N 2126E	Poland	000049	+	1930N 3255E	Shellal/NP	3655
B692	1	200632	5103N 2000E	Poland	050333	+	1801N 3404E	Berber/NP	3875
B2205	1	060634	5238N 1600E	Poland	230436	+	1408N 3519E	Um Khangar/Kas	4606
B2949	1	050735	5044N 2141E	Poland	201036	+	1606N 3149E	Gabrat/Kht	3953
B3052	1	140734	5334N 2223E	Poland	100435	+	1037N 3025E	Talodi/Kor	4826
B3499	1	220635	5022N 1930E	Poland	000935	+	1400N 3151E	Ed Dueim/BN	4192
B4174	1	090735	5337N 2217E	Poland	000935	+	1400N 3151E	Ed Dueim/BN	4482
B2742	1	240638	4928N 2427E	Ukrainian SSR, USSR	021045	+	1400N 3345E	Hag Abdullah/BN	4031
Gdańsk									
V0902	1	020775	5241N 2333E	Poland	021077	+	1524N 3630E	Kassala/Kas	4297
Zagreb									
D117889	1	200676	4525N 2024E	Yugoslavia	000278	+	1320N 3350E	Singa/BN	3783
D102944	1	080757	4623N 1627E	Yugoslavia	011157	x	1326N 3400E	Abu Dau/BN	4012
D103802	1	290657	4546N 1906E	Yugoslavia	010558	+	1540N 3221E	Sabarga/Kht	3565
Lithuanie									
B2762	1	040538	5516N 2348E	Lithuanian SSR, USSR	160940	x	2155N 2119E	Wadi Halfa/NP	3712
					290641	x	1424N 3332E	Wad Medoni/BN	4618
Budapest									
107570	1			Hungary	101135	x	2020N 3110E	Kerma Basin/NP	-
7245	1	280722	4742N 2208E	Hungary	000924	/?	1311N 3010E	El Obeid/Kor	3907
9129	1	190626	4808N 2230E	Hungary	140227	/?	1150N 3420E	Roseires/Kht	4181
9909	1	080726	4832N 2038E	Hungary	011026	/?	1524N 3630E	Kassala/Kas	3956
41007	1	040728	4831N 2045E	Hungary	050829	/?	1350N 3332E	Wad el Haddad/BN	4029
66666	1	010731	4702N 1947E	Hungary	121031	/?	1410N 3345E	Sideira/BN	3875
68965	1	030730	4825N 2114E	Hungary	101030	/?	1400N 3520E	Migareh/Kas	4038
Praha									
B7635	1			Czechoslovakia	031155	x	0510N 3147E	Mongalla?/UN	
Ardea purpurea									
Purple Heron									
Moskwa									
C73991	1	030857	4600N 3810E	Azov Sea/USSR	171157	x	1250N 2330E	Zalingei/Daf	3935
Egretta garzetta									
Little Egret									
Tel Aviv									
G7242	1	100777	3308N 3535E	Israel	20-250678	vw	3308N 3535E	Israel	
+ wingtag					180879	vw	1533N 3235E	Khartoum	1977
					210980	vw	-	Central Israel	

1	2	3	4	5	6	7	8	9	10
<i>Nycticorax nycticorax</i>									
Night Heron									
Moskwa									
C61479	1	040756	3912N 4900E	Caspian Sea, USSR	221156	x	1759N 3115E	Genetti Is./NP	2913
<i>Plegadis falcinellus</i>									
Glossy Ibis									
Moskwa									
●C247144	1	150678	4640N 4808E	Caspian Sea, USSR	000380	+	1311N 3238E	Kosti/BN	3992
D313356	1	030756	3912N 4900E	Caspian Sea, USSR	190257	+	1350N 2530E	El Fashir/Daf	3638
<i>Platalea leucorodia</i>									
Eurasian Spoonbill									
Moskwa									
●B153564	1	190578	4627N 3155	Ukrainian SSR, SSR	280280	+	1533N 3225E	Khartoum	3434
Bucaresti									
B2708	-	090667	4455N 2935E	Danube Delta, Romania	041167	x	-	Matamir?	-
Radolfzell									
B52451	1	000555	4013N 2803E	L. Manyas, Turkey	191055	x	1742N 3400E	Atbara/NP	2566
Budapest									
107470	-	070633	4640N 1715E	Hungary	051133	/?	1759N 3115E	Dongola/NP	3436
<i>Phoenicopterus ruber</i>									
Greater Flamingo									
Teheran									
●LL3691	1	250873	3730N 4530E	L. Rezayeh, Iran	000075	+	1533N 3235E	Khartoum	2747
<i>Sarkidiornis melanotos</i>									
Knob-billed Duck									
Pretoria									
54612325	6m	040365	1910S 2955E	Zimbabwe	270666	+	1125N 2610E	Ed Daein/Daf	3423
65700716	6m	110269	2103S 3140E	Zimbabwe	151269	+	1100N 2500E	Buram/Daf	3635
65700630	6m	151070	2101S 3133E	Zimbabwe	140774	+	1049N 2510E	Buram/Daf	3605
<i>Circus pygargus</i>									
Montagu's Harrier									
Stockholm									
7064824	1	040879	5610N 1625E	Sweden	220481	/?	1345N 2750E	Abu Sorouge/Kor	4813
<i>Pandion haliaetus</i>									
Osprey									
Helsinki									
M4570	1	290768	6440N 2704E	Finland	281168	x	0856N 2730E	River Lol/BeGh	6193
<i>Milvus migrans</i>									
Black Kite									
London									
FS11041	2	091272	0815N 3435E	Gambela, Ethiopia	031173	x	1100N 2944E	Kadogli/Kor	613

1	2	3	4	5	6	7	8	9	10
<i>Charadrius dubius</i> Little Ringed Plover									
<i>Hiddensee</i>									
●80509160	3	130878	5127N 1101E	DR Germany	131178	v	0452N 3138E	Juba/EP	5512
<i>Charadrius leschenaultii</i> Great Sandplover									
<i>Nairobi</i>									
A42779	4	070981	1908N 3717E	Suakin/RS, Sudan	030482	+	3540N 3745E	Habara, Syria	1838
<i>Actitis hypoleucos</i> Common Sandpiper									
<i>Pretoria</i>									
●BB14909	2	031277	2942S 3104E	Durban, South Africa	060478	+	0425N 3235E	Torit/EP	3794
<i>Tringa glareola</i> Wood Sandpiper									
<i>Nairobi</i>									
●A25054	2	211078	0452N 3130E	Juba/EP, Sudan	010680	+	6630N 7038E	Yamal, USSR	7478
<i>Gallinago media</i> Great Snipe									
<i>Nairobi</i>									
●B13584	2	141178	0452N 3130E	Juba/EP, Sudan	300879	+	5819N 5100E	Kirov, USSR	6174
<i>Calidris minuta</i> Little Stint									
<i>Nairobi</i>									
●K5308	2	131178	0452N 3130E	Juba/EP, Sudan	200179	v	0200S 3610E	L. Magadi, Kenya	922
<i>Philomachus pugnax</i> Ruff									
<i>Nairobi</i>									
●B11883	3f	020978	0846N 2724E	Aweil/BeGh, Sudan	230479	/?	3611N 0524E	Setif, Algeria	3772
●C5324	3m	061280	1542N 3230E	Khartoum, Sudan	140281	x	1331N 3338E	Sennar/BN, Sudan	271
B27080	6f	220881	1310N 3240E	Kosti/BN, Sudan	201181	+	1415N 3250E	Manauquil/BN	122
<i>Helsinki</i>									
B38672	1	280762	6132N 2135E	Pori, Finland	041163	+	1335N 3337E	Sennar/BN	5415
<i>Stockholm</i>									
5051917	3f	100865	5612N 1624E	Oland, Sweden	101166	x	1424N 3330E	Wad Medani/BN	4868
<i>Pluvianus aegyptius</i> Egyptian Plover									
<i>London</i>									
C306601	6	251172	0815N 3435E	Gambela, Ethiopia	250875	v	1311N 3238E	Kosti/BN	588
C340966	5	230475	0815N 3435E	Gambela, Ethiopia	160975	v	1533N 3235E	Khartoum	840
<i>Larus ridibundus</i> Black-headed Gull									
<i>Denmark</i>									
Z1828	1	110633	5505N 1148E	Denmark	151255	/?	1531N 3235E	Khartoum	4744

1	2	3	4	5	6	7	8	9	10
<i>Sterna caspia</i> Caspian Tern									
Moskwa									
E825108	6	080674	4052N 4700E	Azerbaijani SSR, USSR	020377	x	1515N 3228E	Jeb. Aulia/BN	3173
Stockholm									
U58432	1	190655	6038N 1756E	Sweden	020458	+	1519N 3231E	Jeb. Aulia/BN	5171
7030408	1	140663	5934N 1858E	Sweden	101066	x	1331N 3338E	Sennar/BN	5258
<i>Acrocephalus palustris</i> Marsh Warbler									
Bruxelles									
1297554	3	150881	5110N 0421E	Antwerpen, Belgium	080982	v	1948N 3703E	Khor Arba'at/RS	4500
<i>Phylloscopus trochilus</i> Willow Warbler									
London									
AS60210	3	240965	1538N 3233E	Khartoum	130967	+	3348N 3539E	Sofar, Lebanon	2042
<i>Sylvia atricapilla</i> Blackcap									
Nairobi									
●J113058	3m	311278	0356N 3252E	Imatong/EP	160580	v	5612N 1624E	Oland, Sweden	5989
J160061	3m	171080	1845N 3710E	Erkowitz/RS	141182	+	3511N 3323E	Nicosia, Cyprus	1864
J160417	4f	060181	0401N 3251E	Imatong/EP	040582	/?	3350N 3555E	Zahle, Lebanon	3328
<i>Sylvia nisoria</i> Barred Warbler									
Varsovia									
H182769	2	070669	5212N 1758E	Ladek, Poland	001070	x	1301N 3155E	Tendelti/Kor	4529
<i>Sylvia communis</i> Whitethroat									
Helsinki									
P168050	2	020866	6414N 2745E	Puistola, Finland	001167	+	1328N 2235E	Keanik/Daf	5655
<i>Motacilla cinerea</i> Grey Wagtail									
Moskwa									
●XA441875	1	070778	4345N 4000E	Stavropolski, USSR	071178	v	0401N 3251E	Imatong/EP	4478
<i>Motacilla alba</i> White Wagtail									
Stockholm									
2099528	1	180665	5855N 1155E	Sweden	311065	+	1933N 3021E	Kerma En Nuzl/NP	4619
Riga									
33847	1	170626	5700N 2500E	Latvian SSR, USSR	140930	x	1825N 3145E	Merowe/NP	4324
Lithuanie									
G6999	2	300731	5559N 2445E	Lithuanian SSR, USSR	190336	x	-	(Khartoum Museum)	
Helsinki									
K58370	2	120662	6327N 2347E	Heikila, Finland	201162	x	2026N 3020E	Solep/NP	4805

1	2	3	4	5	6	7	8	9	10		
	<i>Motacilla flava</i> Yellow Wagtail										
	Riga										
	F51267			Latvian SSR, USSR	before	77	x	-	(Khartoum Museum)	-	
	<i>Lanius collurio</i> Red-backed Shrike										
	Helgoland										
	700456	1	180630	5218N 1030E	FR	Germany	001030	x	1415N 2430E	Kuttum/Daf	4407
	Praha										
	Z356230	1	160666	5026N 1542E	Czechoslovakia		000966	x	1415N 3300E	Managil/BN	4313



TABLE 3

*Ortstreue: examples of recurrence in subsequent seasons  
at the original place of ringing*

Species, age and sex		locality	ringing date	recapture date
<i>Charadrius leschenaultii</i>				
Great Sandplover	2	Suakin	11.10.80	09.08.81
<i>Tringa glareola</i>				
Wood Sandpiper	2	Juba	18.10.78	17.01.80
<i>Tringa nebularia</i>				
Greenshank	2	Suakin	05.11.80	28.08.81
<i>Gallinago gallinago</i>				
Common Snipe	4	Juba	23.01.79	28.10.79
<i>Calidris alpina</i>				
Dunlin	2	Suakin	05.11.80	29.08.81
	2	Suakin	21.11.80	07.09.81
<i>Calidris minuta</i>				
Little Stint	4	Suakin	14.10.80	28.08.81
<i>Pterocles quadricinctus</i>				
Four-banded Sandgrouse	Am	Juba	10.11.78	14.01.80
	Am+f	Juba	18.10.78	17.01.80
<i>Chrysococcyx klaas</i>				
Klaas' Cuckoo	Am	Gilo	23.07.79	06.01.80
	Af	Gilo	04.05.78	31.12.80
<i>Caprimulgus clarus</i>				
Slender-tailed Nightjar	Af	Juba	24.01.79	18.01.80
<i>Caprimulgus climacurus</i>				
Long-tailed Nightjar	Am	Juba	22.10.78	19.01.80
<i>Indicator variegatus</i>				
Scaly-throated Honeyguide	A	Gilo	04.03.78	18.04.80
<i>Hirundo senegalensis</i>				
Mosque Swallow	A	Gilo	16.08.79	11.04.80
<i>Campephaga quiscalina</i>				
Purple-throated Cuckoo Shrike	Af	Gilo	08.04.78	29.03.80
<i>Acrocephalus</i> sp. nov.				
Mangrove Reed Warbler	2	Suakin	07.10.80	02.08.81
<i>Sylvia atricapilla</i>				
Blackcap	6m	Gilo	06.03.78	19.10.79
	6m	Gilo	06.03.78	23.12.79
	6m	Gilo	03.03.79	02.01.80
	4f	Gilo	03.03.79	25.12.80
	6f	Gilo	02.03.79	27.12.80
	4f	Gilo	04.03.78	08.01.81

## REFERENCE

BACKHURST, G.C. 1981. Eastern African bird ringing report 1977-1981. *Journal of the East Africa Natural History Society and National Museum* 174: 1-19.

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(Received 23 February 1982; data up to December 1982 included)

## NOTICE

## 6 P.A.O.C. - 1984

At the end of the 5 P.A.O.C. in Malawi, a 3-man committee comprising Don Turner, Gérard Morel and Ken Newman was charged with the responsibility of convening the 6 P.A.O.C. in 1984. Three venues were formally proposed - Kenya, Namibia and Zimbabwe - and were accepted in that order of preference by those at the Malawi meeting.

Since that Congress in August 1980, the committee has endeavoured to select a venue for the 6 P.A.O.C., but it is with much regret that we have to announce that, at this late stage, all three proposed venues appear to be doubtful starters:

KENYA will not now accept South African passport holders  
 NAMIBIA is not now a popular choice among many delegates from Europe because of its political status and its uncertain future  
 ZIMBABWE, which has gone through a series of internal difficulties, is no longer a candidate since the OAZ feels unable to act as Congress organizer. Moreover, it is felt that South African passport holders may not be permitted to enter the country at the time of the next Congress.

During the past few months we have been exploring alternative ideas for a Congress venue. Swaziland was suggested, but in view of the extremely high cost of the Holiday Inn complex outside the capital, plus the complete lack of a suitable atmosphere, this country must be rejected.

With a decision having to be made within the next few months, and with the need to find a venue that will accept ALL passport holders, irrespective of their nationality, we appear to be faced with the following alternatives:

Capetown, or a similar venue within South Africa.

Mauritius.

Canary Islands

A cruise vessel (if available) somewhere in African waters

Scrapping the whole idea of future Pan-African Ornithological

Congresses altogether

In order to gauge public opinion, this notice is being circulated to all participants of the previous two Congresses, and is being printed in a number of ornithological journals. Would all those with an interest in attending a 6 P.A.O.C. please complete the enclosed short questionnaire and return it by air (or write in by aerogramme) to D.A. Turner, Box 48019, Nairobi, Kenya as soon as possible. Residents of South Africa may, if they wish, reply direct to Ken Newman at Box 65426, Benmore 2010.

THE PREY OF THE CROWNED EAGLE *STEPHANOETUS CORONATUS*  
IN CENTRAL KENYA

L.H. Brown<sup>1</sup>

The Crowned Eagle *Stephanoetus coronatus* has been studied very thoroughly at the nest (Brown 1952, 1966) but it is a difficult species to study away from the nest. It is either seen (infrequently) perching on a forest tree or (almost daily in suitable habitat near the equator) in nuptial or territorial display high above the forest. The male bird is most often seen in such displays, the female much less often. Thus, while one aspect of their lives has been thoroughly studied, their normal way of life, away from the nest, is still very largely unknown.

Some data on the prey of the Crowned Eagle have already been published in the papers referred to; but since 1966 a large amount of additional data has been gathered in central Kenya in the Ololua Forest, south of Nairobi. Many records are derived from prey remains found beneath nests, others from fresh or recent kills and visual identification of kills brought to the nest.

Unfortunately, no detailed study is available of the prey of the Crowned Eagle in its main or typical habitat, the tropical rain forest. Here, it is reputed to feed mainly on monkeys (*vide*, e.g. MacLatchey 1937). The Harpy Eagle *Harpia harpyia* and the Philippine Eagle *Pithecophaga jefferyi* are also reputed to feed mainly on monkeys, but recent good data on both, in typical tropical forest habitat, suggest that monkeys are a much less important constituent of their diet than has been thought (Gilliard 1958).

STUDY AREA AND METHODS

The Ololua Forest is a tract of mixed highland sclerophyll forest dominated by *Olea africana*, *Croton megalocarpus* and *Schrebera alata*, with undergrowth largely composed of *Dombeya rotundifolia*, *D. burgessiae*, *Clausena anisata*, *Turraea mombassana* and *Veronia holstii*. The ultimate dominant is probably *Brachylaena huillensis*, and, at the time of writing, this species is thrusting through the mixed canopy of the trees.

Parts of the forest area are composed of open glades with *Themeda triandra* and other grasses, and various small trees and shrubs, notably *Carissa edulis*, *Grewia* and *Euclea divinorum* growing on old termite mounds. Smaller open glades are often choked with dense shrubbery in which *Lippia javanica*, *Ruttya fruticosa* and the exotic *Psiadia arabica* predominate. Tracts of the former indigenous forest and forest glade were cleared by the Forestry Department in 1961-1963 and planted with *Eucalyptus salgua*. The *Eucalyptus* plantation certainly now supports less indigenous fauna than does the natural forest.

The mammalian fauna includes among ungulates Masai Giraffe *Giraffa camelopardalis tippelskirchi* (which readily enters the densest parts of the forest), Waterbuck *Kobus defassa*, Bohor Reedbuck *Redunca redunca*, Bushbuck *Tragelaphus*

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<sup>1</sup>At the time of his death, Leslie Brown had organized his data on the prey of the Crowned Eagle, collected over many years' observation, near Nairobi, into a short paper. Unfortunately, the discussion section of this paper was never completed. We have, however, considered the incomplete MS worth publishing, particularly for the value of the descriptive statement of the prey of this eagle in Kenya. Editing and shortening has been necessary in those sections obviously designed to build up to the missing discussion. Peter Britton, Charles Dewhurst, Peter Steyn and, especially David Pearson, have made helpful suggestions or modifications to the original account which was typed from a handwritten version by Hazel Britton.

*scriptus*, Harvey's Duiker *Cephalophus natalensis*, Bushpig *Potamochoerus poreus*, Warthog *Phacochoerus aethiopicus*, Suni *Nesotragus moschatus* and occasional Kirk's Dikdik *Rhynchotragus kirki*. Primates include numerous Sykes' Monkeys *Cercopithecus mitis*, itinerant troops of Olive Baboons *Papio anubis*, and Greater Galagos *Galago crassicaudatus*. Carnivora include occasional wandering Lion *Panthera leo*, resident, but scarce, Leopard *P. pardus*, Serval Cat *Felis serval*, Spotted Hyaena *Crocuta crocuta*, Side-striped Jackal *Canis adustus*, Genet Cats *Genetta genetta* and *G. tigrina* and several species of mongooses (including *Herpestes ichneumon* and *Ichneumia albicauda*); the Aardvark *Orycteropus afer* also occurs but is seldom seen, and the Tree Hyrax *Dendrohyrax arboreus* is abundant.

Numbers of the larger ungulates and carnivores have been much reduced by human persecution, notably snaring with wires, during the last two decades, and numbers of the smaller species are severely reduced in drought years (e.g. 1975-77) when herds of cattle and goats browse the undergrowth, reducing available food and cover. However, the primates, Tree Hyrax and small Carnivora appear relatively unaffected.

#### HISTORY OF THE CROWNED EAGLES IN THE AREA

A pair of Crowned Eagles has occupied the forest since 1958. During that time (23 years) there have been two females at the site. The first of these laid five single eggs (1959, 1961, 1964, 1966, 1967) and reared five of the resultant young to fledging and four to independence (Brown 1966, 1971). The second, which was the first female's last offspring, was immature until she was 3½ years old, but laid her first egg in August 1971. This younger female was still present in June 1980, having lived at least nine years as an adult. In that time she laid certainly three (probably four) eggs, of which the first was infertile and abandoned. Her record of breeding is thus much inferior to that of her parent; similar variations between individuals are common among large eagles in Kenya (Brown 1966).

During this period there have been four different males. The first was present from 1958 to 1963, but then disappeared, presumably from natural causes. The second was killed in his prime by an African gardener, and the third appeared in 1969 and was present until early in 1978; he was replaced (presumably dead) by a new male, first seen on 25 June 1978, who is still present (July 1980). The history of this (and other pairs) indicates that as long as any individual is alive, he or she remains faithful to the site, but if bereaved by natural loss or human interference, it will mate again without hesitation and as soon as possible.

#### PREY RECORDS FROM OLOLUA AND OTHER SITES IN EASTERN KENYA

During 23 years of observations on Crowned Eagles in Ololua Forest a successful kill has never been witnessed, though several unsuccessful attempts have been seen, and on five occasions the eagle (one or both members of a pair) has been found on a kill. Prey items have been recorded in three ways:

1. *Fresh or recent kills located on the forest floor.* Most of these have been found with the aid of a keen-nosed Labrador dog, and they have been located at various different times of year. They form perhaps the most natural of all the samples, though the total number found is small.
2. *Kills brought to, or seen on, the nest which could be identified.* Because of the depth of the nest-cup, prey brought to the nest was often impossible to see, even from the highest attainable point in a neighbouring tree. However, of 346 mammalian kills observed brought to the nest,

the identity of 92 was positively established as to species.

3. *Prey remains collected beneath the nests.* The nest in use from 1959 to 1969, in which five young were reared, collapsed completely in 1973 and was abandoned. The remains were thoroughly sifted for any bones embedded amongst the component sticks. In the Crowned Eagle the digestion of bone, and even teeth, is complete, and the few castings found contained nothing but keratinous matter, the hair, hooves, and occasionally horns of antelopes or other mammals. Most of the bones found were the jawbones of Suni or Hyrax, the long leg bones of larger antelopes (Harvey's Duiker or young Bushbuck), the centre part of the cranium and horns of Suni, and the complete or nearly complete skull of mongooses. The collection of bone remains beneath or in nests is a favoured method of analysis of prey in large birds of prey, since it permits recognition of many items from many nests without lengthy periods of watching (see, for example, Smeenk 1975). However, in a species such as the Crowned Eagle, in which bone may be digested, there is clearly a risk of bias against the bones of smaller or young animals.

The total number of individuals of various prey species identified by the three methods is set out in Table 1.

TABLE 1  
*Prey taken by Crowned Eagles in Ololua Forest*

Species	Number of prey animals identified				Percent of total
	As kills found in forest	As prey seen at nest	From bone remains	Total	
Suni	7	41	51	99	41
Tree Hyrax	1	24	27	52	21
Harvey's Duiker	0	2	10	12	5
Bushbuck	2	8	17	27	11
Other antelopes <sup>1</sup>	0	5	8	13	5
Monkeys	7	5	15	27	11
Miscellaneous mammals <sup>2</sup>	1	7	4	12	5
Marabou <sup>3</sup>	0	0	1	1	0.4
Total	18	92	133	243	

<sup>1</sup> includes one Impala *Aepyceros melampus*

<sup>2</sup> mongooses etc.

<sup>3</sup> *Leptoptilos crumeniferus*

The different samples gave broadly comparable results, suggesting that the assortment of animals recognizable from the bone samples was reasonably representative of the prey taken. Suni (41 per cent of all identified prey animals) represented the major item, followed by Hyrax (21 per cent), Bushbuck (11 per cent), monkeys (11 per cent), duikers (5 per cent) and other antelopes (5 per cent). Clearly, on a weight basis, small antelopes provided the bulk of the diet. Observations on prey brought to a Crowned Eagles' nest at a site near Embu, in east-central Kenya, provided similar results (author's unpub. obs.). Here, 78 of the 320 animals seen brought to the nest were identified; of these, the major prey species were again Suni (56 per cent) and Hyrax (26

per cent), followed by mongooses, etc. (8 per cent), monkeys (5 per cent) and duikers (4 per cent).

The prey of these Crowned Eagles in Kenya may be compared with that recorded for the species in southern Africa. Jarvis *et al.* (1980) identified almost 600 distinct prey animals from bone remains found beneath 16 nests in Cape Province. Of these, 42 per cent were Rock Hyraxes *Procavia capensis*, 28 per cent were antelopes (Blue Duiker *Cephalophus monticola* and Bushbuck), 8 per cent were Vervet Monkeys *Cercopithecus pygerythrus* and 6 per cent were young bovids. Steyn (1973) also recorded Rock Hyrax as the most frequent food item of birds in the Matopos area of Zimbabwe.

Thus the diet of both southern birds and those in rather marginal habitats in Kenya consisted mainly of small antelopes and hyraxes, with monkeys representing only a minor component. Good quantitative data are required on the dietary composition of Crowned Eagles living in tropical rain forest.

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FORM AND FUNCTION OF THE DUETTING OF THE  
YELLOW-BREASTED APALIS *APALIS FLAVIDA*

Adrian D. Lewis

Duetting has been defined as "mutual or reciprocal song by paired birds" (Armstrong 1963), and is a phenomenon most common within the tropics (Armstrong 1963, Thorpe 1972, Kunkel 1974, Catchpole 1979). Thorpe (1972) lists the Yellow-breasted Apalis *Apalis flavida* and other congeners as duetting species, while noting that their duets do not appear to be highly accurate. Kunkel (1974) lists various duetting apalis species, omitting the Yellow-breasted, and notes that at least some of them have antiphonal (responsive) duets.

A pair of Yellow-breasted Apalises of the race *flavocincta* hold a territory that is composed, at least in part, of my garden in Spring Valley, Nairobi and they are frequently seen and heard. The sexes are distinguished by size and shape of the black breast spot (Jackson 1938, specimens in the National Museum Nairobi). Based on observations between February 1981 and July 1982, this paper describes their duet and discusses its function, and compares it to duetting of the same species in other areas, and to duetting in other families.

THE FORM OF THE DUET

The male apalis gives a rolling clicking call, where each click-group is either a clearly bisyllabic *cli-click* or a trisyllabic *cli-cli-click*; this rolling sound is often called 'galloping' due to its rhythmic similarity to the drumming of a horse's hooves (it can readily be imitated by the rhythmic drumming of the nails of the first three fingers on a table top, as in irritation or impatience). Mackworth-Praed & Grant (1960) correctly liken the call to two pebbles being knocked together. During the duet, from five to 25 or more of these polysyllabic click-groups can be uttered, sometimes with brief intervals. The longer phrases often have a rolling or undulating quality due to variations in pitch, and the male often calls alone.

The duet is initiated at almost all times by the male's call; instances of the female calling alone or initiating the duet are very rare. The male starts to click and, two to ten seconds later, the female replies with a loud, strident, excited crescendo of shrill and separate squeaks, which are appropriately described by Y. Malcolm-Coe (pers. comm.) as 'laughing'. These squeaks go through one or two rising and falling cycles while the 'galloping' is in progress. Exceptionally, the female may go through four or five squeak cycles, with up to 15 squeaks per cycle. This squeaking is presumably the *tsirri-tsirri* described by Chapin (1953) and Mackworth-Praed & Grant (1960), though neither work mentions duetting.

GEOGRAPHIC VARIATIONS IN THE CALLS

Familiarity with the Spring Valley apalises has facilitated comparison of their calls with those of the species elsewhere. Thus birds heard at Limuru (1.06S, 36.39E) and at the University of Nairobi Chiromo campus, the Nairobi Arboretum and at Langata near Nairobi, sounded identical. The male of a pair at the Hippo Pools at the southern end of Nairobi National Park (1.22S, 36.45E) was, however, distinctly different, with decidedly higher pitched and more resonant calls reminiscent of the 'tonks' of a tinkerbird *Pogoniulus* sp., but with the same rhythm and frequency as the birds at Spring Valley. A male on Embakasi Ranch, 20 km northeast of the Hippo Pools, had the clicks lower

pitched and duller than the Spring Valley birds. Birds in drier country sound different to all the above examples: hence males at Ishiara (0.28S, 37.48E) gave a much more rapid 'gallop' that could be rendered *crit-crit-crit*.... (rather like the rapid and repeated stroking of a finger nail along a comb, in short sequences), with far less variation in pitch than the Spring Valley birds.

Roberts (1978) records duetting for races of the apalis from southern Africa (nominata, *neglecta* and *florisuga*). He mentions "'skee-skee-skee, chizzick chizzick, chizzick', replies to by mate rather more slowly 'krik-krik-krik'." The 'chizzicks' are presumably the 'gallop', while the slow 'kriks' may well be the squeaks. But although both sexes of the birds around Nairobi sometimes begin their calls with a two-second rasping *terrrrsk* call, there seems to be no analogy for the opening *skees* of Roberts.

From West Africa, Mackworth-Praed & Grant (1970) note that the call is variable with locality, and that it is usually *chierrer* or *tsirri* (which may refer to the squeaks) together with freely uttered clicking chittering cries (which may be the 'gallop'), the whole apparently referring to the duet.

#### THE FUNCTIONS OF THE DUET

The functions of avian duetting are several. Firstly, since duetting birds are monogamous and maintain a prolonged or permanent pair bond, duetting is thought to be instrumental in the preserving of this bond (Armstrong 1963, Thorpe 1972, Kunkel 1974, Catchpole 1979, Wickler 1980). This is supported by the fact that, while duetting is a predominantly tropical phenomenon, duetting species outside the tropics are also those species with a permanent pair bond (Kunkel 1974). Furthermore, complex partner-specific duets suggest a strong fixation of the bird to its individual mate (Kunkel 1974), such that to lose the mate would necessitate further expenditure of time and energy to adjust to a new one (Dawkins 1976, Maynard Smith 1977). Secondly, within this pair bond, duetting may also be important in synchronizing the gonadal cycles of the pair (Brockway 1969, Lehrman & Friedman 1969, Kunkel 1974, J.P. Dittami *in litt.*).

Thirdly, duetting may be used to maintain geographical contact between the members of a pair. This aspect, particularly for species that inhabit dense vegetation, was stressed as a basic reason for duetting by Thorpe (1961, 1966, 1972), but Kunkel (1974) showed this emphasis to be erroneous in many cases, since many species do in fact come close together to duet, often while indulging in specific visual displays.

Finally, duetting may be used to preserve territorial integrity, whether as a passive exhibition of a pair's presence, or as an active display against intruders (Kunkel 1974, Seibt & Wickler 1977a, Wickler 1980).

The following points can be made about the Spring Valley apalises in the light of these theories. Firstly, their pair bond is at least prolonged, as they are resident on their territory and duetting takes place throughout the year. The only diminutions in the frequency of the duets came between 20 March and 6 April, and in early August. The Yellow-breasted Apalis is known to breed in the Nairobi area during both of these periods (Brown & Britton 1980, author's obs.), so that these diminutions in the duetting may have occurred at a time when activities were concentrated on incubation or the rearing of young. Although no specific breeding behaviour was observed at Spring Valley during these periods, the presence of the birds on the territory was confirmed by sightings.

The apalises inhabit fairly dense vegetation, in thick shrubs or high in the tree canopies in the garden. They are thus often out of sight of each other, frequently performing the duet while on opposite sides of the house. That these birds use the duet to maintain contact from moment to moment is suggested by the following common occurrence. When the pair is foraging close



together and within sight of each other in a tree or bush, they are silent, or the male gives occasional single, very low, 'introspective' clicks. However, when the male flies off to another bush, he almost at once starts to give three to five beat phrases of the 'gallop'; this call then increases in volume and length until the female replies or joins him.

The distance between the duetting partners inhibits both the complexity of the duet, and any accompanying visual signals (Wickler 1978). Thus highly complicated duets are not possible, as, at long range, all of the elements may not be audible to each partner. Similarly, if the participants are out of visual contact, elaborate posturing is superfluous. Thus, when seen duetting, the apalises simply continue foraging through the vegetation, with no break in this activity when giving their calls; a male on the Mua Hills (1.29S, 37.11E), although producing a 'gallop' of sufficient volume to make the whole of his body shake, still continued foraging for food in the usual way, while the female replied from around 200 m away.

Despite these arguments, I have observed several times what appears to be a semi-automatic listening-recognition posture in female birds. In these cases, a female was being observed while foraging silently, when the male's 'galloping' started up some way off. The female at once stiffened, and became motionless with her head raised and her bill pointed upwards at an angle of some 45 degrees; she gave two or three muted squeaks and then continued foraging when the 'gallop' stopped. This behaviour was also observed in a foraging immature bird, on hearing a full duet start up nearby: the head was held up and the bill raised to about 60 degrees above the horizontal for about four seconds, after which it resumed foraging.

This posture was at first considered to be a listening one, but is more probably a semi-automatic display of the prominent white throat patch, which appears to be important in this species in recognition between individuals (Lewis 1982). Whether the posturing bird faced the direction of the calls in order to show its throat is uncertain, but this seemed improbable as the posture evolved in whatever direction the bird was facing at the time.

Wickler (1980) considered the probability of a territorial mated pair losing contact with each other to be small, and used this and the fact that many species duet when close to each other to suggest duetting to maintain contact to be improbable, a simple non-pair specific call note being adequate for this purpose. This does not, however, cover the situation where a mated pair is surrounded by other resident mated pairs. In this case, because of the frequent remoteness of the duetting partners, the calls of the two sexes would seem to have to be pair-specific; otherwise, visually isolated birds could duet with individuals on neighbouring territories. This individuality would be most important for the male, who initiates the duet, and instances have been given above where the male's calls differ even to the human ear, presumably being far more distinctive to the birds themselves. Differences may occur in the speed and/or grouping of the female's squeaks, but these would not be so important due to her secondary role in the duet.

This apparent function of duetting in maintaining contact may be similar to that described for the Ground Hornbill *Bucorvus cafer*, where the members of a pair utter strictly alternating, low frequency calls to keep in contact when walking in tall grassland (Seibt & Wickler 1977b).

The Spring Valley apalises have never been observed to use their duet as an active territory-claiming device against neighbouring pairs, though they may do so; similarly, the counter-duetting of two pairs has never been heard. It is perhaps significant that the male, perceiving its reflection in a window as another bird on its territory, did not duet or 'gallop', but instead produced a quite different threat posture and call (Lewis 1982).

## REVIEW AND DISCUSSION

Armstrong (1963) subdivided duetting into four types:

1. Singing in unison
2. Antiphonal or responsive duetting:
  - a. the male calls forth a response, imperfectly co-ordinated, from the female; initiation by the female is uncommon
  - b. the birds sing in regular alternation
  - c. the female replies so promptly that the two utterances sound like a single stereotyped call

Type 2a is precisely that given by the Yellow-breasted Apalis. Kunkel (1974) considers this type of duet as a basic form from which more complicated types such as those of the Tropical Boubou *Laniarius ferrugineus*, the Slate-coloured Boubou *L. funebris*, d'Arnaud's Barbet *Trachyphonus darnaudii* and the Usambiro Barbet *T. usambiro* (all type 2c) may have been derived. Certainly the more complex duets of these species show great differences from that of the apalis:

1. Each individual apalis has only one, sex-specific, element, so that its part in the duet is ultimately simple, with no element choices involved. Wickler (1972) listed 24 different duet elements for the Slate-coloured Boubou, while showing the choice of any of these elements by an individual to be jointly determined by its individual song programme, by the preceding calls of its mate, and by the repertoire of its neighbours.
2. While the apalises often duet out of sight of each other, these bush shrikes and barbets habitually come close together to duet, and include muted calls and visual signals that would not be detectable at any distance (Wickler & Uhrig 1969, Wickler 1976, 1978, Seibt & Wickler 1977a): thus these complex duets are not used to maintain geographical contact.
3. While the Slate-coloured Boubou and the Usambiro Barbet use muted duet elements for personal contact interspersed with louder ones for territorial display, the intensity of at least the male apalis' calls is uniform and varies only with distance from the mate.
4. While the apalises have never been observed to use their duet as an active territory-claiming device this is certainly so in the Slate-coloured Boubou and the Usambiro Barbet, where the hearing of a duet elicits the immediate approach and counter-duetting of the resident pair (Seibt & Wickler 1977a).

Of the 18 species in the genus *Apalis* (Hall & Moreau 1970), eight in addition to the Yellow-breasted are known to show probable or certain duetting: Masked Apalis *A. binotata personata* (Kunkel 1974), Grey Apalis *A. cinerea alticola* (?) (Heinrich 1958, Kunkel 1974), Black-throated Apalis *A. jacksoni jacksoni* (Mackworth-Praed & Grant 1960, Thorpe 1972), Black-headed Apalis *A. melanocephala lightoni* (Roberts 1978), *A. m. tenebricosa* (Mackworth-Praed & Grant 1960), Chestnut-throated Apalis *A. porphyrolaema porphyrolaema* (Kunkel 1974, P.H.B. Sessions MS), Rudd's Apalis *A. ruddi* (Beven 1944, Kunkel 1974), Buff-throated Apalis *A. rufogularis* (?) (Heinrich 1958, Kunkel 1974), Bar-throated Apalis *A. thoracica* (Thorpe 1972, Roberts 1978), *A. t. arnoldi* (Mackworth-Praed & Grant 1960), *A. t. fuscigularis* (ADL and D.J. Pearson pers.

obs.); the details of this last unpublished observation and those of Sessions are given below.

P.H.B. Sessions noted two types of duetting for the nominate race of *Apalis porphyrolaema*. While describing the call *pip, preee, pip, preeeeee*, as usually only given from the tops of tall trees while feeding, he noted that the bird "Appears to sing in duet with another bird about 50 yards away". He also described a "low churring rattle, as a finger run along the teeth of a fine comb" from birds feeding in low bush, "each bird making [the] same noise and answering each other".

On 19 March 1982 D.J. Pearson and the author observed a pair of the endemic race *A. t. fuscigularis* duetting in indigenous forest on the top of the Teita Hills (3.25S, 38.20E) in southeast Kenya. The male's call was given in short phrases, and was a melodious, ringing, liquid version of the Yellow-breasted Apalis' 'gallop'. During this call, and forming the type 2a duet, the female gave two or three single and irregularly spaced high metallic *cheek* calls. The whole effect was very similar to the Yellow-breasted Apalis in rhythm, but different in tone.

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#### ENCLOSED MAP

There were some important omissions on Fig. 2, the map of the Sedge Warbler distribution, of D.J. Pearson's paper 'The migration and wintering of Palearctic *Acrocephalus* warblers in Kenya and Uganda', *Scopus* 6: 49-59.

A corrected version of this map is enclosed with this issue: the back of the map should be moistened (it is gummed) and stuck over the original figure on p. 51.

The author and the editor are sorry about this error.

## SHORT COMMUNICATIONS

VERREAUX'S EAGLE *AQUILA VERREAUXI* EATING CARRION On 13 November 1982 I watched a female Verreaux's Eagle feeding on a dead aardwolf *Protelis cristatus* near Leopard Cliffs in Nairobi National Park. The male eagle sat in a small tree near the carcass but did not feed on it. The female fed for about 5 min. On examination I estimated that the aardwolf had been dead for about 48 h. Brown *et al.* (1982) note that carrion-feeding occurs only exceptionally in this species.

Patrick J. Frere, Box 14490, Nairobi

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RECORDS OF THE GRASSHOPPER BUZZARD *BUTASTUR RUFIPENNIS* AT NAKURU, RIFT VALLEY, KENYA, AND A NOTE ON ITS PREY The Grasshopper Buzzard is a regular non-breeding intra-African migrant to eastern Kenya, but is much rarer elsewhere in the country (Britton 1980). The presence of the species at Nakuru, in the eastern rift, is thus noteworthy, and Table 1 details observations of single birds from this area.

TABLE 1

*Records of the Grasshopper Buzzard in the Nakuru area*

Date	Locality	Observer
pre May in 1965	Milmet Estates, Bahati	I.G. Marshall
19.03.76	Grasslands SW of Lake Nakuru (Naishi)	I.G. Marshall
04.04.76		
11.04.76		
14.04.76		
21.01.79	Milmet Estates, Bahati	I.G. Marshall
12.08.79		
30.03.80	Grasslands north of Lake Nakuru (Baharini)	V. Haas
07.04.80		V. Haas
08.04.80		L. Schwab <sup>1</sup>
12.04.80		V. Haas

<sup>1</sup>quoted in *Monthly Newsletter of the Section of Ornithology, National Museums of Kenya* No. 51, June 1980

The records on 8 and 12 April 1980 certainly relate to the same individual, which was identified by broken and missing primaries in its right wing. If the 1976 and 1980 groups of sightings also concerned individual birds, which may be the case since both sets of observations were made in relatively restricted areas, then these birds stayed in the vicinity for at least 27 and 13 d respectively. This may reflect Brown & Amadon's (1968) note of the species taking up temporary territories in its non-breeding range. Furthermore, since the species inhabits its northern breeding areas from May to September (Britton 1980), the striking coincidence of the 1976 and 1980 March-April dates may indicate a migration of birds northwards up the rift, possibly from the regular non-breeding quarters in northeastern Tanzania. Similarly, the August 1979 record might relate to an early southwards return by the same route.

On 30 March 1980 a Grasshopper Buzzard was seen on the ground at Lake Nakuru, being mobbed by a group of seven Crowned Plovers *Vanellus coronatus* whilst holding another of their number struggling in its talons; this captured plover

broke free almost immediately and escaped. On 7 April 1980 a Grasshopper Buzzard again tried to catch a Crowned Plover, but was dissuaded by the alarm calls of the plover's mate.

The Grasshopper Buzzard is predominantly insectivorous, but may also take small mammals and reptiles (Brown & Amadon 1968, Jackson 1938, Mackworth-Praed & Grant 1957); Brown (1972) records only a single case of avian prey, an immature Red-billed *Quelea quelea quelea* taken from large drinking flocks in Tsavo. The Nakuru observations were made on recently burned grassland at the end of the dry season, a time when insects were scarce. This paucity of its usual food may have forced the Grasshopper Buzzard(s) to prey on birds in the same way that Kestrels *Falco tinnunculus* and Common Buzzards *Buteo buteo* will take birds when their normal diet, various species of mice (Microtidae), is made scarce by winter conditions (Glutz von Blotzheim, Bauer & Bezzel 1971).

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- Volker Haas, Max-Planck-Institut für Verhaltensphysiologie, Abteilung Wickler, D-8131 Seewiesen, West Germany, Ian G. Marshall, Milmet Estates Ltd, Box 180, Nakuru, Kenya and Adrian D. Lewis, Department of Geology, University of Nairobi, Box 30197, Nairobi

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THE TRUMPETER HORNBILL *BYCANISTES BUCINATOR* IN NAIROBI The Kenya range of the Trumpeter Hornbill extends through the coastal lowlands from Lamu to Sokoke Forest and, inland, reaches west to Kiboko, Thika, Embu and Meru (Britton 1980). But despite its regular occurrence in the riverine woodland around the New Blue Posts Hotel, to the southwest of Thika, doubts have frequently been expressed over its occurrence in Nairobi, only 30 km to the southwest. This uncertainty has centred on the possibility of confusion with the Silvery-cheeked Hornbill *B. brevis*, a common Nairobi species. Such misidentification does, however, appear unlikely, since the two species differ substantially in such features as size, the colour of the eye wattle, the extent of white on the ventral torso, and the occurrence of white in the wings.

As a result of requests for information in connection with the Kenyan bird atlas (Lewis & Pomeroy in prep.), the following records of the Trumpeter Hornbill in Nairobi, all fully supported by descriptions, have been received:

TABLE 1

*Observations of the Trumpeter Hornbill in Nairobi*

Date	Location	Number	Observers
Feb-Jun 1981	International School, NW suburbs	2	H. Gomez de Silva
17 May 1981	Brookside Grove, Upper Parklands	2	P.S. Soorae
11 Nov 1981	Chiromo, University	1 (+ 9 <i>B. brevis</i> )	D. Widdowson
4 or 5 Sep 82	Muthaiga Road, flying into Karura Forest	3	Mr & Mrs R.M. Greenshields

1 Oct 1982	Muthaiga Road	3	Mr & Mrs R.M. Greenshields
6 Oct 1982	eastern side of Karura Forest	1	ADL, F. Ng'weno P. Wotton

The restriction of these records to the Karura Forest and adjacent areas of the northern suburbs is noteworthy in that, if the species is extending its range southwestwards from its known haunts in the Blue Posts/Thika area, the Karura is the first substantial forest habitat in its path. As well as being the westernmost records of the species for Kenya, these sightings also extend the bird's altitudinal limit from 1500 m (Britton 1980) to c. 1650 m.

My acknowledgements to the observers for their kind response.

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Adrian D. Lewis, Department of Geology, University of Nairobi, Box 30197,  
Nairobi

*Scopus* 6: 102-103, December 1982

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A BREEDING RECORD OF THE WHITE-RUMPED BABBLER *TURDOIDES LEUCOPYGIUS* FROM TANZANIA The White-rumped Babbler is a locally common bird of rank grass and marshy areas on the Ufipa Plateau in southwestern Tanzania (Britton 1980, White 1962). It is listed under category (2) by Brown & Britton (1980) as a resident or presumed resident for which there is no East African breeding record, although nests are known from elsewhere.

A nest with two eggs was found near Tatanda (8.31S, 31.30E) on 24 March 1982. The eggs were turquoise blue in colour and measured (mm and g) 28.2 × 20.3, 6.2; 27.8 × 20.1, 6.0. They were in an advanced state of incubation and would have hatched within five or six days. The nest was a mass of grass and twigs with a deep cup placed on top, the outside made of leaves and the inside lined with fine grass and rootlets. It was placed in a tangle of branches 2.5 m up in a *Piliostigma thönningii* tree which was covered in a dense growth of vines which formed a shaded canopy over the nest. The cup measured 93 × 95 mm across and was 70 mm deep.

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D.C. Moyer, Box 77, Sumbawanga, Tanzania and S.W. Sikombe, Box 77, Sumbawanga

*Scopus* 6: 103, December 1982

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THE BREEDING OF THE RUFOUS-CHESTED SWALLOW *HIRUNDO SEMIRUFA* IN EAST AFRICA The breeding range of the Rufous-chested Swallow has been described as extending from Senegal in the extreme west, eastwards to Darfur (25E) in the western Sudan, thence south to the Orange Free State (26E) (Hall & Moreau 1970). This note summarizes the breeding records of the species (the race *gordoni*) for East Africa, well to the east of Hall & Moreau's cited range, at longitudes of 30 to 35E in Uganda and western Kenya. The information given for this region by Brown & Britton (1980) is supplemented.

The paucity of the data allows individual consideration of the observations:

- a) McInnis (1932-33) reported two nests, each containing three eggs, but unfortunately failed to provide either the date(s) or the location(s) of the observations. However, as the other places mentioned in his paper are all in the vicinity of Lake Victoria in western Kenya, this may well

also apply to the swallow records; the date(s) can only be fixed as pre-1932. He described the nests as built of mud with a long tunnel entrance, and lined with grass and feathers. One of the nests was sited under an arch formed by the conjunction of two termite mounds, while the second was in a culvert.

b) The second record is of a nest with three eggs at Kendu Bay (0.21S, 34.38E) in western Kenya, on 8 June 1932; there are no further details (EANHS nest record card). It is just possible that this refers to one of the McInnes (*op. cit.*) records, but it is rather more likely that his paper was in press at that time.

c) Jackson (1938) recorded breeding at Entebbe (0.04N, 32.28E), in May and June. These are presumably the dates quoted for Uganda by Mackworth-Praed & Grant (1960), while this and record b) are the data given for East Africa by Brown & Britton (P.B. Taylor *in litt.*). Jackson recorded clutch size as c/2 or probably c/3, and described the nest as consisting of mud, thickly lined with feathers and usually placed in large drain-pipes under roads.

d) M.P.L. Fogden found the species breeding in Chambura Game Reserve (0.07S, 30.04E), Uganda, in May 1971; the eggs are now in the collection of the Western Foundation of Vertebrate Zoology, California (H.A. Britton 1980).

e) On 10 April 1977 W.J. Plumb found the species nest building at Kendu Bay; the nest material consisted of feathers and straw, and it was being taken into a culvert pipe below a road (EANHS nest record card). That these birds were presumably adding the nest lining (McInnes 1932-33, Jackson 1938, Mackworth-Praed & Grant 1960, Roberts 1978) suggests that nest building was well progressed.

f) On 18 August 1980 P. Davey observed a pair feeding three newly fledged young in the eastern end of the Masai Mara Game Reserve (approximately 1.38S, 35.16E) of western Kenya (EANHS nest record card). At about the same date and also in the Mara, he saw another pair building a nest in the tangled roots of a bush *Cordia ovata* that was growing out of a disused termite mound (P. Davey *in litt.*).

g) On 25 June 1981 I observed a pair nest building 5.5 km northwest of Nango in Siaya District, western Kenya (0.08S, 34.13E). The birds were collecting small mud pellets from the exposed bank of a small stream near the road, and were carrying them into a culvert which ran under the road.

The paucity of these breeding records is perhaps not surprising in view of the fact that these areas represent the very eastern extremities of the bird's equatorial breeding range, but the question as to whether the absence of breeding records between 1932 and 1971 is real or a product of other factors must be left open. Such long term fluctuations can certainly occur along the periphery of a species' range, but in this case there is also the possibility of loss of records due to confusion with the Mosque Swallow *H. senegalensis* (Mackworth-Praed & Grant 1960) or even with the Red-rumped Swallow *H. daurica* (Williams & Arlott 1980), together with a possible lack of observers, particularly in the part of the Lake Victoria basin in western Kenya. However, that two recent residents of these areas of Kenya and Uganda have recorded the species but have not observed breeding activity (P.L. Britton *in litt.* and EANHS nest record cards; M. Carswell *in MS*) may suggest that breeding is a scarce or localized, or possibly intermittent phenomenon.



Records b, c, d, e and g follow the trend noted by Brown & Britton (1980) of breeding in the April-June 'long' rains, while the late record (f) dates may reflect the somewhat more uniform rainfall distribution in the eastern Mara (Brown & Britton 1980, Fig. 1).

The choices of nesting sites and materials are typical of the species, while the clutch sizes are consistent with published ranges (Bannerman 1953, Mackworth-Praed & Grant 1960, Roberts 1978).

#### ACKNOWLEDGEMENTS

I am grateful to P.B. Taylor for extraction of data from the EANHS nest record scheme, and to G.R. Cunningham-van Someren for provision of reference texts at the National Museum, Nairobi. P. Davey kindly provided unpublished information while D.J. Pearson gave access to Margaret Carswell's MS on the birds of the Kampala area.

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**LACK OF SEASONALITY IN SONG BY SOME BIRDS OF THE NAIROBI AREA** In an important review on mating systems of tropical birds, Kunkel (1974) discussed the question of how the males and females synchronize their behaviour so as to breed at the same time. He pointed out that day length and temperature show little seasonal variation, whilst variations in rainfall are unpredictable in many places. He went on to suggest that pairing for long periods, often for life, assists synchronization because the pair are together all through the year. Presumably this is why they sing all year, although the phenomenon does not seem to have been well documented. Table 1 shows that most of the common garden birds in a Nairobi suburb do this.

The data were obtained as follows. The presence of each species seen at Kenyatta University College, 20 km northeast of the centre of Nairobi, was recorded monthly, from January 1977 to September 1982, except for March to May 1980. When birds were heard singing, that was noted too, but no special effort was made to record song, and species such as cisticolas, which inhabit parts of the campus visited only occasionally, would be less likely to be noticed. However, these gaps in the records were largely random, so that underlying patterns would still be apparent.

Because of their nature, the original data were grouped into seasons. The grouping was done by lumping all records for each of the four yearly seasons, approximated for convenience into 'long' and 'short' rainy, and dry seasons. The number of records of song was expressed as a percentage of the

TABLE 1

Frequency of song, as a percentage of the months for which records were kept (m), and grouped thus: + = 5 to 14%, \* = 15 to 29%, \*\* = 30 to 59%, \*\*\* = 60% or more. N = nest found; n = maximum breeding period according to Brown & Britton (1980). K = recorded by Kunkel (1974) as being in pairs outside the breeding season - 1 = part of year, 2 = whole year, 3 = prolonged or permanent pairs, [] = recorded for a congener, and likely to apply to this species also. () indicate species less common at this season.

Species	Jan-Feb	Mar-Jun	Jul-Oct	Nov-Dec	Notes
	(m=12) Short dry	(21) Long rains	(23) Long dry	(10) Short rains	
Granivores					
Ring-necked Dove					
<i>Streptopelia capicola</i>	*	*	**	(*)	K3
Red-eyed Dove					
<i>S. semitorquata</i>	+	* n	+ N	+	K3
Laughing Dove					
<i>S. senegalensis</i>	** N	** n	* N	(**)	K[3]
Streaky Seedeater					
<i>Serinus striolatus</i>	()	** n	* n	**	usually in pairs
Brimstone Canary					
<i>S. sulphuratus</i>		+ nN	+		usually in pairs
Average, per cent	12	27	20	20	
Insectivores					
Didric Cuckoo					
<i>Chrysococcyx caprius</i>	**	** n	(*)	**	
Klaas' Cuckoo					
<i>C. klaas</i>	**	* n	**	**	
Little Swift					
<i>Apus affinis</i>	*** N	*** n	***	***	
Hoopoe					
<i>Upupa epops</i>	(*)	*	** n	***	sometimes in pairs
Rufous-naped Lark					
<i>Mirafra africana</i>	*	* n	*	(*)	sometimes in pairs
Robin Chat					
<i>Cossypha caffra</i>	***	*** nN	***	***	K[3]
Yellow-breasted Apalis					
<i>Apalis flavida</i>	(*)	** nN	* n	(**)	K[1] duets'
Singing Cisticola					
<i>Cisticola cantans</i>	*	* n		(**)	K2
Winding Cisticola					
<i>C. galactotes</i>	*	** nN		* N	K[2]
Average per cent	34	40	30	46	

maximum possible. For example, there were six months when Hoopoes were noted as singing in the short rains, taken as November to December, out of the ten possible (two months in each of the five years, 1977-1981). So Hoopoe song for the short rains scored six out of ten, or 60 per cent. Because such percentages are at best rough estimates, they are grouped as shown by the stars in the table.

All species with an overall average of more than 5 per cent are included in the table, although the definition of song was arbitrary - thus Little Swift screeching parties were included, but twitterings by sunbirds and Striped Swallows *Hirundo abyssinica* were not. The average seasonal percentages for the two categories of granivore and insectivore are also given.

Song levels were higher in wet seasons, and also tended to be higher during the breeding season, which was the long rains for most species. Each of the species in the table was seen in every month of the year, but some birds, particularly granivores, became scarcer after the breeding season, probably because their food supply was becoming short. Most insectivores find food throughout the year, although the species of insects available vary seasonally. Some of the insectivores, e.g. the Robin Chat, hold territories throughout the year, but so far as is known, none of the granivores do so. The average song level of insectivores was roughly double that for granivores (38 per cent overall, compared to 20 per cent of the maximum possible scores).

The Little Swift, whose screeching is perhaps not equivalent to song in terms of synchronizing breeding behaviour, was the only species apart from the cuckoos that was not regularly seen in pairs.

What the table does not show is that although most of the species sing right through the year, the intensity of song is generally low. (Records are, however, of normal song, not the 'soft song' mentioned by Kunkel (1974).) The only species heard every day of the year, but usually for a few minutes only, is the Robin Chat.

I thank Drs M. Andersson and A.D. Lewis for their comments on the manuscript.

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#### NOTICES

##### THE LIVING BIRD QUARTERLY

The first issue of this new publication from the Laboratory of Ornithology at Cornell University appeared in July. It supersedes the annual *The Living Bird*. Details of subscription rates can be obtained from the Laboratory, Sapsucker Woods, Ithaca, NY 14850, U.S.A.

#### REQUEST: COLOUR-RINGED LESSER SPOTTED EAGLES *AQUILA POMARINA*

Any sightings of colour-ringed Lesser Spotted Eagles should be sent to Dr Wojciech Król, Ornithological Station, Górkki Wschodnie, 80-680 Gdańsk 40, Poland. All observations will be acknowledged. Please record full details, such as colour of ring(s), on which leg, date and exact place of observation, number of eagles present and what they were doing.

OBITUARY: CONSTANTINE WALTER BENSON, OBE, MA

Con Benson, friend and mentor to so many, died in Cambridge on 21 September 1982. Born in 1909, and educated at Eton and Magdalene College, Cambridge, he entered the Colonial Service in 1932. From then until his retirement in 1965 he spent the greater part of his time in Nyasaland (now Malawi) and Northern Rhodesia (now Zambia), though for part of the war (1941-42) he was appointed a Political Officer in southern Abyssinia (now Ethiopia).

Regrettably, Con was one of the last of that splendid breed of Colonial administrator, often without formal training in the biological sciences, who have contributed so much to our knowledge and understanding of the tropical African avifauna. In his publications, numbering some 300, he arguably contributed more than anyone else to systematic knowledge of tropical African birds. Collecting was an important and necessary part of his field work - indeed his later deafness has been linked to the repeated firing of his .410, and it is said that his activities in Abyssinia led the Italians to refrain from attacking what they believed to be a substantial force of arms! He was also a painstaking and able field observer, recording his observations in meticulous detail, much of which was used later in support of conclusions on habitat partitioning and other ecological questions which fascinated and pre-occupied him.

For his last 17 years, Con was a popular member of the Zoology Department in Cambridge, where he continued his own research and also worked as curator of the university's important bird collection. After so many years in the classical niche of the museum man, below ground level in his room at the Zoology Museum, he retained a remarkable knowledge of subtle field characters (e.g. voice differences in parrots). His work with the Cambridge collection allowed him to develop his interest in the birds of the Malagasy sub-region, which began when he was invited to lead the centenary expedition of the British Ornithologists' Union to the Comoro Islands in 1958, reinforced as a member of the Royal Society expedition to Aldabra in 1967-68.

Con had the distinction and privilege of discovering four species of birds new to science, but these were only highlights. His particular achievement was his immense and thorough knowledge of the literature (in all languages) on African and Malagasy birds, and his willingness to share this prodigious knowledge with all who requested his assistance. He was senior author of four standard works on the birds of Malawi and Zambia. Models of their kind, these stimulated others to emulate the high standards which he set. 'Birds of East Africa' benefited from this example, and, even more so, from the detailed and critical comments which Con made on early drafts.

Con was appointed OBE in 1965. Those in Northern Rhodesia who referred to him affectionately as 'birdy Benson' could not resist the temptation of 'Ornithology Before Everything'; such was his contagious enthusiasm, though he did not allow this to interfere with formal duties, and the honour was awarded in recognition of both administrative and ornithological achievement. Other, strictly ornithological, honours were the Union Medal of the BOU in 1960, the Gill Medal of the South African Ornithological Society in 1980, and Chairman of the Fifth Pan-African Ornithological Congress, also in 1980.

Con married Florence Mary Lanham (known to all as Molly) in 1943. A former botanist at the Transvaal Museum, Molly shared Con's interest in African birds, and collaborated as joint author of 'The birds of Malawi' in 1977. She now has the task of finalizing the parrots for volume II of 'The birds of Africa', and a major paper on the Cambridge collections, as well as dealing with the vast amount of correspondence which was such a feature of his life. Despite pressure of work, Con was foremost a family man, who could always find time to baby-sit in Norfolk. We extend our sympathy to Molly and other members of his family who shared so much with him.

P.L. Britton

Any 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. 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 publication should be given in the text in the normal way.

All contributions should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi, Kenya.

#### WORKS WHICH SHOULD NOT BE LISTED UNDER 'REFERENCES'

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#### EAST AFRICAN BIRD REPORT

This forms the fifth issue of *Scopus* and each report covers one calendar year. Records of Afrotropical Region (i.e. Ethiopian Region and Malagasy Sub-Region) and Oceanic birds should be sent to D.A. Turner [tel. 48772], Box 48019, Nairobi; records of Palaeartic Region birds to D.J. Pearson [tel. 47041], Box 30197, Nairobi. Records should be sent in early in the new year to ensure the speedy production of the Bird Report. Reports of rare birds may be phoned through to any OS-C member.

#### BIRDS OF EAST AFRICA

Copies of this 270 page book are available from the EANH.S, Box 44486, Nairobi at the following post-paid prices. All cheques should be made out to the E.A.N.H.S. Those overseas *MUST* remit in Sterling, US\$ or the equivalent in a convertible currency; drafts in Kenya Shillings cannot be accepted.

By surface mail to East Africa or to anywhere in the world: Shs. 130/-, £8.00 or US\$17.00. Airmail, Africa: £11.50 or US\$24.00. Airmail to Europe: £12.00 or US\$25.00. Airmail to the Americas, Australia and the Far East: £13.50 or US\$28.00.

The 40 page *Check-list of the birds of Kenya* is available from D.A. Turner. Post-paid: surface: East Africa Shs. 12.00, anywhere in the world £0.70 or US \$1.50. Airmail to anywhere in the world £1.00 or US\$2.20.

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and wintering of Palaearctic *Acrocephalus* warblers in  
Kenya and Uganda - *Scopus* 6: 51; see this issue, p. 100)

Questionnaire on the 6 P.A.O.C.

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# *SCOPUS*

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# SCOPUS

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## NOTES FOR CONTRIBUTORS

*Scopus* welcomes original contributions in English on all aspects of the ornithology of eastern Africa. Contributions will be assessed by the Sub-Committee and by independent referees. The material published in *Scopus* will be divided into 'papers' and 'short communications', the latter will usually be less than two pages in length. 'Papers' should be written in the third person (except in the 'Acknowledgements' section); 'short communications' may be written in the first or third person. Authors of 'papers' are entitled to five copies of their contribution *gratis*. Extra copies, which will be supplied at cost, *must* be ordered when the MS is submitted.

Contributions should be typed in 1½ or double spacing on one side of the paper only, with wide margins all round, and should be submitted in duplicate. Exceptionally, clear hand-written MSS will be considered but these too should be sent in duplicate. Both English and scientific names of birds should be given when the species is first mentioned, thereafter only one should be used. English and scientific names 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 on separate sheets at the end*. Metric units should be used. If non-metric units were used in the original observation or experiment, the approximate metric equivalent should be given in brackets.

Illustrations should be on bristol board, good quality white paper or tracing material, in line - i.e. black on white, and should not be larger than 19 x 23 cm. Lettering (in black) will be the responsibility of the author and should be done neatly in Letraset (or similar), no larger than 14 point (3.9 mm). Each illustration should be numbered (Fig. 1, etc) and be provided with a legend typed on a separate sheet of paper. Photographs will also be considered.

*Continued inside back cover*



# SCOPUS

## GENERAL REVIEW

Contributions to the 1982 report came as usual mainly from central, southern and coastal areas of Kenya. There was, however, a welcome increase in recording in Uganda, mainly in the Kampala area, whilst in Tanzania observers based at Dar es Salaam, Arusha, Mufindi and Tatanda continued to be very active.

There were fewer excitements than in the previous year, and no new birds were added to the East African avifauna. The main highlights were the second Kenya and East Africa record of Nubian Shrike *Lanius nubicus* and further reports from Tatanda of Long-billed Crombec *Sylvietta rufescens* (one previous East African record), Red-capped Crombec *Sylvietta ruficapilla* (one previous record) and Angola White-bellied Sunbird *Nectarinia oustaleti* (two previous records). Other occurrences of considerable interest included a Brown Booby *Sula leucogaster*, more Wilson's Storm Petrels *Oceanites oceanicus*, several White-tailed Tropicbirds *Phaethon lepturus* and flocks of Red-necked Phalaropes *Phalaropus lobatus* off the Kenya coast, simultaneous influxes of Lesser Spotted Crakes *Porzana pusilla* (? origin) and Jack Snipe *Lymnocyptes minimus* at Naivasha in January, a Eurasian Spoonbill *Platalea leucorodia* in Uganda and the first Tawny Pipit *Anthus campestris* for a number of years. There were also further sightings in the Ulugurus of the new sunbird and the White-winged Apalis *Apalis chariessa* found there in 1981.

Typical drying conditions occurred in Kenya at the beginning of the year, and the bushlands of the northern and eastern plateau country were generally rather leafless by March. The long rains reached most areas during the last few days of March, but these were generally light to moderate inland. The coast by contrast received particularly heavy rainfall during May and June. The short rains began early in October, and then proved heavier and more protracted in many parts of Kenya than in any year since 1961. Many inland swamps and floodpools were still full at the end of the year and lake edges were unusually flooded.

Muddy lakeshore habitats in the Kenya highlands and rift valley were very attractive to shorebirds during January to March. Over 20 000 migrant waders were again estimated present between Magadi and Baringo, and in addition to thousands of Palaearctic duck in central Kenya, tens of thousands were seen at the northern end of Lake Turkana. By contrast, very few duck re-appeared at the usual sites during the flooded conditions of November and December, and wader numbers fell markedly at most lakes as the short rains continued. November produced the usual interesting assortment of passage birds of prey, including Eleonora's Falcons *Falco eleonora*, several Sooty Falcons *Falco concolor*, and some impressive flocks of Steppe Eagles *Aquila nipalensis* and Eastern Red-footed Falcons *Falco amurensis*. Northward passerine migration was more marked during April in such areas as Nairobi and Nakuru than in the wetter conditions of the previous year, and there were a number of migrant warbler records unusually late in May. The appearance of passerine migrants on southward passage late in the year did not seem to be unduly influenced by the excessive rainfall although, surprisingly, the usual mist conditions were never properly established in Tsavo, and consequently the number of night migrants caught and ringed at Ngulia was the lowest for several years.

One project supported by the Sub-Committee which made great progress in 1982 was the production of a distributional atlas for Kenya. Many Society members have made valuable contributions to this scheme, and a reasonable coverage of the country has now been achieved. During the year, the exercise of mapping the occurrence and breeding presence of each species on a quarter square degree grid was largely completed. Bird ringing in East Africa continued much as in other recent years, with activity directed mainly towards Palaearctic waders at the Kenya coast and rift valley lakes, Yellow Wagtails *Motacilla flava* near Nairobi and night migrants at Ngulia Lodge. A full review of contributions during the year to the Society's other long-term project, the Nest Record Scheme, is included in this report.

Once again, we are indebted to the small band of observers who have made the report possible. In order to assist contributors we have published lists of 'scarce' and 'requested' species for which we welcome any record from East Africa. In the recent review in the *Scopus* Supplement of June 1982, the 'requested' category was deliberately left rather wide. We are aware that some species listed here may in fact be seen frequently and even commonly in some localities, so that it is not always appropriate to publish all records in the report. The 'requested' species are, however, all birds whose status in East Africa requires clarification. Where full publication of records is not practicable on an annual basis, we plan to produce consolidated status and distribution accounts to update those in *Birds of East Africa*, but we do need plenty of response on the commoner 'requested' species to be able to do this. Finally, the Sub-Committee is aware of the responsibility it has to ensure that records published in the annual report will stand stringent scrutiny. Contributors are reminded that any obviously unusual records, including any of the species in the 'scarce' category, must be appropriately substantiated.

D.J.Pearson, Chairman, Ornithological Sub-Committee, E.A.N.H.S.

## SPECIES REPORT

This report covers the three countries Kenya, Tanzania and Uganda. Records are included under one or more categories, indicated by code letters, as follows:

- 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 25 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 of Afrotropical and Oceanic species were collated by D.A. Turner, and those of Palaearctic species by D.J. Pearson.

## AFROTROPICAL AND OCEANIC SPECIES

## PODICIPEDIDAE: Grebes

*Podiceps nigricollis* Black-necked Grebe R: up to 5 Thika OPs 24 Apr-5 Sep and 1 there 7 Nov (DJP, PBT). 2 Elmenteita 28 Nov and 400+ there 25 Dec (PBT).

## PROCELLARIIDAE: Petrels and Shearwaters

*Puffinus lherminieri* Audubon's Shearwater S(B): 3-4 off Watamu 30 Dec (DAT).

*Puffinus* sp. 1 off Shimoni 28 Sep was thought to have been a Wedge-tailed Shearwater *P. pacificus*.

## HYDROBATIDAE: Storm Petrels

*Oceanites oceanicus* Wilson's Storm Petrel S(B): 1-2 off Vipingo 16 Nov (MEJG). 1 off Watamu 28 Dec (DAT), and other storm petrels reported there daily by fishermen late Dec probably this species.

## PHAETHONTIDAE: Tropicbirds

*Phaethon lepturus* White-tailed Tropicbird S(B): singles off Shimoni 10 Mar, 19 Aug, 7 Sep, 30 Oct and 17 Nov (PH, MH), and at Dar es Salaam 17 Apr, 15 Jun, 6 Oct and early Dec (NEB, PHs).

## PELECANIDAE: Pelicans

*Pelecanus onocrotalus* White Pelican B: c750 pairs breeding Lake Elmenteita Jun-Sep (MEJG).

*Pelecanus rufescens* Pink-backed Pelican N: flock of 66 Ruaha river 30 Dec (NEB) - a large number for southern Tanzania.

SULIDAE: Boobies

*Sula dactylatra* Masked Booby R: an immature off Shimoni 9 Aug (MH, PH), and 6-7 SW of Zanzibar 24 Jan (NEB).

*Sula leucogaster* Brown Booby S(A): an immature off Shimoni 19 Aug (MH, PH). Full details received.

FREGATIDAE: Frigatebirds

*Fregata* sp. 2 off Sabaki mouth 2 Jan (MACC, DJP) and singles off Dar es Salaam 10 Mar, 24 Apr, 20 May, 17, 29 and 30 Jul (PHs).

ARDEIDAE: Herons, Bitterns and Egrets

*Ixobrychus minutus payesii* Little Bittern R: 2 ads and 3 juvs Lake Baringo Feb-Mar, 1 there 6 Jun and 3+ during Jul (TS).  
1 Mufindi (T) 18 May (AJB, EMB).

*Ixobrychus sturmi* Dwarf Bittern R: single birds Dar es Salaam 24 Apr, Ngong Hills 23 May, Tatanda (T) 27 Jun, Samburu GR 8 Nov, Mtito Andei 16 Dec and Ruaha NP (T) 30 Dec (NEB, DCM, DJP, PBT).

*Ardeola idae* Madagascar Squacco Heron R: recorded central and coastal Kenya 25 Apr-21 Nov, max. 12+ Thika OPs Aug-Sep (PCF, DJP, DKR, TS, PBT, DAT). Singles Dar es Salaam 7 Jul and 14 Aug (NEB).

*Ardeola rufiventris* Rufous-bellied Heron R: 1 Mbarali rice scheme (T) 24 Aug (AJB, EMB).

*Egretta ardesiaca* Black Heron R: at the coast, recorded regularly at Gazi (MACC), and also 10 Mida 16 Apr and 5 there 28 Dec (MEJG). Recorded inland at Lake Jipe and also 1 Lake Bilisa 5 Mar, 1 Ngong Hills 9 Apr, 2 Naivasha 9 May, 1 Naivasha 16 May, 1 Baringo 28 May, 1 Shombole 29 May, 2 Amboseli 24 Jul and one there 8-9 Sep (MACC, ADL, DCM, DJP, DKR, TS, PBT). 1 Tatanda (T) 24 Jun (DCM). 4 Kajansi (U) 31 Oct and 1 on 28 Nov (MJC).

*Egretta gularis* East African Reef Heron R: 1 Koobi Fora, Lake Turkana 4 Feb (FA), 1 white phase Lake Nakuru Jun-Nov (DKR, PBT, DAT), 1 dark phase Mida Creek 2 Mar and 9 Nov (MACC, ADL, DJP, DAT).

*Gorsachius leuconotus* White-backed Night Heron R: 2 Ruaha NP 25 Dec (NEB, KH).

BALAENICIPITIDAE: Shoebill

*Balaeniceps rex* Shoebill R: 2 Kibimba (U) 17 May and 1 there 7 and 20 Nov (ABS, MJC).

CICONIIDAE: Storks

*Anastomus lamelligerus* Open-billed Stork N: 2000+ Aruba Dam, Tsavo E NP, 6 Apr (PBT). 250 Nairobi 4 Nov (GCB). 500+ moving north daily Ruaha NP (T) 26-30 Dec (NEB).

*Ciconia abdimii* Abdim's Stork N: 100+ Hola 6 Mar (DJP), 140+ Mara GR 14 Mar (MEJG), flocks up to 200 moving north Ruaha NP (T) 26 Dec (NEB).

D: last record 20 April Mara GR (DAT).

*Ciconia episcopus* Woolly-necked Stork E: away from the coast and E Kenya, 2 near Iganga (U) 6 Feb and 2 near Kibimba (U) 19 Sep (MJC).

## THRESKIONITHIDAE: Ibises and Spoonbills

*Bostrichia olivacea* Green Ibis R: a pair Mt Kilimanjaro (Marangu route) 5 Feb (JSSB), a pair Met. Station, Mt Kenya 27 Apr (DAT), a pair around Kieni forest station (2215 m) Jul-Dec (CT, PBT), and a pair Mountain Lodge, Mt Kenya, 26 Oct, with 1 on 8 Nov (DAT, DEW).

*Platalea alba* African Spoonbill NE: max. of 39 Dar es Salaam 21 Feb (NEB) was notable number for the coast.

## ANATIDAE: Ducks and Geese

*Dendrocygna viduata* White-faced Whistling Duck N: largest count 500+ Lake Shakobabo 4-5 Mar (MACC, ADL, DJP).

*Alopochen aegyptiacus* Egyptian Goose N: 340 moulting birds on sandbank in Ruaha NP (T) 26 Dec (NEB).

*Anas hottentota* Hottentot Teal E: 2 on coastal salt pans Dar es Salaam 2 Jan were in unusual habitat (NEB).

*Nettapus auritus* Pygmy Goose R: away from coast, 1 Amboseli 12 Jun (DKR), 3 nr Mufindi (T) 15 Aug and 2 nr Iringa (T) 11 Sep (AJB, EMB).

## ACCIPITRIDAE: Birds of Prey

*Gyps africanus* African White-backed Vulture N: max. count of 61, Pugu Hills (T) 2 Jan - birds now resident in area due to establishment of cattle rail head (NEB).

*Gyps rueppellii* Rüppell's Vulture E: 2 Mikumi NP (T) 1 Aug (NEB) - first record for Mikumi NP.

*Accipiter minullus* Little Sparrowhawk R: Tanzanian records: singles at Bukoba 10 Feb (NEB), Tatanda 7 May (DCM) and Mufindi 14 Mar, 4 Aug and 5 Sep (AJB, EMB).

*Accipiter ovampensis* Ovampo Sparrowhawk R: singles Mikumi NP (T) 17 May (NEB), Tatanda (T) 24 Jun (DCM) and Malaba forest 1 Aug (CAT, PBT).

*Aquila verreauxi* R: additional Tanzanian sites at Londoni 60 km NNE of Manyoni (Singida) 10 Apr, Kilimatinde SE of Manyoni 12 Apr, and escarpment above Lake Balangida 31 May (JSSB). Singles Ruaha NP Jun, Oct and Dec, and bird on nest Ruaha Gorge 23 Jul (AJB, EMB, PHs). Kenya records not listed.

*Bustastur rufipennis* Grasshopper Buzzard R: records Taita, Voi, Garsen and Baringo Feb-Mar (MEJG, ADL, DJP). 1 Tsavo W NP 11 Nov (DAT) and scores below Ngulia escarpment in torrential rain 26 Nov (GCB, AMFW). In Tanzania 1 Ruaha NP 28 Dec (NEB).

*Hieraaetus dubius* Ayres' Hawk Eagle E: recorded in Tanzania from Mikumi NP 16 May (NEB), Dar es Salaam 17 May (NEB) and Tatanda 6 May and 12 Jun (DCM).

*Aviceda cuculoides* Cuckoo Hawk R: Kenya records Lavington, Nairobi, several dates (PCF), Sokoke-Watamu area in Aug (DAZ) and Kieni forest 26 Sep (PBT). Tanzania records from Tengeru Feb, Jun, Jul, Aug, Sep and Dec (JSSB), Mufindi 8 Feb (AJB, EMB) and Mikumi NP 28 Jun (NEB).

*Chelictinia ricourii* Swallow-tailed Kite R: few seen regularly along Narok road by Mt Suswa throughout year (many observers).

*Macheiramphus alcinus* Bat Hawk R: records received from Nairobi Mar (KC-L) Usa river (Arusha) Feb-Mar (JSSB), Tatanda (T) Apr (DCM) and Tengeru (T) 10 Dec (JSSB).

## FALCONIDAE: Falcons

*Falco alopex* Fox Kestrel R: 1 Central Is., Lake Turkana 17 Feb (FA).

*Falco ardosiacus* Grey Kestrel E: 2 Baringo 27 Nov (TS).

## PHASIANIDAE: Quails and Francolins

*Coturnix chinensis* Blue Quail R: ad male caught and ringed at night Ngulia Lodge 17 Dec (GCB, AMF-W, DJP) - first record for Ngulia and Tsavo NP.

*Francolinus levillantii* Red-winged Francolin R: pair Sao Hill, near Iringa (T) 15 May (NEB).

## NUMIDIDAE: Guineafowl

*Guttera edouardi* Crested Guineafowl E: present in Kioni/Kikuyu escarpment forests Dec (CAT, PBT).

## GRUIDAE: Cranes

*Grus carunculatus* Wattled Crane R: 1 near Tatanda (T) 23 May (DCM).

## RALLIDAE: Rails and Crakes

*Crex egregia* African Crake R: present Bamburi Jun and Nov (CAT, PBT).

Singles attracted to lights in mist at night Mufindi tea factory (T) 25 May and 1 Jun (AJB, EMB). 1 Kibimba (U) 19 Sep (MJC).

*Gallinula angulata* Lesser Moorhen D: arrival noted Nairobi NP 13 May and Ngong Hills dam 23 May (PBT). Several Bamburi dams 12 Jun (PBT).

*Gallinula chloropus* Common Moorhen M: 1 seen at night Ngulia Lodge 19 Dec (GCB, AMF-W) - the first record for the Lodge.

*Porphyrio alleni* Allen's Gallinule R: 3+ Lake Baringo Feb-Mar, with influx from 20 May and 200 present Jun-Aug (TS).

*Porzana pusilla* Lesser Spotted Crake R: up to 9+ Naivasha 10-29 Jan (DJP, PBT, DAT), 3+ Lake Baringo 3 Feb-11 Mar and 1 there on 22 Mar (TS). A possibility that these were Palaearctic birds cannot be discounted.

*Rallus caerulescens* African Water Rail M: present throughout year Nairobi NP and Thika, and particularly numerous Naivasha during Jan (PBT, DAT). 3 Malindi 17 Aug (DAZ).

*Sarothrura rufa* Red-chested Pigmy Crake R: recorded almost every month from three sites at Tengeru (T), and during Jun at swamp near Sanya Juu (Moshi, T) (JSSB). Recorded all months Tatanda (T) (DCM). Present Thika area Sep-Dec (PBT).

*Sarothrura* sp. 2 females and 1 male caught at night Mufindi (T) on 17 and 17 May respectively were thought to have been *S. boehmi* (NEB, AJB, EMB, PHs).

## HELIORNITHIDAE: Finfoot

*Podica senegalensis* African Finfoot E: records from southern Tanzania at Tatanda 27 Jun (DCM) and Ndembera river (Mufindi) 12 Dec (AJB, EMB).

## JACANIDAE: Jacanas

*Microparra capensis* Lesser Jacana R: common Lake Sundu (T) 21 Feb (DCM), resident throughout year on dams in Mufindi district (T) (AJB, EMB). 1 Ol Kalou road 27 Nov (MEJG).

## ROSTRATULIDAE: Painted Snipes

*Rostratula benghalensis* Painted Snipe R: recorded Naivasha Jan (few), Baringo Feb to Aug (max 5+ Mar), Nairobi NP and Ngong Hills May, Archer's Post Jun, Amboseli Jun-Jul (up to 6+), Dandora Oct-Nov (few) and Athi River Dec (DKR, TS, PBT, DAT).

Present Tengeru and Arusha NP (T) Feb-Mar (JSSB). Up to 3 pairs Kibimba (U) 15-16 May (MJC).

## CHARADRIIDAE: Plovers

*Vanellus crassirostris* Long-toed Plover E: 4+ Baringo Jan-May, and up to 10 Jul-Dec (TS). 6+ resident throughout year at Thika (PBT).

*Vanellus senegallus* Wattled Plover E: 1 15 km west of Mikumi NP (T) 15 May (PHs).

## DROMADIDAE: Crab Plovers

*Dromas ardeola* N: Max. count Mida 230 on 3 Mar (MACC, DJP). Elsewhere, 50 Galu beach on south Kenya coast, was a notable concentration (MACC, DJP). 275-300 in one flock Chwaka, Zanzibar 6-12 Apr (PHs).

## BURHINIDAE: Thicknees

*Burhinus senegalensis* Senegal Thicknee R: 3 Central Is., Lake Turkana 17 Feb (FA).

## GLAREOLIDAE: Coursers and Pratincoles

*Rhinoptilus chalcopterus* Violet-tipped Courser R: pair with small young Tarangire NP (T) 8 Jan (JSSB) and singles near Arusha and Kilosa (T) May-Jan (JSSB). Pair with 2 young near Mloa (Iringa, T) 24 Dec and 1 Ruaha NP (T) 25 Dec (KH).

*Glareola ocularis* Madagascar Pratincole N: 5-600 on salt pans near Dar es Salaam 1 Apr (PHs). D: latest record Sabaki 23 Sep (MACC, DJP).

## LARIDAE: Gulls and Terns

*Larus cirrocephalus* Grey-headed Gull E: 2 on coast at Dar es Salaam 13 Jun (PHs).

*Larus hemprichii* Sooty Gull N: max. count Sabaki 1500 2 Jan (MACC, DJP).

*Anous stolidus* Common Noddy R: the only records received were of singles Galu Beach 2 Oct and 20 Nov (MACC), c20 off Vipingo 14 Nov (MEJG) and a few off Watamu 31 Dec (DAT).

*Chlidonias hybridus* Whiskered Tern E: few in breeding plumage Mbarali rice scheme, southern Tanzania, Jan (JSSB).

*Sterna albifrons* Little Tern E: 2 Lake Naivasha 9 Oct (PBT) and 1 Lake Baringo 12 Nov (TS).

*Sterna anaethetus* Bridled Tern R: c40 off Vipingo 16 Nov (MEJG) was the only record received.

*Sterna bengalensis* Lesser Crested Tern N: 1500 Sabaki 2 Jan (MACC, DJP).

*Sterna bergii* Crested Tern N: max. counts 30 Sabaki 2 Jan and 70 there 3 Mar (MACC, ADL, DJP), and 40 Malindi 27 Dec (MEJG).

*Sterna repressa* White-cheeked Tern R: regularly in small numbers Galu beach, south Kenya coast, up to May (MACC, DJP). 3-4 Sabaki 10 Nov and 2 Malindi 27 Dec (MEJG).

## RYNCHOPIDAE: Skimmers

*Rynchops flavirostris* African Skimmer R: 23 Lake Baringo mid Aug, then 1-5 Oct-Nov (TS). Singles Amboseli NP 9 May, Naivasha 26 Sep, Lake Jipe 7 Nov, Malindi 27 Dec (MEJG). Up to 5 Ruaha NP (T) May-Aug (AJB, EMB, KH).

## PTEROCLIDIDAE: Sandgrouse

*Pterocles exustus* Chestnut-bellied Sandgrouse E: male Ruaha Gorge, near Iringa (T)(NEB) - an uncommon bird in southern Tanzania.

## COLUMBIDAE: Pigeons and Doves

*Columba livia* Feral pigeon M: now occurs in towns and villages throughout Tanzania from Arusha to Mbeya as well as in Dodoma and Morogoro (JSSB).

## MUSOPHAGIDAE: Turacos

*Tauraco porphyreolophus* Violet-crested Turaco E: 5 Mua Hills (Machakos) Feb at altitude 1980 m (ADL).

## CUCULIDAE: Cuckoos and Coucals

*Cuculus clamosus* Black Cuckoo R: calling Naivasha and Nakuru Jun-Jul, Meru NP and Kakamega forest edge Oct and east Ukambani Dec (DJP, MES, DAT).

*Cuculus gularis* African Cuckoo R: calling Mwingi Mkt, Archer's Post and Magadi Apr, Karen late Oct and Tsavo W NP Nov (DJP, DAT).  
In Tanzania, 1 Tarangire NP 8 Jan and 1 Mbarali rice scheme 20 Jan (JSSB).

*Centropus cupreicaudus* Coppery-tailed Coucal N: up to 20 daily Mbarali rice scheme (T) Jan (JSSB).

*Centropus grillii* Black Coucal R: 1 calling Shombole swamp 29 May (PBT).  
Calling Tatanda (T) Jan (DCM) and 1 Mbarali rice scheme (T) 24 Aug (AJB, EMB). 1 Lutembe (U) 30 Jun (MJC).

## TYTONIDAE: Barn Owls

*Tyto capensis* Cape Grass Owl R: in Tanzania, 1 near Tatanda 18 Jan and 17 May (DCM), and 1 Mufindi 24 Mar and 7 Apr (AJB, EMB).

## STRIGIDAE: Owls

*Asio capensis* African Marsh Owl M: 3 hunting in mid-afternoon over grassland near Nanyuki following heavy rainstorm 12 Apr (DJP).

*Glaucidium capense* Barred Owlet R: singles at Tatanda (T) 6 May and 12 Jun (DCM).

## CAPRIMULGIDAE: Nightjars

*Caprimulgus fraenatus* Dusky Nightjar R: 1 Amboseli NP 18 Apr and 2 Ngulia 11 Nov (DAT).

*Caprimulgus inornatus* Plain Nightjar R: small numbers recorded Ngulia Lodge 21 Oct-17 Dec (GCB, DJP). 2 Baringo 14 Nov (DEW).

*Caprimulgus tristigma* Freckled Nightjar R: singles Tatanda, southern Tanzania, 17 and 24 May (DCM) were presumably referable to the southern race *granosus*.

*Macrodipteryx vexillarius* Pennant-winged Nightjar R; a female hit by car near Tatanda (T) 12 Jan (DCM) was the only record received.

## APODIDAE: Swifts

*Apus melba* Alpine Swift E: 1 Kibimba near Kampala 16 May (MJC).

*Schoutedenapus myoptilus* Scarce Swift R: Kenya records from Mt Kenya moorlands (3600 m) 29 Jun (DAT), Kieni forest Oct, Mountain Lodge (2215 m) Oct-Nov with 200+ on 8 Nov and near Embu 5 Dec (PBT, DAT, DEW).  
In Tanzania, 1 Sanje/Mwanihana Mts 9 Dec (PHs).

*Telecanthura ussheri* Mottle-throated Spinetail E: 1 Mountain Lodge 26 Oct - appears to be annual here in Oct but absent in other months (DAT).

## TROGONIDAE: Trogons

*Apaloderma narina* Narina's Trogon E: 1 Lake Baringo 13 Mar (TS).

## ALCEDINIDAE: Kingfishers

*Halcyon senegalensis* Woodland Kingfisher E: 1-3 daily Lake Baringo Jan-Jun (TS).

*Alcedo cristata* Malachite Kingfisher M: an adult caught at night Ngulia Lodge 13 Dec (GCB, AMF-W, DJP).



*Hirundo daurica* Red-rumped Swallow E: 2 Mufindi 5 Mar (NEB) - this species is scarce in southern Tanzania.

*Hirundo semirufa* Rufous-chested Swallow E: 1 nr Tatanda (T) 27 Jun (DCM) was presumably a southern nominate bird.

ORIOOLIDAE: Orioles

*Oriolus auratus* African Golden Oriole ED: away from the Kenya coast, a pair Tengeru (T) 19 Feb (JSSB), singles Entebbe (U) 30 May and 20 Jun (MJC), Serawongo Hill (Siaya) 25 Jun (ADL), Kampala 31 Oct and 13 Nov (MJC) and nr Kondoia (T) 20 Dec (JSSB).

SALPORNITHIDAE: Spotted Creeper

*Salpornis spilonota* Spotted Creeper R: recorded all months in miombo woodland nr Tatanda (T) (DCM).

TIMALIIDAE: Babblers

*Turdoides plebejus* Brown Babbler E: 5 Baringo 6 Nov (TS).

CAMPEPHAGIDAE: Cuckoo Shrikes

*Coracina pectoralis* White-breasted Cuckoo Shrike R: present throughout year in miombo woodland Tatanda (T) (DCM). 2 in miombo north of Kondoia (T) 23 Jan and 20 Dec (JSSB).

TURDIDAE: Thrushes, Robins

*Cercotrichas quadrivirgata* Eastern Bearded Scrub Robin E: 1 nr Manyoni (Singida, T) Apr (JSSB).

*Cossypha natalensis* Red-capped Robin Chat R: inland records: a few Kitovu forest 19 Mar (ADL, DJP). Present south end of Lake Natron (T) 9 Jun (JSSB).

*Oenanthe pileata* Capped Wheatear M: singles caught at night at Ngulia Lodge 10 and 21 Dec (GCB, AMF-W).

*Monticola rufocinerea* Little Rock Thrush E: recorded from western escarpment above Lake Natron with a pair 9 Jun and 1 25 Aug (JSSB) - second record from Tanzania and first since the 1930s.

SYLVIIDAE: Warblers

*Acrocephalus baeticatus* African Reed Warbler M: an adult of race *cinnamomeus* caught and ringed Ngulia Lodge 17 Dec (GCB, AMF-W, DJP).

*Apalis chariessa* White-winged Apalis S(B): at least 3 birds Mwanihana forest at Sanje 8 Aug (NEB).

*Bradypterus baboecala* Little Rush Warbler E: 12+ Lake Baringo Feb to early Apr (TS) - very unusual here.

*Heliolais erythroptera* Red-winged Warbler R: pair nr Kilosa (T) 16 Jan (JSSB).

*Parisoma boehmi* Banded Parisoma E: recorded in thorn scrub around Usamgu flats, southern Tanzania, Jan and Apr (NEB, JSSB).

*Sylvietta rufescens* Long-billed Crombec S(A): singles at Tatanda (T) 9 and 12 May (DCM).

*The second and third records from East Africa.*

*Sylvietta ruficapilla* Red-capped Crombec S(A): recorded throughout year in miombo woodland around Tatanda (T) (DCM).

*Only one previous record from East Africa.*

## MUSCICAPIDAE: Flycatchers

*Myioparus plumbeus* Lead-coloured Flycatcher E: recorded Baringo Feb and Aug-Oct (TS).

*Platysteira peltata* Black-throated Wattle-eye E: female Lake Shakababo 5 Mar (ADL, DJP).

*Erannornis albicauda* White-tailed Blue Flycatcher R: common throughout year at Tatanda (T) (DCM).

## MOTACILLIDAE: Wagtails, Pipits and Longclaws

*Anthus lineiventris* Striped Pipit E: 1 Tatanda (T) 28 Feb (DCM).

*Motacilla capensis* Cape Wagtail E: a southern Tanzanian record from Lake Sundu 21 Feb (DCM).

*Tmetothylacus tenellus* Golden Pipit E: coastal records of 1 Ngomeni 3 Apr, 10+ Mida Creek 3 Apr (CAT, PBT) and 1 Dar es Salaam 12 Jan (NEB). 1 Tengeru (T) 13 Mar (JSSB) and 1 displaying Ruaha NP (T) 27 Dec (NEB) were respectively from west and south of usual range.

## MALACONOTIDAE: Bush Shrikes

*Lanarius ruficeps* Red-naped Bush Shrike R: a single in mixed bird party Galana ranch 2 Mar (ADL, DJP).

## PRIONOPIDAE: Helmet Shrikes

*Prionops poliophaga* Grey-crested Helmet Shrike R: 7 at 19 km north of Naivasha 2 Nov (TS) - see *Scopus* 7:26.

## STURNIDAE: Starlings

*Cinnyricinclus sharpii* Sharp's Starling R: 1 O1 Donyo Sabuk 21 Mar (CAT, PBT), party 8-10 Nyahururu Falls 19 Jul (DAT) and 10 Mountain Lodge 3 Aug (DAZ).

*Cosmopsarus unicolor* Ashy Starling E: 1 salt pans Dar es Salaam 1 Apr (PHs).

*Speculipaster bicolor* Magpie Starling E: 4-5 Maungu 11 Nov were south of usual range in eastern Kenya (DAT).

*Spreo albicapillus* White-crowned Starling E: a few around Kalacha water-hole, Huri Hills Jul (FA).

*Spreo shelleyi* Shelley's Starling E: in south-east Kenya, 20 Galana Ranch c10 km north of the river 1-3 Mar (ADL, DJP), 1 Wenje 6 Mar (DJP), several nr Kinango (Kwale) 10 Oct (MACC) and 6-7 Maungu with Magpie Starlings 11 Nov (DAT).

## NECTARINIIDAE: Sunbirds

*Anthreptes neglectus* Uluguru Violet-backed Sunbird E: 1 Mwanihana Mts, Sanje 8-10 Dec (PHs).

*Anthreptes rubritorques* Banded Green Sunbird E: several Mwanihana Mts, Sanje, 8-9 Aug (NEB).

*Nectarinia habessinica* Shining Sunbird R: 1 Shaba GR 30 Jun (DAT).

*Nectarinia oustaleti* Angola White-bellied Sunbird S(A): singles at Kasesya and Tatanda, southwest Tanzania during Jun (DCM).

*The third and fourth records from East Africa.*

*Nectarinia pembae* Violet-breasted Sunbird E: 1 Galana ranch 1 Mar and very common west of Hola 6 Mar (ADL, DJP).

*Nectarinia shelleyi* Shelley's Double-collared Sunbird E: par N of Mikumi NP (T) 7 Oct (PHs).

*Nectarinia* sp. nov. Rufous-winged Sunbird S(A): several records Mwanihana forest, Sanje, during the year (several observers).

*This species was first discovered in 1981.*

ZOSTEROPIDAE: White-eyes

*Zosterops poliogastra* Montane White-eye M: flocking with *Z. abyssinica* Taita Hills 20 Mar (ADL, DJP).

PLOCEIDAE: Weavers etc.

*Anomalospiza imberbis* Parasitic Weaver R: small numbers Nairobi NP May-Jun (PBT) and 1 Mara GR Jun (DAT).

*Euplectes afer* Yellow-crowned Bishop E: many Mbarali rice scheme, southern Tanzania, 19-20 Jan and many Bahi swamp (T) 20 Mar (JSSB). The former record presumably involved the southern race *taha*.

*Ploceus golangi* Clarke's Weaver R: flocks reported Sokoke forest during Apr and Sep, with young juvs on 4 Apr (several observers).

*Ploceus olivaceiceps* Olive-headed Weaver E: N.E. Franzmann (1983, *Bulletin of the British Ornithologists' Club* 103: 49-51) has recently described a new race of weaver from the Ulugurus (T). Franzmann regards *P. olivaceiceps* (sensu Britton 1980) as comprising two species, *P. olivaceiceps* (of miombo) and *P. nicolli* (of montane forest), and has named the new population *P.n. anderseni* from a male collected in the Ulugurus in 1952. Several birds belonging to this race were seen in the Mwanihana forest, Sanje, 7-10 Dec (PHs).

*Ploceus superciliosus* Compact Weaver R: several Akala (Siaya) 26-28 Jun (ADL).

*Quelea erythrops* Red-headed Quelea E: colonies along rivers in Mkata plains (Kilosa, T) during May (JSSB) - the second year of breeding in Tanzania.

*Pseudonigrita arnaudi* Grey-headed Social Weaver E: common in dry bush country around Usangu flats, southern Tanzania in Jan (JSSB). Several Ruaha NP 30 Dec (NEB) and 1 coastal scrub Dar es Salaam 13 Feb (NEB). These records presumably relate to the race *iringae*.

*Passer domesticus* House Sparrow E: pair with nest at Voi 11-15 Nov (ADL, DAT) - a considerable extension of range inland from Mombasa. See also *Scopus* 7:23-26.

*Passer eminibey* Chestnut Sparrow E: common in bush and grassland around Usangu flats, southern Tanzania Jan (JSSB).

*Vidua fischeri* Straw-tailed Whydah E: 2 males in open coastal scrub, Dar es Salaam Jan-Feb (NEB).

*Vidua obtusa* Broad-tailed Paradise Whydah R: Tanzanian records from Tatanda May-Jun (DCM) and Ruaha Gorge and Mikumi village in May (NEB, AJB, EMB).

ESTRILDIDAE: Waxbills etc.

*Estrilda perreini* Lavender Waxbill E: 1 near Sanje 10 Dec (PHs).

*Mandingoa nitidula* Green-backed Twinspot E: 1 caught 18 Sep was first record for Pugu Hills forest reserve (NEB, PHs).

*Ortygospiza gabonensis* Black-chinned Quailfinch R: recorded Tatanda 3 May (DCM) - the first records from southwest Tanzania.

*Ortygospiza locustella* Locust Finch S(B): common on a short grass area around Tatanda (T) during May and Jun (DCM).

*Pytilia afra* Orange-winged Pytilia R: 1 Tatanda (T) 8 Jun (DCM) was the only record received.

*Lonchura malabarica* Silverbill E: up to 7 Dar es Salaam during Oct, and 1 with nest material on 30th (PHs).

FRINGILLIDAE: Buntings, Canaries etc.

*Emberiza tahapisi* Cinnamon-chested Rock Bunting E: pair Lutembe (U) 31 Oct (MJC) was first record for the Entebbe Peninsula.

*Serinus reichardi* Stripe-breasted Seed-eater R: few north of Kondoa (T) during Mar (JSSB) and recorded throughout year at Tatanda (T) (DCM). 1 Colcheccio Lodge (Laikipia) 12 Nov (DEW).

#### PALAEARCTIC SPECIES

*Ciconia ciconia* White Stork D: up to 25 Nairobi NP 25 Jun-1 Jul. DB: small numbers over-summering Nakuru area Apr-Jul; 2 adults in Nakuru NP accompanied by two very young juveniles 17-18 Jul - see *Scopus* 6:70.

*Ciconia nigra* Black Stork R: up to 4 together Nairobi NP/Karen area to 27 Apr, and singles from 10 Oct. 1 Tana R 15 Feb (DAT), 1 flying SSE Kisima 7 Nov (NEB), 1 Mountain Lodge 8-9 Nov (DEW) and 2 Colcheccio Lodge, 11 Nov (DEW).

*Platalea alba* Eurasian Spoonbill S(B): singles Kibimba (U) 16 May and Kajansi (U) 4 Jul, 31 Oct and 13 Nov-4 Dec (MJC, ABS).

*There are only two previous records from Uganda.*

*Anas acuta* Pintail E: several Mbarali (T) 18 Jan (JSSB); 70+ Mabamba (U) 31 Jan and 5 Kibimba (U) 6 Feb (MJC).  
D: 1 Arusha NP 1 Sep (JSSB).

*Anas crecca* Teal R: 3 Naivasha 10 Jan, 4 17 Jan and c20 there 7 Feb (DJP, DAT); 16+ Solai 6 Feb (DJP, TS). 1 male Limuru 16 May and 23 May and 1 Thika OPs 15 Aug (DJP, PBT).  
Singles Kibimba (U) 5 Dec (MJC) and Nakuru 18 Dec (PEG).

*Anas penelope* Wigeon R: 1 Naivasha 17 Jan (PBT, DAT) was the only record.

*Anas querquedula* Garganey E: 2 Dar es Salaam 2 Jan (NEB).  
D: 2 Dandora from 29 Aug (PBT).

*Anas clypeata* Shoveler E: 9 Kibimba (U) 10 Oct (MJC).  
N: 50 000+ L Turkana, near Omo delta, early Mar (TS) - see *Scopus* 6:72.  
800+ counted N shore L Naivasha 10 Jan and 1000+ on W shore 24 Jan (DJP).

*Aythya fuligula* Tufted Duck R: up to 13 Naivasha 10 Jan-7 Mar (DJP, PBT, DAT).

*Aquila nipalensis* Steppe Eagle N: 350+ Kisima 7 Nov was an exceptionally large flock (NEB).

*Aquila pomarina* Lesser Spotted Eagle R: 2 Solai 6 Feb, and singles Elmenteita 31 Jan, Mtito Andei 8 Mar and Amboseli 14 Mar (DJP, DKR, TS).  
Regularly Mufindi upland grasslands (T) 18 Feb-4 Apr, max 9 (AJB, EMB).  
6-7 Meru NP 26 Oct, 1 Narok road 31 Oct, 1 Nakuru 2 Nov, 2 Kisima 7 Nov, up to 11 together Ngulia 11-12 Nov, 1 Ziwani, Tsavo W NP, 17 Dec (NEB, DJP, DKR, DAT).

*Buteo buteo* Steppe Buzzard N: 60+ feeding on emerging termites Mufindi (T) 5 Mar and many others same area 6-7 Mar (NEB).

*Hieraaetus pennatus* Booted Eagle R: 1 Baringo 12 Jan, 1 Gaba (U) 17 Jan, 1 Kitani, Tsavo W NP 7 Mar, 1 Buomo, Lower Tana 7 Mar (MJC, MACC, ADL, DJP, DKR, TS). A pale phase bird Dandora 18 Aug (DJP). 2 Meru NP 26 Oct, 1 Nakuru 14 Nov, 1 Ngulia 16-17 Nov and 3 Nakuru 12 Dec (DJP, DKR, PBT, DAT).

*Pernis apivorus* Honey Buzzard R: 1 Kitovu forest 19 Mar (ADL, DJP), 1 OI Donyo Sapuk 21 Mar (PBT) and 1 Karen 2 May (DKR). Singles Meru NP 26 Oct, Kakamega 30 Oct and Naivasha 5 Nov (DAT) and Baringo 27 Nov (TS).

*Falco peregrinus* Peregrine R: 1 chasing waders Sabaki mouth 10 Nov assumed to be Palaearctic (DAT) and 1 Dandora 26 Oct with characters of the race *calidus* (PBT).

*Falco amurensis* Eastern Red-footed Falcon R: 1 Mufindi (T) 27 Feb (AJB, EMB). 1 Lake Bogoria 13 Nov (TS). Scores below Ngulia in torrential rain 26 Nov (GCB), 500+ Saltlick Lodge 30 Nov and scores Maktau-Lake Jipe 1 Dec (DJP). 1 Ruaha NP (T) 31 Dec (NEB).

*Falco concolor* Sooty Falcon R: 1 Mikumi NP (T) 28 Feb (PHS). 1 Baringo 2 Nov and 1 on 4 Nov (TS); 1 Karen 3 Nov (PBT) and 2 on 5 Nov (DKR); 1 Tsavo W NP 10 Nov (NEB).

*Falco eleonora* Eleonora's Falcon R: 1 Magadi 15 May (PBT). 1 pale phase Karen 1 Nov (PBT, CAT) and another Ngulia 26 Nov (GCB).

*Falco naumanni* Lesser Kestrel N: 60 Nakuru NP 2 Nov (NEB) - a large gathering for this early date.

*Falco subbuteo* Hobby N: 80+ at termite hatch Mufindi airstrip (T) 27 Feb (AJB, EMB); 60+ feeding together after rain Nanyuki 12 Apr (DJP).

*Crex crex* Corncrake R: 1 caught Ngulia Lodge at night 13 Dec and 2 seen there 16 Dec (GCB, AMF-W, DJP).

*Porzana porzana* Spotted Crake S(B): 2 Naivasha 22 Jan and 31 Jan and 1 on 14 Feb (TS, PBT). 1 Thika 25 Apr (PBT).

*Haematopus ostralegus* Oystercatcher R: 7 Dar es Salaam 17 Mar, 12 there 12 Jun and 9 on 6 Sep (NEB). 4 Tanga (T) 11 Sep (JSSB). 2 Diani Beach 11 Sep-7 Nov and 1 Msambweni 9 Oct (MACC).

*Charadrius alexandrinus* Kentish Plover S(B): 1 Elmenteita 31 Jan (DJP); 1 Nakuru 30 Oct (PBT).

All East African records have come from the Kenya Rift Valley. These are the fifth and sixth records away from Lake Turkana.

*Charadrius dubius* Little Ringed Plover R: recorded Naivasha, Nakuru and Baringo up to 1 Apr and from 26 Sep, max 9+ Naivasha Jan (DJP, TS et al.). Several records Galana and Tana rivers, max. 13+ Buomo 13 Mar (MACC, ADL, DJP), and 2 Sabaki 1 Apr (MACC). Regular Kariobangi to late Mar and from early Oct (DJP). 1 Saguta Marmar 12 Nov and 2 Samburu GR 15 Dec (DEW). 1 Kajansi (U) 23 Jan (MJC).

*Charadrius leschenaultii* Great Sandplover N: 1000+ counted Galu beach 1 Jan (MACC, DJP). E: inland: 1 Nakuru 30 Oct (PBT), 1 Lake Jipe 7 Nov (DAT) and 1 Elmenteita 25 Dec (PBT, CAT).

- Charadrius mongolus* Mongolian Sandplover E: Inland: singles Nakuru 22 Aug, 5 Sep, 30 Oct and 14 Nov (JPD, DJP, PBT) and at Nairobi NP 22 Sep, Thika 24 Oct, Magadi 6 Nov and Elmenteita 28 Nov and 25 Dec (PBT). 1-2 Dandora 15-26 Oct (PBT).
- Pluvialis dominica* Lesser Golden Plover S(B): 1 Dar es Salaam 9-12 Jan (NEB) and 5 there 18 Mar (PHs). 5 Lake Bilisa 5 Mar (MACC, ADL, DJP).
- Pluvialis squatarola* Grey Plover E: Inland: singles Dandora 18-22 Oct and 12 Nov (PBT), Magadi 10 Nov, Baringo mid-Nov, Nakuru 30 Oct, 13 Nov and 12 Dec and Elmenteita 28 Nov and 25 Dec (DKR, TS, CAT, PBT, TS).
- Numenius arquata* Curlew E: Coastal records south of Mida: 1 Gazi Mar, 2 Tiwi 3 Jul, 3 Diani 7 Jul and 1 there 30 Aug (MACC). Inland: 1 Nakuru 22 Aug, and 30-31 Oct (JPD, DJP, CAT, PBT).
- Numenius phaeopus* Whimbrel E: Inland: 1 Naivasha 23 Jan (DJP); a juvenile caught Nakuru 4 Sep (JPD, DJP); 1 Elmenteita 28 Nov (CAT, PBT).
- Limosa lapponica* Bar-tailed Godwit R: recorded Mida Jan, Mar, Apr and Sep, max 3 (MEJG, DJP); 1 Galu 4 Sep (MACC), 1 Dar es Salaam 6 Sep and 12 Sep (NEB, PH), 4 Tanga 12 Sep (JSSB) and 1 Sabaki 24 Sep and 10 Nov (DJP, DAT). Inland: 1 Nakuru 30 Oct and 1 Dandora 31 Mar and 8 Apr (PBT).
- Limosa limosa* Black-tailed Godwit R: up to 16 Naivasha Jan-Feb and up to 25 there late Sep-Nov (DJP); 4 Baringo 18-31 Mar (TS), 3 Ferguson's Gulf 16 Feb (FA), 2 Lake Shakababo 4 Mar (ADL, DJP), 1 Dandora 22 Aug (PBT), and singles on coast at Dar es Salaam 10 Feb-early Apr (PHs) and Malindi 12 Aug (JHF). Up to 6 Kibimba (U) 19 Sep-15 Nov (MJC) and 8 Rwenzori NP (U) 30 Dec (ABS).
- Tringa erythropus* Spotted Redshank R: many records of small numbers Kenya rift valley lakes and central highlands up to 15 May, with max. 17 Magadi 20 Feb (JPD, DJP, DKR, PBT). Scores at Ahero rice scheme late Feb (TG per DJP). 1 Lake Shakababo 4 Mar (DJP). Singles Nakuru 11 and 31 Dec (DKR, DJP). In Uganda, 1 Kajansi 21 Feb and 6-7 Mar and 11 Kibimba 5 Dec (MJC).
- Tringa glareola* Wood Sandpiper D: 1 Kakindu (U) 27 Jun was presumably over-summering (MJC).
- Tringa nebularia* Greenshank N: 400+ Dar es Salaam 17 Mar was max. count (NEB).
- Tringa totanus* Redshank R: 1 Naivasha 31 Jan (PBT), 1 Ferguson's Gulf 16 Feb (FA), 1 Sabaki 5 Apr (PBT), 1 Magadi 10 May (DKR), 1 Athi River 19 Sep to end of year (DJP, PBT), 7 Mida 23 Sep (DJP), 1 Nakuru 2 Oct and 4 Elmenteita 28 Nov (PBT).
- Xenus cinereus* Terek N: 100+ Galu beach 1 Jan (MACC, DJP) was notable count away from Mida. E: Inland: singles Dandora 28 Aug-1 Sep, 21 Sep and 24 Oct (PBT), 1 Thika 24 Oct (PBT) and 1 Nakuru 29 Oct (DAT).
- Gallinago gallinago* Common snipe N: c900 estimated around Lake Naivasha Jan, mostly on the E and SE shores (DJP). D: recorded up to 25 Apr and from 26 Sep.
- Gallinago media* Great Snipe R: singles Naivasha 10 Jan, 19 Jan and 14 Feb (DJP, PBT); 2 Thika 24 Apr, 1 there 2 May and 2 on 16 May (PBT). 8+ Thika 7 Nov and 3 on 13 Nov (PBT). Several Tatanda, southwest Tanzania 27 Mar (DCM). In Uganda, 3 Kibimba 16 May, 2 there 19 Sep and 2 on 10 Oct (MJC).

- Lymnocyptes minimus* Jack Snipe S(B): influx Naivasha early in year with first bird Naivasha 10 Jan (PBT), then up to 16+ around lake (at least 5 sites) 17 Jan-7 Feb and singles 14 Feb and 7 Mar (DJP, PBT, DAT); 1 Limuru 31 Jan (DJP); 1 Thika 26 Sep (PBT), an exceptionally early date for tropical Africa.
- Calidris alba* Sanderling E: Inland: 1 Magadi 20 Oct, 3 there 6-10 Nov and 1 on 30 Nov. Singles Dandora 20 Oct, 5 Nov, 29 Nov; Nakuru 13 Nov and Elmenteita 28 Nov (PBT).
- Calidris temminckii* Temminck's Stint R: recorded Naivasha up to 16 May and from 2 Oct, with 19+ counted around lake late Jan (DJP, PBT). Smaller numbers Jan-Apr Nakuru, Solai, Baringo, Ngong, Kariobangi, Thika and Lake Bilisa, and Oct-Nov Nakuru, Athi River and Dandora. At coast, 1 Sabaki 5 Apr (PBT). In Uganda many records Kajansi 23 Jan-8 May, max. 10 on 7 Mar (MJC); 3 Mabamba 31 Jan (MJC) and 2 Lutembo 9 May (MJC). Up to 8 Kajansi 13 Nov-4 Dec; singles Kibimba 10 Oct, 7 Nov and 5 Dec (MJC).
- Limicola falcinellus* Broad-billed Sandpiper R: recorded Sabaki mouth Jan to Mar, max. at least 8, and from late Sep to Dec, max 7 (DJP, DAT). 1 Mida 3 Jan (MACC, DJP) and 7 there 3 Apr (CT, PBT). 1 caught Nakuru 5 Sep (JPD, DJP).
- Red-necked Phalarope R: regular sightings, involving up to scores of birds, off Shimoni Jan-early Mar (MH, PH). 4 Nakuru 6-7 Feb (DJP, TS), 1 Dandora 14 Sep (PBT), 3 Nakuru 2-3 Nov (JPD, DJP, PBT), 2 Elmenteita 28 Nov and 1 there 25 Dec (PBT).
- Phalaropus* sp. 2 off Shimoni 11 Nov (MH, PH).
- Arenaria interpres* Turnstone E: Inland: singles Magadi 20 Oct, Dandora 20 Oct-2 Nov and Nakuru 30 Oct (PBT). 1 Mayinja Is.(U) 24 Oct (MJC).
- Larus argentatus* Herring Gull R: 4 Todenyang, Lake Turkana 3 Mar (TS). As usual Sabaki/Malindi area with max. c300 Sabaki 2 Jan (MACC, DJP).
- Larus fuscus* Lesser Black-backed Gull N: max. count Dar es Salaam c120 17 Mar (NEB).
- Larus ichthyaetus* Great Black-headed Gull S(B): a sub-adult Sabaki 3 Mar (ADL, DJP); another sub-adult Malindi end of Dec and 2 there on 27th (ALA, PEG).
- Larus ridibundus* Black-headed Gull R: usual records small numbers, mainly Lake Nakuru and coast. 1 still in full breeding plumage Naivasha on surprisingly late date 26 Sep (DJP). In Uganda, 4 Gaba 17 and 24 Jan (MJC), 3 Kibimba 5 Dec (MJC) and 2 Rwenzori NP 29 Dec (ABS).
- Chlidonias leucopterus* White-winged Black Tern E: 1 Dar es Salaam 17 Mar (NEB).
- Sterna hirundo* Common Tern R: recorded every month from coast, with largest numbers Jan and Sep-Nov (MACC, DJP).
- Sterna caspia* Caspian Tern E: 2 Dar es Salaam 24 Apr (NEB). 1 Nakuru 31 Oct (CAT, PBT). N: c90 counted Sabaki 2 Jan (MACC, DJP).
- Sterna sandvicensis* Sandwich Tern S(B): 1 Lamu 22 Oct (MES).

- Cuculus poliocephalus* Lesser Cuckoo R: 1 Gedi 6 Apr (CAT, PBT). A few records Diani second week Apr (MACC).
- Caprimulgus europaeus* European Nightjar R: recorded at Ngulia, 23 Oct and 12-19 Nov (GCB, DJP). 3 Baringo early Nov (TS) and 1 there on 14th (DEW) were the only other records.
- Jynx torquilla* Wryneck S(B): 1 Meru NP 25 Oct (WR). Full details received.  
*The sixth Kenyan record.*
- Apus apus* Eurasian Swift N: very common, perhaps on passage, Tatanda, southwest Tanzania, Jan-Mar (DCM).
- Coracias garrulus* Eurasian Roller N: 700-1000 by roadside Mtito Andei-Mombasa 17 Jan (MEJG).
- Delichon urbica* House Martin D: 1 Nakuru 17 Jul (DAT) was presumably over-summering.
- Riparia riparia* Sand Martin N: 200 000 Lake Bogoria 20 Feb (MEJG) was an unusually large concentration for central Kenya.
- Cercotrichas galactotes* Rufous Bush Chat E: away from E Kenya: 6+ Baringo 27 Nov to end of year (TS). 1 Dar es Salaam 7 Dec (PHs).
- Irania gutturalis* Irania E: away from usual areas in inland E Kenya: 1 Mbarali (8.35S, 38.40E), near Mbeya 20 Jan (JSSB); apparently the most southerly wintering record for the species in Africa.
- Luscinia luscinia* Sprosser E: 3 singing Ngare Nairobi (T) 25 Dec (JSSB).
- Monticola saxatilis* Rock Thrush E: a southerly record Mufindi (T) 28 Nov (NEB).
- Oenanthe isabellina* Isabelline Wheatear E: 1 Lutembe (U) 23 Jan (MJC).
- Oenanthe pleschanka* Pied Wheatear M: a first year male white throated bird, Kariobangi 9-12 Feb (DJP).
- Saxicola rubetra* Whinchat E: in central Kenya, small numbers Nakuru to late Mar (JPD), 1 Naivasha 31 Jan (DKR), 1 Elmenteita 31 Jan (DJP), 1 Baringo 3 Feb (TS), and 1 Thika 27 Mar (PBT). 1 Ngulia 23 Oct (GCB, AMF-W).
- Acrocephalus arundinaceus* Great Reed Warbler : singles frequent Baringo 26 Feb-2 Apr (TS). 1 Naivasha 3 Dec (DJP, DJT) and 1 Ngulia 16 Dec. This species is very uncommon on autumn passage. Recorded as usual in April in central Kenya.
- Acrocephalus griseldis* Basra Reed Warbler R: singles at Dar es Saleem 2 Jan, 9 Jan and 13 Feb (NEB) and at Maji ya Chumvi (singing) 8 Mar (ADL, DJP). Common around Lake Shakababo 5 Mar (MACC, ADL, DJP). Recorded at Ngulia 13 Nov-19 Dec and 25 ringed there (GCB, DJP). 1 Naivasha 3 Dec (DJP, DJT) was probably on passage.
- Acrocephalus palustris* Marsh Warbler DE: 1 in song Nzaui, Machakos 18 Mar was presumably wintering (DJP). 2+ in coastal scrub Tiwi 4 Apr (DJP); 1 Kariobangi 1 May (DJP).
- Acrocephalus schoenobaenus* Sedge Warbler D: birds Ngong and Limuru 23 May (PBT) were exceptionally late.



*Hippolais icterina* Icterine Warbler R: 1 singing Rusinga Is. 2 Mar (GCB).  
1 Manyoni (T) 30 Mar (JSSB). 1 Lutembe (U) 3 Oct (MJC). 1 caught Ngulia  
18 Nov (DJP, DEGB).

*Hippolais languida* Upcher's Warbler NE: common and widespread Galana Ranch  
and around Hola early Mar (ADL, DJP). D: late bird Kariobangi 24 Apr (DJP).

*Hippolais olivetorum* Olive-tree Warbler R: 1 Tsavo E NP 28 Feb (ADL, DJP),  
1 Galana Ranch 1 Mar (ADL, DJP), 1 Baringo 9 Mar (TS), 1 Mtera Dam (T)  
18 Mar (JSSB) and 1 Longido (T) 27 Dec (JSSB). Recorded at Ngulia 12 Nov-  
19 Nov (DJP).

*Locustella fluviatilis* River Warbler R: 1 Athi River 26 Apr (DJP). 2+ Nzauí,  
Machakos (one in song) 6 Dec (DJP) and 1 singing Maktau 18 Dec (DJP).  
Recorded at Ngulia 13 Nov-21 Dec, and 136 ringed (max. 37 on 13 Dec) (GCB,  
DJP).

*Phylloscopus sibilatrix* Wood Warbler S(B): 1 caught Ngulia 10 Dec (GCB, DJP).

*Phylloscopus trochilus* Willow Warbler D: 1 Thika 16 May (PBT) was unusually  
late.

*Sylvia communis* Whitethroat E: 1 Lutembe (U) 4 Dec (MJC).

*Sylvia nisoria* Barred Warbler E: away from inland SE Kenya: singles Same (T)  
28 Jan (JSSB), N of Ngao 1 Mar (MACC, ADL, DJP), Dar es Salaam 13 and 18  
Mar (NEB) and Baringo throughout Mar-early Apr (TS).

*Ficedula albicollis* Collared Flycatcher R: a female Mara GR 11-12 Apr (DKR).  
Full details received.

*Ficedula* sp. females Kakamega 3 Nov, 20 Nov and 22 Dec (NEB, PEG, DEW).

*Anthus campestris* Tawny Pipit S(B): 1 Lamu 25 Oct (MES). Full details  
received.

*The sixth record from Kenya and the seventh from East Africa.*

*Anthus cervinus* Red-throated Pipit E: 1 Dar es Salaam 21 Feb (PHs). 16 at  
Kibimba (U) 6 Feb and 2 there 15 Nov (ABS).

*Motacilla alba* White Wagtail R: as usual at Lake Turkana, and regularly  
Kariobangi, where max c10 in Feb. 1 Limuru 17 and 31 Jan (DJP, DAT);  
1 Nakuru 12 Dec (DKR).

*Motacilla flava* Yellow Wagtail D: exceptionally late bird Naivasha 16 May  
(DJP). M: male of race *leucocephala* caught Kabete 2 Apr (DEGB, DJP).

*Lanius isabellinus* Red-tailed Shrike E: 1 Dar es Salaam 9 Jan (NEB).

*Lanius colluris* x *L. isabellinus* Red-backed/Red-tailed Shrike hybrid.  
1 male with grey head, chestnut back and red tail Mutomo 21 Mar (DJP).  
Another caught at Ngulia 12 Nov (DJP).

*Lanius minor* Lesser Grey Shrike D: 1 Voi 20 Mar (ADL, DJP) was exceptionally  
early.

*Lanius rubicus* Nubian Shrike S(A): 1 Baringo 6 Dec to end of year (TS). See  
*Scopus* 7 in press.

*The second Kenya and East African record.*

## ADDITIONS AND CORRECTIONS FOR PREVIOUS YEARS

## AFROTROPICAL AND OCEANIC SPECIES

*Diomedea melanophris* Black-browed Albatros S(A): an adult off Shimoni Oct 1978 (PH). Full details received.

*Puffinus* sp. Single birds of Shimoni 26 Feb and 8 Aug 1981 were thought to have been Wedge-tailed Shearwaters *P. pacificus* (MH, PH).

*Phaethon lepturus* White-tailed Tropicbird S(B): singles off Shimoni 29 Jan, 3 Sep, 1 Oct and 24 Nov 1977, 23 Jan 1978, 4 and 14 Feb and 5 Sep 1979, 25 Aug and 1 Dec 1980, and on several dates Aug-Dec 1981 (MH, PH). 2 Kunduchi beach, Dar es Salaam 18 Sep 1980 and 1 over city centre 10 Dec 1981 (IF, PHs).

*There are only two previous records from Tanzania.*

*Sula leucogaster* Brown Booby S(A): 1 off Shimoni 6 Aug 1976 (MH, PH). Full details received.

*Fregata* sp. Single Lamu 29 Nov 1981 (FA).

*Coracias abyssinica* Abyssinian Roller E: 1 Mara GR 28 Dec 1974 (RD) - photograph supplied.

*Hirundo dimidiata* Pearl-breasted Swallow S(A): 1 nr Lake Sundu, southwest Tanzania 1 Dec 1980 (DCM). See *Scopus* 7:51.

*The second record for East Africa, and the first since 1903.*

*Nectarinia oustaleti* Angola White-bellied Sunbird S(A): 1 Kasesya, southwest Tanzania, 2 km from the Zambian border, 27 Nov 1979 (DCM). See *Scopus* 7:52.

*The second record from East Africa.*

*Euplectes fransiscanus* Northern Red Bishop E: 2 males and 3 females 40 km north of Marsabit were identified as the Ethiopian race *pusillus* (RDM, DRW). See *Scopus* 7:23.

*The first record of this race in Kenya.*

## PALAEARCTIC SPECIES

*Platalea leucorodia* Eurasian Spoonbill S(B): 1 Ferguson's Gulf, Lake Turkana 26 Jan 1981 (FA).

*The fifth Kenyan record.*

*Pernis apivorus* Honey Buzzard R: 1 Langata 10 Oct 1981 (GCB).

*Haematopus ostralegus* Oystercatcher R: 1 Nakuru 26 Sep 1975 (RD).

'FIRST' AND 'LAST' DATES FOR SOME PALAEARCTIC MIGRANT LANDBIRDS  
(central/eastern Kenya)

Species	Last Date	First Date
<i>Caprimulgus europaeus</i>		23 Oct Ngulia
<i>Merops persicus</i>	11 Apr Amboseli	21 Oct Ngulia
<i>Merops apiaster</i>	8 Apr Mwingi Mkt	4 Sep Nairobi, Nakuru
<i>Hirundo rustica</i>	16 May Naivasha	18 Aug Dandora
<i>Delichon urbica</i>		26 Sep Naivasha
<i>Riparia riparia</i>		26 Sep Naivasha
<i>Oriolus oriolus</i>	12 Apr Archer's Post.	23 Sep Bamburi
<i>Cercotrichas galactotes</i>	4 Apr Tiwi	24 Oct Ngulia
<i>Irania gutturalis</i>		12 Nov Ngulia
<i>Luscinia luscinia</i>	8 Apr Mwingi Mkt	23 Oct Ngulia
<i>Luscinia megarhynchos</i>		24 Oct Ngulia
<i>Monticola saxatilis</i>	8 Apr Mwingi Mkt	25 Oct Meru NP
<i>Oenanthe isabellina</i>	2 Apr Tsavo E	25 Sep Magadi
<i>O. oenanthe</i>	9 Apr Ngong	5 Sep Kajiado
<i>O. pleschanka</i>	10 Apr Naivasha	
<i>Acrocephalus arundinaceus</i>	25 Apr Naivasha	3 Dec Naivasha
<i>A. griseldis</i>		13 Nov Ngulia
<i>A. palustris</i>	1 May Kariobangi	23 Oct Ngulia
<i>A. schoenobaenus</i>	23 May Ngong, Limuru	12 Nov Ngulia
<i>A. scirpaceus</i>	10 May Kariobangi	
<i>Hippolais languida</i>	24 Apr Kariobangi	4 Dec Ngulia
<i>H. pallida</i>	25 Apr Naivasha	24 Oct Meru NP
<i>Locustella fluviatilis</i>	26 Apr Athi River	13 Nov Ngulia
<i>Phylloscopus trochilus</i>	16 May Thika	25 Sep Naivasha
<i>Sylvia atricapilla</i>		26 Oct Mt Kenya
<i>S. borin</i>	18 Apr Ngong	26 Oct Mt Kenya
<i>S. communis</i>	24 Apr Kariobangi	23 Oct Ngulia
<i>S. nisoria</i>	12 Apr Isiolo/Archer's Post	23 Oct Ngulia
<i>Muscicapa striata</i>	15 Apr Kariobangi	23 Oct Ngulia
<i>Anthus cervinus</i>	1 May Ngong	
<i>A. trivialis</i>	12 Apr Isiolo	20 Oct Ngulia
<i>Motacilla flava</i>	16 May Naivasha	29 Aug Kariobangi
<i>Lanius collurio</i>	24 Apr Ngong	23 Oct Ngulia
<i>L. isabellinus</i>	9 Apr Ngong	12 Nov Ngulia
<i>L. minor</i>	20 Mar Voi	

English names of birds listed above but not mentioned in the Species Report:  
*Merops apiaster* Eurasian Bee-eater, *Hirundo rustica* Eurasian Swallow,  
*Luscinia megarhynchos* Nightingale, *Oenanthe oenanthe* Northern Wheatear,  
*Acrocephalus scirpaceus* Reed Warbler, *Hippolais pallida* Olivaceous Warbler,  
*Sylvia atricapilla* Blackcap, *S. borin* Garden Warbler, *Muscicapa striata*  
 Spotted Flycatcher and *Anthus trivialis* Tree Pipit

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## ADVICE TO REPORT CONTRIBUTORS

Full lists of S(A), S(B) and R species are given in the *Scopus* Supplement of June 1982. These lists relate, however, to the whole of East Africa. Species which are unknown or scarce locally, or even within one of the East African countries, may not appear in these lists, in which case appropriate records would merit inclusion under Category E. Guidance as to whether or not a record might be worth submitting under Categories E, N, D or B can usually be obtained by reference to Britton, P.L. (ed.) 1980, *Birds of East Africa*.

If a record relates to a species in one of the S categories, or is otherwise clearly very unusual, it must be accompanied by sufficient detail to support the identification. For species previously recorded five times or less in East Africa as a whole, or for which there exist no previous records for the country concerned, it is desirable that a record be supported by a specimen or an adequate photograph. If this is not possible, it is desirable that at least two independent observers should see the bird, and that full details should be submitted. The Sub-Committee is prepared to consider sight records of such species from a single observer only provided that (a) his/her reliability can be vouched for by at least two independent authorities and (b) there was clearly no possibility of obtaining corroboration from another observer.

Records should be sent within two months of the end of the year to the recorders named inside the cover of the current issue of *Scopus*. Records received too late for inclusion in one report can always be accommodated in the 'Additions' section of the next.

## E.A.N.H.S. NEST RECORD SCHEME: 1982

P.B. Taylor

1982 was an encouraging year for the Scheme. About 1000 cards were submitted by 57 observers and, as well as the usual good coverage for Kenya, there was a considerable increase in the number of records for Tanzania, plus a very welcome contribution on forest birds from Uganda by J.P. Skorupa. As in 1981, cards have been received for a number of species with no or very few East African breeding records, and these are commented upon in the text. Several observers have sent in records from previous years, and it is hoped that all contributors will be able to send in any such observations not previously documented, no matter how long ago they were made. Breeding records from all papers and short notes in *Scopus* Volumes 5 and 6 (1981 and 1982) have been extracted and cards have been made for those records which are not already in the collection. This will be done every year from now on, but all authors are urged to complete cards for the Scheme so that we may have as much detail as possible on record.

Good use was made of the card collection in 1982: much information was extracted and summarized for research workers and authors (including for *The Birds of Africa*), and details from all the cards were extracted for use in the Kenya distributional mapping scheme.

The format of this report follows that introduced in 1981. Readers are asked to see that report for an explanation of the layout and terminology used. Abbreviations used are as follows:

ad = adult	J = juvenile
C = clutch	L = Lake
c = approximately	m = month(s)
D = District	N = nestling
d = day(s)	NP= National Park
F. = fledgling	NR= National Reserve
FG = fully-grown	R = River
Fo = Forest	rd= road
g = grams	V = Valley
GR = Game Reserve	w = week(s)

The following observers contributed records during 1982: R.G.Allan, D.Angwin, E.B.Angwin, R.K.Bagine, A.J. & J.F.Beakbane, J.S.S.Beasley, A.Bonnett, E.M.Boswell, D.Brass, A.C.Cameron, L. & T.Campbell, C.Carter, M.Charleston, M.Clifton, M.A.C.Coverdale, G.R.Cunningham-van Someren, P.Davey, J.Fanshaw, H.Gomez de Silva, W.M.Good, M.E.J.Gore, V.Haas, I.W.Hardy, J.Hartley, J.Hayes, M.Heath, J.F.M.Horne, K.M.Howell, G.C. & Mrs. Irvine, R.King, A.D.Lewis, J.Lock, A.Lohding, M.R.Merrett, P.J.Merrett, D.C.Moyer, F.Ng'weno, C.E.Norris, M.Pickford, D.E.Pomeroy, D.K.Richards, R.Russell, S.Sassoon, D.Schmidl, D.M.Sheppard, L.L.Short, J.P.Skorupa, T.Stevenson, P.B.Taylor, D.Trump, D.A.Turner, R.F.Tyers, S.M.Whitehouse, P.A.Wootton.

*Struthio camelus* Ostrich: *molybdophanes*: Shaba NR Y6 2w old 14/6/79, Y7 1w old 15/6/79; Samburu GR Y12 7-10d old 15/9, c44+Y3 17/9; Tsavo East NP Y9 small 6/8. *massaicus*: Nairobi NP Y10 small 14/1, Y3 1/3-grown 17/1, Y12 1w old 26/10.

*Tachybaptus ruficollis* Little Grebe: Nairobi NP Y3 4-5d old 26/6, Y3 hatched 28/6, incubating 29/6, Y1 2w old 15/7; 08.36'S, 35.21'E (T) Y2 small 1/6, Y1 small 18/6.

*Phalacrocorax carbo* Greater Cormorant: L Turkana c6 nests with C3-4 & building 25/4.

*Anhinga rufa* Darter: L Naivasha several nests with sitting ads 14/12.

*Ixobrychus minutus* Little Bittern: L Baringo 2 ads with F2 hardly flying 7/2 (T.Stevenson).

*Very few East African breeding records.*

*Ardea melanocephala* Black-headed Heron: Kakamega c25 nests with total 15+ small Y 2/12.

*Egretta garzetta* Little Egret: L Turkana 'hundreds' of nests with C2-5 25/4 and many eggs hatched by 5/5; Kisite Island C1 & 2xC3 29/12.

*Nycticorax nycticorax* Night Heron: L Turkana C2 25/4.

*Scopus umbretta* Hamerkop: Limuru F4 left nest 12/12.

*Bostrychia olivacea* Green Ibis: Aberdares building 1959 (A.Dyer), N2 half-fledged ?/9/81 (I.S.C.Parker).

*See Parker (1982) Scopus 6:20. Only 1 previous East African breeding record.*

*Threskiornis aethiopica* Sacred Ibis: L Turkana C2 25/4.

*Platalea alba* African Spoonbill: L Turkana C2 25/4; near Magadi 2-3  $\frac{3}{4}$ -grown Y in several nests 25/7.

*Dendrocygna viduata* White-faced Whistling Duck: Thika Y5  $\frac{1}{2}$ -grown 18/7.

*Alopochen aegyptiacus* Egyptian Goose: L Turkana C6 25/4; Samburu GR Y4  $\frac{1}{4}$ -grown 23/8; Aberdares Y8 just hatched 19/2, Y3  $\frac{1}{2}$ -grown 19/3, Y5 almost FG 22/6, Y7 2/8, Y7 c14d old 18/9; L Naivasha Y6 1d old 23/10; Thika Y9 clw old 7/11; Nairobi NP Y8 8/8; near Ngong Y8 1-2w old & Y2 large 17/7; Tsavo West NP Y6 small 1/4.

*Anas capensis* Cape Wigeon: L Nakuru Y8 small 3/10; near Magadi Y7 downy 25/7.

*Anas erythrorhynchus* Red-billed Teal: Nairobi NP Y13 1-2d old 22/6, Y9 small 26/6.

*Anas undulata* Yellow-billed Duck: near Kieni 1+ large downy Y 27/6, Y8 1-2d old 10/7; 08.36'S, 35.21'E (T) Y3 downy 11/6; Kibale Fo (U) Y6+ 1/3 grown 26/12/80.

*Plectropterus gambensis* Spur-winged Goose: Tatanda (T) Y7 1d old 15/3.

*Gyps africanus* African White-backed Vulture: Mara GR N1 almost-fledged 17/8.

*Neophron percnopterus* Egyptian Vulture: Naivasha and sitting 25/7 and 29/7 & 8/8.

*Torgos tracheliotus* Lappet-faced Vulture: Marsabit incubating March; Mara GR N1 with first feathers 18/8.

*Terathopus ecaudatus* Bateleur: Samburu GR N1 fully-fledged 26/6; Mara GR N1 just-fledged 11/8.

*Accipiter melanoleucus* Great Sparrowhawk: Karen N3 fledged 2/10; Gedi building 6/4.

*Accipiter tachiro* African Goshawk: Langata N1 300g 19/1.

*Aquila rapax* Tawny Eagle: Mara GR N2 downy 18/8.

*Aquila verreauxi* Verreaux's Eagle: L Baringo ad on nest 23/6.

*Aquila wahlbergi* Wahlberg's Eagle: Kendu Bay ads on nest 25/7; Tsavo West NP incubating 17/11.

*Buteo augur* Augur Buzzard: Nakuru NP ads feeding F1 5/6, N1 large and N2 feathered 11/12; Tatanda (T) C2 25/6.

*Hieraaetus africanus* Cassin's Hawk Eagle: Kibale Fo (U) incubating 4/12/80 but unsuccessful (J.P.Skorupa).

See Skorupa (1981) *Scopus* 5:52-54. No previously documented breeding records for this species.

*Hieraaetus dubius* Ayres' Hawk Eagle: Kibale Fo (U) N1 downy 17/11/81 (J.P. Skorupa).

*Polemaetus bellicosus* Martial Eagle: Embu D N1 10-14d old 28/8.

*Stephanoaetus coronatus* Crowned Eagle: Aberdares N1 almost-fledged 20/3; Kibale Fo (U) N1 hatched 29/10/80-1/11/80 and first flew 1/2/81.

*Haliaeetus vocifer* Fish Eagle: L Victoria N1 1/7.

*Milvus migrans* Black Kite: Kiambu F2 left nest 31/12/81.

*Chelictinia riocourii* Swallow-tailed Kite: L Turkana 3 pairs displaying near nest sites 2/5.

*Falco biarmicus* Lanner Falcon: Iringa (T) N4 downy 26/7 - first flew 9/9 (E.Boswell).

*The first card for Tanzania.*

*Falco rupicoloides* White-eyed Kestrel: near Suswa building 27/6.

*Falco tinninculus* Kestrel: L Baringo F2 fed by parents 23/6; Iringa (T) mating 30/10.

*Polihierax semitorquatus* Pygmy Falcon: Marsabit incubating April.

*Coturnix delegorguei* Harlequin Quail: Magadi C8 23/5.

*Francolinus afer* Red-necked Spurfowl: Mara GR Y3  $\frac{1}{2}$ -grown 17/8; Tatanda (T) C1 20/4, C7 4/6, C5 14/6, C8 & Y3 2-3w out of nest 1/7, Y4 2-3w old 3/7.

*Francolinus hildebrandti* Hildebrandt's Francolin: Naivasha Y3  $\frac{1}{2}$ -grown 12/12/80.

*Francolinus leucoscepus* Yellow-necked Spurfowl: Samburu GR Y5 newly-hatched & N4  $\frac{1}{2}$ -grown 25/6, many pairs with Y (downy to just flying) 24/8; Nairobi NP Y3  $\frac{1}{2}$ -grown 14/8, Y2 1/5-grown 6/11; Mkomazi GR (T) Y4 fledged 1/2/78.

*Francolinus sephaena* Crested Francolin: Marsabit C2 April; Mkomazi GR (T) Y5 just flying 2/2/78; Mikumi NP (T) Y3+ fledged 6/6/76.

*Francolinus shelleyi* Shelley's Francolin: Nairobi NP Y2 less than 1w old 5/10.

*Guttera edouardi* Crested Guineafowl: Kibale Fo (U) Y12 c $\frac{1}{2}$ -grown with c30 ads 3/3/80, several small fledged Y 17/12/80, Y1 just hatched 9/12/81, Y1 very small 19/12/81.

- Guttera pucherani* Kenya Crested Guinea-fowl: Shimba Hills Y6 4w old 14/11.
- Numida meleagris* Helmeted Guinea-fowl: Nairobi NP Y5 1/6-grown 22/6 and 7/7, Y14 1/6-grown with 3 ads 29/6; 07.15'S, 37.10'E (T) Y11 1/2-grown 7/7.
- Balearica pavonina* Crowned Crane: Naro Moru Y1 1/2-grown 19/6/81; Nairobi NP C1 + N1 2/7, Y2 1/3-grown 17/7, Y2 1/2-grown & Y2 downy 10/8; Athi River C1 fresh 30/12; Serengeti/Ngorongoro (T) egg-laying months estimated as Jan-May (1965-66, 1972-78); Ngorongoro C1 21/1/73, C3 4/2/73.
- For Serengeti/Ngorongoro details see Frame (1982) Scopus 6:60-69.
- Gallinula chloropus* Common Moorhen: Nairobi NP Y1 less than 1w old 15/7.
- Limnocorax flavirostra* Black Crake: Nairobi NP Y1 almost FG 15/7; Kibale Fo (U) 1 small downy Y 19/6/80.
- Porphyrio porphyrio* Purple Gallinule: Thika Y3 almost FG 28/3, Y1 3/4-grown 16/10.
- Rallus caerulescens* African Water Rail: Thika Y2 1-2w old 20/6 (P.B.Taylor).  
Only two previous East African breeding records, from Naivasha.
- Fulica cristata* Red-knobbed Coot: Aberdares Y4 1/2-grown 30/1, 3xY1 newly-hatched 19/3, Y2 downy & Y5 fledged 22/6; Mufindi (T) Y2 downy 1/6 & 18/6.
- Eupodotis melanogaster* Black-bellied Bustard: Shimba Hills Y1 1/2-grown 19/9/81.
- Eupodotis senegalensis* White-bellied Bustard: Nairobi NP Y2 almost FG 8/8.
- Otis kori* Kori Bustard: Magadi Y1 1/2-grown 12/6.
- Actophilornis africanus* Jacana: Thika Y3 1/2-grown 18/7; Amboseli NP Y3 1/2-grown 4/9; Taita Hills Y3 3-4d old 20/10/81.
- Charadrius pecuarius* Kittlitz's Sandplover: L Turkana C2 28/4; L Magadi 2xY2 downy 12/6; Amboseli NP Y2 downy 6/7; Tsavo East NP C2 6/4; L Jipe C2 7/11.
- Charadrius tricollaris* Three-banded Plover: Thika Y1 1/4-grown 2/10; Dandora Y1 less than 1w old 16/10; Nairobi NP Y1 1/4-grown 28/8.
- Vanellus albiceps* White-headed Plover: Ruaha NP (T) Y2 29/6.
- Vanellus armatus* Blacksmith Plover: L Naivasha C4 10/7; Thika Y2 less than 1w old 10/10; Nairobi NP Y1 2d old 22/6; L Magadi C2 22/5, C4 29/5, C3 12/6; Amboseli NP C3 20/7 & 28/7 & 9/9 & 10/9, C2 4/9.
- Vanellus coronatus* Crowned Plover: Karen Y3 22/3; Nairobi NP 2xY2 1/4-grown 24/5, Y2 1-2d old 27/5, C2 7/7, Y1 downy 10/8; 07.15'S, 37.10'E (T) 4xC1 & 3xC2 7/7; Ruaha NP (T) C1 9/6; Mikumi NP (T) C2 6/6/76.
- Vanellus crassirostris* Long-toed Plover: Thika Y4 FG 18/7.
- Vanellus melanopterus* Black-winged Plover: Karen Y2 18/4, 2xY2 3/6; Serengeti (T) F2 5/2/78.
- Gallinago nigripennis* African Snipe: Mt Kenya Y2 w-3d old 8/6.
- Himantopus himantopus* Black-winged Stilt: L Magadi Y2 4/7.
- Burhinus capensis* Spotted Thicknee: Nairobi NP Y1 very small 22/6.
- Burhinus vermiculatus* Water Thicknee: L Turkana C1 + Y1 5/5; L Jipe C2 7/11.
- Cursorius temminckii* Temminck's Courser: Athi River C2 13/7.



*Rhinoptilus africanus* Two-banded Courser: Shombole '2 nests' 21/7; L Jipe C1 7/11.

*Glareola pratincola* Common Pratincole: ?Mkata Plain (T) Y1 16/9.

*Larus cirrocephalus* Grey-headed Gull: L Turkana 'hundreds of nests' with C2-5 25/4.

*Rynchops flavirostris* African Skimmer: L Turkana 4 nests with C1-4 25/4.

*Pterocles decoratus* Black-faced Sandgrouse: Tsavo East NP Y1 ½-grown 2/4.

*Pterocles exustus* Chestnut-bellied Sandgrouse: L Magadi C2 & C3 12/6, Y3 a few d old 19/8; Amboseli NP Y2 downy 7/7.

*Columba guinea* Speckled Pigeon: L Turkana C2 27/4.

*Oena capensis* Namaqua Dove: L Turkana C2 28/4.

*Streptopelia capicola* Ring-necked Dove: L Turkana incubating 2/5; Tatanda (T) N2 10/6/81, C1 1/7, 12xC2 3/5-31/5, 8xC2 3/6-24/6, C2 2/7, N1 1d old 18/5, N1 2w old 23/6, 2xN2 laid May, 6xN2 laid Jun.

*Streptopelia decipiens* Mourning Dove: Marsabit C2 Feb; L Baringo F2 23/6; Magadi C1 15/5.

*Streptopelia semitorquata* Red-eyed Dove: Nairobi incubating 27/9/81 & 26/7. C1 28/1, C2 27/2 & 11/7; Tatanda (T) C2 15/6 & 27/6, N2 1w old 27/6.

*Turtur chalcospilos* Emerald-spotted Wood Dove: Tatanda (T) Y2 left nest 4/7.

*Turtur tympanistria* Tambourine Dove: Kibale Fo (U) incubating (198) 29/4 & 14/9 & 15/9 & (1981) 22/1 & 11/2 & 20/9, C1 26/11/80 & (1981) 8/9 & 21/11 & 19/12.

*Poicephalus robustus* Brown-necked Parrot: Mikumi NP (T) pair at nest hole 20/4-8/7 (A.J.Beakbane).

No previous East African breeding records, and not mentioned by Brown & Britton (1980).

*Tauraco fischeri* Fischer's Turaco: Shimba Hills carrying nest material 30/5 (M.A.C.Coverdale).

Very few East African Breeding records.

*Tauraco livingstonii* Livingstone's Turaco: Tatanda (T) N2 4d old 26/3, F2 8/2 (D.C.Moyer).

No previous dated records for East Africa.

*Chrysococcyx caprius* Didric Cuckoo: Magadi rd C1 + C2 *Euplectes orix* 8/6/80 (G.R.Cunningham-van Someren); Nairobi F1 fed by *Ploceus baglafecht* Jul; Tatanda (T) C1 + C2 *Ploceus xanthops* 14/4 (D.C.Moyer).

The first East African records of *E. orix* and *P.xanthops* as hosts.

*Chrysococcyx cupreus* Emerald Cuckoo: Kibale Fo (U) F1 fed by *Nectarinia chloropygia* 20/2/81 (J.P.Skorupa).

The first East African record of this host.

*Chrysococcyx klaas* Klaas's Cuckoo: Karen J1 fed by *Nectarinia kilimensis* 7/9.

*Clamator jacobinus* Black and White Cuckoo: Bushwhackers Camp F1 fed by *Turdoides rubiginosus* 24/1/76.

For details see Huels (1982) *Scopus* 6:33-35.

*Ceuthmochares aereus* Yellowbill: Kibale Fo (U) F1 fed by adult 6/7/81 (J.P.Skorupa).

*Only three previous East African breeding records.*

*Centropus superciliosus* White-browed Coucal: Marsabit F1 May; Kendu Bay F 19/7; Tatanda (T) Y1 1-2w out of nest 25/4, Y1 4+w old 26/4, Y1 ½-grown 6/6.

*Bubo africanus* Spotted Eagle Owl: Huri Hills C2 25/5/81 hatched 2/6/81.

*Bubo lacteus* Verreaux's Eagle Owl: Diani N1 fledged by 2/10.

*Caprimulgus clarus* Slender-tailed Nighthjar: Arusha (T) N1 a few d old 17/10/81.

*Caprimulgus natalensis* White-tailed Nightjar: Tatanda (T) N2 4d old 21/10/76 (D.C.Moyer).

*The first breeding record for Tanzania.*

*Caprimulgus poliocephalus* Montane Nightjar: Muthaiga (Nairobi) C2 18/7 fledged by 12/8.

*Apus affinus* Little Swift: Huri Hills C2 25/5/81.

*Colius leucocephalus* White-headed Mousebird: Marsabit C2 ?/10/81 (R.K.Bagine).

*Only two previous East African breeding records.*

*Colius striatus* Speckled Mousebird: Nairobi C2 28/12/81; Tatanda (T) C3 4/5, N3 2w old 23/4, C1 31/5, N2 w-5d old 14/5.

*Urocolius macrourus* Blue-naped Mousebird: Marsabit C2 ?/10/81.

*Ceryle rudis* Pied Kingfisher: Mufindi (T) feeding Ns 18/7.

*Merops bullockoides* White-fronted Bee-eater: Kerio V 2 colonies 6/5.

*Merops oreobates* Cinnamon-chested Bee-eater: Naivasha feeding Y from 20/12/80; Limuru J1 fed by ad 27/12.

*Merops pusillus* Little Bee-eater: Kiambu F2 17/3, J1 16/5.

*Merops revoilii* Somali Bee-eater: Shaba NP adult remaining in nest hole - incubating? (L.Campbell).

*Only one East African breeding record.*

*Coracias caudata* Lilac-breasted Roller: Sokoke Fo C3 20/11; 07.15'S, 37.10'E (T) J1 clw out of nest 7/7.

*Upupa epops* Hoopoe: Kabete at nest hole from 25/8 for 6w; Langata C3 26/7.

*Phoeniculus bollei* White-headed Wood Hoopoe: Kibale Fo (U) feeding Ns 15/6/80, N2+ almost fledged 9/12/81.

*Phoeniculus minor* Abyssinian Scimitarbill: L Baringo feeding Ns 23/6.

*Phoeniculus purpureus* Green Wood Hoopoe: Naivasha feeding Ns 20/6 & 25/10; Diani Js 9/3.

*Bycanistes brevis* Silvery-cheeked Hornbill: Arusha (T) F1 left nest 10/2 (J.S.S.Beesley).

*Only three previous dated East African records.*

*Tockus alboterminatus* Crowned Hornbill: Diani feeding Ns 9/10 & 28/11.

- Tockus erythrorhynchus* Red-billed Hornbill: L Bogoria male feeding female in nest hole 5/6.
- Tockus flavirostris* Yellow-billed Hornbill: L Turkana male feeding female in nest hole 1/5; Marsabit F1 May.
- Bucorvus cafer* Ground Hornbill: Masai Mara J1 almost FG 16/8; 07.15'S, 37.10'E (T) J1 c6m old 7/7.
- Buccanodon leucotis* White-eared Barbet: Chyulu Hills N3 10/11, incubating 12/11 & 15/11.
- Gymnobucco bonapartei* Grey-throated Barbet: Kakamega N1+ 27/12/76, N2 8/10/80; Kibale Fo (U) feeding Ns 24/5/80.
- Lybius bidentatus* Double-toothed Barbet: Kendu Bay pair at nest hole 26/6.
- Lybius diadematus* Red-fronted Barbet: Kerio V N2 23/1/81.
- Lybius leucocephalus* White-headed Barbet: Kiambu N3 March - first F left nest 13/3.
- Lybius melanopterus* Brown-breasted Barbet: Diani F2 4/10/81.
- Lybius torquatus* Black-collared Barbet: Tatanda (T) N2 4-5d old 22/4 (D.C.Moyer)

*Only two previous dated East African records.*

- Pogoniulus bilineatus* Yellow-rumped Tinkerbird: Nairobi N2 1/9; Diani ads at nest hole 4-19/10/81; Kibale Fo (U) F1 3/3/80.
- Trachyphonus erythrocephalus* Red and Yellow Barbet: L Bogoria feeding Ns 8/7.
- Indicator variegatus* Scaly-throated Honeyguide: Nairobi NP F1 fed by *Thripias namaquus* 16/1 (J.P.Skorupa).

*The first record of this host for East Africa.*

- Prodotiscus zambesiae* Eastern Honeybird: Nairobi J1 fed by *Zosterops poliogastra* 11/8.
- Campethera caroli* Brown-eared Woodpecker: Kibale Fo (U) feeding Ns 22/9/80, very young Ns 19/12/81 (J.P.Skorupa).

*Only two previous East African records; none for Uganda.*

- Campethera tullbergi* Fine-banded Woodpecker: Kibale Fo (U) building 17/5/81 and incubating 31/5/81 but nest deserted 30/6/81 (J.P.Skorupa)

*Only two previous East African records; none for Uganda.*

- Dendropicos fuscescens* Cardinal Woodpecker: Baringo Ns 19/1; Arusha (T) Ns 9/12; Kibale Fo (U) F2+ 7/7/80.
- Mesopicos goertae* Grey Woodpecker: Kiambu feeding Ns 11/10/81; Naivasha J1 13/12/80, F(s) 18/6.
- Mesopicos griseocephalus* Olive Woodpecker: West Usambaras (T) N1+ 11/12/76 & 12/12/76 (C.Carter)

*Only two previous dated records for East Africa (T).*

- Mesopicos xantholophus* Yellow-crested Woodpecker: Kibale Fo (U) adult in nest hole 8/11/81.

- Calendrella cinerea* Red-capped Lark: Karen N2 unfeathered 27/12.
- Eremopterix leucopareia* Fischer's Sparrow Lark: Magadi C2 22/5 & 12/6 & 25/7, C1 + N1 & N1 1d old & N2 1d old 12/6, N2 downy 25/7; 07.15'S, 37.10'E(T) C2 7/7.
- Mirafraga cantillans* Singing Bush Lark: Magadi N3 first feathers 22/5.
- Mirafraga rufocinnamomea* Flappet Lark: Tatanda (T) N3 fledged 30/4.
- Hirundo abyssinica* Striped Swallow: Nairobi N2 left nest 2/6; Amboseli Ns 26/6.
- Hirundo atrocaerulea* Blue Swallow: Njombe (T) nest with eggs Oct.
- Hirundo daurica* Red-rumped Swallow: Tatanda (T) N2 fledged + C1 addled 26/5.
- Hirundo fuligula* African Rock Martin: Limuru N2 fledged 23/11; Tatanda (T) N2 1d old + C1 addled 17/3, C2 24/5.
- Hirundo griseopyga* Grey-rumped Swallow: Mufindi (T) 3 pairs at nest holes 20/6.
- Hirundo semirufa* Rufous-chested Swallow: Masai Mara building 18/8/80; Siaya D building 25/6/81.
- Hirundo senegalensis* Mosque Swallow: Tatanda (T) N3 4-6d old 18/4.
- Hirundo smithii* Wire-tailed Swallow: Kendu Bay incubating 10/6.
- Psalidoprocne albiceps* White-headed Rough-wing: Olambwe V GR feeding fledged Y 28/6.
- Psalidoprocne pristoptera* Black Rough-wing: West Usambaras (T) at nest-hole 14/12/76.
- Riparia paludicola* African Sand Martin: Kendu Bay incubating 9/6; Aberdares N2 11/2/78.
- Dicrurus adsimilis* Drongo: Kerio V N2+ 4/5; L Baringo ad on nest 21/8; L Bogoria Fs 5/6; Same (T) N2 31/1/78.
- Oriolus larvatus* Black-headed Oriole: Kerio V incubating 6/5.
- Oriolus percivali* Montane Oriole: Kibale Fo (U) F1 fed by ad 19/11/80.
- Corvus albus* Pied Crow: L Nakuru Ns 5/6; Arusha (T) ad on nest 11/12; Mtwara (T) Y2 FG 25/1.
- Corvus ruficollis* Brown-necked Raven: L Turkana C2 2/5.
- Parus albiventris* White-bellied Tit: Kericho Ns 27/12/80; Naivasha F1 30/12/80; Limuru F1 3/11; Nairobi F1 27/11 & 28/11; Lolgorien J2 20/8.
- Parus funereus* Dusky Tit: Kibale Fo (U) F1 30/7/80 (J.P.Skorupa)  
*Only three previous East African breeding records.*
- Remiz caroli* African Penduline Tit: Magadi Ns 12/6.
- Remiz musculus* Mouse-coloured Penduline Tit: Marsabit N2 newly-hatched May (R.K.Bagine)  
*The first detailed East African breeding record.*
- Trichastoma fulvescens* Brown Illadopsis: Kibale Fo (U) C2 30/7/80 (J.P.Skorupa)  
*The second East African breeding record.*

*Turdoides jardineii* Arrow-marked Babbler: Naivasha F1 12/12/80; Tatanda (T) C1 9/5.

*Turdoides leucopygius* White-rumped Babbler: Tatanda (T) C2 24/3 & 18/5, N2 5d old 20/4 (C.D.Moyer)

*The first East African breeding records.*

*Turdoides melanops* Black-lored Babbler: Nakuru NP F1 14/11; L Naivasha F3 29/7.

*Turdoides rubiginosus* Rufous Chatterer: L Bogoria Fs 8/7.

*Andropadus latirostris* Yellow-whiskered Greenbul: Kibale Fo (U) F1 28/10/80 & 27/11/80.

*Pycnonotus barbatus* Common Bulbul: Kerio V Fs 13/5; Kendu Bay Ns 10/6; Kiambu F1 18/1; Limuru F1 8/12; Nairobi F1 24/6 & 1/8, F2 6/12; Diani F2 1/6/81; Tatanda (T) C2 18/1 & 14/4, N2 6d old 18/5; Kibale Fo (U) F1 20/8/81.

*Alethe diademata* Fire-crested Alethe: Kibale Fo (U) C2 1/5/81, C3 8/11/81 (J.P.Skorupa)

*Only one previous East African breeding record (March)*

*Alethe pilirocephala* Brown-chested Alethe: Nairobi J2 29/12.

*Cichladusa guttata* Spotted Morning Thrush: Shaba NR C2 38/9; L Baringo F2 23/6.

*Cossypha caffra* Robin Chat: Kiambu N2 left nest 14/5; Nairobi F1 31/1, N2 almost-fledged 29/5.

*Cossypha cyanocampter* Blue-shouldered Robin Chat: Kibale Fo (U) N2 downy 9/5/80 (J.P.Skorupa)

*First breeding record for East Africa. See Skorupa (1982) Scopus 6:46-47.*

*Cossypha heuglini* White-browed Robin Chat: Tatanda (T) F2 2-3d out of nest 29/1.

*Cossypha semirufa* Rüppell's Robin Chat: Kiambu F1 8/5; Limuru F1 4/12.

*Dryocichloides archeri* Archer's Ground Robin: Kitandara, Rwenzori Mts (U) C2 17/1/59 (A.N.B.Masterson).

*See Masterson (1981) Scopus 5:33-34. Nest and eggs previously undescribed.*

*Oenanthe lugens* Mourning Wheatear: Naivasha N1 fledged by 30/12/80.

*Sheppardia aequatorialis* Equatorial Akalat: Kakamega F1 7/12 (S.M.Whitehouse).

*No proper East African breeding records.*

*Turdus abyssinicus* Northern Olive Thrush: Kiambu N2 small 13/4; Nairobi F1 12/6 & 18/6, C2 18/7.

*Acrocephalus gracilirostris* Lesser Swamp Warbler: L Naivasha incubating and Ns small 16/6.

*These records were submitted as A.rufescens, but refer presumably to A.gracilirostris.*

*Apalis flavida* Yellow-breasted Apalis: Nairobi NP building 5/6.

- Apalis thoracica* Bar-throated Apalis: Mufindi (T) C3 22/10.
- Bathmoceros cerviniventris* Black-faced Rufous Warbler: Kakamega building 1/8.
- Bradypterus cinnamomeus* Cinnamon Bracken Warbler: Limuru F1 31/12; Nyamleju Rwenzori Mts (U) C2 9/1/59.
- Camaroptera brachyura* Grey-backed Camaroptera: Kakamega F1 4/12; Limuru F2 28/11.
- Chloropeta natalensis* Yellow Warbler: Tatanda (T) F1 2d out of nest 5/2.
- Cisticola aberrans* Rock-loving Cisticola: Tatanda (T) N3 2w old 21/4.
- Cisticola aridula* Desert Cisticola: 07.15'S, 37.10'E (T) N3 1½w old 7/7.
- Cisticola brachyptera* Siffling Cisticola: Tatanda (T) C3 10/3 & 6/4.
- Cisticola galactotes* Winding Cisticola: L Naivasha Fs 15/6.
- Cisticola juncidis* Zitting Cisticola: Tatanda (T) building 12/2, C3 2/2 & 11/4 & 10/5, C4 6/2, N4 2d old 28/6.
- Cisticola natalensis* Croaking Cisticola: Tatanda (T) C2 13/3 & 23/5, N3 5d old 13/3.
- Cisticola robusta* Stout Cisticola: Kikuyu Escarpment F1 just out of nest 10/7.
- Cisticola woosnami* Trilling Cisticola: Tatanda (T) F1 1d out of nest 1/1, F2 just flying 27/5, J1 moulting 26/5.
- Phylloscopus budongoensis* Uganda Woodland Warbler: Kakamega N3 24/12/76 (C.Carter).
- Only one previous East African breeding record.*
- Phylloscopus umbrovirens* Brown Woodland Warbler: Aberdares N1+ 12/2/78.
- Prinia subflava* Tawny-flanked Prinia: Mombasa C3 13/6; Tatanda (T) C1 18/5, C3 7/3 & 11/6, C4 12/3, N4 4d old 21/4, F2 22/3.
- Sylvietta whytii* Red-faced Crombec: Karen C2 2/6 flew 12/7.
- Bradornis pallidus* Pale Flycatcher: Kerio V J1 4/5; Karen F1 3/1.
- Melaenornis chocolatina* White-eyed Slaty Flycatcher: Kakamega F1 6/12; L Naivasha F 6/6 & 22/6; Kiambu F1 & 2xF2 20/2; Karen F1 21/6.
- Muscicapa adusta* Dusky Flycatcher: Limuru F1 26/12.
- Muscicapa aquatica* Swamp Flycatcher: Kendu Bay building 3/7; Kisumu F1 12/12.
- Muscicapa caerulescens* Ashy Flycatcher: Diani F2 6/6/81.
- Batis molitor* Chin-spot Batis: Kerio V F1 8/5; Nairobi F1 2/8 & 3/9.
- Platysteira peltata* Black-throated Wattle-eye: Lambwe V GR N(s) 28/6.
- Terpsiphone rufiventer* Red-bellied Paradise Flycatcher: Kibale Fo (U) incubating 8/3/80.
- Terpsiphone viridis* Paradise Flycatcher: Limuru F1 28/11, incubating 13/12; Nairobi F2 14/6, F1 left nest 21/1, N(s) 19/6, N2 partly fledged 19/6.
- Trochocercus albonotatus* White-tailed Crested Flycatcher: Kikuyu escarpment building 5/9.

- Macronyx croceus* Yellow-throated Longclaw: Thika C2 24/4.
- Macronyx fuellebornii* Fülleborn's Longclaw: Tatanda (T) C2 9/1, C3 5/3 & 11/4, N2 4d old 23/3, N2 3d old 8/4.
- Motacilla aguimp* African Pied Wagtail: Samburu NR F2 24/8; Kendu Bay F(s) 9/6; Kibale Fo (U) F1 8/6/80.
- Laniarius funebris* Slate-coloured Boubou: L Baringo N2 almost fledged 23/6.
- Malaconotus sulfureopectus* Sulphur-breasted Bush Shrike: Kerio V N2-3 almost fledged 8/5.
- Nilaus afer* Brubru: Tatanda (T) F1 2w out of nest 27/3.
- Lanius cabanisi* Long-tailed Fiscal: Amboseli NP F4 3/1.
- Lanius collaris* Fiscal: Kerio V F2-3 left nest 11/5; Kiambu N1 27/1; Limuru F1 10/8 & 15/12; Nairobi F1 left nest 4/1; Tatanda (T) C2 Jan & Mar (3) & Apr (2), C3 Feb & Mar(2), N2 1w old 25/1, N3 3d old 11/3, N3 just hatched 29/3.
- Lanius dorsalis* Taita Fiscal: Magadi C4 23/5, N4 downy 12/6, building 11/6.
- Lanius excubitorius* Grey-backed Fiscal: L Baringo N(s) 5/4/79; L Naivasha N(s) 29/6 & 11/7, F2 8/12, F(s) 16/6.
- Eurocephalus rueppelli* White-crowned Shrike: Samburu NR F3 23/8.
- Prionops plumata* Helmet Shrike: L Bogoria F(s) 8/7.
- Prionops scopifrons* Chestnut-fronted Helmet Shrike: Sokoke Fo incubating 9/11.
- Cosmopsarus regius* Golden-breasted Starling: Tsavo West NP feeding N(s) 24/12.
- Creatophora cinerea* Wattled Starling: L Naivasha F(s) 29/7.
- Lamprotornis chalybaeus* Blue-eared Glossy Starling: Kerio V feeding N(s) 6/5; Nakuru feeding N(s) 22/8; Kinangop F2 6/6; Kiambu F1 7/4.
- Lamprotornis corruscus* Black-bellied Glossy Starling: Diani feeding N(s) 28/9.
- Lamprotornis purpureiceps* Purple-headed Glossy Starling: Kibale Fo (U) F1 13/8/81 (J.P.Skorupa)
- Only one previous East African breeding record.*
- Onychognathus fulgidus* Chestnut-winged Starling: Kibale Fo (U) feeding N(s) 21/9/81 (J.P.Skorupa)
- The first East African breeding record.*
- Poeoptera kenricki* Kenrick's Starling: Mufindi (T) adults at nest hole 3-11/9.
- Speculipastor bicolor* Magpie Starling: South Horr feeding N(s) 13/6/81 (V. Haas); Baragoi at nest holes 12/5 (M.Pickford).
- See 1981 Nest Record Report for first East African breeding records.*
- Spreo fischeri* Fischer's Starling: Mkomasi (T) F1 1/2/78.
- Spreo superbus* Superb Starling: Marsabit C2 Sep; L Naivasha F2 22/6, N2 fledged 12/7; Kiambu F2 left nest 12/3.
- Buphagus erythrorhynchus* Red-billed Oxpecker: Narok feeding N(s) 23/10.
- Anthreptes collaris* Collared Sunbird: Diani feeding N(s) 4/10/81; Tatanda (T) J1 23/5.

- Nectarinia chloropygia* Olive-bellied Sunbird: Kibale Fo (U) F1 20/2/81.
- Nectarinia cuprea* Copper Sunbird: Tatanda (T) 2xC1 5/5, C1 8/3, F2 1d out of nest 31/3.
- Nectarinia erythroceria* Red-chested Sunbird: Kendu Bay N(s) 25/7.
- Nectarinia johnstoni* Scarlet-tufted Malachite Sunbird: Rwenzori Mts (U) C1 about to hatch Jan 1959.
- Nectarinia kilimensis* Bronze Sunbird: Kinangop F1 6/6; Kiambu F1 left nest 25/5 & 18/7; Limuru N(s) 27/6; Nairobi F1 left nest 22/4, F2 Aug; Lolgorien N1 Jul; Tatanda (T) F1 4/6.
- Nectarinia olivacea* Olive Sunbird: Kakamega at nest 7/5; Kilombero D (T) N3 naked 10/1.
- Nectarinia pulchella* Beautiful Sunbird: L Baringo J1 21/8.
- Nectarinia senegalensis* Scarlet-chested Sunbird: Tatanda (T) C2 12/3 & 20/4, N1 1w old 14/5.
- Nectarinia venusta* Variable Sunbird: Limuru N1 flew late Aug + N1 dead, building from 29/9, C1 & N2 20/10, N2 hatched 20-21/11; Karen N1 flew 12/7, N2 flew 23/9; Tatanda (T) C2 31/3, 6xC2 18/5-31/5, C1 + N1 10/6, N1 3d old 9/6, N3 1-3d old 4/5, C2 (no date).
- Nectarinia veroxii* Mouse-coloured Sunbird: Shimba Hills occupied nest 5/9.
- Nectarinia verticalis* Green-headed Sunbird: Tatanda area (T) F1 17/5 & 23/5 & 6/6 & 23/6; Kibale Fo (U) 2xN(s) 30/5/81.
- Zosterops abyssinica* Abyssinian White-eye: Langata C2 20/6 hatched 2-4/7.
- Amblyospiza albifrons* Grosbeak Weaver: Bamburi C1 & 2xC2 & 4xC3 Jun, C2 & C3 22/11, N3  $\frac{1}{4}$ -grown 13/6, F2 just flying 21/11.
- Anaplectes rubriceps* Red-headed Weaver: Kendu Bay completed nest 10/6.
- Anomalospiza imberbis* Parasitic Weaver: Nairobi NP F1 fed by *Cisticola brunnescens* 25/6 (P.B.Taylor).
- Euplectes albonotatus* White-winged Widowbird: Thika C3 16/5.
- Euplectes ardens* Red-naped Widowbird: Langata C3 11/6; Tatanda (T) C2 25/5, C3 23/4 & 9/5, F2 23/5 & 27/5 & 11/6, N2 5d old 18/5, N1 1w old 7/6.
- Euplectes axillaris* Fan-tailed Widowbird: Tatanda (T) C3 16/5, C1 29/5.
- Euplectes capensis* Yellow Bishop: Tatanda (T) N2 3d old 18/5.
- Euplectes macrourus* Yellow-mantled Widowbird: Tatanda (T) C1 30/4, C2 23/4 & 9/5, N2 fledged 3/6.
- Euplectes nigroventris* Zanzibar Red Bishop: Bamburi 3xC1 & 3xC2 & C3 Jun, C1 & 4xN2 Nov.
- Ploceus baglafecht* Baglafecht Weaver: L Naivasha F2 10/12/80, N2 fledged 9/10; Kiambu F1 left nest 12/7/81 & 20/12/81 & 10/2 & 19/7; Nairobi N2 12/2, F2 10/7; Tatanda (T) C1 + N2 5/4, C2 23/5.
- Ploceus bicolor* Dark-backed Weaver: Kibale Fo (U) incubating 22/4/81 (J.P. Skorupa).

Very few East African breeding records.



- Ploceus bojeri* Golden Palm Weaver: Bamburi 2xN1 & 3xN2 & N3 Jun.
- Ploceus intermedius* Masked Weaver: Ngong N2+ large 19/6.
- Ploceus melanogaster* Black-billed Weaver; Kakamega at nest 5/12; Kibale FO (U) N2 almost naked 28/10/81, feeding N(s) 31/5/80.
- Ploceus nigricollis* Black-necked Weaver: Kibale Fo (U) incubating 8/3/80.
- Ploceus ocularis* Spectacled Weaver: Nairobi F1 14/9; Bamburi C1 12/6; Diani C?3 16/11.
- Ploceus velatus* Vitelline Masked Weaver: Athi River C2 11/11.
- Ploceus xanthops* Holub's Golden Weaver: Kiambu F1 4/1 & 27/5; Nairobi F1 26/5; Tatanda (T) C1 14/4, C1 + N1 21/3, 3xC2 Apr & May, C1 Apr & Jun, C3 Mar & Apr, F1 27/3 & 5/6, F2 19/3.
- Plocepasser mahali* White-browed Sparrow Weaver: L Bogoria F(s) 27/7.
- Pseudonigrita arnaudi* Grey-headed Social Weaver: Olorgesailie F1 1/6; Serengeti (T) C2 5/2/78.
- Passer castanopterus* Somali Sparrow: Korr N(s) 23/5/81 (A.D.Lewis)  
*First East African breeding record. See Lewis (1981) Scopus 5:83.*
- Passer domesticus* House Sparrow: Voi occupied nest 12/8.
- Passer griseus* Grey-headed Sparrow: Marsabit N(s) Apr; Nairobi N1 12/7; Tatanda (T) F1 12/3, F2 5/3, N4 1w old 8/3, C3 7/4, C4 2/7, N3 1w old 8/3, 2xN3 laid May, N3 10d old 28/6, N4 2w old 11/5.
- Passer motitensis* Rufous Sparrow: L Nakuru F(s) 7/6; Kinangop N2 6/6.
- Petronia pyrgita* Yellow-spotted Petronia: Marsabit N(s) May.
- Amandava subflava* Zebra Waxbill: Tatanda (T) C5 25/5.
- Estrilda astrild* Waxbill: Tatanda (T) C2 9/4, C3 11/6, C4 30/5, N4 fledged 14/4, C5 31/3, N5 2d old 11/4 & 1-5d old 15/6, C6 15/6.
- Lagonosticta rubricata* African Firefinch: Tatanda (T) C3 9/3, N3 4d old 5/3, C4 6/5, N3 fledged + C1 addled 2/6.
- Lagonosticta senegala* Red-billed Firefinch: Arusha (T) F6 8/12; Tatanda (T) N3 10d old 23/3, C3 11/6, N4 fledged 2/6.
- Nigrita canicapilla* Grey-headed Negrofinch: Kakamega building 11/12.
- Ortygospiza atricollis* Quailfinch: Tatanda (T) C4 7/6.
- Pytilia melba* Green-winged Pytilia: Tatanda (T) C4 2/7.
- Uraeginthus bengalus* Red-cheeked Cordon-bleu: Bamburi C7 & 2xC3 12/6; Tatanda (T) 2xC1 Jun, F1 18/5, C2 Mar & Apr & May, C3 Mar & Apr(2) & May, C4 Mar (3) & Apr & May(2), C5 15/5.
- Uraeginthus cyanocephalus* Blue-capped Cordon-bleu: Magadi C2 13/6.
- Uraeginthus ianthinogaster* Purple Grenadier: Kendu Bay building 24/7.
- Lonchura cucullata* Bronze Mannikin: Tatanda (T) C1 Mar (4) & Apr & May (5) C2 Apr(4) & May, C3 Apr(2) & May(4), C4 Mar(3) & Apr(7) & May(3), C5 Feb & Mar(3) & Apr(3) & May(10), C6 May(6), C7 & C9 & C10 May, N3 + C1 29/3, N4 + C1 23/3, F1 17/5, F3 12/3, N3 18/5, N4 laid Feb & Mar & Apr & Jun, N5 laid Feb(3) & Mar(2) & Apr & May, N6 laid Apr(2).

*Emberiza tahapisi* Cinnamon-breasted Rock Bunting: Tatanda (T) 2xC3 14/5, C3 7/6, N3 4d old 25/5, N3 fledged 15/6.

*Serinus atrogularis* Yellow-rumped Seed-eater: Olorgesailie N2 almost fledged 24/7.

*Serinus citrinelloides* African Citril: Kiambu F1 21/4; Nairobi F1 23/2.

*Serinus mozambicus* Yellow-fronted Canary: Tatanda (T) C1 May, C2 Jan & Mar & Apr(2) & May, C3 Feb & Mar & Apr(3) & May(2) & Jun, N3 laid Feb & Mar & May, F1 4/3 & 27/6, N2 fledged 28/5.

*Serinus striolatus* Streaky Seed-eater: Mufindi (T) N4 feathered 27/5; Rwenzori Mts (U) C2 Jan 1959.

*Serinus sulphuratus* Brimstone Canary: Ngong F1 10/10; Tatanda (T) C2 3/6, C3 Apr(3) & May(2) & Jun(2), N2 4d old 1/7, N3 1w old 19/6, F2 27/6.

#### ORNITHOLOGICAL PROJECTS IN EAST AFRICA, 1982

The following list includes all projects known to the Sub-Committee, which (a) involved active field work during 1982, and (b) were expected to culminate in publication in recognized journals. For professional workers, only their major projects are listed.

Andersson, M. University of Göteborg, Sweden. Breeding biology and mate selection in Long-tailed Widowbirds; Kinangop plateau, Kenya.

Backhurst, G.C. Nairobi. (a) Eastern African ringing scheme. (b) (with Pearson, D.J.) Migration studies at Ngulia, Tsavo West NP, Kenya.

+Carswell, M. Kampala, Uganda. Avifauna of the Kampala area.

Cunningham-van Someren, G.R. National Museums of Kenya. (a) Taxonomic studies of montane birds from Kenya and Sudan. (b) Conservation status of birds in Kenya for Red Data book. (c) (with Angwin, D.) 10 km<sup>2</sup> bird distribution studies.

+Dittami, J.P. Max-Planck-Institut, Lake Nakuru NP, Kenya. Behavioural and physiological studies of Stonechats, starlings and other passerines.

Elliot, C.C.H. FAO/UNDP Quelea bird control project, Arusha, Tanzania. Biology and management of quelea populations.

Emlen, S.T. see P. Wrege.

Haas, V. Max-Planck-Institut, Lake Nakuru NP, Kenya. Social behaviour of Anteatr Chats.

Horne, J.F.M. Box 24622, Nairobi. Comparative vocal communication in Kenyan and other African birds, especially white-eyes and cuckoo shrikes.

Leisler, B. Max-Planck-Institut, Lake Nakuru NP, Kenya. Ecology of wintering Wheatears.

Lewis, A.D. Nairobi. (a) (with Pomeroy, D.E.) Atlas of the birds of Kenya. (b) Vocalizations of the Yellow-breasted Apalis.

Meadows, B.S. Nairobi. East African wildfowl counts.

+Muringo, C. National Museums of Kenya and University of Nairobi. General biology of Speke's Weavers, Nairobi.

- Oelke, H. Göttingen, W.Germany. Birds of native and exotic forests, western Kenya.
- Pearson, D.J. University of Nairobi. Status, seasonality and distribution of Palaearctic migrants in southern and eastern Kenya.
- Pomeroy, D.E. Kenyatta University College, Nairobi. (a) + Distribution and abundance of birds in semi-arid areas, mainly in southern and eastern Kenya. (b) (with Lewis, A.D.) Atlas of the birds of Kenya.
- Reyer, H.E. Max-Planck-Institut, Lake Nakuru NP, Kenya. Behaviour of Pied Kingfishers, Nakuru and Homa Bay, Lake Victoria.
- Short, L.L. (American Museum of Natural History) & Horne, J.F.M., Box 24622 Nairobi. Taxonomy and behaviour, especially vocal, of barbets, honeyguides and woodpeckers.
- Sonnenschein, Edith. Max-Planck-Institut, Lake Nakuru NP, Kenya. Ecology of wintering Wheatears.
- Stevenson, T. Baringo, Kenya. Birds of the Lake Baringo area.
- Taylor, P.B. Nairobi. East African Nest Record Scheme.
- +Thouless, C. University of Oxford, U.K. Stone-throwing by Egyptian Vultures.
- Wrege, P. Cornell University, USA. Social behaviour of White-fronted Bee-eaters, Lake Nakuru NP, Kenya: in association with S.T. Emlen.
- +Zack, S. University of New Mexico, USA. Behaviour and ecology of Fiscal and Long-tailed Fiscal Shrikes, Naivasha, Kenya.
- + Field work completed in 1982.  
(compiled by A.D.Lewis)

## CORRECTIONS: EAST AFRICAN BIRD REPORT 1981

*Pachyptila* sp. The bird off Shimoni 25 Aug 1981 was the first record of a prion from Kenyan waters, not from East African waters as stated in the 1981 report.

*Larus genei* Slender-billed Gull p.149: delete '*The Mombasa record is the first away from Lake Turkana*'.

*Oriolus larvatus* p.159: the correct English name is, of course, the Black-headed Oriole.

RINGING AND MIGRATION AT NGULIA, TSAVO,  
OCTOBER TO DECEMBER 1982

G.C. Backhurst & D.J. Pearson

The Lodge was manned for a total of 25 nights between 21 October and 21 December 1982 although suitable weather allowed netting on only 18 of them.

During the season the number and wattage of the north-facing game-viewing lights was often much reduced in an attempt to save electricity, but also due to breakdowns. The reduced light output appeared to affect the attractive power of the lights: the number of birds around the Lodge on moonless misty nights was judged to be less than in previous years, and the total of only 4035 Palaearctic migrants ringed was the lowest since the 1973/4 season.

In 1982 the short rains were exceptionally early in eastern Kenya, and by mid October the bush in Tsavo was as green and lush as in a normal January. Three of the five nights spent at the Lodge in the fourth week of October were misty but few Palaearctics were attracted down (although the number of Harlequin Quails *Coturnix delegorguei* caught at night was high).

During the next suitable moon period the Lodge was manned continuously from 12-21 November, but a combination of many clear nights and faulty lights was responsible for the small number of birds ringed (1176). A first-winter Icterine Warbler<sup>1</sup> on 18th was only the second for the Lodge. Numbers of Marsh Warblers and Sprossers were good but Whitethroats were surprisingly scarce.

Three nights spent at the Lodge later in November (25-27th) were completely free of mist although torrential rain fell during the day nearby.

The most successful period of cover was from 10-21 December: reasonable catching weather occurred on all but four of these 12 nights and over 2800 birds were ringed. Marsh Warbler continued dominant and, in fact, the total ringed was almost exactly the 10-year mean (see Table 1). Numbers of almost all other species, however, were well below average. A number of seldom recorded species was caught. Perhaps the most exciting was an adult male Blue Quail *Coturnix chinensis* picked up alive inside the Lodge on the night of 17th; this was the first record for Ngulia and Tsavo (see 'Species Report' p.114). A Wood Warbler at night on 10th (amongst only five Willows) was the second Ngulia record, a Corncrake on 13th was the seventh and an adult male Little Bittern of the nominate race on 18th was only the fourth.

#### ACKNOWLEDGEMENTS

We thank the management of Ngulia Safari Lodge and African Tours & Hotels Limited for assistance with accommodation and the Warden of Tsavo National Park (West) for permission to ring birds in the Park. For help during ringing we are most grateful to D.E.G.Backhurst, A.M.Forbes-Watson, A.D. Lewis, M.D.Pearson, D.E.Pomeroy, E.Risley, M.Sinclair, B.Tengecho and D.A. Turner. We also thank the East African Natural History Society for financial help from the Migration Fund.

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<sup>1</sup> Scientific names of Palaearctic birds are given in Table 1.

TABLE 1

Numbers of Palaearctic night migrants ringed at Ngulia Safari Lodge between October and February in the years 1969-1983\*

Species	1982/3* Total	%**	Total 1969- 1983
Little Bittern <i>Ixobrychus minutus</i>	1	-	4
Corncrake <i>Crex crex</i>	1		7
Eurasian Nightjar <i>Caprimulgus europaeus</i>	13	61	226
Eurasian Swallow <i>Hirundo rustica</i>	2	16	124
Golden Oriole <i>Oriolus oriolus</i>	2	200	13
Rufous Bush Chat <i>Cercotrichas galactotes</i>	21	30	729
Irania <i>Irania gutturalis</i>	42	37	1200
Sprosser <i>Luscinia luscinia</i>	617	56	11 778
Nightingale <i>L. megarhynchos</i>	18	42	445
Rock Thrush <i>Monticola saxatilis</i>	3	34	93
Isabelline Wheatear <i>Oenanthe isabellina</i>	3	48	66
Northern Wheatear <i>O. oenanthe</i>	18	257	88
Pied Wheatear <i>O. pleschanka</i>	1	30	34
Great Reed Warbler <i>Acrocephalus arundinaceus</i>	1	38	27
Basra Reed Warbler <i>A. griseldis</i>	25	55	484
Marsh Warbler <i>A. palustris</i>	1877	101	20 686
Sedge Warbler <i>A. schoenobaenus</i>	3	58	65
Icterine Warbler <i>Hippolais icterina</i>	1	-	2
Upcher's Warbler <i>H. languida</i>	6	25	252
Olive-tree Warbler <i>H. olivetorum</i>	17	66	279
Olivaceous Warbler <i>H. pallida</i>	9	30	315
River Warbler <i>Locustella fluviatilis</i>	136	63	2315
Wood Warbler <i>Phylloscopus sibilatrix</i>	1	-	2
Willow Warbler <i>P. trochilus</i>	94	88	1166
Blackcap <i>Sylvia atricapilla</i>	2	44	48
Garden Warbler <i>S. borin</i>	34	89	423
Whitethroat <i>S. communis</i>	1001	59	17 991
Barred Warbler <i>S. nisoria</i>	13	29	461
Spotted Flycatcher <i>Muscicapa striata</i>	30	52	611
Tree Pipit <i>Anthus trivialis</i>	1	56	19
Red-backed Shrike <i>Lanius collurio</i>	26	36	753
Red-tailed Shrike <i>L. isabellinus</i>	15	26	597
Hybrid <i>collurio x isabellinus</i>	1	-	8
Number of species	32		32
Total	4035		61 311

\* 1982/83 season - no ringing in January or February 1983.

\*\*The autumn 1982 total expressed as a percentage of the 1972/82 mean for each species.

Totals of species ringed in previous seasons but not in autumn 1982 are as follows: Eleonora's Falcon *Falco eleonora* 1, Spotted Crake *Porzana porzana* 1, Eurasian Cuckoo *Cuculus canorus* 2, Lesser Cuckoo *C. poliocephalus* 1, Scops Owl *Otus scops* 1, Eurasian Roller *Coracias garrulus* 34, Sand Martin *Riparia riparia* 6, Redstart *Phoenicurus phoenicurus* 2, Whinchat *Saxicola rubetra* 2, Reed Warbler *Acrocephalus scirpaceus* 60, Savi's Warbler *Locustella luscinioides* 1, Yellow Wagtail *Motacilla flava* 3. From 1969 a total of 61 425 Palaearctic birds of 44 species has been ringed at Ngulia during southward migration.

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All contributions should be sent to Dr D.J. Pearson, Department of Biochemistry, University of Nairobi, Box 30197, Nairobi, Kenya.

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