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## The birds of Mount Kupe, southwest Cameroon

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### Summary

A total of 335 bird species has now been recorded on Mt Kupe. All records for the forest and surrounding farmland have been collated in this checklist both from before and after my own study period of 1991–4. Of 29 restricted-range species, confined to the Cameroon Mountains Endemic Bird Area, 19 occur on Mt Kupe, including the Mt Kupe Bush-shrike *Malaconotus kupeensis*, which is otherwise known only from the neighbouring Bakossi Mountains. The high species diversity arises from the presence of these endemics, together with at least 25 other montane species and a high diversity of lowland forest birds.

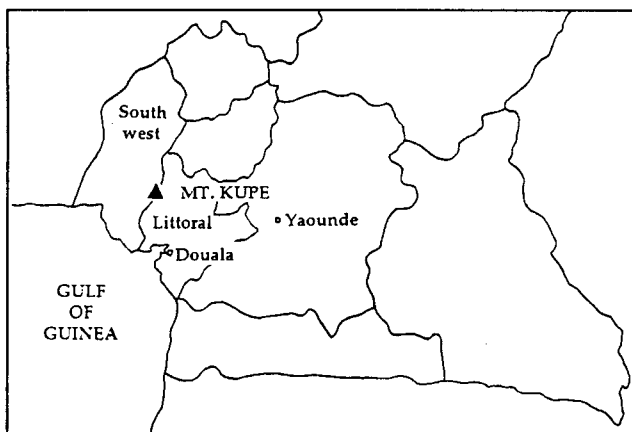
### Résumé

Un total de 335 espèces d'oiseaux est maintenant répertorié pour le mont Kupé. Toutes les observations relatives à la forêt et aux cultures avoisinantes données dans cette liste ont été faites avant et après la période de mon étude 1991–4. Des 29 espèces de distribution réduite, limitées à la Zone d'Oiseaux Endémiques des Monts Camerounais, 19 se trouvent sur le mont Kupé, y compris le Gladiateur du Kupé *Malaconotus kupeensis* qui est par ailleurs connu seulement des monts Bakossi voisins. La grande richesse d'espèces provient de la présence de ces endémiques ainsi que d'au moins 25 autres espèces de montagne et d'une riche variété des espèces forestières de plaine.

### Introduction

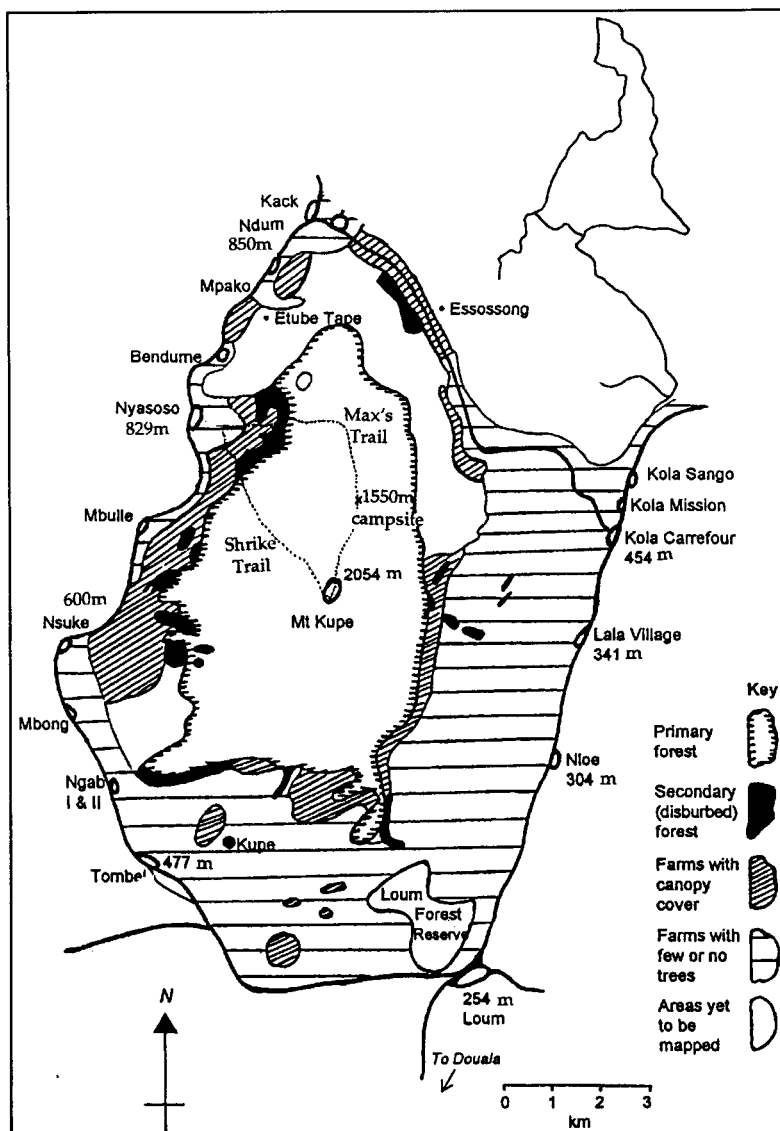
This checklist summarises all known bird observations from Mt Kupe. It gives information on breeding seasonality, migration, abundance, habitat and altitudinal range for each species. Few forest areas in the Lower Guinea region have been as intensively studied year-round as was possible in this 1991–4 study.

Mt Kupe straddles the boundary between Southwest and Littoral Provinces of SW Cameroon (Fig. 1). It supports a unique avifauna (Serle 1949, 1950, 1951, 1954, 1965, Collar & Stuart 1985) that includes 11 species of conservation concern as well as 19 restricted range species (Stattersfield *et al.* 1998). There are also important populations of primate species including the “Endangered” Drill *Mandrillus leucophaeus* (Lee *et al.* 1988) and a newly described nocturnal prosimian *Pseudopotto martini* (Schwartz 1996, C. Wild pers. comm.). There are over 80 amphibians and 70 reptiles, including four highly restricted chamaeleons, notably *Chamaeleo pfefferi*, known only from Kupe and the adjacent mountains (Wild 1993), and a newly discovered Skink *Panaspis chriswildi*. The flora is also important, including eight recently discovered species (Cheek & Cable 1996). The aim of the BirdLife Mt Kupe Forest Project is to secure the future of the forest, by working with local people towards sustainable use of the area’s resources. The mountain has important cultural significance for the Bakossi people (the majority of the villagers), who believe it to be the home of the ancestral spirits and the source of all wealth (Bowden & Bowden 1993).



**Figure 1. Map of SW Cameroon, showing location of Mt Kupe.**

The Cameroon–Nigeria–Bioko mountain chain supports many endemics of all studied taxa, and qualifies as an “Endemic Bird Area” (Bibby 1992). Many endemic species occur throughout the chain, whilst others only occur on certain peaks within restricted altitudinal ranges. Kupe lies centrally within the chain, and supports many of the endemic birds, including the highly localised and rare Mt Kupe Bush-shrike. The species composition is similar to that of Mt Nlonako and of the Bakossi Mountains on either side, but has less in common with Manenguba Mountain which, although equally close by, is slightly higher with more grassland (see Dowsett-Lemaire & Dowsett 1999 for more detailed comparison).



**Figure 2.** Vegetation map of the Mt Kupe study area showing all adjacent settlements and trails referred to in the text. Adapted from vegetation map compiled by author in 1992 (BirdLife International 1993).

A habitat map of Mt Kupe was produced in 1992, which showed 30 km<sup>2</sup> of primary forest, surrounded by cultivation and damaged forest (BirdLife International 1993). Loum Forest Reserve in the south is covered by secondary forest at 350 m and, although there are other fragmented areas of degraded forest at low altitudes, most areas below 1000 m are farmland with variable amounts of tree cover (Fig. 2).

The great diversity of bird species in a relatively small area of mainly sub-montane forest mosaic within surrounding cultivated and degraded forest habitats, combined with its relatively easy access, makes Kupe an ideal location to see a wide variety of birds. The montane component is of great international importance but it is the lowland forest component that is largely responsible for the high diversity. Nineteen of the 29 Cameroon mountains restricted range species occur here, as well as three of the six species confined to the Cameroon and Gabon lowlands Endemic Bird Area (Stattersfield *et al.* 1998).

### Area covered and methods

This study summarises all ornithological work carried out in the area, with particular reference to observations within the 3.25 yr period (Mar 1991 to Jun 1994, subsequently termed the “study period”) when I was resident in Nyasoso. All of my records during this time were recorded in a log-book, to which visiting birdwatchers also contributed, and which is held at the Mt Kupe Forest Project headquarters in Nyasoso. An effort has been made to include all subsequent records up to the time of publishing.

The study area included all of the forest on Mt Kupe and the surrounding areas of farmland, to the roads connecting Kolla, Loum, Tombel and Ndum and the track between Ndum and Kolla (Fig. 2). The settlements around the mountain range from small villages to small towns.

Although most parts of the mountain were visited several times during the study period, there was a strong emphasis on the forest areas adjacent to Nyasoso; coverage has not been even, and the eastern slopes have been poorly covered. These include the Loum Forest Reserve, which I visited twice and which has been more recently visited by F. Dowsett-Lemaire and R.J. Dowsett. Between Apr and Jul 1994, Richard Stone and O’Kah Ebwekoh did point-count censusing along trails covering the north, south, east and west slopes within the forest, providing quantitative data on the relative abundance of many key species, particularly in relation to altitude. These results will be published elsewhere, but their observations are incorporated here. This paper also includes some results of my mist-netting programme at three sites above Nyasoso: at 900 m on the Nature Trail, at 1200 m on the Shrike Trail, and at 1550 m on Max’s Trail (shown on Fig. 2). At least two full days mist-netting were carried out at each of these sites in each month of the year, with at least 400 m of four-panel mist-nets. Birds were given individually numbered metal rings, standard measure-ments taken and brood patch and moult recorded. Over 2000 birds were captured.

### Climate

Kupe is hot and humid, with one long wet season (Mar–Nov). The wettest months are normally Jun–Sep but with considerable variation from year to year. The dry season (Dec–Feb) can be almost rainless in some years. Mean figures for several years combined are given in Table 1. Most of the rain arrives from the southwest, producing a rain shadow on the lower eastern side. Being inland from Mount Cameroon, the whole area is in a larger rain shadow. The rainfall data are from just three locations, and none is available for the upper slopes of the mountain. Temperature data are even scarcer, but Tombel shows similar average temperatures for all months (23.4–25.8 C), with no clear seasonal trends. This may be misleading, as temperatures during the dry season are somewhat higher during the day and lower at night. Relative humidity is high throughout the year, rarely falling below 80%.

**Table 1. Rainfall data (mm) (from Ejedepang-Koge 1986)**

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Tombel	53	121	248	240	267	507	489	480	554	474	160	65	3657
Nyasoso	21	107	230	182	298	402	822	720	645	453	77	45	4045
Essosong	48	87	223	253	270	383	416	453	459	478	139	44	3253

### History of ornithological research

The first ornithological research carried out on Mt Kupe was by William Serle, between 1948 and 1952 when he discovered both the Mt Kupe Bush-shrike and Gilbert's Babbler *Kupeornis gilberti* in the forest above Nyasoso. He lived in Kumba, and stayed at the Government Rest House in Nyasoso, visiting the forest from there, with his assistant Gilbert Nkwocha, who did the majority of the skin preparations. Some of his specimens came from Tombel and Essosong but most are from Nyasoso (Serle 1949, 1950, 1951, 1954, 1965).

Martin Eisentraut made collections of birds and bats using mist-nets in the 1960s (Eisentraut 1968, 1973). The International Council for Bird Preservation (now BirdLife International) carried out a survey of the birds of the west Cameroon mountain chain which included two visits to Kupe in early 1984 (Stuart 1986a); I was a member of that team.

After Serle's discovery of the Mt Kupe Bush-shrike (Serle 1950), it was not seen again until 1989, by Duncan McNiven. It has been seen by over 40 other observers since then.

Since the initiation of the Mt Kupe Forest Project in 1991 and improved visitor facilities, more visiting birdwatchers including regular bird-tour groups have come to the area. This increase in observer activity has greatly contributed to the information

presented here. Recent findings include the discovery of Zenker's Honeyguide *Melignomon zenkeri* (Bowden *et al.* 1995), White-naped Pigeon *Columba albinucha* (Williams 1995), and Bates's Weaver *Ploceus batesi* (Bowden & Andrews 1994). Françoise Dowsett-Lemaire and Bob Dowsett have visited the mountain several times since I was there, and their findings (published and unpublished) are incorporated.

### Conservation status and threats

Mt Kupe has had no statutory protection apart from two small Forest Reserves (Loum F.R. and a small area near the summit), a status that has not given effective protection to other forests in Cameroon. With the greater awareness of the biological significance of Mt Kupe in recent years, the Ministry of Forest and Wildlife (MINEF) has recently proposed that the area be designated a Community Forest.

The main threats to the forest are encroachment by farming, small-scale timber extraction, and heavy hunting of the larger mammals. Other more localised problems are unregulated exploitation of the bark of *Prunus africanus* for sale to drug companies; this often kills the trees, and adjacent forest is often damaged in the process of extraction. The local communities have shown a growing commitment to conserving the forest and its wildlife since the benefits of doing so have emerged. A voluntary hunting ban within the forest was imposed in 1993 by several of the villages, and has been largely respected. More recently though, some forest clearance as high as 1500m has taken place, showing that project activities and collaboration with community leaders need to be well maintained if the good will to conserve the forest is to be effective.

### Species list

#### Codes used in the species list

Status:

R = Resident

PM = Palearctic migrant

AM = Intra-African migrant

LM = Local migrant

? = Status unknown or uncertain

Abundance:

r = rare (1–3 records)

u = uncommon (more than 3 records, but not usually recorded)

f = frequent (usually recorded when relevant area visited)

c = common (1–10 recorded/day in suitable habitat)

a = abundant (10–100 usually seen per day in suitable habitat)

v = very abundant (>100 usually seen per day in suitable habitat)

? = abundance uncertain

**Habitat:**

P = primary forest

S = secondary or disturbed forest

F = farmbush (cultivation) with significant tree cover

O = open farms with little or no tree cover

G = grassy knolls around summit

Altitude range (m) is given in parentheses. Threat status is taken from BirdLife International (2000).

**Observers:**

The following (in order of last initial) have contributed records; their initials are given for the most significant records.

Mark Andrews (SMA); Chris Bowden (CGRB); J Bech (JB); Nik Borrow (NB); Thieri Bara (TB); Peter Dolton (PJD); Bob Dowsett (RJD); Lincoln Fishpool (LF); Chris Gibbins (CG); Peter Hayman (PVH); Steve Jones (SJ); E. Krabbe (EK); Epie Ngoe Kingsley (ENK); Steve Keen (SK); Françoise Dowsett-Lemaire (FDL); Rod Leslie (RL); O'kah Ebwekoh (OEM); Rod Martins (RPM); Andrew Ngwene (AN); Duncan McNiven (DMN); Simon Ngwese (SN); Iain Robertson (IR); Paul Rodewald (PWR); Chris Sykes (CS); Liz Smith (EMS); Richard Stone (RES); U. Sorensen (UGS); Chris Wild (CW); Eddie Williams (EW); Richard Webb (RW). The BirdLife IBA survey team consisted of Kevin Yana Njabo, Bobo Kadiri Serge, Dennis Anye Ndeh, Njeh Francis and CGRB.

**Ardeidae**

*Bubulcus ibis* Cattle Egret. AM (mid-Nov to mid-Apr) u O (400–600). Most records are of 1–6 individuals in Tombel area.

*Butorides striatus* Green-backed Heron. R? S (400). One record, Kolla Songo along Ekouk River, Jun 1992. Status unclear since this area rarely visited.

**Ciconidae**

*Ciconia abdimii* Abdim's Stork. AM O (300). One record: flock of 10 on farmland between Loum and Tombel, 23 Apr 1991.

**Accipitridae**

*Aviceda cuculoides* Cuckoo Falcon. ? r F (800–900). Recorded above Nyasoso 18 Sep 1992 (SK, RES), 18 Oct 1992 (CGRB) and one Nyasoso village Dec 1999 (BirdLife IBA team).

*Pernis apivorus* Honey Buzzard. PM (Sep–Apr, occasionally to May), f, FP (350–1600).

*Macheiramphus alcinus* Bat Hawk. R? F (750–850). Four records, Feb–Mar 1992–3.



*Milvus migrans* Black Kite. AM (Nov–Apr, occasionally late Aug to early Jun) f O (350–1200). Only *M. m. parasitus* recorded.

*Gypohierax angolensis* Palm-nut Vulture. R f OFSP (350–2050). More records Mar–Apr and Sep–Nov than rest of year.

*Necrosyrtes monachus* Hooded Vulture. AM? F (600–1000). Singles 7 Apr 1992 (EW) and 4 Dec 1999 (BirdLife IBA team).

*Gyps africanus* White-backed Vulture. AM? F (1000). One sighting, 20 Nov 1992 (SK). This was a time when many migrant species were recorded.

*Dryotriorchis spectabilis* Congo Serpent Eagle. R FP (850–1600). Four sight records.

*Polyboroides typus* Harrier Hawk. R f FSP (350–1600). Nest-building begins Oct; birds observed sitting in Nov, usually in Silk-cotton *Ceiba* trees.

*Accipiter melanoleucus* Great Sparrowhawk. R f FS (700–2000). Seen every month, but more records in Nov may indicate the breeding season: it breeds in the late wet season in W Africa generally (Brown *et al.* 1982).

*A. erythropus* Red-thighed Sparrowhawk. R FP (800–1000). Four records, all in farms and forest around Nyasoso. A bird seen at 2000 m in Feb 1984 was almost certainly this species (CGRB).

*A. castanilius* Chestnut-flanked Sparrowhawk. ? F (800). One sighting, Oct 1998 (LF).

*A. tachiro* African Goshawk. R f FSP (350–1500). The small size of the race *macroscelides* has led to some confusion with *A. castanilius*. All mist-netted individuals were *A. tachiro* (wing length: 185, 195, 199, 201, 229, 237 mm; weight 198, 204, 216, 230, 299, >300 g).

*Kaupifalco monogrammicus* Lizard Buzzard. R u OF (350–1050). Most common between Kolla, Loum and Tombel, the lower and more intensively cultivated areas.

*Buteo auguralis* Red-necked Buzzard. AM (Nov–May) u OF (700–2000). Nesting observed on southern edge of Nyasoso.

*Aquila wahlbergi* Wahlberg's Eagle. AM F (850–950) F. Three records: 18 Sep 1992 (SK, RES), 18 Mar 1993 (EW), 23 Nov 1993 (CGRB). All probably passage birds (although Nov record, near Mpako, is late), as this species generally prefers more open grassland habitats.

*Hieraaetus ayresii* Ayres's Hawk Eagle. ? FSP (1000). Two records, both immature birds in the same area, where farms meet forest above Nyasoso: 29 Feb 1992, 27 Feb 1993. The difficulty of separating immatures from those of *Spizaetus africanus* (F. Dowsett-Lemaire & R.J. Dowsett pers. comm.) led to these records originally being treated with caution, but Clark (1999) had four sightings of adults in 1998, so it may be more common, with some records attributed to *S. africanus* actually being *H. ayresii*.

*Spizaetus africanus* Cassin's Hawk Eagle. R u FSP (450–1550). Recorded almost every month. See identification comment for *Hieraaetus ayresii*.

*Lophaelus occipitalis* Long-crested Eagle. R u OF (350–950).

*Stephanoaetus coronatus* Crowned Eagle. R u SP (850–2000). Recorded most months, displaying Jan–Apr. An immature seen from Nature Trail at Nyasoso, 18 Jul 1993 was following with interest a full-grown dog.

**Falconidae**

*Falco subbuteo* Eurasian Hobby. PM SF (900). One seen above Nyasoso 5 Oct 1991 is the only confirmed record. Two other hobby sightings at 1550m 26 Dec 1993 and at the summit 28 Apr 1994 may relate to this species or African Hobby *F. cuvieri*. *F. biarmicus* Lanner. AM (Nov to early May) u O (350–850). May breed in the area. Strongly associated with habitation where it preys on chickens. Seen in Nlohe, Tombel and Nyasoso.

**Phasianidae**

*Francolinus squamatus* Scaly Francolin. R f OF (400–2000). Nest with eggs reported in Nyasoso, Feb.

**Rallidae**

*Sarothrura pulchra* White-spotted Flufftail. R f FSP (750–1600). Heard all months, most frequently in secondary forest.

*S. elegans* Buff-spotted Flufftail. R? u FS (800–1550). Its eerie call (mainly heard at night) was believed by many local people to be that of a chamaeleon. Heard from onset of rains, in neglected thickets and stream beds within cultivated areas. First dates of calling in the study period were between 9 and 16 Mar, and not heard after 26 Jul).

*Crex egregia* African Crake. AM O (850). A migrant caught by hand on a foggy night on Nyasoso main street, 27 Nov 1991.

*Gallinula angulata* Lesser Moorhen. LM? (800) F. A sub-adult caught in a trap by schoolboys on the Ngusi side of Nyasoso, 17 Jan 1993, was released unharmed.

**Columbidae**

*Columba unicincta* Afep Pigeon. ? P (1350–1500). Two records of this generally lowland forest species: two birds on 28 Feb 1950, one of which was collected (Serle 1954); a sighting on 29 Nov 1995 (CGRB).

*C. albinucha* White-naped Pigeon. ? FP (1000–1450) “Near-threatened”. First record: three seen at 1000 m above Nyasoso, 30 Mar 1993 (EW). Two seen there some 10 days later (EW, CGRB) and four in the same place, 20 Apr 1994 (EW). Sightings in the same area in Mar 1997 and 1998 of birds eating fruit of *Sapium* (FDL, RJD). Two seen at 1450 m, 21 Sep 1992 (SK). Subsequent records from neighbouring Bakossi Mts (Williams 1995, Dowsett-Lemaire & Dowsett 1999), Manenguba and Santchou (Dowsett-Lemaire & Dowsett 1999, Anon. 2000) so appears similarly distributed within the mountain chain to Gilbert’s Babbler *Kupeornis gilberti*, but at lower densities. Prior to the Kupe records, only reported in Cameroon from Rumpi Hills in 1967 (Eisentraut 1968); otherwise known only from montane E Congo-Kinshasa and W Uganda.

*C. sjostedti* Cameroon Olive Pigeon. R u FSP (900–2000). Most records of this mountain chain endemic are of groups of 2–10 flying above the canopy. More common above 1500 m but occasional records over farm-bush as low as 900 m. Max. 60 at 1000 m, above Nyasoso, 21 Oct 1991.

*Aplopelia larvata* Lemon Dove. R u P (900–1950). Six mist-netted and, as suggested by Serle (1950), these more closely resembled *C. l. simplex*, the São Tomé race, than

*inornata* found elsewhere in Cameroon. One of the birds, however, had cinnamon underparts, resembling *C. l. larvata* from southern Africa, but this species has been found to be quite variable in other parts of its range too (A.Tye pers. comm.). Few sightings but probably not uncommon.

*Streptopelia semitorquata* Red-eyed Dove. R u O (350–400). Only known from Tombel, Loum and the road between them where it is not common.

*Turtur afer* Blue-spotted Wood Dove. R f O (350–900).

*T. tympanistria* Tambourine Dove. R f OFSP (450–1850). Less common in primary forest than elsewhere, consistent with findings of Brosset & Erard (1986).

*T. brehmeri* Blue-headed Wood Dove. R u SP (850–1150).

*Treron calva* African Green Pigeon. R f FSP (700–1800).

### **Psittacidae**

*Psittacus erithacus* Grey Parrot. R u OF (350–850). Only small groups (up to 3) recorded Apr–Aug, but flocks of 15–28 flying over Nyasoso to and from roosts in Nov, and flocks of 41 and 50 in Jan. Largest flocks 8–14 in Feb–Mar and Sep–Oct.

*Poicephalus gularis* Red-fronted Parrot. R F (950–1000). Few records: May–Jun 1990 (SMA, PVH) and Mar 1999 (NB).

### **Musophagidae**

*Tauraco persa* Green Turaco. R f FSP (500–1400). Most frequent in farm-bush with trees; not often recorded in primary forest.

*T. macrorhynchus* Yellow-billed Turaco. R c FSP (700–2050). Occurs throughout primary forest and in farms with trees.

*Corythaeola cristata* Great Blue Turaco. R u FS (350–1000). Possibly at reduced densities owing to hunting. Not in primary forest; occurs sporadically in farms with high canopy cover and in secondary forest around many villages including Nyasoso, Nsuke, Kolla and in Loum Forest Reserve. Recorded all months except Dec–Jan.

### **Cuculidae**

*Oxylophus levillantii* Levillant's Cuckoo. AM (late Nov to early Apr) u FS (600–1050).

*Cuculus solitarius* Red-chested Cuckoo. AM? (Dec–Sep) u SP (700–1550).

*C. clamosus* Black Cuckoo. R f OFS (500–1000). Perhaps a partial migrant, but recorded every month, mostly in farm-bush, and only the non-migratory race *gabonensis* has been confirmed. Call heard mostly Apr–Nov.

*C. canorus* Common Cuckoo. PM P (1000–1050). Two records above Nyasoso: 25 Nov 1993 (UGS, JB, EK); 23 Mar 1998 (FDL).

*Cercococcyx olivinus* Olive Long-tailed Cuckoo. R f OFS (500–1500). Only in primary forest and detection usually relies on the far-carrying calls, which were heard throughout the year. Eisentraut (1973) mentions collecting a *C. mechowii* at 1100 m, which has not otherwise been recorded. The two have very different voices but are so similar in plumage that perhaps the specimen should be re-examined.

*Chrysococcyx cupreus* Emerald Cuckoo. R f FSP (550–1550). A juvenile seen, late Nov. Call heard every month, but less in the first half of the year.

*C. klaas* Klaas's Cuckoo. R f OFS (400–1000). Call heard every month; juveniles seen Sep and Nov.

*C. caprius* Didric Cuckoo. R u OF (400–1000). Recorded in cultivated areas in all months except May–Jun, with a peak of calling birds in Jul. Whether there is movement in and out of the area is unclear.

*Ceuthmochares aereus* Yellowbill. R f FSP (700–1600).

*Centropus leucogaster* Black-throated Coucal. R u FSP (850–1000). Usually detected by deep resonant call from areas where farms border the forest above Nyasoso.

*C. monachus* Blue-headed Coucal. R f OF (400–1000).

### **Tytonidae**

*Tyto alba* Barn Owl. R u O (400–850). Five records, in different months from Nyasoso and the banana plantations at Loum, suggest a small resident population.

### **Strigidae**

*Otus icterorhynchus* Sandy Scops Owl. R P (1550). One record: one found roosting 1 m above ground on Max's Trail (TB).

*Bubo poensis* Fraser's Eagle Owl. R u OFSP (850–1600).

*Glaucidium tephronotum* Red-chested Owlet. R u P (1100–1600). One seen, apparently part of a mixed-species bird-party, Feb 1984; one mist-netted (Stuart 1986b).

*G. sjostedti* Chestnut-backed Owlet. R u P (1250–1550). First record for Kupe was one mist-netted above Nyasoso, Nov 1992; since heard there and on Max's Trail where one responded to play-back in Nov 1994 (SJ).

*Strix woodfordi* African Wood Owl. R u P (1000–2000).

### **Caprimulgidae**

*Caprimulgus climacurus* Long-tailed Nightjar. AM r O (850). One record: in open farms at Nyasoso, Feb 1984. Presumably a passage bird.

*C. nigriscapularis* Black-shouldered Nightjar. R u OF (750–900). Distinctive call most often heard on moonlit nights in the dry season. Earliest record 15 Aug, but mainly heard late Oct to early Feb (latest 10 Feb). A male killed in Nyasoso, 7 May 1994, was nearing completion of primary moult, suggesting that the species may actually be resident, but quiet during the wet season.

### **Apodidae**

*Telacanthura ussheri* Mottled Spinetail. LM? r O (850). One record: four birds over Nyasoso, 18 Dec 1993.

*T. melanopygia* Black Spinetail. AM? r OF (850). Two records, 8 and 10 Feb 1992, both of two birds with other passage swifts and hirundines over Nyasoso. Fry *et al.* (1988) mention only one record for Cameroon, although I have also seen this species near Nguti (Korup), Limbe and Kumba (see Rodewald *et al.* 1994), and there are more recent records from southern Cameroon (FDL, RJD).

*Rhaphidura sabini* Sabine's Spinetail. LM? u O (800–850). Described as non-migratory by Fry *et al.* (1988), the nine records are all from times when other species are moving through, but perhaps this represents local wandering (FDL pers. comm.).

The records were: 1–2 on 14 Mar 1994, 20 Mar 1994, 21 Mar 1991, 30 Apr 1992; 2–5 on five dates between 12 and 28 Nov 1992.

*Cypsiurus parvus* Palm Swift. R f OFSP (350–1500). Most frequent between Kolla and Loum; only occasionally over primary forest.

*Apus barbatus sladeniae* African Black Swift. LM? r OF (850–2050). Apart from one record mentioned for “Bakossi” and attributed to Nyasoso in Fry *et al.* (1988), SMA and PVH recorded it in Jun 1990, and FDL and RJD saw several near the summit in Mar 1998. Although separation from *A. b. barbatus* in the field is almost impossible, the birds in this part of Cameroon are regarded by some (e.g. Collar & Stuart 1985,) as a separate species *A. sladeniae*, classified as ‘Data Deficient’ (BirdLife International 2000).

*A. apus* European Swift. PM u OF (850). Only seen during two-week passage periods both north and south. Records are of groups up to 100, all from Nyasoso, 8–20 Mar and 19 Sep to 3 Oct.

*A. batesi* Bates’s Swift. R? u OFSP (800–1000). Recorded almost every month. Regularly enters the cave on the Nature Trail at Nyasoso; four mist-netted there. Although such a cave is a potential nest-site, none of the birds caught in Aug and Oct had incubation patches or moult in progress.

*A. affinis* Little Swift. R u OF (350–1950).

*Tachymarptis aequatorialis* Mottled Swift. ? P (1950–2050). One record: three at the summit, 13 Feb 1984 (Stuart 1986b). Otherwise, Fry *et al.* (1988) record it in Cameroon only from the Bamenda area.

### **Coliidae**

*Colius striatus* Speckled Mousebird. R f OF (350–1000). Breeding recorded Jan–Feb (Serle 1965).

### **Trogonidae**

*Apaloderma narina* Narina’s Trogon. R u P (950–1300). Despite the difficulty of separating it from *A. aequatoriale*, it seems that this species is the more common, although not recorded at the higher elevations.

*A. aequatoriale* Bare-cheeked Trogon. R u P (1000–2000). Five records during the period.

*A. vittatum* Bar-tailed Trogon. R u SP (1000–2000). Mainly in primary montane forest, but also seen in an overgrown Quinine *Cinchona* plantation at Essosong.

### **Alcedinidae**

*Halcyon badia* Chocolate-backed Kingfisher. ? u SP (900–1450).

*H. leucocephala* Grey-headed Kingfisher. AM u O (350–850). Passage migrant, seen between Loum and Tombel, 10 Feb to 13 Apr; one stayed in Nyasoso college grounds 23–27 Nov 1992.

*H. malimbica* Blue-breasted Kingfisher. ? r FP (600–1150).

*H. senegalensis* Woodland Kingfisher. R f O (350–900).

*Ceyx lecontei* Dwarf Kingfisher. R u FSP (650–1000). Five mist-netted in areas where rarely sighted; one seen several times in farmland at the roadside between Nsuke and Mbulle.

*C. picta* Pygmy Kingfisher. R f OF (350–1000).

*Alcedo leucogaster* White-bellied Kingfisher. R u SP (900–1550). Rarely seen, but mist-netted frequently in the forest. Moults Feb–Mar, suggesting breeding early dry season.

*Megaceryle maxima* Giant Kingfisher. R? u O (450). Recorded only in farmland near Kolla, near the Dibombe River; most other streams probably too small to support it.

### **Meropidae**

*Merops gularis* Black Bee-eater. R u FS (650–1050). A nest-burrow was made in the path (Max's Trail) at 950m above Nyasoso from 18–26 Mar 1993, but the nest failed, presumably due to disturbance. Dependent juveniles seen Apr in two years.

*M. pusillus* Little Bee-eater. LM? r O (350). Owing to confusion with *M. variegatus*, just two acceptable records (both in association with *M. variegatus*) between Tombel and Loum: four on 21 Mar 1994 and one on 3 Apr 1994 (a time when many migrant species were passing through). Louette (1981) suggests there is some dispersal in the dry season away from breeding areas.

*M. variegatus* Blue-breasted Bee-eater. R? u O (350–850). Probably breeds in the area: dependent juvenile seen 23 Nov 1992; juveniles seen Mar–Apr. Over half of the records are from late Mar and Nov, suggesting some passage at those times.

*M. albicollis* White-throated Bee-eater. AM f OF (350–900). Dry season migrant with peak numbers at passage times, notably early Apr. Earliest 25 Oct, latest 5 May.

*M. apiaster* European Bee-eater. PM u OFSP (850–2000). Recorded between 8 Sep and 16 Oct on southward passage (flocks of 6–100), with fewer records on return passage, 21 Mar to 2 Apr.

### **Coraciidae**

*Eurystomus gularis* Blue-throated Roller. LM? FS (900–1000). Four records between Aug and Nov in the study period.

### **Bucerotidae**

*Tockus albocristatus* White-crested Hornbill. R u SP (900–1250).

*T. fasciatus* Pied Hornbill. R f OFSP (350–2000). The commonest hornbill, found in all areas, but favouring farms with tree cover and secondary forest. One seen eating a chamaeleon *Chamaeleo montium*. Usually in groups of 3–8.

*Bycanistes fistulator* Piping Hornbill. R? u OF (500–1100). Possibly at its upper altitudinal limit at Nyasoso, and more common at lower altitudes nearby. Four records in 1991, one in 1992, none in 1993, one in 1994.

*B. cylindricus albotibialis* White-thighed Hornbill. LM? FSP (350–900). Nine records during the study period, all between Jul and Jan in groups of 1–10. Does not occur high on the mountain, despite preferring primary forest (Rodewald *et al.* 1994).

*B. subcylindricus* Black-and-White Casqued Hornbill. ? O (350). One bird seen above Lala, Nov 1998 (Dowsett-Lemaire & Dowsett 1999).

*Ceratogymna atrata* Black-casqued Wattled Hornbill. LM? SP (850–1300). Two records in the period: groups of three and four in primary forest above Nyasoso. There were however several records during a two week visit in Feb 1984 (Stuart 1986b) suggesting a decline since then.

*C. elata* Yellow-casqued Wattled Hornbill. ? S (350) "Near threatened". One record: Loum F.R., Nov 1998 (FDL, RJD) is on the edge of its range.

### **Lybiidae**

*Gymnobucco calvus* Naked-faced Barbet. R a OFSP (350–2050). Found in all habitats including the canopy of primary forest; most numerous in secondary forest. Breeds at least May–Nov (brood patch data), with moult Oct–Apr.

*G. peli* Bristle-nosed Barbet. ? F (950). Only confirmed records: 15 pairs breeding in Dec 1995 and Jan 1996 low on Max's Trail (NB). Another colony observed nearby at Nyang.

*Pogoniulus scolopaceus* Speckled Tinkerbird. R f OFSP (850–2050).

*P. coryphaeus* Western Green Tinkerbird. R f OFSP (850–2050).

*P. atroflavus* Red-rumped Tinkerbird. R u OFSP (700–2000). One mist-netted in late Nov had a brood patch.

*P. subsulphureus* Yellow-throated Tinkerbird. R f FSP (350–1100). One mist-netted in May had a brood patch.

*P. bilineatus* Yellow-rumped Tinkerbird. R f OFS (350–1550). Although common at higher elevations on neighbouring mountains, presumably the closed canopy on Kupe prevents it from penetrating the forest very far.

*Buccanodon duchaillui* Yellow-spotted Barbet. R f FSP (350–2050). Nest excavation noted in Mar and Apr.

*Tricholaema hirsuta* Hairy-breasted Barbet. R u SP (850–1500).

*Lybius bidentatus* Double-toothed Barbet. R u OF (750–900).

*Trachyphonus purpuratus* Yellow-billed Barbet. R f FSP (350–1900). Nest excavation at 1000 m, mid-May.

### **Indicatoridae**

*Prodotiscus insignis* Cassin's Honeybird. R? u FS (850–1000). Seven records, all between Mar and Aug.

*Melignomon zenkeri* Zenker's Honeyguide. R? u FSP (900–1300). At least four individuals recorded above Nyasoso, a major range extension for this species: two singing at the edge of primary forest; one seen in farms with many trees; two mist-netted in secondary forest on the Nature Trail at Nyasoso. Most singing recorded Sep–Oct but also through to Apr. Song consists of a series of c. 20 whistles at a rate of 2 s<sup>-1</sup>, the pitch and volume gradually increasing and then falling again at the end (described in more detail by Bowden *et al.* 1995). Neither of the birds caught in Nov was moulting, although one seen on 1 Apr 1997 was at least in tail moult (FDL, RJD).

*Indicator maculatus* Spotted Honeyguide. R? P (900–1700). Recorded three times, above Nyasoso: one with enlarged ovaries, 19 Nov (Serle 1950); one on 10 Apr (Serle 1954); one seen in Nov 1990 (DMN).

*I. conirostris* Thick-billed Honeyguide. R u/f OFSP (600–1850).

*I. exilis* Least Honeyguide. R u F (850–950).

*I. willcocksii* Willcocks's Honeyguide. R? FS (850–1000). Three records during the study period.

**Picidae**

*Sasia africana* African Piculet. R u FSP (850–1200). Usually seen on vines in disturbed areas of secondary forest but also occurs in primary; 28 mist-netted on Nature Trail at Nyasoso. Within a few months of being ringed, the alloy ring invariably discolours to a dull orangey surface. Breeds in the dry season: nest-building early Apr; carrying food late Nov; performing butterfly-like display flight in early Mar; brood patches Dec–Mar; moult Jan–May.

*Campethera cailliautii* Green-backed Woodpecker. R u FSP (850–1200).

*C. tullbergi* Tullberg's Woodpecker. R u P (900–2000). Usually in mixed-species flocks, high in large trees in open areas. Typically associates with *Phyllastrephus poliocephalus*, *Andropadus tephrolaemus*, *Kupeornis gilberti* and *Ploceus bicolor*. Not often below 1400 m.

*C. nivosa* Buff-spotted Woodpecker. R u FSP (850–1500). Most frequent in secondary forest and farm-bush with trees, but also enters primary forest. Two mist-netted on Nature Trail at Nyasoso, where often associates with mixed species parties, typically including *Terpsiphone rufiventer*, *Criniger calurus* and *Ploceus bicolor*. Only record above 1050 m was one collected by Serle (1965).

*Dendropicos gabonensis* Gabon Woodpecker. R u FSP (700–1200). Usually seen in farms with good tree cover, it is less associated with mixed-species foraging flocks than the previous two species.

*D. fuscescens* Cardinal Woodpecker. R f OFS (850–1050).

*D. ellioti* Elliot's Woodpecker. R u P (1250–1950). Strongly associated with thickets in tree-falls, generally occurring low in the vegetation. Not as numerous as *C. tullbergi*, contrary to Stuart & Jensen's (1986) generalisation for mountain chain as a whole. One mist-netted.

*D. xantholophus* Yellow-crested Woodpecker. R u F (800–950). Seven records of this lowland species in the study period, all from farmland around Nyasoso and Bendume.

**Eurylaimidae**

*Smithornis sharpei* Grey-headed Broadbill. R f SP (850–1950). Evenly distributed within the forest. Display flight heard most months, but more frequently Sep–Nov. Brood patches Nov, family parties mist-netted in Jan and Mar, 23 moulting birds May–Jul; suggesting breeding season is the dry season.

*S. rufolateralis* Rufous-sided Broadbill. R? u P (900–1050). Only three confirmed records in the period, in the lowest undisturbed forest: two displaying males in Feb and one female in Apr.

**Pittidae**

*Pitta reichenowi* Green-breasted Pitta. ? S (900–950). First confirmed record, 22 Feb 1992 (SMA). Call heard, 2 Mar 1993 (TB). Both at forest edge above Nyasoso.

**Hirundinidae**

*Psalidoprocne nitens* Square-tailed Saw-wing. R f OFSP (600–1050).

*P. priostoptera* Black Saw-wing. R c OFSP (350–1100). The commonest saw-wing. Local race *petiti* sometimes regarded as specifically distinct. Nests found high in a



volcanic ash quarry bank, beside the road at Mboh (550 m). Juveniles seen there in Aug (paler rumps and shallowly forked tails) bore superficial resemblance to Mountain Saw-wing *P. fuliginosa* of further west. Serle (1954) recorded three nests with young near Nyasoso, Apr.

*P. obscura* Fanti Saw-wing. AM? OF (850). Only certain record, Apr 1991 (EW) possibly a migrant.

*Hirundo semirufa* Red-breasted Swallow. ? u O (350–850). Most noticeable when collecting mud from puddles for nest-building in Mar.

*H. abyssinica* Lesser Striped Swallow. LM (late Sep–Jun) f OF (350–950). Breeds in the villages Mar–May but absent Jul–Aug, returning late Sep. Larger numbers noted late Oct and Nov and late Mar, when flocks of up to 60 roost in Elephant Grass *Pennisetum purpureum* at Nyasoso.

*H. fuliginosa* Forest Swallow. R f OFSP (750–1550). Usually in loose groups of up to ten, feeding around large emergent trees in secondary forest and farms or above the canopy of primary forest. Roosts and breeds in the cave on Nyasoso Nature Trail where 23 mist-netted. One with a brood patch, May; starting primary moult in Aug, finishing in Oct. No evidence of seasonal movements.

*H. fuligula* Rock Martin. ? u G (2000). Only recorded around the summit in Feb 1984 (Stuart 1986b), in Jun 1994 (RES, OEM) and in Mar 1998 (FDL, RJD).

*H. rustica* Barn Swallow. PM f OFSPG (350–2050). First arrivals between 19 Sep and 27 Oct, and last departures between 11 and 21 Apr during the study period.

*Delichon urbica* House Martin. PM OF (850–2000). Two Nyasoso records: 20 on 19 Sep 1991; one on 29 Feb 1992 (CGRB). Several near summit 24–25 Mar 1998 (FDL).

*Riparia riparia* Sand Martin: PM OF (850). 25 passed over Nyasoso with other migrants on 19 Sep 1991.

### **Motacillidae**

*Motacilla flava* Yellow Wagtail. PM (late Nov to Apr) u O (350–850). Passage migrant in small numbers, with 1–2 spending several weeks in the area. Arrived apparently later than in other parts of Cameroon, the first being between 23 Nov and 5 Dec, and the last sightings from 11 Mar to 23 Apr.

*M. clara* Mountain Wagtail. R u FSR (600–1050).

*Anthus trivialis* Tree Pipit. PM (late Nov to Mar) u O (850).

*A. novaeseelandiae cameroonensis* Cameroon Pipit. AM r O (850). Two records of singles on the college sports field in Nyasoso 22–23 Oct 1993 and 9–18 Jan 1994.

### **Campephagidae**

*Coracina caesia* Grey Cuckoo-Shrike. R f P (1100–1950). Most common above 1400 m.

*C. azurea* Blue Cuckoo-Shrike. R? SP (900–1200) SP. Four records in the study period.

*Campephaga petiti* Petit's Cuckoo-Shrike: R f FSP (800–1050). Most often seen in disturbed forest where often joins mixed-species flocks. Attended nest and recent fledglings recorded in Nov and Apr respectively.

*C. phoenicea* Red-shouldered Cuckoo-Shrike. AM? F (800). One record: a male in moult on the Ngusi side of Nyasoso, 30 Jan 1994 (CGRB). A savanna bird, wandered

into the forest belt during its non-breeding season. No previous records in the forest belt (e.g. Louette 1981, Keith *et al.* 1992) but one seen well to the north of Kupe on Mt Oku (Williams 1992).

*C. quiscalina* Purple-throated Cuckoo-Shrike. R? u FSP (850–1200). Probably resident but no records between mid-Jun and Oct. One breeding record at 950 m, Nov (SJ).

### **Pycnonotidae**

*Andropadus virens* Little Greenbul. R a FSP (350–1950). Commonest in secondary forest and farms with trees; in primary forest only occurs in natural clearings. An altitudinal migrant, absent above 1400 m during the wet season, and generally scarce above 1100m. Brood patches recorded Mar–Jul, juveniles Feb–Jul, moult Feb–Oct with all birds moulting by Aug. Breeding season is therefore clearly defined as the early wet season.

*A. gracilis* Little Grey Greenbul. R f FSP (350–1300). Usually seen in secondary forest, in middle strata or canopy, but five mist-netted on Nyasoso Nature Trail and one at 1200 m. One with brood patch in Nov, when a juvenile was also caught.

*A. curvirostris* Plain Greenbul. R u FS (700–1100).

*A. gracilirostris* Slender-billed Greenbul. R u FSP (850–1500). Not recorded above 1100 m except by Serle (1965).

*A. latirostris* Yellow-whiskered Greenbul. R a FSP (350–1950). Altitudinal migrant, absent above 1300 m Apr–Sep, but occurs almost to the summit in the dry season. Much less common above 1300 m, even in the dry season. The most numerous species mist-netted in secondary and low-altitude primary forest. Brood patches (n=315) indicate breeding May–Oct (apart from one brood patch at 1200 m in Feb), and moult starts from early Sep into the dry season. Some evidence that juveniles tend to move to higher altitudes during the dry season, but no records of breeding there. Individuals have moved between 900 and 1250 m above Nyasoso, and one from Nyasoso to Ndum (7 km).

*A. ansorgei* Ansorge's Greenbul. ? u S (850–950). Several records from the Nature Trail above Nyasoso (FDL, RJD, SMA, NB).

*A. tephrolaemus* Mountain Greenbul. R a SP (900–2050). Above 1400 m often forms a large proportion of mixed-species flocks. Much less common lower down and relatively rare at 900–1000 m. Birds seen on nests in mid-Apr, which is also when Serle (1954) recorded a nest with young, but brood patches recorded only Oct–Feb.

*A. montanus* Cameroon Montane Greenbul. R u SP (900–1600), “Near-threatened”. Eisentraut (1968, 1973) found it at 900 m. No other records until nine caught at 1550 m, including two juveniles in Feb and Apr. All three birds caught in Jan had brood patches. Inhabits the dense shrub layer of relatively open areas within the forest, mostly tree-falls.

*Calyptocichla serina* Golden Bulbul. R u FSP (850–1200).

*Baeopogon indicator* Honeyguide Bulbul. R f FSP (850–1100). Most song heard Mar–Apr.

*Ixonotus guttatus* Spotted Bulbul. R u OFS (850–900).

*Chlorocichla flavicollis* Yellow-throated Leaflove. R u OF (850–900). Recorded in farms and gardens near Nyasoso.

*C. simplex* Simple Leaflove. R u OF (450–1000).

*Thescelocichla leucopleurus* Swamp Palm Bulbul. R u OF (550–1000).

*Phyllastrephus poensis* Cameroon Olive Greenbul. R f P (1050–2000). Occupies the lower and middle vegetation strata, often in pairs or as part of mixed species foraging flocks typically comprising *P. poliocephalus*, *Andropadus tephrolaemus* and *Kupeornis gilberti*. More numerous above 1300 m. Brood patches Nov–Feb.

*P. icterinus* Icterine Greenbul. R? u SP (900–1100). Because of confusion between this species and *P. xavieri*, only three records confirmed, including one heard calling by PWR, who is familiar with both species from Korup.

*P. xavieri* Xavier's Greenbul. R f SP (900–1200). Measurements of eight birds mist-netted referred them to this species. Usually associated with mixed-species foraging flocks and not seen above mid-storey vegetation. Brood patches Jan–Mar.

*P. poliocephalus* Grey-headed Greenbul. R f SP (850–2000), "Near-threatened". Noisy and almost always in mixed-species flocks, usually with *Campethera tullbergi*, *Kupeornis gilberti*, *Andropadus tephrolaemus*, *Phyllastrephus poensis* and *Ploceus bicolor*. Most numerous 1200–1800 m and distinctly less so in secondary forest and above 1800 m. Brood patches Jan–Feb. A nest with young, 10 Apr, at 2000 m; a female collected on 9 Feb was about to lay eggs (Serle 1954).

*Bleda notata* Grey-headed Bristlebill. R u FS (750–900). A lowland species at its upper altitudinal limit. Three records, including one mist-netted on Nyasoso Nature Trail.

*Criniger chloronotus* Eastern Bearded Bulbul. ? P (900–950). A female collected at 900 m (Serle 1965). N records during the study period but more recent records at the base of the Shrike Trail and Nyasoso Nature Trail (EW, FDL, RJD).

*C. calurus* Red-tailed Bulbul. R f SP (700–1100). Separation of this species from *C. ndussumensis* has caused considerable discussion. Birds with bill dimensions suggesting both species have twice been caught together, apparently a pair, on Nyasoso Nature Trail. They had similar plumage with no suggestion of the pale lores of *ndussumensis*. Usually forages in middle and lower strata in fairly dense vegetation, often in mixed-species flocks with *Campethera nivosa*, *Phyllastrephus xavieri*, *Anthreptes fraseri* and *Ploceus bicolor*. More numerous in disturbed forest with more understorey than in true primary forest. Despite the problems of identification, this is the more common of the two species.

*C. ndussumensis* White-bearded Bulbul. ? u P (950). Recently confirmed at 950 m on the Shrike Trail (FDL); cautious reports of the call (EW, SK) based on Chappuis (1975).

*Pycnonotus barbatus* Common Bulbul. R a OFSP (350–1200). Less numerous with greater tree cover and only enters primary forest at tree-fall gaps.

### **Turdidae**

*Neocossyphus poensis* White-tailed Ant Thrush. R f SP (850–1950). No juveniles recorded among 16 caught, but moult noted at 900 m in Nov, suggesting wet season breeding.

*N. fraseri* Rufous Flycatcher-Thrush. R f FSP (750–1950). Most vocal towards end of dry season. Occupies middle strata in primary and disturbed forest. A recent fledgling collected 23 Jan (Serle 1965).

*Turdus pelios* West African Thrush. R c OFS (350–1000). Breeding at least Mar–Jul.

*Zoothera crossleyi* Crossley's Ground Thrush. R u P (1000–2050), "Near-threatened". Song heard mostly Mar–May but, among seven caught, brood patches recorded Sep and Jan and another was finishing wing moult in Nov (which accords with three birds moulting on Mt Cameroon in Dec–Jan: Bowden 1986). These limited data imply that breeding occurs during the wet and early dry seasons.

*Alethe diademata* Fire-crested Alethe. R u SP (850–1350). Among 13 mist-netted, one juvenile in Nov and birds in moult Oct–Dec, suggesting a breeding season similar to that of *A. poliocephala* for which there are more data.

*A. poliocephala* Brown-chested Alethe. R f SP (800–2000). Mist-netting has shown this species to be more numerous than field observations would suggest (180 captures). Brood patches recorded Jul–Sep at 950–1250 m but only in Jan (two individuals) at 1550 m, supporting Tye's (1992) suggestion of a reversed breeding season at higher altitudes in this species. One bird ringed as an adult at 1200 m on 5 Feb 1984 was recaptured in the same area in Nov 1992 and again on 24 May 1994.

*Sheppardia bocagei* Bocage's Akalat. R f P (850–1700). Relatively common up to 1400 m, above which it is markedly less so. Juveniles recorded May–Jul at 900 m; two brood patches at 1200 m in Feb. A juvenile caught at 1550 m in Dec is suggestive of a reversed breeding season at higher altitudes.

*Luscinia megarhynchos* Nightingale. PM O (850). One migrant stayed on the school campus at Nyasoso, 18–20 Mar 1992.

*Cossypha roberti* White-bellied Robin-chat. R u P (900–2000). Juveniles been seen Mar; brood patches recorded Nov and Feb (1550 and 1850 m) so certainly a dry season breeder at high altitudes.

*C. isabellae* Mountain Robin-chat. R f P (1350–2000). Common above 1500 m, associated with dense low shrubs. Brood patches recorded Nov–Feb, juveniles Dec–Mar, and moult Mar–Apr.

*C. cyanocampter* Blue-shouldered Robin-chat. ? C (850). One record, from a thicket in Nyasoso village, Mar–Apr 1997 (FDL).

*C. niveicapilla* Snowy-crowned Robin-chat. R f O (600–850).

*Saxicola rubetra* Whinchat. PM r O (850). Three records from open areas at Nyasoso: Feb 1984, 25 Dec 1992 (PJD), 27 Feb 1993. Generally inhabits drier areas, which may explain why none seen for more than one day.

### **Sylvidae**

*Bradypterus baboecala* Little Rush Warbler. R f O (450–900). Found exclusively in areas of tall Elephant Grass *Pennisetum purpureum*, which is mostly in recently abandoned cultivated areas. Difficult to observe, but mist-netting suggests fairly common.

*Bathmocercus rufus* Black-faced Rufous Warbler. R c FSP (700–1600). Occupies low shrubby vegetation, notably stands of Acanthaceae, where it skulks close to ground

level. Only penetrates primary forest at major treefalls. A brood patch recorded Apr and young juveniles caught May.

*Acrocephalus rufescens* Greater Swamp Warbler. R c O (350–1000).

*Hippolais polyglotta* Melodious Warbler. PM F (950). One record, 28 Nov 1994 (SJ).

*Eremomela badiceps* Rufous-crowned Eremomela. R f FSP (850–1200). Usually in mixed species flocks (typically with *Apalis nigriceps*), gleaning insects from the outer leaves of middle and higher strata branches. Family parties including young juveniles recorded in Jan, Apr and May.

*Sylvietta virens* Green Crombec. R f OFS (750–1550).

*S. denti* Lemon-bellied Crombec. ? S (850). Two sightings of pairs; birds singing near Nyasoso (FDL, RJD). Probably under recorded.

*Macrosphenus concolor* Grey Longbill. R f FSP (900–1200).

*M. flavicans* Yellow Longbill. R u SP (850–1300).

*Phylloscopus trochilus* Willow Warbler. PM (mid-Nov to early Apr) u OFG (750–1950). Small numbers, mainly on passage in Nov and Feb–Apr. Frequents open farms and joins mixed species flocks in more enclosed areas. Recorded on open grassy knolls near the summit, but not inside primary forest.

*P. sybilatrix* Wood Warbler. PM (mid-Nov to Apr) f OFSP (350–1100). Abundance appears to vary between years, but more numerous than *P. trochilus* and more often enters forest. Often in mixed species flocks; tends to forage in upper half of taller trees.

*P. herberti* Black-capped Woodland Warbler. R f SP (900–2000). Alone, in small parties or in mixed species flocks; common throughout primary forest and slightly less so in secondary forest, and in all strata of relatively open vegetation. In addition to the song described by Stuart (1986a), has another common call, a clear, drawn out, slightly ascending trill lasting about 2 s. Brood patches recorded Nov–Dec. Some suggestion of altitudinal migration: the only birds caught at 900 m were in May–Jun, with sightings there from 31 Mar (FDL).

*Hyliota flavigaster* Yellow-bellied Hyliota. R u FS (850–1000). A canopy-dwelling species of disturbed areas, usually in mixed species flocks. Slightly more numerous than *H. violacea*.

*Hyliota violacea* Violet-backed Hyliota. ? u SP (950–1100). Only three records during the study period, in disturbed forest (RES) but several sightings in Jun 1990 (SMA, PVH). One other record from Southwest Province, in a clearing at Korup (Rodewald *et al.* 1994).

*Hylia prasina* Green Hylia. R f FSP (850–1550).

*Sylvia borin* Garden Warbler. PM F (850–950). Five records: 10 Nov 1992 (SK); several singing 20 and 22 Mar 1998 (FDL, RJD); 19 Mar 1999 (NB); 29 Mar 2000 (NB).

*S. atricapilla* Blackcap. PM r S (850). One record: Nyasoso Nature Trail 14 Jan 1995 (CG, CS).

*Cisticola anonymus* Chattering Cisticola. R c O (350–950).

*C. erythrops* Red-faced Cisticola. R u O (350–850). In areas with stands of Elephant Grass *Pennisetum purpureum*.

*C. chubbi* Chubb's Cisticola. R u SG (900–2050). Recorded near Essossong, with a nest with young at 1050 m nearer to Nyasoso, 10 Apr (Serle 1954); this is low for this species. The only other records have been on grassy outcrops near the summit (Stuart & Jensen 1986, RES in 1994). Much more numerous on nearby mountains with more grassland.

*Prinia subflava* Tawny-flanked Prinia. R f O (350–900). Birds carrying nest material mid-Nov.

*P. leucopogon* White-chinned Prinia. R c OF (350–1000).

*P. bairdii* Banded Prinia. R c OFS (350–1550). Frequents dense shrubby vegetation, only entering forest where large treefalls have created such habitat. Fledglings noted late Nov.

*Urolais epichlora* Green Longtail. R c FSP (850–2000). Prefers openings and gaps in the canopy, which perhaps explains why it is more numerous on other nearby mountains than on Kupe. Most records are from above 1200 m, with lower ones all Feb–Jul, suggesting seasonal movement. Brood patches Dec–Jan; seen feeding young mid-Apr; family parties mid-Apr and early Jun.

*Apalis binotata* Masked Apalis. R? u FS (750–1000). Three records during the study period, in dense secondary thicket. One had only a narrow black stripe down the throat, broad white cheeks and yellow sides to the breast, unlike any available fieldguide illustrations, but comparison with skins at the British Museum (Natural History) revealed that it was certainly this species and probably a sub-adult female.

*A. jacksoni* Black-throated Apalis. R u FS (850–1350). Montane species of clearings and disturbed vegetation, sometimes joining mixed species flocks.

*A. nigriceps* Black-capped Apalis. R c FS (750–1250). Invariably in mixed species flocks, even as family groups. Juveniles noted in Jan and May.

*A. cinerea* Grey Apalis. R c P (950–2050). Montane species. Pair breeding in dense vegetation near ground level a tree-fall gap, late Dec. One with brood patch, Oct. Juvenile collected 10 Apr (Serle 1965).

*A. rufogularis* Buff-throated Apalis. R f FSP (850–1100). One in wing moult, May.

*Camaroptera brachyura* Grey-backed Camaroptera. R c OFS (350–1550). Common in cultivation and gardens; one record in a tree-fall gap at 1550 m inside primary forest. The local name translates to 'man who lives by the fence': an apt habitat description.

*C. superciliaris* Yellow-browed Camaroptera. R u FS (700–1150).

*C. chloronota* Olive-green Camaroptera. R f FSP (750–1300). Brood patches Nov–Mar.

*Poliolais lopezi* White-tailed Warbler. R u SP (850–1900) "Near threatened". Occurs in stands of dense low shrubby vegetation, notably Acanthaceae (mainly *Oreacanthus mannii*), which is found typically at higher elevations where the canopy is less continuous but also in disturbed areas lower down. Brood patches Oct–Feb.

### **Muscicapidae**

*Fraseria ocreata* Fraser's Forest Flycatcher. R u FSP (750–1200).

*Muscicapa striata* Spotted Flycatcher. PM u O (650–1000). Mainly 1 Oct to 28 Nov (18 records); 3 records 26 Mar to 1 Apr.

*M. adusta* Dusky Flycatcher. ? F (850–900). Two records in farms at the edge of the forest above Nyasoso. Also scarce on Manenguba and in the Rumpi Hills, but common on Mt Cameroon and in the Bamenda Highlands (Stuart & Jensen 1986).

*M. olivascens* Olivaceous Flycatcher. ? S (850–1050). Three records: one mist-netted on Nyasoso Nature Trail, 24 Nov 1992; one seen nearby, 20 Mar 1993, and again in 1998 (FDL).

*M. cassini* Cassin's Grey Flycatcher. ? u S (400). Seen on the Dibombe River at Kolla Songo, apparently the only river large enough for it on Kupe.

*M. epulatus* Little Grey Flycatcher. ? u FS (850–1000).

*M. sethsmithi* Yellow-footed Flycatcher. R f FSP (850–1950). A bird of tree-fall gaps, small forest clearings and recently cleared farms. Brood patches Feb and Jul; nest building late Feb; fledglings seen late Jul and Oct; suggest protracted breeding season.

*M. caerulescens* Ashy Flycatcher. R u FS (850–950).

*M. comitata* Dusky Blue Flycatcher. R u FS (750–1050).

*M. fuliginosa* Sooty Flycatcher. R u F (850–1050). Juveniles seen in late Nov.

*Myioparus plumbeus* Grey Tit-Flycatcher. ? O (400). One seen above Lala, Nov 1998 (Dowsett-Lemaire & Dowsett 1999).

### **Platysteiridae**

*Megabyas flammulata* Shrike Flycatcher. R u FSP (850–1250). Usually in pairs or small parties in the canopy at forest edge, but occasionally penetrates primary forest. An immature seen late Apr.

*Bias musicus* Black and White Flycatcher. R f FS (800–1000). Two active nests, Jan.

*Batis minor* Black-headed Batis. R u FS (850–1050).

*B. poensis* Bioko Batis. R FS (850–1050). Four records from mixed species flocks in disturbed areas. A nest with eggs, Mar 1998 (Dowsett-Lemaire & Dowsett 1999).

*Platysteira concreta* Yellow-bellied Wattle-eye. R f SP (900–1950). Unobtrusive but reasonably common in small groups; sometimes joins mixed species flocks, where mainly below 3 m. Brood patches Dec–Mar; moult Jul–Aug.

*P. chalybea* Black-necked Wattle-eye. R u SP (900–1950). Uncommon below 1400 m. Usually in a well developed shrub layer and often close to the forest floor. Joins mixed species flocks but more often in pairs or family parties. Brood patches at 1550 m, Jan–Feb.

*P. castanea* Chestnut Wattle-eye. R u FSP (850–1250). An active nest, late Feb.

*P. tonsa* White-spotted Wattle-eye. R SP (850–1200). Five records during the period. Joins mixed species flocks.

*P. cyanea* Scarlet-spectacled Wattle-eye. R c OFS (350–1050).

### **Monarchidae**

*Erythrocercus mccalli* Chestnut-capped Flycatcher. R u SP (350–1300).

*Elminia longicauda* Blue Fairy Flycatcher. R c OFS (350–1100). Open cultivation, occasionally entering secondary forest. Carrying food, late Mar; fledglings mid-Jun.

*Trochocercus nigromitratus* Dusky Crested Flycatcher. R u FSP (850–1550). Unobtrusive in low dense thicket within forest, but mist-netting has shown it to be numerous. One brood patch at 900 m, Feb.

*T. albiventris* White-bellied Flycatcher. R u P (1300–2000). Favours openings in the forest which probably explains why it is less common on Kupe than on neighbouring mountains. Generally alone or in pairs, but occasionally joins mixed species flocks.

*T. nitens* Blue-headed Crested Flycatcher. R? SP (900–1500). Five records in the study period, in forest understorey. Family with dependent young, 1 Apr (FDL, RJD).

*Terpsiphone viridis* African Paradise Flycatcher. R f OFS (450–1100). Most numerous in open farms and gardens where alone or in pairs. Occasionally joins mixed flocks at the forest edge. Several white males seen.

*T. batesi* Bates's Paradise Flycatcher. R u FSP (800–1200). More a forest bird than *T. viridis*, usually in mixed species flocks. Females of the two species difficult to separate. Probably the commoner of the two species overall and certainly within forest habitats. Two brood patches, Jan; a juvenile, Jan.

*T. rufiventer* Red-bellied Paradise Flycatcher. R c SP (700–1700). Most mixed species flocks up to 1400 m contain this species. Breeds throughout dry season; family parties late Nov; brood patches Jan; an active on 1 Mar; moult in progress May.

### **Timaliidae**

*Kakamega poliothorax* Grey-chested Illadopsis. R f P (1150–2000). Rare below 1400 m. A juvenile mist-netted Oct; moulting Nov–Dec and Feb; suggests breeding late rains.

*Illadopsis fulvescens* Brown Illadopsis. R u SP (900–1200).

*I. rufipennis* Pale-breasted Illadopsis. R u FSP (900–1350).

*I. cleaveri* Black-cap Illadopsis. R u SP (900–2000). Brood patches Jan–Feb at 1550 m and Jun–Jul and Nov at 900 m, which, despite the small sample, suggests a reversed breeding season at higher altitudes.

*Kupeornis gilberti* Gilbert's Babbler. R f SP (1000–2050) "Endangered". Discovered on Kupe by Serle (1949). Usually frequents the larger boughs of tall trees (canopy and middle strata), searching for food in moss, epiphytes and crevices. Occasionally descend to the understorey. Always in groups of up to 25, usually with *Phyllastrephus poliocephalus* and other species that associate with the latter. Often noisy when excited by snakes or other dangers, but remain quiet for long periods. Breeding recorded Apr and Jun by Serle (1954, 1957, 1981); juveniles seen Nov–Jan, suggesting an extended breeding season. One mist-netted, at 1550 m in Nov; it was starting wing moult.

*Picathartes oreas* Grey-necked Rockfowl. R u SP (900–2000) "Vulnerable". At low densities throughout the forest. Three mist-netted, two on the Nyasoso Nature Trail, close to the village. Several old nests found at lower altitudes on overhanging rock faces in forest. One old nest was re-used: the two eggs hatched 3 and 5 Apr 1994, but the nest had fallen for unknown reasons eight days later. Hunters in Nyasoso are



familiar with “rockfowl” as they often term them, and believe that they were more numerous twenty years ago. It gets caught in spring-traps (snares) set for mammals, which may have reduced the population.

### **Remizidae**

*Pholidornis rushiae* Tit-hylia. R u F (850–1000). Alone or in groups of up to six; joins mixed flocks. Favours leguminous trees that are retained in farms for maintaining soil fertility, where it gleans insects from bare branches. Juveniles late Mar.

### **Nectariniidae**

*Anthreptes fraseri* Fraser’s Scarlet-tufted Sunbird. R u SP (850–1550). Usually in mixed species flocks. One with brood patch, Nov.

*A. rectirostris* Green Sunbird. R f OFS (850–1550).

*A. collaris* Collared Sunbird. R f FSP (400–1600).

*Nectarinia seimundi* Little Green Sunbird. ? F (1000). One record, Apr 1997 (FDL, RJD); likely under-recorded.

*N. batesi* Bates’s Sunbird. R u FS (850–1100). Not often seen (easily overlooked); five mist-netted on Nyasoso Nature Trail. In creepers and thicker vegetation, any height.

*N. olivacea* Olive Sunbird. R a FSP (350–1600). The most numerous sunbird at low altitudes, in all vegetation levels but mostly in the middle strata both in farm-bush with considerable tree cover, and in forest. Brood patches Oct–Apr; most birds moulting in Apr. However, two birds also had brood patches in Jul. Mist-netting suggests altitudinal movements, birds moving down in the wet season.

*N. ursulae* Ursula’s Sunbird. R f SP (900–2000) “Near-threatened”. Throughout the forest but less common below 1200 m. In all vegetation strata, but mostly high in the canopy. Birds carrying nest material, late Nov; a family party with fledglings, late Dec; brood patches Dec–Feb; moult Feb–Apr indicating a relatively short breeding season. The only records at 900 m were in Jul, indicating some altitudinal migration.

*N. oritis* Cameroon Blue-headed Sunbird. R a SP (900–2050). Censuses by RES and OEM showed that this is the most numerous bird species within the primary forest. Above 1400 m it is locally abundant around flowering trees, notably an endemic Rubiaceae with long pendulous flowers near ground level. Breeding season protracted, but mostly towards the end of the wet season: brood patches in almost every month. Moult mainly Nov–Jan.

*N. verticalis* Green headed Sunbird. R f OF (350–1050).

*N. cyanolaema* Blue-throated Brown Sunbird. R? u OF (850–1050).

*N. fuliginosa* Carmelite Sunbird. ? OF (650–950). Two records during the period.

*N. rubescens* Green-throated Sunbird. R u OFS (350–900).

*N. chloropygia* Olive-bellied Sunbird. R c OF (350–1000). Status uncertain in view of potential confusion with *N. minulla* (q.v.). Building nests late Mar.

*N. minulla* Tiny Sunbird. ? FS (850–1050). Present in farm-bush low on Max’s Trail in 1998 (FDL, RJD). Serle (1950) collected four on farms above Nyasoso. Probably overlooked during the study period, possibly due to potential confusion with *N. chloropygia* (q.v.).

*N. preussi* Northern Double-collared Sunbird. LM? u FSP (1000–2050). Much less common on Kupe than on neighbouring mountains, presumably due to its preference for relatively open areas. Recorded only above 1950 m by Stuart (1986a) in Feb, but also occasionally occurs down to the farms above Nyasoso.

*N. bouvieri* Bouvier's Sunbird. ? r FP (850–1400). Two records: 850 m, Nov 1990 (DM); 1400 m, 29 Feb 1992 (SMA). Common on neighbouring Mt Manenguba in more open habitats.

*N. cuprea* Copper Sunbird. LM? OF (350–900). Two records: one between Loum and Tombel, 11 Apr (CGRB); one above Nyasoso, 20 Sep (RES).

*N. coccinigaster* Splendid Sunbird. R u OF (850–950).

*N. superba* Superb Sunbird. R u OF (350–950). An active nest, late Nov. Serle (1954) collected one at its nest, 28 Feb.

### **Zosteropidae**

*Zosterops senegalensis* Yellow White-eye. R f FSP (800–2050).

### **Oriolidae**

*Oriolus brachyrhynchus* Western Black-headed Oriole. R f FSP (850–1600). Generally regarded as a lowland species (e.g. Serle 1950), but three records were from 1050–1600 m.

*O. nigripennis* Black-winged Oriole. R f FSP (850–2000). Brosset & Erard (1986) regarded it as more of a secondary forest species than *O. brachyrhynchus*, but this is not supported by observations on Kupe. Both species tend to occur in the canopy and occasionally in mixed species flocks, with little altitudinal separation.

### **Laniidae**

*Lanius mackinnoni* Mackinnon's Shrike. R f O (600–1000). Juveniles early Dec.

*L. collaris* Fiscal Shrike. ? O (850). Recorded Nyasoso, Feb 1984 (Stuart 1986b) but not since.

*L. senator* Woodchat Shrike. PM O (850). Three records of passage migrants, all on Nyasoso college campus: Feb 1984, 18 Mar 1993, 18 Nov 1994 (SJ).

### **Malaconotidae**

*Dryoscopus senegalensis* Red-eyed Puffback. R f FS (750–1300).

*D. angolensis* Pink-footed Puffback. R u FSP (750–1950). A family party, 1 Apr (FDL).

*D. sabini* Sabine's Puffback. R u FSP (850–1300).

*Laniarius luehderi* Lühder's Bush Shrike. R f OF (350–1000).

*L. fuelleborni* Fülleborn's Black Boubou. R f P (1000–2000). Inhabits areas with dense low shrubby vegetation, which is often on steep slopes or in tree-falls. Such areas are limited on Kupe and it is more numerous on neighbouring mountains.

*Malaconotus bocagei* Grey Bush-shrike. R f OF (750–1000).

*M. multicolor* Many-coloured Bush Shrike. R f FSP (750–1300). The far-carrying "whoop" call is often heard in secondary forest. One record from 1300 m on Max's Trail (FDL), but mainly below 1000m. Colour morphs included birds with underparts entirely yellow or mainly orange. Serle did not record any bush-shrike other than *M.*

*kupeensis* on Kupe; if this represents a real change, it could have implications for competition with *M. kupeensis*.

*M. kupeensis* Mt Kupe Bush-shrike. R? u P (950–1450) “Endangered”. Described by Serle (1952), then not seen until 1989 (Bowden & Andrews 1994). Despite considerable effort, only 13 sightings during the study period; 26 sightings (probably of seven pairs, once two pairs in an apparent territorial dispute), but call heard only 2–3 times, in 1990 (SMA, PVH). Mostly seen in the wet season, especially Jun–Jul; despite greater observer effort in the dry season, no sightings between 10 Oct and 20 Feb. All sightings were along trails above Nyasoso (except a pair at 1300 m above Kupe village: SN), all in primary forest with relatively open understorey. Mostly 1–6 m above the forest floor although occurs almost up to the canopy. There has been forest loss in 1998 in one of the sites at 1250 m on Max’s Trail. More detailed descriptions of calls are given by Dowsett-Lemaire (1999); a subsequent recording is a series of harsh accelerating ticks, terminating with some richer but somewhat more husky scolding notes: “tic tic tic tic tic tic - cheow - cheow - cheow cheow” (NB). Scarce, but several birds seen near Lake Edib in the neighbouring Bakossi Mountains (I. Faucher pers. comm., Dowsett-Lemaire & Dowsett 1999).

*M. cruentus* Fiery-breasted Bush-shrike. R FS (900–1000). Five records in the period. One, mist-netted on Nyasoso Nature Trail, was mid-way through primary moult, Jul.

*M. gladiator* Green-breasted Bush-shrike. R u P (1100–2000), “Vulnerable”. Solitary, at low densities in primary forest. All but one record were above 1400 m where move high in the canopy. Usually detected by call (described by Stuart & Jensen 1986). Records spread evenly through the year.

*M. monteiroi* Monteiro’s Bush-shrike. ? P (1450) “Data deficient”. One sighting, at 1450 m, 21 Sep 1992 (Andrews 1994). Taxonomic status uncertain (Hall *et al.* 1966, Hall & Moreau 1970, Stuart 1986a, Sibley & Monroe 1990, Williams 1998); perhaps conspecific with *M. gladiator*.

*Nicator chloris* West African Nicator. R f FSP (500–1250). Highly vocal, occurs in all strata of the vegetation. One with brood patch, Nov.

### **Prionopidae**

*Prionops caniceps* Red-billed Helmet Shrike. R P (950–1250). Four records during the period, of groups of 2–5 in the canopy of primary forest.

### **Dicruridae**

*Dicrurus atripennis* Shining Drongo. R f SP (900–2000). The commonest drongo in primary forest, where often leads mixed species flocks.

*D. adsimilis* Fork-tailed Drongo. R f FSP (850–1450). Open secondary areas but also penetrates primary forest. Sometimes leads mixed species flocks.

*D. ludwigii* Square-tailed Drongo. R u P (1200–1550) P. Primary forest, perhaps under-recorded. See comment by Dowsetts – did you net any?

### **Corvidae**

*Corvus albus* Pied Crow. R f O (350–850). Associated with large villages, especially the eastern lowland settlements of Nlohe and Loum where flocks of up to 25 seen.

**Sturnidae**

*Poeoptera lugubris* Narrow-tailed Starling. R u OFS (400–1050). Mainly in small parties in farms with high canopy cover. There was a regular roost of up to 40 birds in Nyasoso village in late Nov each year. Birds carrying nest material, 1 Jul.

*Onychognathus walleri* Waller's Chestnut-winged Starling. R c SP (1000–2050). Common only above 1500 m; very few records below that. Usually in flocks of up to 12, in the canopy. More numerous on neighbouring peaks than Kupe.

*O. fulgidus* Forest Chestnut-winged Starling. R? u FS (800–1000). Occurs at low densities in secondary habitat, usually singly or in pairs. Largest flock: 18 above Nyasoso, 26 May 1994 (RES).

*Lamprotornis purpureiceps* Purple-headed Glossy Starling. ? (Apr–Sep) u FSP (850–1450).

*L. purpureus* Purple Glossy Starling. ? F (850–950). Three records in the period, all in farms above Nyasoso.

*L. splendidus* Splendid Glossy Starling. ? (Feb–Jun) u F (850–1000).

**Passeridae**

*Passer griseus* Grey-headed Sparrow. R c O (350–900).

**Ploceidae**

*Ploceus batesi* Bates's Weaver. ? S (900) "Endangered". Two sightings of two birds on the edge of Nyasoso, Jun 1990 (Bowden & Andrews 1994).

*P. pelzelni* Slender-billed Weaver. LM? OF (350–900). Generally near open water. Three records, presumably passage birds: one near Loum, 11 Apr 1992 (CGRB); two in farms above Nyasoso, 25 Sep 1992 (SK) and 24 Nov 1994 (SJ).

*P. nigricollis* Black-necked Weaver. R c OFS (350–950). Cultivated areas and villages; sometimes joins mixed-species flocks in secondary forest. Only the olive-backed morphs occur in the area.

*P. ocularis* Spectacled Weaver. R u OF (350–900). Less numerous than the very similar *P. nigricollis* and less inclined to enter forest. Most records are of birds roosting in Elephant Grass *Pennisetum purpureum* around Nyasoso.

*P. melanogaster* Black-billed Weaver. R u SP (900–1950). Occurs at low densities in areas with breaks in the canopy. Usually singly or in pairs in low shrubby vegetation. A nest with young at 900 m, 26 Dec.

*P. nigerrimus* Vieillot's Black Weaver. R c OFS (350–1000).

*P. cucullatus* Village Weaver. R v O (350–950). Breeds throughout the year, often in mixed colonies with *P. nigerrimus*.

*P. albinucha* Maxwell's Black Weaver. ? u S (850). One record of a juvenile seen in a mixed species flock below Nyasoso Nature Trail, 9 Apr 1998 (NB).

*P. bicolor* Dark-backed Weaver. R f SP (850–2000). Building nests late Oct and late Nov; dependent juveniles seen late Feb. Often shows a small black spot in the centre of the breast (not obvious except when displaying), which is not described in field guides.

*P. insignis* Brown-capped Weaver. ? FP (850–1250). Two records: Feb 1984 (Stuart 1986a); Jun 1990 (SMA, PVH).

*P. preussi* Preuss's Weaver. R u OFS (850–1050).

*Malimbus nitens* Blue-billed Malimbe. ? S (950–1000). Two records between Tape Etube and Essosong.

*M. malimbicus* Crested Malimbe. R u SP (800–1000). Usually in mixed-species flocks unless breeding. Building nests from late Jul to early Oct; nest with young late Nov and the first week of Dec. Seven nests observed, all in palms.

*M. rubricollis* Red-headed Malimbe. R u FS (900–1000).

*M. erythrogaster* Red-bellied Malimbe. ? F (950). Two seen above Nyasoso, Jan 1996 (NB).

*Euplectes hordeaceus* Fire-crowned Bishop. LM? u O (350–850). Occurs in small numbers in areas with Elephant Grass *Pennisetum purpureum*, appearing late Jul and probably breeding Aug–Oct. Not usually seen early Dec but there is one record on 19 Feb. Although much less obvious when not in breeding plumage, may leave the area in non-breeding season.

*E. macrourus* Yellow-mantled Whydah. LM? u O (350–400). Recorded only along the road between Tombel and Loum, on seven occasions between 2 May and 15 Oct. All records were of breeding males; they may remain in the area but be less obtrusive at other times of year.

*Amblyospiza albifrons* Thick-billed Weaver. LM u O (350–850). Apparently leaves the area in dry season; breeds wet season in patches of tall Elephant Grass *Pennisetum purpureum*. First records each year generally mid-Jun (once early Apr: FDL); the last, late Oct.

### **Estrildidae**

*Parmoptila woodhousei* Flower-pecker Weaver-finch. R u FS (700–1050). Seen only in disturbed areas with a dense low herb layer. Occurs singly or in small groups; when enters secondary forest, rarely moves far from the ground or lower strata.

*Nigrita canicapilla* Grey-crowned Negrofinch. R f OFSP (350–1600). Most numerous in cultivated areas where the mournful song is usually heard.

*N. luteifrons* Pale-fronted Negrofinch. R u F (750–1000).

*N. bicolor* Chestnut-breasted Negrofinch. R u SP (350–1000).

*N. fusconota* White-breasted Negrofinch. R f FS (800–1050).

*Nesocharis shelleyi* Little Olive-back. R u P (1550–2000). Recorded only from primary forest, in forest edge and tree-falls. Usually in flocks of 2–15.

*Cryptospiza reichenovii* Red-faced Crimson-wing. R u OFSP (850–1300). Occurs in open areas with herbaceous vegetation, but has been mist-netted in primary forest. One with brood patch at 1200 m, Nov; two juveniles netted at 1850 m, Feb.

*Spermophaga haematina* Bluebill. R f OFS (350–1950). Found in cultivation, but skulks in dense vegetation so not seen as frequently as mist-netting would suggest. Regularly enters disturbed forest but rare in primary. Brood patches recorded at 900 m Oct–Dec.

*Mandingoa nitidula* Green Twinspot. R u FSP (850–1200). Usually in low thick cover but occasionally higher, in small groups. Mist-netted in primary forest, but generally seen in secondary habitats including farms. One caught with brood patch, Dec; a juvenile netted Feb.

*Estrilda melpoda* Orange-cheeked Waxbill. R c O (350–900). Usually with *E. nonnula*.

*E. astrild* Common Waxbill. LM? O (350–1000). Seven records during the period, all of flocks of 5–20 in grassy areas at roadsides, late Feb to mid-Apr (except one flock at Kack, 11 Jul 1993). Often with *E. melpoda*. Dates suggest local movements.

*E. nonnula* Black-crowned Waxbill. R a OFS (350–1200). The most numerous waxbill, in flocks up to 120, throughout the year in cultivated areas. Also in farms with high canopy cover and rarely even in gaps in true forest. The relative abundance of this species and *E. melpoda* is the reverse of the situation at Korup (Rodewald *et al.* 1994).

*E. atricapilla* Black-headed Waxbill. ? u O (850). Four records during the period, in flocks of *E. nonnula*, Aug–Sep. Probably overlooked, but whether it is a migrant remains unclear. Commoner nearer the coast (e.g. Serle 1954, Rodewald *et al.* 1994, pers obs.).

*Lonchura cucullata* Bronze Mannikin. R a O (350–1000). Usually in flocks of 10–20. Juveniles seen mid-Apr.

*L. poensis* Black and White Mannikin. R c O (350–900). Widespread but at low densities in cultivated areas, often with waxbills.

#### **Viduidae**

*Vidua macroura* Pin-tailed Widow. LM? (Jul–Nov) u O (350–850).

#### **Fringillidae**

*Serinus mozambicus* Yellow-fronted Canary. R c O (350–900).

*Linurgus olivaceus* Oriole Finch. R? SG (1050–2000). One record during the period, near Essosong; previously recorded on grassy knolls near the summit by Stuart (1986a).

#### **Emberizidae**

*Emberiza tahapisi* Cinnamon-breasted Rock Bunting. AM O (850). One record: a migrant on Nyasoso college campus, 29 Nov 1992.

*E. cabanisi* Cabanis's Bunting. ? O (750–900). Two records of singing males in maize fields near Essosong: Nov 1998 (FDL, RJD); Dec 1999 (BirdLife IBA team).

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