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Birds of prey observed during vulture surveys in northeast Sudan

Ivaylo Angelov and Ibrahim Hashim

Summary

An Egyptian Vulture *Neophron percnopterus* survey was undertaken in the northeast part of the Republic of Sudan during eight days in September and October 2010. Raptor and large bird counts were conducted along 2010 km of roads travelled. In total 2818 individual raptors of 23 species were counted. The most common were the group of Black and Yellow-billed Kites *Milvus* spp. and Egyptian Vultures, forming 82.8% and 8.0% of all raptors respectively, while Snake Eagles *Circaetus* spp., Rüppell's Vultures *Gyps rueppellii*, and Hooded Vultures *Necrosyrtes monachus* accounted for 2.0, 2.8 and 1.3 % of the raptor assemblage, respectively.

Keywords Sudan, road count, raptors

Introduction

Large declines of vulture species have recently been reported throughout Africa (Thiollay 2006a,b, Virani *et al.* 2011, Ogada *et al.* 2016). Populations of Egyptian Vultures breeding in the Palaearctic are also limited by mortality along the migration flyway (Grande *et al.* 2008), which for some populations may be unsustainably high (Angelov *et al.* 2012). The Republic of the Sudan is among the largest countries in Africa, where many species of Palaearctic diurnal raptors occur during migration and overwinter (Nikolaus 1987) and the country is of international importance for wintering Egyptian and Griffon vultures *G. fulvus* from the Palaearctic (Mundy *et al.* 1992). However, despite the work undertaken to date, ornithologically Sudan remains poorly explored (Bird & Blackburn 2011). The aim of the current survey was to conduct road counts of all vulture and other raptor species observed and to collect additional *ad hoc* data on limiting factors. The overall aim of the visit was to collect data about mortality among Egyptian Vultures along a power line near Port Sudan (Angelov *et al.* 2012), long-known to be very dangerous for the species (Nikolaus 1984).

Methods

Raptor and large bird road counts were implemented from 27 September to 4 October 2010 along 2010 km in Northeast Sudan (Fig. 1). The survey followed the route from Khartoum, Wad Madani, Al Qadarif, Kassala, Port Sudan and surroundings, and Atbara, Shendi, and Khartoum. The section of road stretching up to 138 km east of Atbara was not surveyed. The habitat consisted of grasslands and agricultural land with occasional scattered trees in the south, changing into dry savanna and semi-desert, and desert in the north. All raptors and large birds seen on both sides of the road were recorded by two observers – one on each side of the vehicle. In most cases when

identification while driving was not possible, we stopped to properly identify the observed birds. Average speed was about 60 km/h. Small transects (1–30 km) away from the main route were conducted opportunistically in areas where vulture presence was recorded or suspected, e.g. cliffs with large ‘whitewash’ from vulture roosts and nests, or flying, or perched vultures. Such transects were implemented in the areas of Kassala, Port Sudan, and the savanna northeast of Al Qadarif and Suwakin. Opportunistically, we conducted five interviews with local people in order to gain an impression of potential threats for vultures, such as poisoning against wild carnivores. The main question we asked was what they do in cases of wild predators or stray dogs attack on livestock.

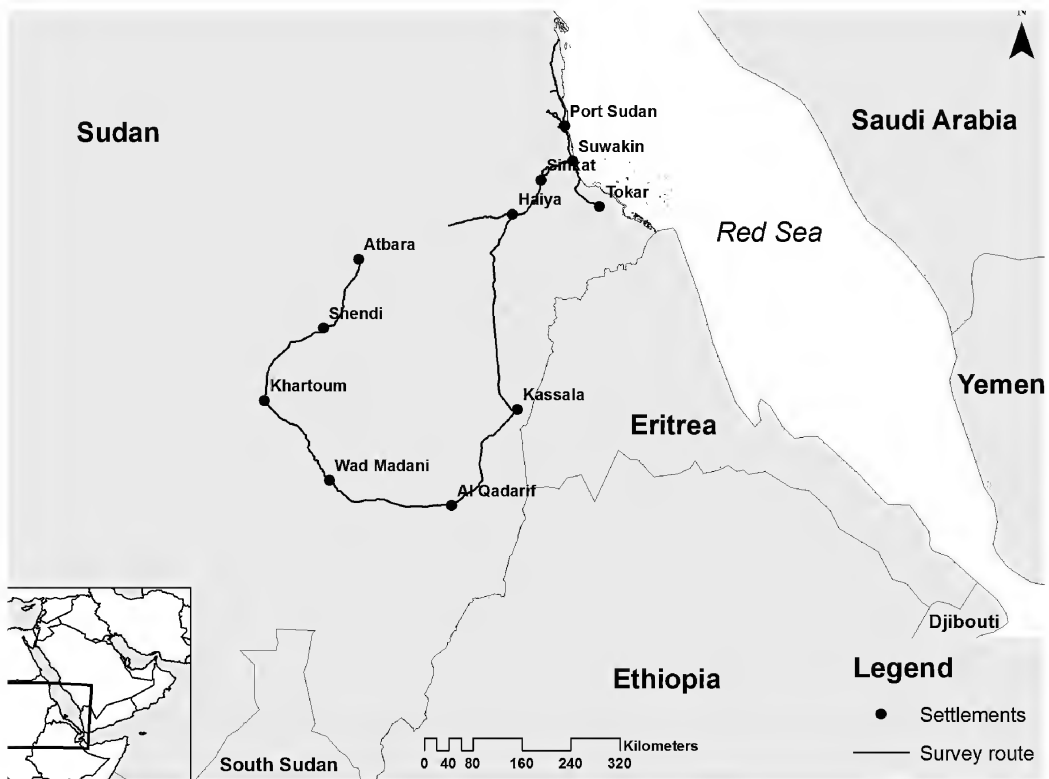


Figure 1. Map of survey route.

Results

Osprey Pandion haliaetus

Nikolaus (1987) mentioned that Osprey is a common resident breeder along the Red Sea coast of Sudan. We observed one nest with an adult bird on a halophyte bush in mangrove habitat on the Red Sea coast between Suwakin and Tokar. The base of the nest was only about 50 cm high, built on the dead trunk of a mangrove tree with the top of the nest about 1 m above the water surface.

Black Kite Milvus migrans and *Yellow-billed Kite M. aegyptius*

With a total of 2332 individuals seen at 156 locations, the Black, and Yellow-billed Kites were the most common raptors, accounting for 82.8% of the observed raptors.

Kites were common in Khartoum, where they were present in the air and dispersed over the city virtually all of the time. The numbers represent only birds seen during the transect through the city. The biggest concentrations were seen along the main road from Al Qadarif to Kassala over a stretch of 50 km before Kassala. In this area 1520 individuals were seen, with the biggest concentrations in the town of Kassala (at least 320) and at a market and village along the road, where two groups of 252 and 300 were seen. However, kites were almost constantly present in the sky along this transect, with groups largely increasing in and around villages.

On 1 October one pair was observed in a nest built on a transmission tower at c. 25 m high in the central part of the village of Suwakin on the Red Sea coast. A loose colony of four nests was located in mangrove forest in the sea 29 km south of Suwakin with ten birds perched on trees in close proximity to the nests and one bird in a nest. On 2 October a nest built on a high voltage power pole with one pair nearby was observed in the surroundings of Port Sudan.

Nine road-killed kites were found in different places along the route. Most probably all of them became victims of the traffic while scavenging other road-killed animals on the asphalt road or while trying to catch live prey crossing the road. Several times we observed that kites allowed vehicles to approach within a few metres before taking off. In one case 14 kites were observed feeding on a cow carcass next to the road.

Egyptian Vulture *Neophron percnopterus*

Nikolaus (1987) described the Egyptian Vulture as, "still fairly common" in desert, semi-arid grassland and villages and added that their numbers had decreased noticeably in most areas except the Red Sea region, where Palearctic migrants are expected. Almost 20 years later Nikolaus (2006) recorded almost no vultures in areas that previously had healthy populations and suggested there was a continuing and very strong decline of all vulture species in Sudan. During this survey 226 Egyptian Vultures were seen, which accounted for 8% of all raptor observations; 91.6% of all Egyptian Vultures were seen in or near the immediate vicinities of villages or towns. Larger congregations existed at Port Sudan where, on 30 September, 34 were seen at midday perching on the ground next to a small waterhole among large livestock farms on the northern edge of the town. The age structure of the birds was as follows: adult 23, 4th plumage 1, 3rd plumage 1, 2nd plumage 6, juvenile 3 (Clark & Schmitt 2004). Another group of at least 40, mostly adults, together with a similar number of stray dogs was seen at the town's slaughterhouse on 1 October around the area where animal remains were dumped in a small valley. About 40 were observed at Haiya on 3 October, where most of the birds were taking off from a roadside restaurant where there were remains of slaughtered animals. On the same day, 105 km west from Hiya, 54 Egyptian Vultures were roosting on high-tension power lines next to a small roadside settlement, comprising 24 adults, 27 immatures and 3 of unidentified age. Identification of all birds by age class was not possible due to the distance from the road and the decreased light in late evening.

Three quite probable local resident pairs were seen in the Red Sea Hills. A pair was seen perched in midday on a shaded part of a niche, very suitable for breeding and with a probable nest as the site had 'whitewash' typical for the species. Another probable pair was seen near the dirt road from Port Sudan to Khor Arba' At, preparing to roost together on a cliff niche with 'whitewash' typical for the species, indicating

traditional use as a favourite perch site. A third pair of adults was flying together in synchronous flight near a small settlement north of Port Sudan.

Two adult Egyptian Vultures were observed feeding on the asphalt road on the remains of a road-killed Black/Yellow-billed Kite, showing a very high tolerance to approaching cars, taking off only in the last few metres and putting themselves at significant risk of being hit. One road-killed adult vulture was observed on the road between Port Sudan and Suwakin, while another adult with an injured wing was seen at Haiya. Vulnerability of the Egyptian Vulture to road collision has already been reported for Sudan, Spain and Socotra Island (Nikolaus 1984, Hernandez & Margalida 2009, Porter & Suleiman 2012). Angelov *et al.* (2012) reported 17 electrocuted Egyptian Vultures along a 31-km section of power line near Port Sudan, while the same power line had already been described as heavily lethal to the species and other large raptors in previous surveys (Nikolaus 1984).

Hooded Vulture *Necrosyrtes monachus*

The Hooded Vulture in Sudan is described as, “very common in the south, rare in the north” (Nikolaus 1987). In total, 37 individuals were seen at three locations. The first two were in the only densely forested area along the route, part of the Eastern Sudanian savanna zone, where 35 Hooded Vultures were seen at two different locations 6.5 km apart. The first group of 20 was feeding on a dead cow in the forest next to a temporary nomads’ camp. The second group, consisting of 15 Hooded Vultures together with other scavengers, was flying and appeared to land next to a carcass. Two Hooded Vultures were seen flying over Sinkat in the Red Sea Hills.

White-backed Vulture *Gyps africanus*

Only one observation was made, of six birds seen together with 15 Hooded Vultures, 4 Black Kites and one Tawny Eagle *Aquila rapax* in a forested landscape. The area offered suitable breeding habitat. The birds were seen flying around and landing on the trees; probably there was a carcass nearby.

Rüppell’s Vulture *Gyps rueppellii*

Rüppell’s Vulture in Sudan was described as, “the most common vulture in the north” (Nikolaus 1987). We observed it at four locations while cliffs with ‘whitewash’, indicating the presence of *Gyps* vultures, were seen at seven more sites. On 28 September around 12:30 at least 40 vultures were seen flying and landing on a big roost next to Kassala town, where historically, a “very large” colony existed (Nikolaus 2006). The cliffs were covered with a large amount of ‘whitewash’, reaching 10–20 m on some ledges. The number and size of the ‘whitewashes’ indicated the presence of hundreds of Rüppell’s Vultures, but it is not known whether such numbers still occur there, because, depending on the climatic conditions, ‘whitewash’ may persist for years. Interestingly, during a visit in autumn 2005 there were no vultures sighted at the cliffs (Nikolaus 2006), suggesting the extinction of the colony at that time and subsequent recolonization. A probable breeding colony was located about 80 km southeast of Wad Madani, where 30 vultures were observed (28 of them flying), with at least 3 pairs engaged in courtship flights, while another possible pair was perching on a suitable nesting ledge covered with whitewash.

Snake eagles *Circaetus* spp.

In total, 56 individuals of three species were observed at 36 locations on 27 and 28

September (up to 6 eagles per location). Fifty of them (89%) were recorded during a transect about 100 km along the main road west of Al Qadarif in grassland and agricultural habitat. Species composition included 42 Short-toed *C. gallicus*, 12 Black-chested *C. pectoralis*, and 2 Brown *C. cinereus*. More than 90% of the observed snake eagles were perching on medium and high voltage electricity pylons along the road. Considering the difficulty in identifying Beaudouin's Snake Eagle *C. beaudouini*, especially when perched at a distance (Clark 2000), it is possible that some individuals of this species were confused with Short-toed or Black-chested Snake Eagles. Geographically, our observations were several tens of kilometres more to the northeast than the northern-most records for the species in Sudan (Nikolaus 1987). The northern-most observation of a snake eagle during our survey, was one Short-toed Snake Eagle about 20 km southwest of Kassala.

African Harrier Hawk *Polyboroides typus*

One adult observed on 27 September was perched on a power pole next to the main road 88 km west of Gedaref.

Harriers *Circus* spp.

Three species of harrier, totalling 24 individuals were seen during the survey, of which 4 were Western Marsh *C. aeruginosus*, 5 were Montagu's *C. pygargus*, and 4 were Pallid *C. macrourus*, and 11 female and juvenile Pallid or Montagu's Harriers. Among these, 16 (67%) were seen along 33 km in open grasslands immediately north of Kassala, representing two Pallid, one Western Marsh and 8 female and juvenile Pallid or Montagu's harriers. Three other Western Marsh Harriers were seen at different sites along the Atbara-Khartoum road. One Pallid Harrier was seen about 55 km southwest of Atbara and one between Gedaref and Wad Medani.

Grasshopper Buzzard *Butastur rufipennis*

In total 8 Grasshopper Buzzards were seen at four sites. Two birds were seen at 26 km and two more at 22 km west of Al Fao in an agricultural landscape, the other two (of 3 and 1 birds) at 32 and 38 km north-northwest of Kassala in vast grasslands. Nikolaus (1987) mentioned that, "very large numbers concentrate in the Khartoum-Gedaref area in September-October". This, compared with our observations, suggests a possible population decline or a change in the non-breeding grounds of this species.

Red-necked Buzzard *Buteo auguralis*

Nineteen Red-necked Buzzards were seen at 15 sites along 160 km, mostly west and northeast of Gedaref, together with three unidentified buzzards. Most of these birds were perching on medium voltage power lines along the road. Our observations of this species are in accordance with the distribution map given by Nikolaus (1987).

Lesser Spotted Eagle *Aquila pomarina*

Two juveniles were seen landing at a night roost in palm trees in a valley east of the reservoir of Khor Arba' At northwest of Port Sudan.

Tawny Eagle *Aquila rapax*

The species was seen at only two locations. One adult was seen perching on a high voltage power line next to the road. On the next pylon there was a big eagle-type nest, most probably belonging to this species. High voltage power lines are increasingly

used for nest sites across the range of this species (Jennings 2010, Tarboton & Allan 1984), but to our knowledge it has not been recorded in Sudan. One adult was seen together with a group of 15 Hooded Vultures, 6 White-backed Vultures and 4 Black Kites in a forested landscape, offering suitable breeding habitat, with birds flying around and landing on trees probably next to a carcass. In the same area one dead adult was seen next to the road, probably killed by a car.

Bonelli's Eagle *Aquila fasciata*

A pair of adults with an indication of probable breeding and one dead adult electrocuted under a power line were observed northwest of Port Sudan (Angelov & Hashim 2011).

Booted Eagle *Aquila pennata*

One light morph individual was seen in soaring flight over Sinkat on 29 September.

Lesser Kestrel *Falco naumanni*

One adult male was seen on 30 September in a flat desert area several kilometres northwest of Port Sudan.

Lanner Falcon *Falco biarmicus*

Three breeding territories were recorded. Two of them were on cliffs north of Port Sudan with pairs observed near traditional nesting sites (one of the birds was inspecting an old nest built by Brown-necked Ravens *Corvus ruficollis*). One adult was perched on a cliff suitable for nesting that had typical large falcon 'whitewash', located about 30 km north from Derudeb. One adult was observed over Sinkat and one on a high voltage power line nest Port Sudan.

Discussion

Our observations contribute to the growing body of more recent ornithological data on the status and threats to raptors in Sudan (Angelov & Hashim 2011, Bird & Blackburn 2011, Angelov *et al.* 2012).

Our survey was conducted mainly along the most intensively used asphalt roads in the northeast of the country in areas where high human population density was concentrated. Urbanization and increasing human populations are reported to cause negative effects on large raptors in Africa (Thiollay 2006, 2007). While for some species like Black, and Yellow-billed Kites and Egyptian Vultures, areas of human habitation in the tropics are attractants (Fergusson-Lees & Chrisite 2011). Thus, we suggest that extrapolation of raptor counts along the main roads in northeast Sudan will most likely give a biased picture of the raptor populations in that part of the country.

The geographic region where Egyptian Vultures were mostly seen lies 100 to 200 km north of the wintering range of the species as identified by Buechley *et al.* (2018). Earlier publications suggest that historically observed congregations of Egyptian Vultures in the Red Sea Hills area in autumn are formed by migrating and wintering Palaearctic birds, possibly mixed with North African resident individuals (Meinertzhagen 1954, Nikolaus 1987, Angelov *et al.* 2012). However, recent data using satellite telemetry suggest that Palaearctic migrants may not fly along the west coast of the Red Sea in autumn but do so in spring (Buechley *et al.* 2018). However, given the relatively small number of vultures tracked, it cannot be determined with certainty that the congregations of Egyptian Vultures we observed were resident or migrants.

Food availability seems not to be a limiting factor for vultures since more than 100 livestock carcasses (mainly cattle) were seen within a few tens of metres from the main road during the survey. Few of them were fresh, but we saw no scavengers feeding or flying around them, except for Black and Yellow-billed Kites. The areas where vultures were encountered most often were inhabited mainly by nomadic pastoralists. These pastoralists increasingly use firearms to hunt wild animals, which were said to be declining because of the increase in armed civilians. The use of poisons against wild carnivores is forbidden and seems to be an unused practice, but more research is needed. The few interviewed pastoralists said that if they have problems with carnivores attacking their livestock, they usually shoot them, but they do not use poison baits. Large congregations of stray dogs occur at the municipal slaughterhouse in Port Sudan, where until several years ago orders for shooting them were regularly issued by the municipality and poison baits had not been used.

Currently there is a large increase in electricity infrastructure across Africa (Smallie *et al.* 2009), which at medium voltage, is most often unsafe for large birds. In this respect, there is an urgent need for close dialogue between government bodies in the environment sector, electricity companies, power pole production companies, and conservation managers. However, to date there has been very little action undertaken in this respect across the continent, while probably hundreds of thousands of kilometres of electricity infrastructure are planned to be built in Africa in the next decades (Smallie *et al.* 2009).

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References

- ANGELOV, I., HASHIM, I. 2011. First record of Bonelli's Eagle *Aquila fasciatus* in Sudan. *Scopus* 31: 42–45.
- ANGELOV, I., HASHIM, I., & OPPEL, S. 2012. Persistent electrocution mortality of Egyptian Vultures *Neophron percnopterus* over 28 years in East Africa. *Bird Conservation International*. 1–6.
- BIRD, J. P. & BLACKBURN, T. M. 2011. Observations of large raptors in northeast Sudan. *Scopus* 31: 19–27.
- BUECHLEY, E. R., OPPEL, S., BEATTY, W. S., NIKOLOV, S. C., DOBREV, V., ARKUMAREV, V., SARAVIA, V., BOUGAIN, C., BOUNAS, A., KRET, E., SKARTSI, T., AKTAY, L., AGHABABYAN, K., FREHNER, E. & ŞEKERCIOĞLU, Ç. H. 2018. Identifying critical migratory bottlenecks and high-use areas for an endangered migratory soaring bird across three continents. *Journal of Avian Biology* 49: e01629. doi:10.1111/jav.01629
- CLARK, W. S. 2000. Field identification of Beaudouin's Snake Eagle *Circaetus (gallicus) beaudouini*. *Bulletin of the African Bird Club* 7: 1–13.
- CLARK, W. S. & SCHMITT, N. J. 1998. Ageing Egyptian Vultures. *Alula* 4: 122–127.
- FERGUSON-LEES, J. & CHRISTIE, D. 2001. *Raptors of the world*. London: Christopher Helm.
- GRANDE, J. M., D. SERRANO, G. TAVECCHIA, M. CARRETE, O. CEBALLOS, R. DIAZ-DELGADO, J. L. TELLA, & DONÁZAR, J. A. 2009. Survival in a long-lived territorial migrant: effects of life-history traits and ecological conditions in wintering and breeding areas. *Oikos* 118: 580–590.

- HERNANDEZ, M. & MARGALIDA, A. 2009. Poison-related mortality effects in the endangered Egyptian Vulture (*Neophron percnopterus*) population in Spain. *European Journal of Wildlife Research* 55: 415–423.
- JENNINGS, M. C. 2010. *Atlas of the breeding birds of Arabia*. Fauna of Arabia, Vol. 25, 772 pp.
- MEINERTZHAGEN, R. 1954. *Birds of Arabia*. Edinburgh: Oliver & Boyd.
- MUNDY, P. J., BUTCHART, D., LEDGER, J. & PIPER, S. 1992. *The vultures of Africa*. Randburg, South Africa: Acorn Books.
- NIKOLAUS, G. 1984. Distinct status changes of certain Palaearctic migrants in the Sudan. *Scopus* 8: 36–38.
- NIKOLAUS, G. 1987. Distribution atlas of Sudan's birds with notes on habitat and status. *Bonner Zoologische Monographien* 25: 1–32.
- NIKOLAUS, G. 2006. Where have all the African vultures gone? *Vulture News* 55: 65–67.
- OGADA, D., SHAW, P., BEYERS, R. L., BUIJ, R., MURN, C., THIOLLAY, J. M., BEALE, C. M., HOLDO, R. M., POMEROY, D., BAKER, N., KRÜGER, S. C., BOTHA, A., VIRANI, M. Z., MONADIEM, A. & SINCLAIR, A. R. 2016. Another Continental Vulture Crisis: Africa's Vultures Collapsing toward Extinction. *Conservation Letters* 9: 89–97.
- PORTER, R. F. & SULEIMAN, A. S. 2012. The Egyptian Vulture *Neophron percnopterus* on Socotra, Yemen: population, ecology, conservation and ethno-ornithology. *Sandgrouse* 34: 44–62.
- SMALLIE, J., DIAMOND, M. & JENKINS, A. 2009. Lighting up the African continent—what does it mean for our birds? pp. 38–43. In: Harebottle, D.M., Craig, A.J.F.K., Anderson, M.D., Rakotomanana, H. & Muchai. (eds). *Proceedings of the 12th Pan-African Ornithological Congress, 2008*. Animal Demography Unit: Cape Town.
- TARBOTON, W. & ALLAN, D. 1984. *The status and conservation of birds of prey in the Transvaal*. Pretoria: Transvaal Museum.
- THIOLLAY, J.-M. 2006. Large bird declines with increasing human pressure in savanna woodlands (Burkina Faso). *Biodiversity and Conservation* 15: 2085–2108.
- THIOLLAY, J.-M. 2006. Severe decline of large birds in the northern Sahel of West Africa: a long-term assessment. *Bird Conservation International* 16: 353–365.
- THIOLLAY, J.-M. 2007. Raptor population decline in West Africa. *Ostrich* 78:404–413.
- VIRANI, M. Z., KENDALL, C., NJOROGI, P., & THOMSETT, S. 2011. Major declines in the abundance of vultures and other scavenging raptors in and around the Masai Mara ecosystem, Kenya. *Biological Conservation*. 144: 746–752.

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Conservation status of the forest birds of the Siria Plateau and western Maasai Mara, Narok County, Kenya

James Bradley and Tyler Davis

Summary

In light of rapid deforestation across the Siria Plateau of southwest Kenya, we compile records and review the status and distribution of locally occurring forest dependent birds there. Records of forest birds in the western reaches of the Maasai Mara National Reserve are also included for reference, and bird richness in the area is briefly contrasted with that of other forests of southwest Kenya. Included in this review is a first account of the forest birds of the 1500-ha Nyakweri Forest.

Keywords Deforestation, Biodiversity, Migori River, Inventory, Forest birds

Introduction

Zimmerman *et al.* (1996) map species of forest birds occurring in the western Maasai Mara and across the Siria Plateau, and a classification of forest birds by Bennun *et al.* (1996) provides a means of assessing the relative importance of forests for the conservation of forest bird diversity. Records of forest species from this area in the 22 years since have remained largely unpublished, and several exploratory surveys now permit the drafting of a species list for the previously unknown Nyakweri Forest, the largest extant forest in southwestern Kenya. In conjunction with this growing body of newer information, forest loss has been extensive since 2014, which has prompted this collective review of forest birds occurring in the region. In addition to putting our own field observations on record, we incorporate field observations and published records from a variety of other sources so as to provide some additional detail on the distribution and comparative abundance of forest birds across the area covered. It is hoped that such a regional specific study of forest bird occurrence as presented here, might provide some incentive or be useful in efforts to conserve what is left.

Study area

Forest in the region discussed here is found in two main basins, with both rivers flowing in different directions into Lake Victoria along the eastern shores. First, the Migori River and its tributaries drain westwards across the Siria Plateau, which comprises an upland area with gentle relief situated around the town of Lolgorien (Fig 1.) and spanning the western three quarters of the region discussed here. The plateau is covered by an extensive area of forest-savanna mosaic at an elevation of approximately 1550–1900 m, with primarily lower-montane vegetation characteristics. Second, the well forested Mara River drains southwards across the westernmost extent of the Maasai Mara at 1500–1600 m, which covers the eastern quarter of the study area. Div-

iding these two local ecoregions, the steep and rocky Siria Escarpment (Esoit Oololo Escarpment) comprises the easternmost limits of the Siria Plateau and the western extent of the Mara–Serengeti ecosystem, and rises to just over 2000 m. It is well wooded in a few places and drained by several small streams, including the slightly larger Sabaringo River, which flows into the Mara River downstream of groundwater forest at Kichwa Tembo Camp. Forest along the Sabaringo and covering parts of the divide between the Migori and Mara River basins, though increasingly degraded, continues to provide a biological link between the two main areas covered.

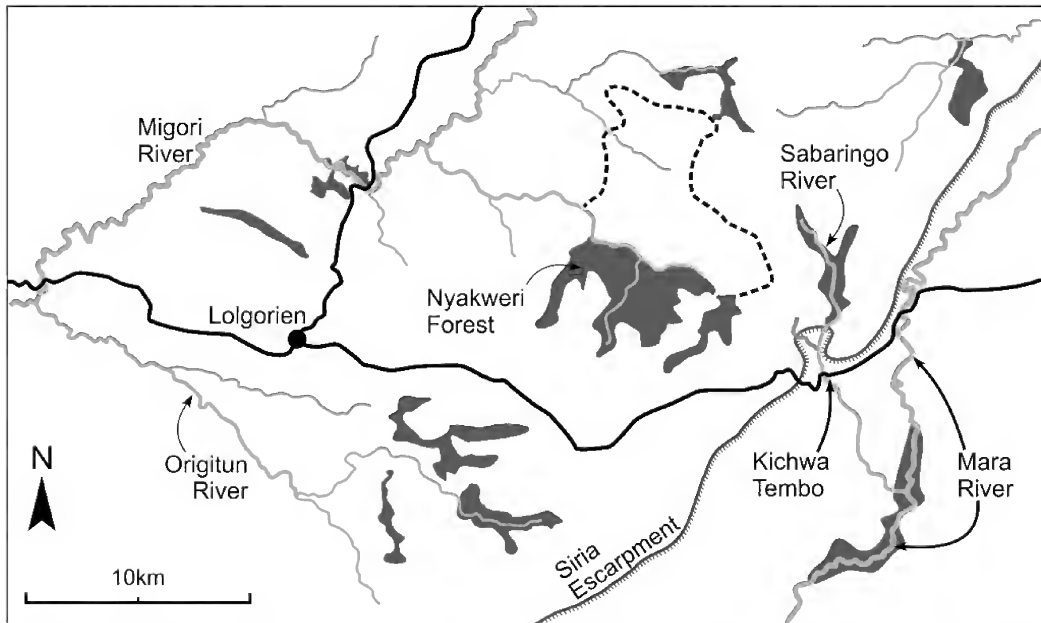


Figure 1. Map of the study area showing locations described in the text, the town of Lolgorien and main roads, as well as larger tracts of extant forest habitat (green shade). The former extent of Nyakweri Forest (pre-2014) is shown by the dashed line.

The most extensive and important remaining habitat for forest bird conservation in the region, is Nyakweri Forest ($1^{\circ} 12'S$, $34^{\circ} 56'E$), which is located midway between the Siria Escarpment and the town of Lolgorien. Approximately 1500 ha of contiguous forest remains at this site, which comprises a significant area likely to support viable populations of many of the species detailed here. Prior to 2014, this forest covered twice this area, and in light of the deforestation of the northern half in the years since (over 2000 ha), there is intense pressure on the remaining forest and its forest dependent bird species. Severe threat of habitat loss is also faced by forest dependent species, and in particular forest specialists, inhabiting the many smaller forest patches (<50 ha) peripheral to Nyakweri and along the Origitun River in the south of the region, which are also being rapidly cleared or degraded. As of the time of writing, Nyakweri Forest has been subdivided with plot titles issued, and its conservation now rests in the hands of private landowners.

Data sources and presentation

Our field data from the region were collected from 2013 to early 2019 and comprise a series of site-visit checklists; each considered an individual survey unit regardless of

duration. Observations were made with 8x or 10x binoculars, while digital photography, audio recording and playback was also sometimes used to maximize the possibility of detecting all species present. Our data comprise four checklists from Nyakweri Forest (each visit 4+ hours), 15 checklists from smaller forest patches to the west, north and south of Nyakweri, and 65 checklists from Angama Lodge on the Siria Escarpment. To supplement our own field observations, we also include and reference where possible, any previously published records in short notes, papers or rare bird reviews, as well as a small number of records kindly forwarded to us for this paper by Brian Finch and Don Turner. Lastly, and with care, we include a number of records reported to local email listserves (Kenya Birdsnet Yahoo Group), and an open-user database (eBird).

Each species account includes a map showing the spatial distribution of records in the study area as shown in Figure 1, as well as a coarse indication of relative abundance by way of differing size markers: the smallest dot comprising a single survey record, a medium dot two to four records, and a large dot five or more records. The text also provides some information on aspects of a species ecology locally, including breeding information where known. It should be noted that including all data sources, relative observer effort in the area of the Mara River and Siria Escarpment area is considerably greater than elsewhere, including Nyakweri Forest. Taxonomy and nomenclature follow the *Checklist of the Birds of Kenya* 4th edition (EANHS 2009) and references for online digital media and specimen material reviewed are given in Appendix A.

Results and discussion

In the western Maasai Mara and Siria Plateau forests, we document the occurrence of 80 species of forest dependent birds, as defined by Bennun *et al.* (1996): 51 forest generalists and 29 forest specialists, comprising approximately 35 % of the total number of forest dependent species known to occur in Kenya. Of these, 18 can be considered representative of the Afrotropical highlands biome, while four are representative of the Congo-Guinea forests biome (Bennun & Njoroge 1999). Sixty species have been recorded in Nyakweri Forest or 8 km downstream on the Migori River (formerly connected by forest), where there is currently no legal forest protection, and 59 have been recorded in the forests of the western Maasai Mara at Kichwa Tembo and/or along the Mara River, where habitats are afforded better protection. Comparing the forest avifauna of these two discreet regions, 43 % (26 out of 60) of forest dependent birds occurring in Nyakweri Forest and downstream on the Migori River are comprised of forest specialists, compared with only 25 % (15 out of 59) at Kichwa Tembo or downstream on the Mara River. It can be further pointed out that many of the forest bird records from the western Maasai Mara involve single records, possibly of individuals wandering from the Siria Plateau forests in many cases. These figures highlight the importance of Nyakweri Forest in sustaining forest specialist bird populations at a regional level, the closest forest area of similar size and richness being more than 150 km distant.

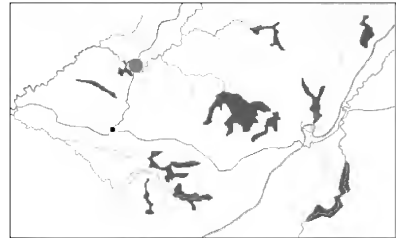
Elsewhere in southwest Kenya, the extensive Trans-Mara Forest lies *c.* 150 km to the northeast of the study region and is known to support a minimum of 66 forest dependent bird species (Bennun 1991b). One hundred kilometres to the west of the study region, the isolated and small forests of the Gwasssi Hills are known to support 54 species of forest dependent birds (Bradley *et al.* 2015, Bradley 2018, JB unpubl.).

While there is considerable overlap in the avifauna of all these forests, several species typical of higher montane forest and present both at Trans-Mara and the Gwas-si Hills have yet to be found in the study area. These include Mountain Greenbul *Andropadus nigriceps*, Cinnamon Bracken Warbler *Bradypterus cinnamomeus*, Brown Woodland Warbler *Phylloscopus umbrovirens*, White-browed Crombec *Syloietta leucophrys*, Northern Double-collared Sunbird *Cinnyris reichenowi* and Black-billed Weaver *Ploceus melanogaster*. Conversely, the presence of Pel's Fishing Owl *Scotopelia peli* and Blue-mantled Crested Flycatcher *Trochocercus cyanomelas* in the study area is unique in western Kenya. Further surveys should seek to establish which subspecies of the latter is present, as these birds may comprise the only Kenya population of western *T. c. vivax*, as suggested by initial observations. Otherwise, and given the still limited amount of observational data from Nyakweri Forest, it can be expected that future observations will reveal additional forest birds as yet unrecorded in the area.

Species accounts

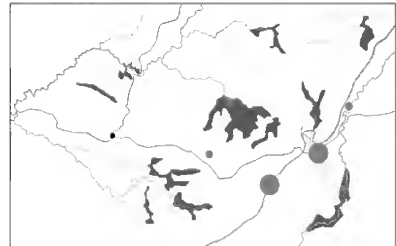
Crested Guineafowl *Guttera pucherani*

Forest generalist. Pre-1995 records along the Migori River and in the Sabaringo Valley, with a more recent observation in the Origitun drainage. Presumably only a rare resident, but has bred, with a record of young in October (Turner 1993, Finch 1994, Zimmerman *et al.* 1996).



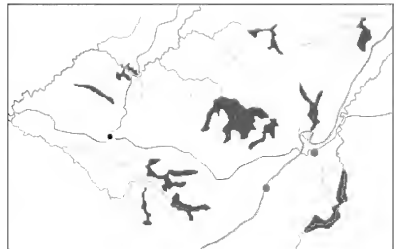
Scaly Francolin *Francolinus squamatus*

Forest generalist. Local resident throughout the region and common only in moist thicket and dense forest understory in the vicinity of the Siria Escarpment.



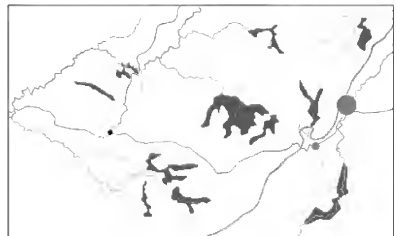
African Hobby *Falco cuvieri*

Forest generalist. Very local and rare visitor to wooded areas of the Siria Escarpment from 1600 to 1900 m, with records in October 1989 and August 2017.



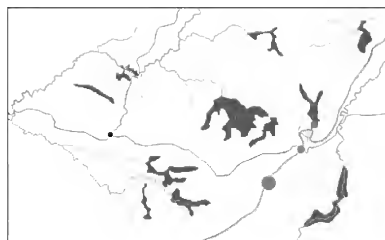
African Cuckoo Hawk *Alviceda cuculoides*

Forest generalist. Older records from the Mara River in July–October, where undoubtedly only a local and rare seasonal visitor. Juveniles observed in July–August (Turner & Pearson 1991).

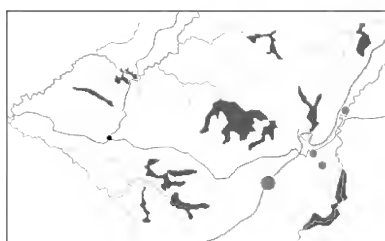


European Honey Buzzard *Pernis apivorus*

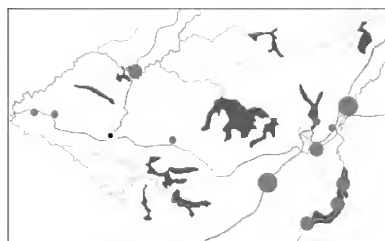
Forest generalist. A scarce Palaearctic passage migrant in the region, with records in November–December and April, up to a maximum of eight birds.

**Bat Hawk** *Macheiramphus alcinus*

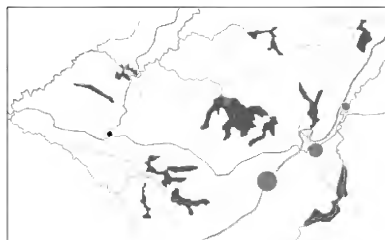
Forest generalist. Very local and rare resident, recorded only from the vicinity of the Siria Escarpment, with records possibly representing only a single pair of birds.

**Western Banded Snake Eagle** *Circaetus cinerascens*

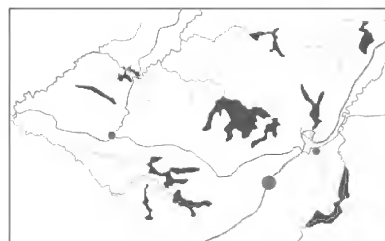
Forest generalist. Singles and pairs are widespread and fairly common residents, reported most often from riverine forest below 1700 m.

**African Goshawk** *Accipiter tachiro*

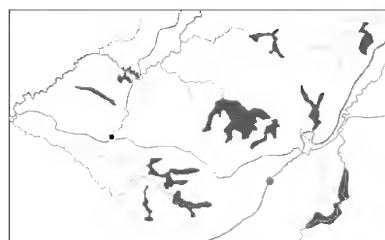
Forest generalist. Local and scarce resident of woodlands and forest edge most often found at 1600–1900 m in the vicinity on the Siria Escarpment.

**Great Sparrowhawk** *Accipiter melanoleucus*

Forest generalist. Singles occurs widely but are very scarce in well wooded and forest edge habitats, possibly only occurring in the region as wanderers.

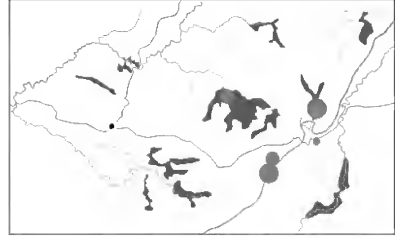
**Mountain Buzzard** *Buteo oreophilus*

Afrotropical highlands forest specialist. One record: 10 February 2015, at 1850 m on the Siria Escarpment. Presumably only a rare wanderer to the region known elsewhere in west Kenya south to the Mau highlands.

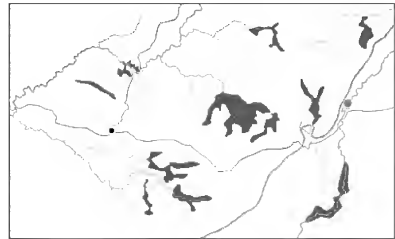


Crowned Eagle *Stephanoaetus coronatus*

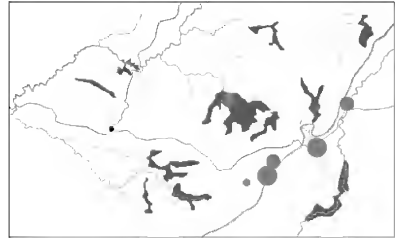
Forest specialist. Very local and uncommon at 1700–1800 m in Nyakweri Forest and the vicinity of the Siria Escarpment. Observed with nest material in April (Finch 2011).

**Buff-spotted Flufftail** *Sarothrura elegans*

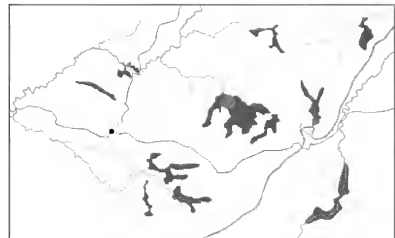
Forest specialist. One record: 14 December 1984 at 1600 m on the Mara River. Presumably only a rare wanderer to the area (Stevenson & Pearson 1986).

**Olive Pigeon** *Columba arquatrix*

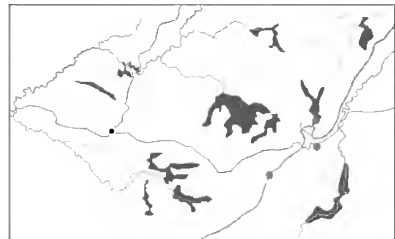
Forest specialist. Local but regularly occurring visitor, primarily along the Siria Escarpment, with all records in March–November.

**Eastern Bronze-naped Pigeon** *Columba delegorguei*

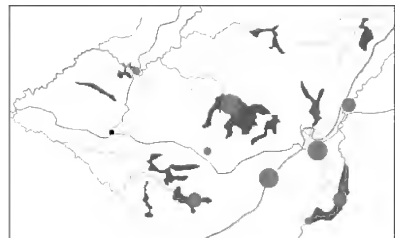
Forest specialist. Very local and scarce visitor (?) primarily to Nyakweri Forest, with records in May and November.

**Lemon Dove** *Aplopelia larvata*

Forest specialist. A rare visitor to forest patches at 1600–1900 m in the vicinity of the Siria Escarpment, with records in January, April and July (Turner & Pearson 1991, B. Finch *in litt.*).

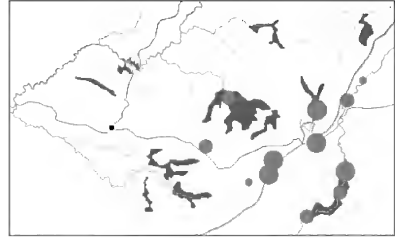
**Tambourine Dove** *Turtur tympanistria*

Forest generalist. Widespread and common resident of tall thicket and forest with a dense understorey, occurring from 1600 to 1900 m throughout the region.

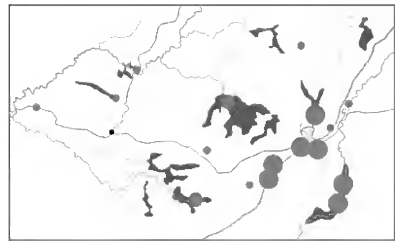


African Green Pigeon *Treron calvus*

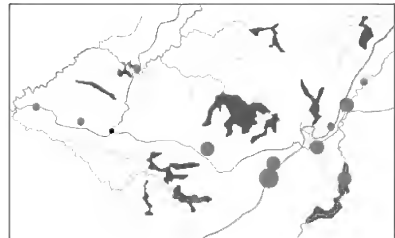
Forest generalist. A common resident from 1550 to 1900 m along the Mara River and across eastern areas of the Siria Plateau. The lack of records from western areas below 1700 m may reflect heavy deforestation in those areas in past decades.

**Ross's Turaco** *Mussophaga rossae*

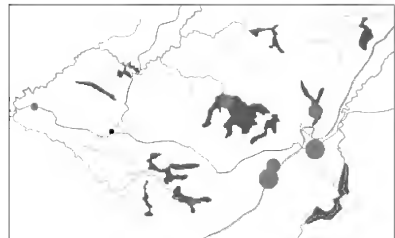
Forest generalist. Widespread and common resident in pairs and small groups from 1550 to 2000 m, preferring forest strips and small patches to the forest interior.

**Red-chested Cuckoo** *Cuculus solitarius*

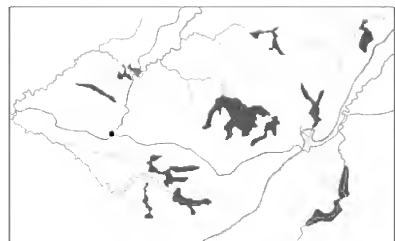
Forest generalist. Widespread and fairly common seasonal visitor to forest edge habitats, with most records in April–June and October–December.

**African Emerald Cuckoo** *Chrysococcyx cupreus*

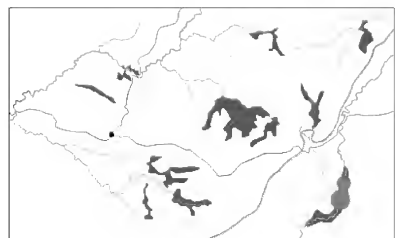
Forest generalist. Widespread but generally uncommon resident (?), mostly above 1700 m, and usually detected only when singing in April–May and October–December.

**Yellowbill** *Ceuthmochares aereus*

Forest generalist. Known in the region from one undated record at 1550 m on the Migori River. This species is now widely treated as two forms, with ranges roughly divided east and west of the Kenya Rift Valley. The race here is known as the Blue Malkoha in some checklists (D. Turner, pers. comm.).

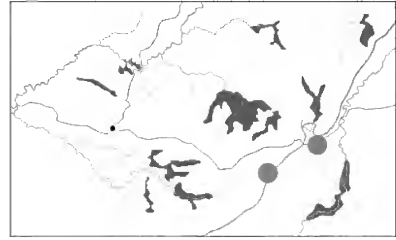
**Pel's Fishing Owl** *Scotopelia peli*

Forest generalist. Very local and rare resident at 1600 m along the Mara River. Heard more often than seen but sometimes spotted from hot air balloons. Birds were observed on an active nest in March–April 1994 (Pearson 1978, Pearson & Turner 1998, Turner 1993).

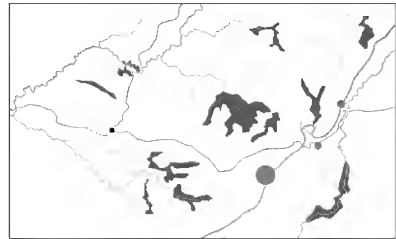


African Wood Owl *Strix woodfordii*

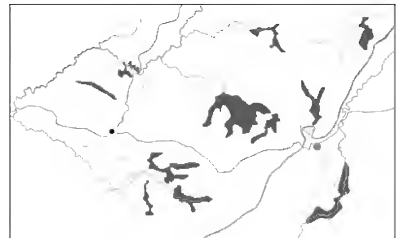
Forest generalist. Local and scarce resident from 1600 to 1900m along the Siria Escarpment. Possibly overlooked elsewhere.

**Montane Nightjar** *Caprimulgus poliocephalus*

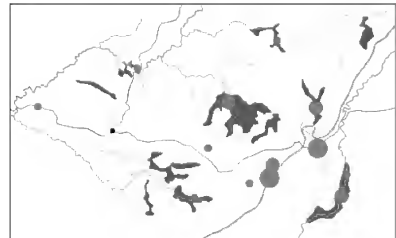
Afrotropical highlands forest generalist. Local and uncommon resident from 1600 to 1900 m along the Siria Escarpment.

**Scarce Swift** *Schoutedenapus myoptilus*

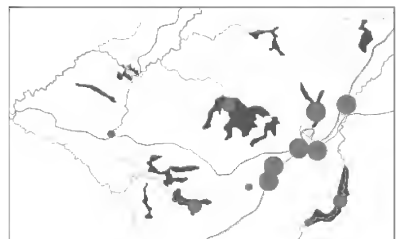
Afrotropical highlands forest generalist. One record: 100+ birds in March 1987 at 1600m over Kichwa Tembo. Presumably only a rare wanderer to the area (Turner & Pearson 1989).

**Narina Trogon** *Apaloderma narina*

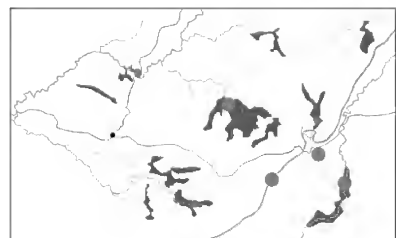
Forest generalist. Widespread and fairly common resident of forest interior from 1550 to 1900m, often wandering to narrow forest strips or small forest patches.

**Cinnamon-chested Bee-eater** *Merops oreobates*

Afrotropical highlands forest generalist. Widespread and locally common resident of forest edge from 1550 to 1900m, favouring steep valleys and the slopes of the Siria Escarpment.

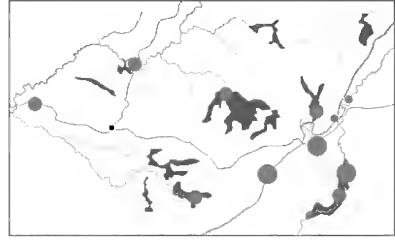
**White-headed Wood-hoopoe** *Phoeniculus bollei*

Forest specialist. A local and uncommon resident above 1750m in Nyakweri Forest and along the Siria Escarpment. Today, it appears to be less numerous in the Mara basin than in the past, possibly reflecting a local contraction in range.



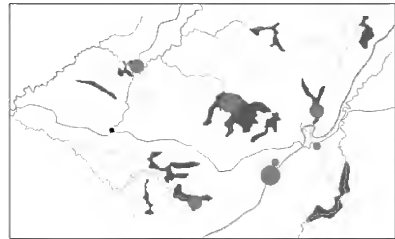
Black-and-white-casqued Hornbill *Bycanistes subcylindricus*

Guinea - Congo forest generalist. Widespread and fairly common resident of riverine forest and well wooded areas from 1550 to 1900m. Typically found in pairs but may gather in numbers at fruiting trees.



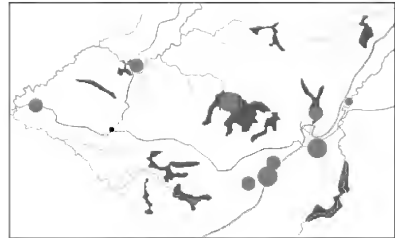
Grey-throated Barbet *Gymnobucco bonapartei*

Forest generalist. Widespread and fairly common resident of forest interior from 1600 to 1900 m, often favouring large and old trees where sometimes gathers in groups of 20 or more birds.



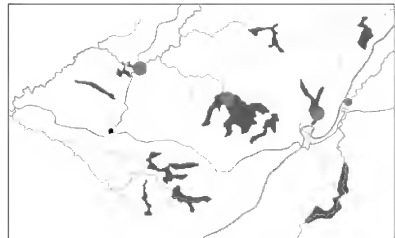
Yellow-rumped Tinkerbird *Pogoniulus bilineatus*

Forest generalist. Widespread and common resident of forest interior, edge and well wooded habitats from 1550 to 1900m, but scarce along the Mara River.



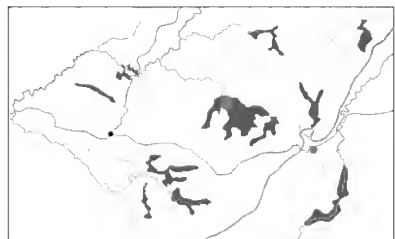
Yellow-billed Barbet *Trachylaemus purpuratus*

Guinea-Congo forest generalist. Local and uncommon resident of good forest from 1600 to 1800m, wandering rarely to the Mara River.



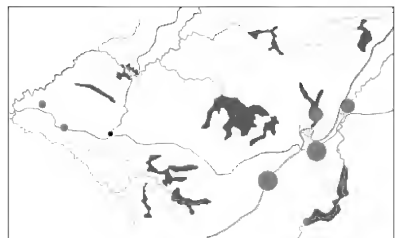
Least Honeyguide *Indicator exilis*

Forest specialist. Singles are very local and scarce residents of forest interior from 1700 to 1800m at Nyakweri Forest, wandering occasionally to the western Maasai Mara. Previously known in west Kenya south to the southwest Mau Forest (Zimmerman *et al.* 1996).



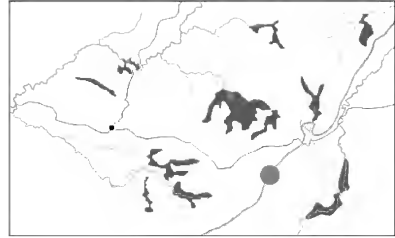
Golden-tailed Woodpecker *Campethera abingoni*

Forest generalist. Widespread but generally uncommon resident of forest edge and well wooded habitats around the Siria Escarpment, occasionally found further west towards Migori.

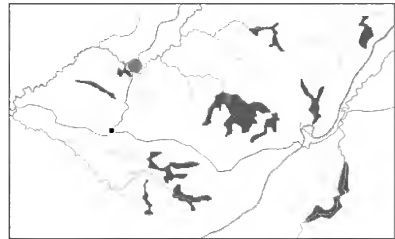


Fine-banded Woodpecker *Campethera tullbergi*

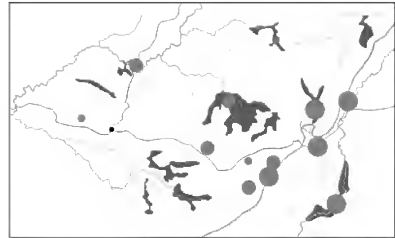
Afrotropical highlands forest specialist. Very local and rare resident of forest patches above 1800 m on the Siria Escarpment and in Nyakweri Forest. Occurs in the region at the lowest extent of its preferred altitudinal range.

**Black-fronted Bushshrike** *Chlorophoneus nigrifrons*

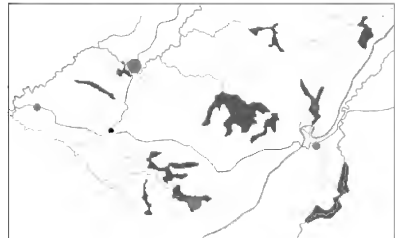
Afrotropical highlands forest specialist. Pre-1990 records from the Migori River, and more recently at 1750 m in Nyakweri Forest. Presumably a very local and rare resident (Zimmerman *et al.* 1996).

**Black-backed Puffback** *Dryoscopus cubla*

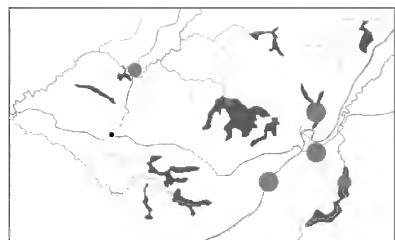
Forest generalist. Widespread and common resident above 1600 m, occurring in wooded and forest habitats. Adults observed feeding nestlings in August (Bennun 1991).

**Lühder's Bushshrike** *Laniarius luehderi*

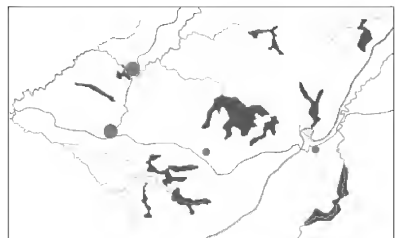
Forest generalist. Pairs are widespread but scarce residents from 1550 to 1850 m, favouring well stratified forest interior and leafy edges. It is only a rare wanderer to the Mara drainage.

**Grey Cuckooshrike** *Coracina caesia*

Afrotropical highlands forest specialist. Singles and pairs are widespread but generally uncommon residents from 1600 to 1900 m, occurring in small forest patches and strips, as well as the forest interior. Today, it appears to be less numerous in the Mara basin than in the past, possibly reflecting a local contraction in range.

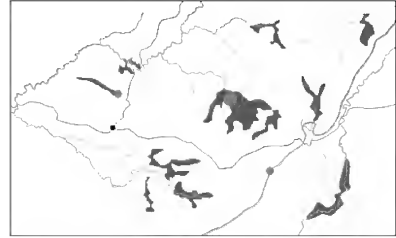
**Purple-throated Cuckooshrike** *Campephaga quiscalina*

Forest specialist. Very local and generally scarce resident of both well wooded and forested habitats at 1600–1900 m, wandering sporadically to the Mara River.



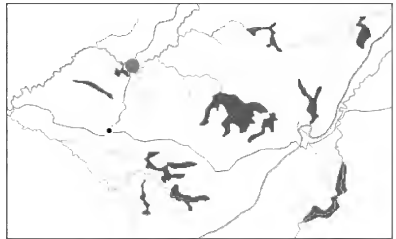
Blue-mantled Crested Flycatcher *Trochocercus cyanomelas*

Forest specialist. Singles and pairs are very local and scarce residents of forest interior from 1700 to 1900 m, favouring a lower midstory and understory with very dense vines. This is a recently discovered population, and a song recorded by J. Bradley in November 2017 is distinct from that of birds in eastern Kenya (Davis *et al.* 2016).



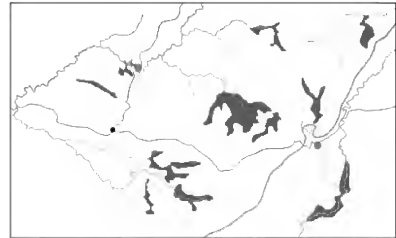
Chubb's Cisticola *Cisticola chubbi*

Afrotropical highlands forest generalist. Pre-1993 records from along the Migori River only, where presumably a very local and rare resident (Zimmerman *et al.* 1996).



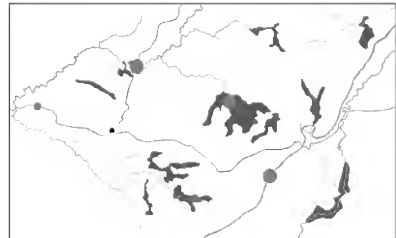
White-chinned Prinia *Schistolais leucopogon*

Forest generalist. Observed in October 1991 along the Migori River and known from the Mara basin by a single individual that remained at Kichwa Tembo for at least 5 years in the early 2000s. It may only be a wanderer to the region from forest areas to the north (Turner 1993, B. Finch *in litt.*).



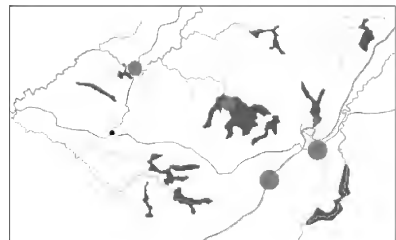
Buff-throated Apalis *Apalis rufogularis*

Guinea-Congo forest specialist. Widespread resident from 1550 to 1900 m, common in Nyakweri Forest but less so elsewhere. Not previously known in Kenya south of the Kavirondo Rift, and first reported in July 2004 before confirmed with a photograph by S. Hatfield in 2016, and an audio recording by J. Bradley in 2017. (C. Kariuki *in litt.*, Zimmerman *et al.* 1996).



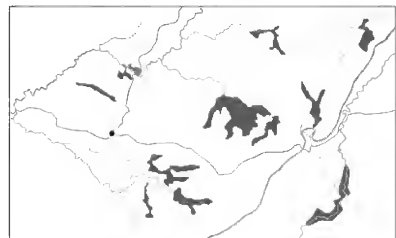
Grey Apalis *Apalis cinerea*

Forest specialist. Widespread resident, mostly above 1700 m but only locally common. Generally outnumbered by the previous species.



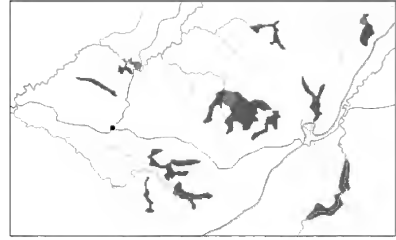
Black-collared Apalis *Apalis pulchra*

Afrotropical highlands forest generalist. One record: 7 October 1991 at 1550 m on the Migori River. It is possibly only a wanderer to the region from forest areas to the north (Turner 1993).



Black-throated Apalis *Apalis jacksoni*

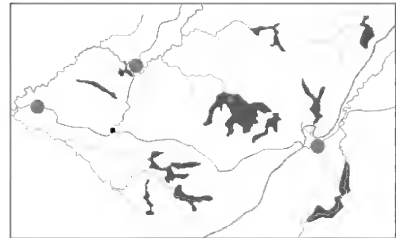
Forest specialist. Very local and rare resident from 1550 to 1850 m, typically favouring the most humid areas within a broader forest habitat.

**Little Greenbul** *Andropadus virens*

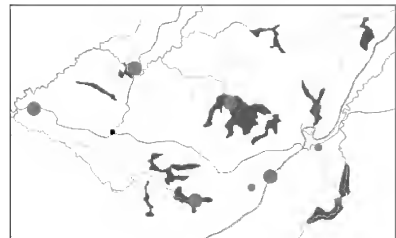
Forest generalist. Widespread resident of forest edge but abundant only below 1800 m in the Migori basin. On occasion, five or more birds can be heard simultaneously, and it may wander to the Mara basin on rare occasions.

**Plain Greenbul** *Andropadus curvirostris*

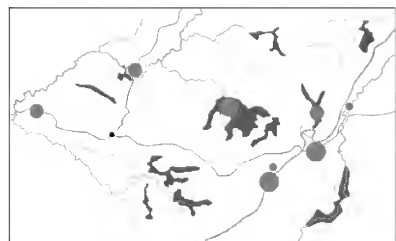
Guinea-Congo forest specialist. Locally rare to uncommon resident from 1550 to 1800 m, favouring the lower-midstory of tall forest. Birds are documented in the region by way of a photograph by S. Carter and an audio recording by J. Williams.

**Yellow-whiskered Greenbul** *Andropadus latirostris*

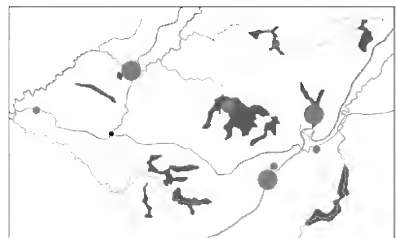
Forest generalist. Widespread and fairly common resident from 1550 to 1900 m, being most abundant in more humid forest types.

**Slender-billed Greenbul** *Andropadus gracilirostris*

Forest specialist. Widespread and fairly common from 1550 to 1900 m but easily overlooked. Favours the canopy and outer foliage of fruiting forest trees. Nest building observed in May and November.

**Joyful Greenbul** *Chlorocichla laetissima*

Aftrotropical highlands forest generalist. Widespread and fairly common resident of good forest from 1550 to 1900 m, with rare wanderers to the Mara basin at Kichwa Tembo. Occurs in groups of 2–6 birds.

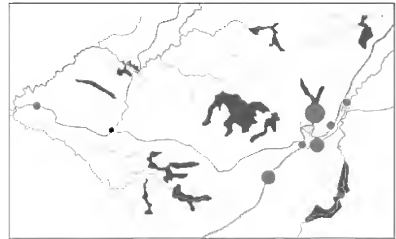


Cabanis's Greenbul *Phyllastrephus cabanisi*

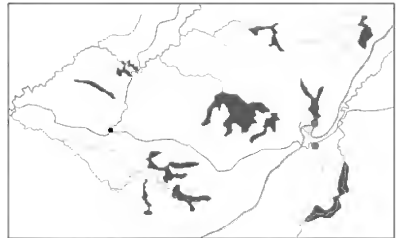
Forest specialist. Pairs and small groups are widespread and common residents of forest and tall thicket from 1550 to 1900 m but are absent from riparian forests of the Mara River.

**Yellow-bellied Hyliota** *Hyliota flavigaster*

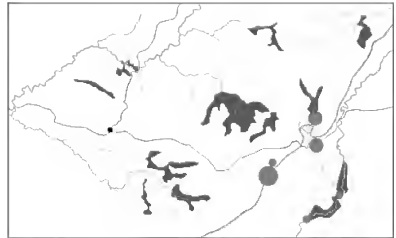
Forest generalist. Local and generally uncommon resident of well wooded habitats, and closely tied to the Siria Escarpment. It is also occasionally found further west towards Migori and an active nest has been observed in July. (B. Finch *in litt.*).

**Wood Warbler** *Phylloscopus sibilatrix*

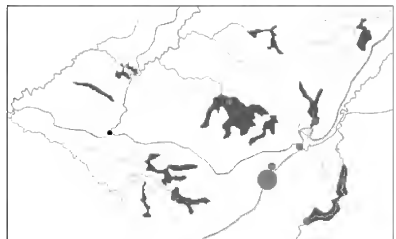
Forest generalist. Single birds on 1-2 January 1989 at c. 1700 m on the Siria Escarpment and on 7 December 1986 at Kichwa Tembo comprise the only records. Undoubtedly only a rare Palearctic visitor (Turner & Pearson 1988, 1991).

**Green-capped Eremomela** *Eremomela scotops*

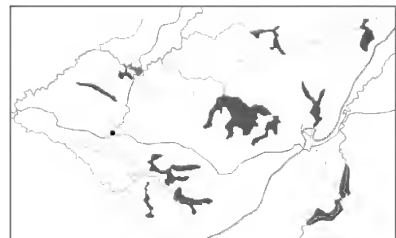
Forest generalist. Very local and uncommon resident of forest edge and well wooded habitats from 1600 to 1900 m along the Siria Escarpment, and occasionally along the Mara River. The subspecies present in the area is *E. s. citriniceps*.

**Blackcap** *Sylvia atricapilla*

Forest generalist. Singles are local and uncommon seasonal visitors from the Palearctic, inhabiting thicket and forest edge mostly in the vicinity of the Siria Escarpment. Records span primarily November to February.

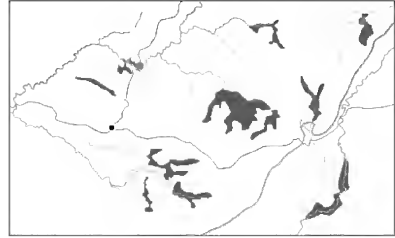
**Mountain Illadopsis** *Illadopsis pyrrhoptera*

Afrotropical highlands forest specialist. One record: August 2004, at 1560 m along the Migori River. Presumably a very local and rare resident, known elsewhere in southwest Kenya south to the Kilgoris area, where collected by A. D. Forbes-Watson (B. Finch *in litt.*).

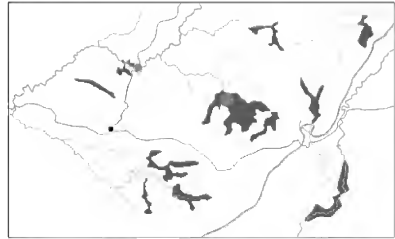


African Hill Babbler *Pseudoalcippe abyssinica*

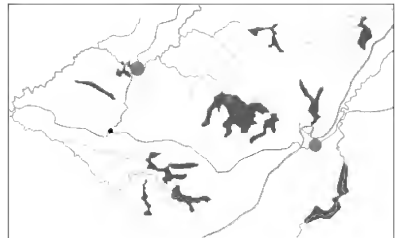
Afrotropical highlands forest specialist. Older records from 1550 to 1850 m along Migori River and in the northeast of the region. Presumably a very local and rare resident (Turner 1993, Finch 1994).

**Waller's Starling** *Onychognathus walleri*

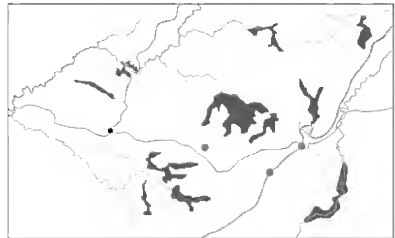
Afrotropical highlands forest specialist. Pairs are very local and scarce residents of forest interior from 1550 to 1800 m. Known elsewhere in west Kenya south to the Trans Mara and Nguruman forests (Zimmerman *et al.* 1996).

**Sharpe's Starling** *Pholia sharpii*

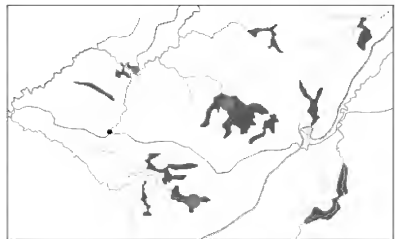
Afrotropical highlands forest specialist. Very local and scarce resident above 1550 m along the Migori River, reaching the west Maasai Mara only rarely in August–September. Active nest observed from mid June to late July (Bennun 1991, Turner & Pearson 1988, 1991).

**Olive Thrush** *Turdus olivaceous*

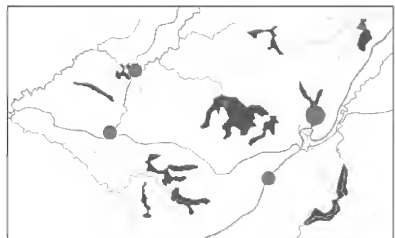
Forest generalist. Very local and scarce resident of bushy and leafy woodlands above 1800 m to the east of Lolgorien only, wandering to 1550 m along the Mara River.

**Equatorial Akalat** *Sheppardia aequatorialis*

Afrotropical highlands forest specialist. Singles are local and scarce resident of dark understory in mature forest at 1550–1850 m, being absent from the Mara basin. Not previously known in southwest Kenya south of the Mau forests, but photographed in the region by J. Fidorra in 2018 (Zimmerman *et al.* 1996).

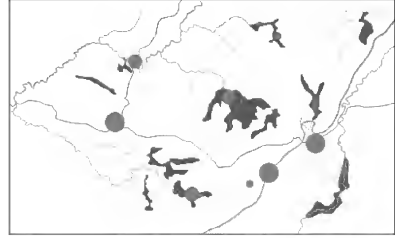
**Grey-winged Robin** *Sheppardia polioptera*

Forest specialist. Singles and pairs are widespread but generally uncommon residents of forest understory from 1550 to 1850 m, commonly occurring along streams and rivers. Observations on the Siria Escarpment in 2018 may have involved birds displaced by deforestation elsewhere nearby.

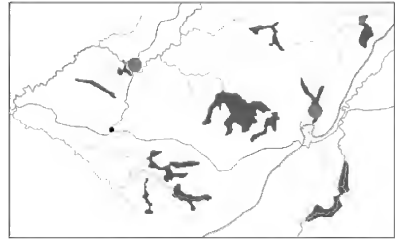


Red-capped Robin Chat *Cossypha natalensis*

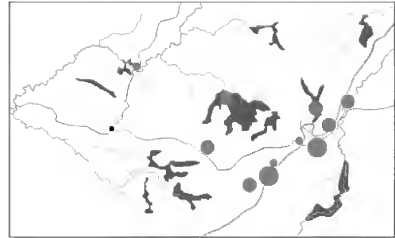
Forest generalist. Widespread and fairly common resident of dense thicket and forest interior throughout. Dependent fledglings observed in February and July (Bennun 1991).

**Snowy-crowned Robin Chat** *Cossypha niveicapilla*

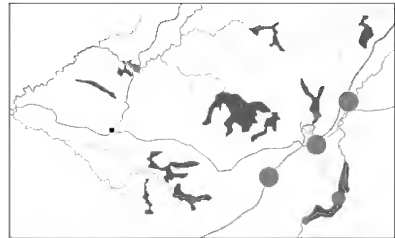
Forest generalist. A very local and scarce resident of good forest, mostly in northern areas of the region covered, and with no records since the late 1990s (Finch 1994).

**White-eyed Slaty Flycatcher** *Melaenornis fischeri*

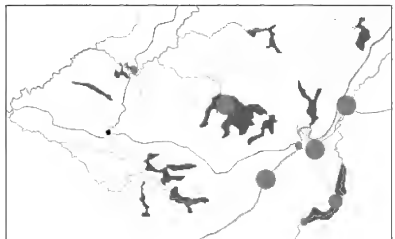
Afrotropical highlands forest generalist. Widespread and common resident of thick woodlands and forest edge from the vicinity of the Siria Escarpment westwards, rarely occurring below 1600 m.

**Ashy Flycatcher** *Muscicapa caerulescens*

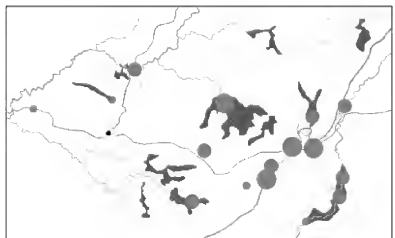
Forest generalist. Pairs are quite local and generally uncommon residents of shady woodlands and riparian forest in the vicinity of the Siria Escarpment and Mara River. Active nest observed in November (B. Finch *in litt.*).

**African Dusky Flycatcher** *Muscicapa adusta*

Forest generalist. Pairs are widespread and fairly common residents of forest edge habitats, primarily above 1600 m.

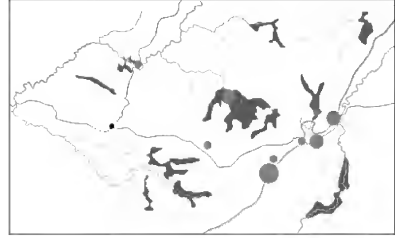
**Collared Sunbird** *Hedydipna collaris*

Forest generalist. Pairs are widespread and common residents of tall thickets, forest interior and edge habitats throughout the region.

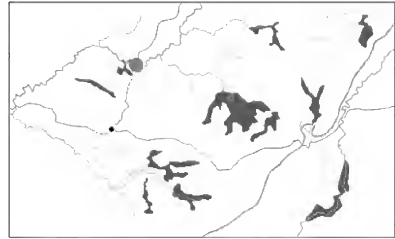


Green-headed Sunbird *Cyanomitra verticalis*

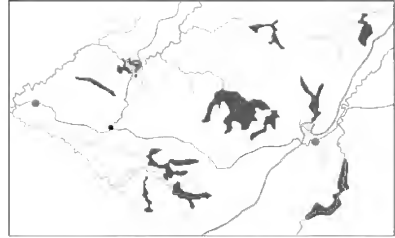
Forest generalist. Widespread but only locally fairly common, favouring moist streamside thickets, humid forest and flower plantings.

**Olive Sunbird** *Cyanomitra olivacea*

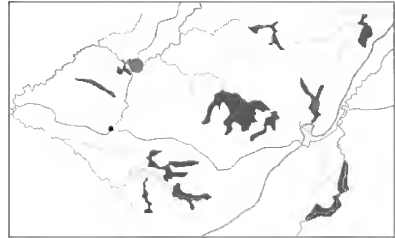
Forest specialist. Pre-1995 records from the Migori River, and more recently at 1750m in Nyakweri Forest. It is probably a rather scarce bird in the region (Zimmerman *et al.*1996).

**Olive-bellied Sunbird** *Cinnyris chloropygius*

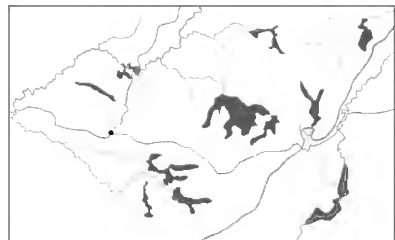
Forest generalist. Single birds are local and scarce residents in the west of the region, with a July record from the western Maasai Mara. Periodic reports of Northern Double-collared Sunbird *Cinnyris reichenowi* probably refer to this species.

**Brown-capped Weaver** *Ploceus insignis*

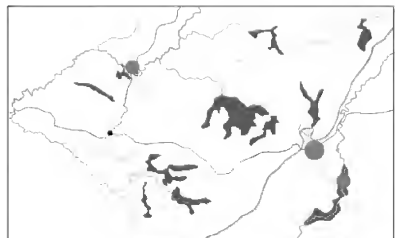
Afrotropical highlands forest specialist. Pre-1995 records only, from the Migori River and the Sabaringo Valley, where presumably a very local and rare resident (Finch 1994).

**Grey-headed Negrofinch** *Nigrita canicapillus*

Forest generalist. One record: late January–early February 1992 at 1550m along the Migori River. It is probably a very local and rare resident (Lohding 1992).

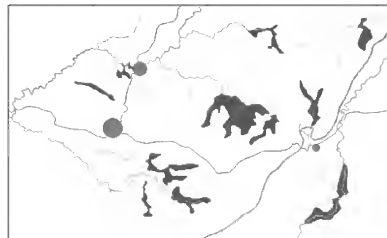
**Green-backed Twinspot** *Mandingoa nitidula*

Forest specialist. Pre-1995 records from the Migori River, and more recently in groundwater forest at Kichwa Tembo and along the Mara River. It is undoubtedly very local and scarce in the region (Finch 1994, Zimmerman *et al.*1996).

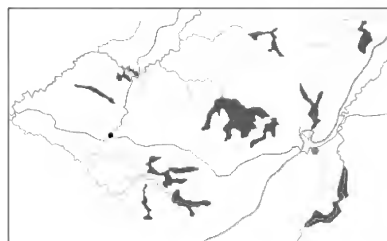


Red-headed Bluebill *Spermophaga ruficapilla*

Forest generalist. Old records from forest along the Migori and Mara Rivers, and was formerly reported as resident at Lolgorien. It is now unreported for at least 25 years and possibly locally extirpated (D. Turner pers. comm., Zimmerman *et al.* 1996).

**Grey Wagtail** *Motacilla cinerea*

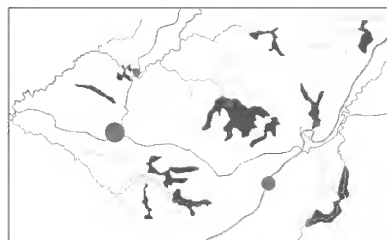
Forest generalist. One record: 30 October 2018 at 1550m at Kichwa Tembo. It is presumably only a sporadic Palaearctic passage migrant in the region.

**Mountain Wagtail** *Motacilla clara*

Forest generalist. Very local resident in small numbers from 1600 to 1900m, favouring several small streams flowing off the Siria Escarpment.

**Thick-billed Seedeater** *Crithagra burtoni*

Afrotropical highlands forest specialist. Pairs are widespread but generally uncommon residents of humid forest and secondary growth, often seen near water. Active nests observed in May and November (Bennun 1991, Lohding 1992).

**Acknowledgements**

We would like to thank Brian Finch, David Fisher, Chege Kariuki and Adam Scott Kennedy for sharing their observations from the Maasai Mara area on local email lists, as well as the following observers for submitting observations to the online databases eBird and Kenya Birdfinder (records now deposited at eBird): James Beatty, Frank Brown, Simon Carter, Ed Harper, Stratton Hatfield, Peter Headland, Marshall Iliff, Alistair Kilpin, William Marengo, Samantha Musgrave, Jane Tatchell, Julia Williams, the National Museums of Kenya Ornithology Department, and Nature Kenya. We also thank Don Turner and Brian Finch for forwarding to us some additional records from the region, as well as Darcy Ogada and two referees for advice on improving the paper. Lastly, we thank Angama Lodge for providing logistical support on a number of occasions.

References

- BENNUN, L.A. 1991. East Africa Natural History Society Nest Record Scheme: 1985–1989. *Scopus* 13(3): 165–180
- BENNUN L.A. 1991b. An avifaunal survey of the Trans-Mara Forest, Kenya. *Scopus* 14: 61–72.

- BENNUN, L.A., DRANZOA, C. & POMEROY, D. 1996. The forest birds of Kenya and Uganda. *Journal of East African Natural History* 85: 23–48.
- BENNUN, L.A. & NJOROGE, P. 1999. *Important Bird Areas in Kenya*. Nairobi: East Africa Natural History Society.
- BRADLEY, J.E., IMBOMA, T. & BRADLEY, D.W. 2015. Birds of Mount Kisingiri, Nyanza Province, including a preliminary survey of the Gwasssi Hills Forest Reserve and a species new to Kenya. *Scopus* 35: 11–38.
- BRADLEY, J.E. 2018. Some noteworthy distributional records from the Gwasssi Hills area, Homa Bay County, Kenya. *Scopus* 38(1): 16–23.
- DAVIS, T., BUTCHART, D. & KILPIN, A. 2016. Discovery of a population of Blue-mantled Crested Flycatcher *Trochocercus cyanomelas* in the Mara ecosystem. *Scopus* 36(1): 36–37.
- EANHS 2009. *Checklist of the Birds of Kenya*. Nairobi: Ornithological sub-committee, East Africa Natural History Society.
- FINCH, B. W. 1994. Birding in and around the Masai Mara. *Kenya Birds* 3 (2): 57–66.
- FINCH, B. W. 2011. Kenya Mega Birding Tour 2nd to 27th April 2011. Rockjumper Worldwide Birding Adventures. Available: <https://tinyurl.com/yauaff8f> (Accessed: January 9, 2018).
- LOHDING, A. 1992. Transmara revisited after two years. *Kenya Birds* 1 (1): 11–12.
- PEARSON, D.J. 1978. East African Bird Report 1977. *Scopus* 1(5): 116–131.
- PEARSON, D.J. & TURNER, D.A. 1998. Review of Kenya bird records 1992–1996. *Scopus* 20: 65–83.
- STEVENSON, T. & PEARSON, D.J. 1986. East African Bird Report 1984. *Scopus* 8(5): 104–123.
- TURNER, D.A. 1993. East African Bird Report 1991. *Scopus* 15(3): 143–163.
- TURNER, D.A. & PEARSON, D.J. 1988. East African Bird Report 1986. *Scopus* 10(5): 118–132.
- TURNER, D.A. & PEARSON, D.J. 1989. East African Bird Report 1987. *Scopus* 11(5): 102–119.
- TURNER, D.A. & PEARSON, D.J. 1991. East African Bird Report 1989. *Scopus* 13(3): 139–164.
- ZIMMERMAN, D.A., TURNER, D.A. & PEARSON, D.J. 1996. *Birds of Kenya and northern Tanzania*. Halfway House, South Africa: Russel Friedman Books.

Appendix A. Specimen material and online digital media referenced in Species Accounts.

Blue-mantled Crested Flycatcher: XC #395871 (Xeno-canto)

Buff-throated Apalis: XC #363896, ML#163607701 (Macaulay Library)

Plain Greenbul: ML#103563261, ML#102316181

Mountain Illadopsis: YPM #069509 (Yale Peabody Museum)

Equatorial Akalat: ML#139054551

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First record of Eurasian Griffon Vulture *Gyps fulvus* from the Balkans migrating to South Sudan revealed by GPS tracking

Volen Arkumarev, Dobromir Dobrev, and Anton Stamenov

Summary

Adult Griffon Vultures *Gyps fulvus* are mostly resident but the juveniles and immatures are mostly nomadic and migratory. Significant numbers of young vultures from Eurasia migrate every autumn to the Middle East and Africa but little is known about their migration routes and wintering grounds. We tracked one juvenile Griffon Vulture on its south migration from Bulgaria to South Sudan. This is the first confirmed occurrence of the species in South Sudan. The overall travelled distance on migration was 5727 km with a migration speed of 136 km/d. In the wintering grounds in Sudan and South Sudan this bird inhabited mostly arid savannah and desert habitats up to 600m altitude. The overall wintering home range (MCP) was 47781 km².

Keywords: dispersal, satellite telemetry, wintering, home range

Introduction

The Eurasian Griffon Vulture *Gyps fulvus* is an obligate scavenger with a large range (Ferguson-Lees & Christie 2001). Its breeding distribution extends from Kazakhstan and Nepal in the east, throughout the Caucasus, southern Europe and the Iberian Peninsula to the west. The species is now considered extinct as a breeding species from Algeria, Morocco and Tunisia in North Africa but still occurs in good numbers in the Middle East, south to Saudi Arabia and Yemen (BirdLife International 2019). Spain holds more than 95 % of the European population (Del Moral 2009). On the Balkan Peninsula the species breeds in Bulgaria, Greece, Macedonia, Serbia, and Croatia (Sušić 2004, Xirouchakis & Tsiakiris 2009, Grubač 2013, Sušić & Radek 2013, Velevski *et al.* 2013, Demerdzhiev *et al.* 2014). The Griffon Vulture population in Bulgaria has steadily increased in the past 20 years as result of intensive conservation actions and reintroduction programmes (Demerdzhiev *et al.* 2014, Stoyanov *et al.* 2018).

Adult Griffon vultures are mostly resident, while the juveniles are primarily nomadic, with some are migratory, overwintering in Africa and the Middle East (del Hoyo *et al.* 2004, McGrady & Gavashelishvili 2006). There is an increasing number of records, mostly in the spring and summer, of nomadic Griffon Vultures wandering in Central and Northern Europe, e.g. Germany, Belgium, the Netherlands, Finland for example (Botha *et al.* 2017). Zuberogoitia *et al.* (2013) found that after being ringed as nestlings, the Griffon Vultures were re-sighted in the natal area only three or more years later suggesting that young vultures wandered around vast areas in the first years of their life. Donazar (1993) concluded that about 30% of the juveniles in Spain migrate. Some birds from France join the autumn migration of the Spanish vultures

and overwinter in Spain or Western Africa (Terrasse 2006). Sušić (2000) reported that in autumn 100 % of the Croatian juvenile, immature and subadult Griffon Vultures migrate south reaching Italy, Greece, Bulgaria, Israel and Chad. However, the wintering grounds of the Eurasian populations of the species are not well studied and only sporadic records could be found in the literature (Hogg *et al.* 1984, Mundy 1992, Jennings 1995, Strandberg *et al.* 2007, Henriques *et al.* 2017, Di Vittorio & Petrozzi 2018).

Here we present results of tracking a juvenile Griffon Vulture from Bulgaria to its wintering grounds in Sudan and South Sudan. We estimated the migration speed and distance travelled during its first fall migration and the size of its wintering home range.

Materials and Methods

We tracked a juvenile Griffon Vulture tagged in its nest in the Eastern Rhodopes, Bulgaria at approximately 100 days of age. The vulture was tagged in its nest located near the town of Madzharovo (41.65N, 25.86E). Based on a blood DNA sample, the vulture was sexed as female (BSPB unpubl. data). The following measurements were made: weight 7.1 kg, cranium length 139.2 cm, tarsometatarsus length 126.3 cm. The bird was marked with a colour wingtag, a standard metal ring, and colour plastic ring, to ease its identification after fledging. It was fitted with 70-g solar-powered GPS satellite transmitter (Microwave Telemetry www.microwavetelemetry.com). The unit was attached as a backpack with a 10-mm Teflon ribbon harness. The entire transmitter equipment, rings and wingtag did not exceed 3 % of the bird's body mass and it was unlikely to have had adverse effects on the individual's survival probability, or movement ecology (Kenward 2001). The transmitter was set to record the location of the bird every 2h during the day and night. All data were automatically downloaded and incorporated into the Movebank database (www.movebank.org). Prior to analyses, the telemetry data were inspected and visualized in Movebank to check for outliers. Using the Movebank data filters, we removed erroneous GPS fixes (Walter *et al.* 2011).

We calculated the start and end dates of migration, the distance travelled and the migration speed based on GPS location fixes. The start of autumn migration was defined as the first day on which the bird moved over 100 km from its natal area, and the end of autumn migration was defined as the first day south of 30° N latitude when the bird started moving less than 50 km per day and remained in a confined area. Migration distance was calculated by summing the Euclidean distance between all subsequent locations during the migration period, and migration speed was the migration distance divided by the number of days spent migrating (Alerstam 2003). Stopover sites were considered to be those areas where the vulture stopped for more than 3 days during the migration.

We estimated the Griffon vulture's wintering home-range using kernel utilization distribution method with 95 % and 50 % kernel density contours (Worton 1989). We also calculated the overall foraging range as the Minimum Convex Polygon (MCP) encompassing all GPS locations (Worton 1989). For these calculations we used all the GPS fixes collected from the end of the migration until the transmitter became stationary, suggesting the death of the vulture or the removal of the unit. Home-range analyses were performed using Geospatial Modelling Environment software operating with R (Beyer 2012, R Core Team 2018). We used information on land cover types (from GlobCover 2009, http://due.esrin.esa.int/page_globcover.php) to char-

acterize the habitats within the home range of the Griffon Vulture. We combined land cover types into six discrete landscape types: cropland (composed of the GlobCover classes: 11, 14, and 20), savannah (GlobCover classes 30, 110, 130 and 180), grassland (GlobCover classes 120 and 140), sparse vegetation and desert (GlobCover classes 150 and 200), forest (GlobCover classes 40, 50, 60, 70, 90, 100, 160 and 170) and other landscapes, including all remaining GlobCover classes (190, 210, 220) (Buechley *et al.* 2018). Data were mapped and processed using QGIS software (www.qgis.org).

Results

The juvenile Griffon Vulture was tracked for 170 days in 2016 (17 July–1 December). It started the autumn migration on 19 September and arrived in the wintering grounds in Africa on 30 October. The overall distance travelled was 5727 km over 42 days, equaling 136 km per day. The longest distance travelled in a single day was 346 km on 28 October over the Sahara Desert in Sudan. The Griffon Vulture passed over four migratory bottlenecks for soaring birds: Burgas, Bulgaria (21 September), Bosphorus, Turkey (22 September), Iskenderun, Turkey (15 October) and Suez, Egypt (22 October). It stopped at two stopover sites, both in north Turkey, spending six days at each. The first stopover was in the area of Beypazari and the second was 60 km northwest of Cankiri.

The overall wintering home range, calculated as MCP was 47781 km² extending from North and South Darfur states in Sudan to the Western and Eastern Bahr el Ghazal states in South Sudan, as far south as 8°80'N. The 95 % kernel home range was 14300 km² and the core area of the wintering home range (50 % kernel) was 2350 km² (Fig. 1). The Griffon Vulture primarily inhabited medium elevations between 450 and 600 m above sea level. Savannah landscape covered 52.5 % of the home range core area and 44.86 % was covered by sparse vegetation and desert. The other habitat types covered less than 3 % of the inhabited area.

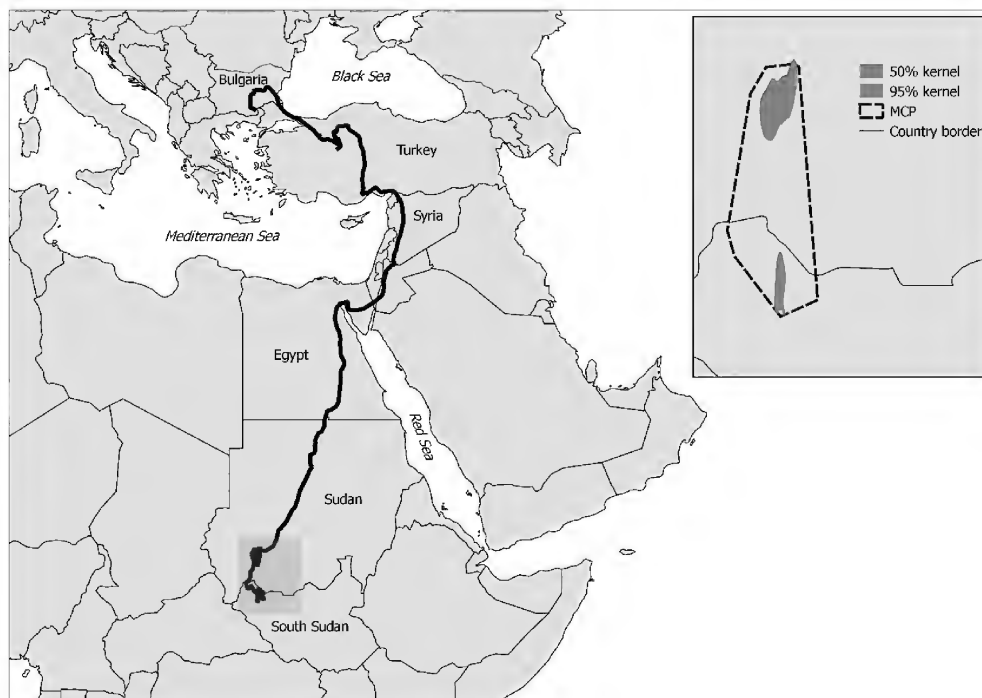


Figure 1. Map of the migration route and wintering home range of a juvenile Griffon Vulture

Discussion

This study provides the first documented record of Eurasian Griffon Vulture migrating from the Balkans to South Sudan, and it is also the first record of the species in South Sudan. There are no previous studies on the Griffon Vulture's wintering home range in Africa and our results can serve as baseline information for future studies in this field. However, it should be noted that the reported wintering home range size was estimated using data from only 32 days, and does not encompass the whole wintering season, so the estimate should be interpreted with caution. The transmitter became stationary from 1 December, but it continued sending GPS fixes, so we suspect that the bird had died or the unit had been removed.

On its southward migration, the tracked Griffon Vulture first moved north towards the Balkan Mountain in Bulgaria, then later passed over the soaring birds' migration bottleneck at Burgas, and a day later it had crossed the Bosphorus. We suppose that the majority of the migrating Griffon Vultures from the Balkans cross the Sea of Marmara either through the Bosphorus or through the Dardanelles like other raptors (Fulop *et al.* 2014, Panuccio *et al.* 2017). However, the species was not recorded during raptor migration counts at the Dardanelles in 1956 and 2010 (Nisbet & Smout 1957, Panuccio *et al.* 2017). In contrast, significant numbers were recorded at the Bosphorus during autumn migration counts – 165 individuals in 1956 and 55 individuals in 2010 (Nisbet & Smout 1957, Fulop *et al.* 2014). Based on these records and our unpublished tracking data of migrating individuals ($n=5$), we suggest that Griffon Vultures from the Balkans migrate mostly through the Bosphorus where the sea crossing is shortest. Observations made at Gibraltar confirm that the sea crossing takes much longer for Griffon Vultures in comparison to other soaring birds, and some vultures even fall exhausted into the sea (Mundy 1992). However, more in-depth studies need to be carried out to confirm this pattern.

Migrant Griffon Vultures, like other soaring birds, only use a few main migration bottlenecks to cross to Africa: the Strait of Gibraltar (between Spain and Morocco), the Strait of Bab-el Mandeb (between Yemen and Djibouti) and Suez (Mundy 1992). Our tracked Griffon Vulture crossed into Africa through Suez in the second half of October. The first record of migrating Griffon Vultures through Suez was in 1947 when over 3800 individuals were counted for one week in October (Goodwin 1949). In 1981, during a two-month survey, 1284 vultures were recorded and 97% of them were classified as juveniles or immatures (Bijlsma 1983, Goodman & Meininger 1989). The number of migrating vultures through Gibraltar has been constantly increasing over the last 40 years reflecting the increase of the Iberian population (Ramirez 2017). In 1970 only 600 Griffon Vultures were recorded during the autumn migration count at Gibraltar but in 2015, on a single day, 2362 vultures were observed, and it is estimated that over 8000 migrate through the strait every autumn (Pineau & Giraud-Audine 1974, Ramirez 2017). Migration raptor counts at Bab el Mandeb suggest that the number of Griffon Vultures crossing the strait towards Africa is very low. No Griffon Vultures were recorded during migration counts in 1985, and only three individuals were observed in 1987, which was the first published record of the species in Djibouti (Welch & Welch 1988). In contrast, twelve Griffon Vultures were observed for one week of observations in northern Yemen in 1985. The same number was recorded for nine days of observations in 1987 (Porter & Christensen 1987). These records are evidence that some migrating Griffon Vultures reach Yemen but very few cross to Africa, so probably they remain in the southern parts of Yemen for the winter.

The migration speed of our tracked Griffon Vulture was significantly lower than the speed of an adult Griffon Vulture tracked from Spain to Senegal; this bird travelled 2682 km with a migration speed of 206 km/d (Munoz *et al.* 2016). Both vultures travelled their longest daily distances when crossing the Sahara. The core area of the wintering home range (50 % kernel) of our tracked vulture was five times larger than the home range of adult and subadult non-breeding Griffon Vultures in Spain (García-Ripolles *et al.* 2011). These differences in the home range size could be explained by the availability of food and suitable foraging habitat, and the age of the tracked birds. However, there are no previous studies on the wintering home range size of the species and our results can be used as baseline information for future studies and comparisons. The Griffon Vulture inhabited primarily arid areas covered by savannah and desert vegetation. These areas likely hold high numbers of livestock whose carcasses provide valuable and predictable food resource (Kendal *et al.* 2014). Egyptian Vultures *Neophron percnopterus* from the Balkans which overwinter in Sahel inhabit similar habitats and take advantage of these food resources as well (Meyburg *et al.* 2004, Oppel *et al.* 2015).

The wintering grounds of the Eurasian populations of the Griffon Vulture have not been thoroughly studied. Griffon Vultures, presumably originating from the Iberian population, were recorded as winter visitors in a number of West African countries—more frequently in Mauritania and Senegal but also in Mali, Gambia, Ghana, Nigeria and Niger (Mundy 1992, Barlow *et al.* 1997, Strandberg *et al.* 2007, Caucanas *et al.* 2018). An immature Griffon Vulture was observed in a rice field in Guinea-Bissau in 2011, only the second record of the species in the country (Borrow & Demey 2004, Henriques *et al.* 2017). The first record of a Griffon Vulture from the Balkans wintering in Africa was a juvenile ringed in Croatia and re-sighted a few months later in Chad (Sušić 2000). There are few other records of the species from Central and East Africa. Two specimens were obtained in the 1920s in the Lake Chad basin (Mundy 1992). In Sudan the species was reported as “uncommon” along the Red Sea and “rare” as far south as 13°N during the Palaearctic winter, but there were no previous records in South Sudan (Hogg *et al.* 1984, Nikolaus 1989, Mundy 1992, de Bont 2009, Mallalieu 2013). Our results indicate that some Griffon Vultures may overwinter in South Sudan but due to the lack of observers these individuals have remained unreported. In Ethiopia the Griffon Vulture was considered an uncommon visitor between the Eritrean border and the West Highlands near Addis Ababa at 9°N, and it was never sighted further south in Somalia (Mundy 1992). The southernmost records of the species in Africa are from lake Langano in Ethiopia where two individuals identified as adults were observed in 1974 (Vittery 1983) and southern Kenya where one individual was observed feeding on an elephant carcass (Clark 2001). However, it should be noted that misidentifications with the rufous morph of immature Rüppell's Vultures *Gyps rueppelli* are possible (D. Forsman *in litt.*) and D. A. Turner (*in litt.*) in addition, mentioned the possibility of the occurrence of hybrids. Our record is one of the few proved records of the species further south than 9°N.

Three other Griffon Vultures tagged in Bulgaria were tracked to their wintering grounds in Israel and Saudi Arabia (BSPB unpubl. data) and one juvenile from Greece was tracked to Yemen (Tsiakiris *et al.* 2018). Furthermore, a subadult Griffon Vulture from the Caucasus, tracked with satellite transmitter overwintered in Saudi Arabia (McGrady & Gavashelishvili 2006). Presumably wintering Griffon Vultures were previously recorded in the northern parts of Saudi Arabia but the origin of these birds

remained unknown (Jennings 1995). The species is also considered a rare visitor on migration and in winter in Oman (Gallagher 1989). These records affirm that an unknown but possibly considerable number of the young Griffon Vultures from south-east Europe overwinter in vast areas in the Middle East but our results and records from raptor migration counts at migration bottlenecks suggest that some individuals continue further south to Africa.

A significant number of Griffon Vultures enter Africa every autumn through the main raptor migration bottlenecks, but little is known of their wintering areas and sojourns. Here we present tracking data from one juvenile Griffon Vulture migrating from Bulgaria to South Sudan. More studies on the Griffon Vulture's migration patterns, wintering distribution, home ranges and habitat selection in Africa are encouraged to understand their movements and and the threats they face better.

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References

- ALERSTAM, T. 2003. Bird migration speed pp. 253–267 in Berthold, P., Gwinner, E. & Sonnenschein, E. (eds) *Avian Migration*. Berlin: Springer-Verlag.
- BARLOW, C., WACHER, T. & DISLEY, T.A. 1997. *Field Guide to the Birds of the Gambia and Senegal*. Mountfield: Pica Press.
- BEYER, H.L. 2012. Geospatial Modelling Environment (Version 0.7.3.0). (software). URL: <http://www.spatialecology.com/gme>.
- BIJLSMA, R.G. 1983. The migration of raptors near Suez, Egypt, autumn 1981. *Sandgrouse* 5: 19–44.
- BIRDLIFE INTERNATIONAL 2019. Species factsheet: *Gyps fulvus*. Downloaded from <http://www.birdlife.org> on 24/05/2019.
- BORROW, N & DEMEY, R. 2014. *Birds of western Africa*. Edition 2. London: Christopher Helm.
- BOTHA, A. J., ANDEVSKI, J., BOWDEN, C.G.R., GUDKA, M., SAFFORD, R.J., TAVARES, J. & WILLIAMS, N.P. 2017. Multi-species Action Plan to Conserve African-Eurasian Vultures. CMS Raptors MOU Technical Publication No. 5. CMS Technical Series No. 35. Coordinating Unit of the CMS Raptors MOU, Abu Dhabi, United Arab Emirates.
- BUCHLEY, E.R., MCGRADY, M.J., ÇOBAN, E. & ŞEKERCIOĞLU, C.H. 2018. Satellite tracking a wide-ranging endangered vulture species to target conservation actions in the Middle East and East Africa. *Biodiversity Conservation* 27: 2293–2310.
- CAUCANAS, G., PIOT, B., BARLOW, C. & PHIPPS, W.L. 2018. A major count of the Egyptian Vulture *Neophron percnopterus* in Senegal in November 2017, with notes on its history and current status in Senegal and the Gambia. *Malimbus* 40: 55–66.
- DEL HOYO, J., ELLIOTT, A. & SARGATAL, J. 1994. *Handbook of the Birds of the World*. Vol. 2: New World Vultures to Guineafowl. Barcelona: Lynx Edicions.
- DEL MORAL, J.C. 2009. The Eurasian Griffon Vulture in Spain. Breeding population in 2008 and census technique. Technical report no 30. SEO/BirdLife, Madrid.
- DEMERDZHIEV, D., HRISTOV, H., DOBREV, D., ANGELOV, I. & KURTEV, M. 2014. Long-term population status, breeding parameters and limiting factors of the Griffon Vulture (*Gyps fulvus*) population in Eastern Rhodopes, Bulgaria. *Acta Zoologica Bulgarica* 66(3): 373–384.

- DE BONT, M. 2009. Bird observations from south-east Sudan. *Bulletin of the African Bird Club* 16(1): 37–52.
- DI VITTORIO, M. & PETROZZI, F. 2018. Preliminary data on the birds of prey at Mole National Park (Ghana), including the first record of *Gyps fulvus* and a short synopsis on the literature of this species' occurrence in West Africa. *Vie et milieu – Life and environment* 68(1): 19–23.
- DONÁZAR, J.A. 1993. *The Iberian Vultures. Biology and Conservation*. Madrid: Reyero.
- FERGUSON-LEES, J. & CHRISTIE, D. 2001. *Raptors of the world*. London: Christopher Helm.
- FULOP, A., KOVACS, I., BALTAG, E., DAROCZI, S.C., DEHELEAN, A.S., DEHELEAN A.L., KIS, R.B., KOMAROMI, I.S., LATKOVA, H., MIHOLCSA, T., NAGY, A., OLVEDI, S.Z., PAPP, T., SANDOR, A.K., ZEITZ, R. & KELEMEN M.A. 2014. Autumn migration of soaring birds at Bosphorus: validating a new survey station design. *Bird Study* 61: 264–269.
- GALLAGHER, M. 1989. Vultures in Oman, Eastern Arabia. *Vulture News* 22: 4–11.
- GARCIA-RIPOLLES, C., LOPEZ-LOPEZ, P., URIOS, V. 2011. Ranging behaviour of non-breeding Eurasian Griffon Vultures *Gyps fulvus*: a GPS-telemetry study. *Acta Ornithologica* 46(2): 127–134.
- GOODMAN, S. M. & MEININGER, P.L. 1989. *The Birds of Egypt*. Oxford: Oxford University Press.
- GOODWIN, D. 1949. Notes on the migration of birds of prey over Suez. *Ibis* 91: 59–63.
- GRUBAČ, B. 2013. Vulture status and conservation in Serbia pp. 30–33 in Andevski, J. (eds) *Vulture Conservation in the Balkan Peninsula and Adjacent Regions. 10 Years of Vulture Research and Conservation*. Skopje.
- HENRIQUES, M., LECOQ, M., MONTEIRO, H., GRANADEIRO, J.P., REGALLA, A. & CATRY, P. 2017. Status of birds of prey in Guinea-Bissau: first assessment based on road surveys. *Ostrich* 88: 101–111.
- HOGG, P., DARE, P.J. & RINTOUL, J.V. 1984. Palaearctic migrants in the central Sudan. *Ibis* 126: 307–331.
- JENNINGS, M.C. 1995 (eds). *An Interim Atlas of Breeding Birds in Arabia*. National Commission for Wildlife Conservation and Development. Riyadh: Saudi Arabia.
- KENDALL, C.J., VIRANI, M.Z., HOPCRAFT, J.G.C., BILDSTEIN, K.L. & RUBENSTEIN, D.I. 2014. African vultures don't follow migratory herds: scavenger habitat use is not mediated by prey abundance. *PLoS One* 9: e83470.
- KENWARD, R. 2001. *A manual for wildlife radio tagging*. San Diego: Academic Press.
- MEYBURG, B.U., GALLARDO, M., MEYBURG, C. & DIMITROVA, E. 2004. Migrations and sojourn in Africa of Egyptian vultures (*Neophron percnopterus*) tracked by satellite. *Journal of Ornithology* 145: 273–280.
- MALLALIEU, M. 2013. Bird observations around Juba, South Sudan. *Bulletin of the African Bird Club* 20 (2): 156–176.
- MCGRADY, M. & GAVASHELISHVILI, A. 2006. Tracking vultures from the Caucasus into Iran. *Podoces* 1(1/2): 21–26.
- MUNDY, P.J., BUTCHART, D., LEDGER, J. & PIPER, S. 1992. *The vultures of Africa*. Randburg: Acorn Books.
- MUNOZ A.-R., CHAMORRO, D., TOXOPEUS, A.G., VENUS, V., BOUTEN, W., SKIDMORE, A. K. 2016. One complete migration cycle of an adult Griffon Vulture: from southern Spain to Senegambia as revealed by high-resolution GPS tracking technology. Abstract in African Congress for Conservation Biology
- NISBET, I.C.T. & SMOUT, T.C. 1957. Autumn observations on the Bosphorus and Dardanelles. *Ibis* 99: 483–499.
- OPPEL, S., DOBREV, V., ARKUMAREV, V., SARAVIA, V., BOUNAS, A., KRET, E., VELEVSKI, M., STOYCHEV, S. & NIKOLOV, S. C. 2015. High juvenile mortality during migration in a declining population of a long-distance migratory raptor. *Ibis* 157: 545–557.
- PINEAU, J. & GIRAUD-AUDINE, M. 1974. Notes sur les migrateurs traversant pextreme nord-ouest du Maroc. *Alauda* 42: 159–188.

- PORTER, R.F. & CHRISTENSEN, S. 1987. The autumn migration of raptors and other soaring birds in North Yemen. *Sandgrouse* 9: 121–124.
- R CORE TEAM 2018. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>
- RAMIREZ, J. 2017. Maximum number of Griffon vultures ever recorded on active migration in a single day on the Strait of Gibraltar. *Vulture News* 73: 3–10.
- STOYNOV, E., KMETOVA-BIRO, E., STOYANOV, G., PESHEV, H., IVANOV, I., STOEV, I., BONCHEV, L., VANGELOVA, N., NIKOLOVA, Z., IANKOV, L., PARVANOV, D., GROZDANOV, A. 2018. Population Boost of the Griffon Vulture (*Gyps fulvus* Hablizl, 1783) (*Accipitridae*) in Bulgaria based on reintroductions. *Acta Zoologica Bulgarica* Suppl. 12: 59–65.
- STRANDBERG, R., OTTOSSON, U., WALDENSTR, M.J. & HELLGREN, O. 2007. European Griffon Vulture *Gyps fulvus* at Yankari National Park, Nigeria. *Malimbus* 29: 122–123.
- SUŠIĆ, G. 2000. Regular Long-distance Migration of Eurasian Griffon *Gyps fulvus* pp 225–230 in Chancellor, R.D. & Meyburg, B.-U. (eds) *Raptors at Risk*. WWGBP/Hancock House.
- SUŠIĆ, G. 2004. The situation of the Griffon Vulture in Croatia pp 32–36 in Slotta-Bachmayr, L., Bögel, R., Camina, A (eds) *The Eurasian griffon vulture (Gyps fulvus fulvus) in Europe and the Mediterranean. Status report and action plan*. Salzburg: East European/Mediterranean Griffon Vulture Working Group.
- SUŠIĆ, G. & RADEK, V. 2013. Vulture status and conservation in Croatia pp 16–19 in Andevski, J. (eds) *Vulture Conservation in the Balkan Peninsula and Adjacent Regions. 10 Years of Vulture Research and Conservation*. Skopje.
- TERRASSE, M. 2006. The movements of Griffon Vulture in France and Europe. *Ornithos* 13: 273–299.
- TSIAKIRIS, R., SIDIROPOULOS, L., VASILAKIS, D., STARA, K., PESHEV, H. & STOYNOV, E. 2018. Greek and Yemen's cultural landscapes through the eyes of a Griffon Vulture. Conference paper. Heraklion, Greece.
- VELEVSKI, M., LISITCHANETS, E. & LISITCHANETS, T. 2013. Vulture status and conservation in Macedonia pp 26–29 in Andevski, J. (eds) *Vulture Conservation in the Balkan Peninsula and Adjacent Regions. 10 Years of Vulture Research and Conservation*. Skopje
- VITTEY, A. 1983. Movements of Palaearctic raptors in the Ethiopian Rift Valley. *Scopus* 7(1): 1–8.
- WALTER, W.D., FISCHER, J.W., BARUCH-MORDO, S. & VERCAUTEREN, K.C. 2011. What is the proper method to delineate home range of an animal using today's advanced GPS telemetry systems: the initial step pp 249–268 in Krejcar, O. (eds) *Modern telemetry*. Rijeka, Croatia: In Tech Open Access Publisher.
- WELCH, G. & WELCH, H. 1998. Raptor migration Bab al Mandab, Yemen. Spring 1998. *Phoenix* 15: 11–12.
- WORTON, B.J. 1989. Kernel methods for estimating the utilization distribution in home-range studies. *Ecology* 70: 164–168.
- XIROUCHAKIS, S., TSIAKIRIS, R. 2009: Status and population trends of vultures in Greece pp 154–171 in Donázar, J.A., Margalida, A., & Cambion, A. (eds) *Vultures, feeding stations and sanitary legislations: a conflict and its consequences from the perspective of conservation biology*. Donostia: Aranzadi.
- ZUBEROGOITIA, I., GONZALEZ-OREJA, J.A., MARTINEZ, J.E., ZABALA, J., GOMEZ, I. & LOPEZ-LOPEZ, P. 2013. Foraging movements of Eurasian Griffon Vultures (*Gyps fulvus*): implications for supplementary feeding management. *European Journal of Wildlife Research* 59: 421–429.

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Short communications

The Mascarene Martin *Phedina borbonica* in Tanzania with comments on other records from mainland Africa

Britton (1980) summarized the occurrence of this species in East Africa as, "The Madagascar race *madagascariensis* has been recorded as a non-breeding visitor to Pemba in small numbers between September and March, but not during the past 50 years. A flock of 16 at Lake Jipe, southeastern Kenya, on 24 June 1978 is the only other record."

This record from Pemba is that of Vaughan (1930) who wrote, "I have seen it mostly between November and March, but only in very small numbers, never more than three at a time. In 1928 there were two hawking insects over Kichanje pond in August and September. I know of no other records of its occurrence outside Madagascar, and its appearance in Pemba is therefore of some interest. Of the two specimens obtained the female was shot on 1 November, 1925, and the immature bird, which was in moult, on 10 February. A note of this occurrence has already been made by Mr Bannerman (*Bull. B.O.C. xlvii. July, 1926, p. 127.*)" These records of Vaughan's are the only ones mentioned in Pakenham (1979) in his summary of the birds of Zanzibar and Pemba.

The first documented record from Kenya was from Zimmerman (1978) when he observed a flock of 16 at Lake Jipe on 24 June 1978. There have been two additional records in Kenya. Turner (1980) reported a single bird with a flock of Lesser Striped Swallows *Hirundo abyssinica* at Watamu on 23 June 1980. On 18 June 1993 Mel Ogola, observing from the Kenya shore, noticed a number of Mascarene Martins roosting with Plain Martins *Riparia paludicola* at Lake Jipe. Approximately 200 birds in total were going to roost at the time (Pearson & Turner 1998) but it is not clear how many Mascarene Martins were included in the 200 total.

Despite regular visits by birders to Pemba in recent decades, there have been no further reports of these martins until Geene (2001), who wrote, "One record on Pemba of 15 individuals together in Micheweni peninsular on 27 January 1998. Largest group ever recorded in Zanzibar archipelago."

The Atlas database holds a record from Theophil Gaus, a visiting academic and noted birder from Switzerland who found 5 to 10 birds from the bridge while crossing the Rufiji River on 2 August 2009. There are no doubts attached to this record despite it not being supported by photographs or having been submitted to the East African Rarities Committee.

On the 24 March 2013 I with (RM, JS and JJ) was scanning the tidal flats from the sea wall of the Livingstone Hotel north of Bagamoyo town when I found a "brown martin" flying south. It had already passed us and continued south partially hidden by a fine drizzle. Knowing what it might have been only added to our acute disappointment at the time. After the rain cleared, we visited our usual weekend birding site at the Stanley Salt Works 1 km north of the hotel but were forced to retreat early as the rain returned and RM located a single Mascarene Martin with Wire-tailed Swallows *Hirundo smithii* on the power cables close to where we had parked. On the 3 September 2013 we again found a single martin in the same locality, perched on the very same cables. Figure 1 relates to this observation.



Figure 1. Mascarene Martin on power line and in flight at Bagamoyo town, 22 September 2013.

Table 1 gives all ten records for Tanzania, with day dates where known. Localities are given to five decimal places where possible and to three decimal places when not precisely known. Note that the Lake Jipe record from the eastern shoreline was approximately 1 km from the centre of the lake so was not actually observed in Tanzania.

Table 1. Mascarene Martin records in Tanzania

Locality	Day	Month	Year	Counts	Observer	Latitude	Longitude
Pemba Kichanje ponds	1	11	1925		Vaughan	-5.184	39.847
Pemba Kichanje ponds	10	2	1925		Vaughan		
Pemba Kichanje ponds	0	8	1928		Vaughan		
Pemba Kichanje ponds	0	9	1928		Vaughan		
Lake Jipe	24	6	1978	16	Zimmerman	-3.614	37.776
Micheweni Pemba	27	1	1998	15	Geene <i>et al.</i>	-4.981	39.855
Rufiji	2	8	2009		T. Gaus	-8.015	38.971
Livingstone Hotel	24	3	2013	1	This note	6.42691	38.90256
Bagamoyo Salt Pans	24	3	2013	1	This note	6.42243	38.89508
Bagamoyo Salt Pans	23	9	2013	1	This note		

Clearly, records for March, August and September south of 6 degrees South are of birds on passage. Records from Pemba in November, January and February are surely of birds on their non-breeding grounds on the north-east coast of Pemba. There are no records in Tanzania for April, May, July or December.

These few observations suggest that only a small proportion of the breeding population migrate to East Africa. Although where the large number of birds seen at Lake Jipe in June 1993 (see above) might have spent their non-breeding season remains a mystery. Ash & Miskell (2013) do not record this species for Somalia.

Dowsett-Lemaire & Dowsett (2008) record small numbers in Malawi at four sites on 12 July 1987, 20 July 1985, 25 March 1989 and 6 April 1959. They also quote Benson (1944) detailing hundreds present at Lake Chilwa 28 June to at least 30 July 1944. Dowsett *et al.* (2006) do not record this species for Zambia. Clancey *et al.* 1969 report on large numbers seen and nine collected in southern Mozambique in June and July 1968. This is still the only record for Southern Africa (Harrison *et al.* 1997) although there is a claim from Imagine Dam in Phinda Private Game Reserve 10 August 2016 that has yet to be verified (D. Dell e-bird). Safford & Hawkins (2013) state that this

species is found in all months in Madagascar and give August to November for the breeding season.

This suggests that birds seen in Bagamoyo in September and Rufiji in August were on their return migration and those in March were moving north to winter quarters despite the fact that the bird observed at the Livingstone Hotel was flying south. Birds observed in Pemba in November, January and February could be said to be on their wintering grounds. The flocks at Lake Jipe in June could be said to be on their way south to breed and had wandered (been blown perhaps) off course. Birds on Pemba in August and September would also be ready to return to Madagascar to breed.

Anyone visiting Pemba Island from November through February is encouraged to visit the northeastern coastal zone and look for this species feeding over the numerous small ponds.

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References

- ASH, J.S. & MISKELL, J.E. 2013. *Birds of Somalia*. London: Christopher Helm.
- BANNERMAN, D.A. 1926. Description of a New Glossy Starling from Pemba Island (*Lamprocolius corruscus vaughani*). Record of the occurrence in Pemba Island of the Madagascar Striped Swallow (*Phedina borbonica madagascariensis*). *Bulletin of the British Ornithologists' Club* 46: 126–128.
- BENSON, C.W. 1944. The Madagascar Martin from Nyasaland. *Bulletin of the British Ornithologists' Club* 65: 4–5.
- BRITTON, P.L. (ED.). 1980. *Birds of East Africa*. Nairobi: East Africa Natural History Society.
- CLANCEY, P.A., LAWSON, W.J. & IRWIN, M.P.S. 1969. The Mascarene Martin *Phedina borbonica* (Gmelin) in Moçambique: a new species to the South Africa list. *Ostrich* 40: 5–8.
- DOWSETT, R.J., ASPINWALL, D.R. & DOWSETT-LEMAIRE, F. 2008. *The Birds of Zambia*. Liège: Tauraco Press and Aves a.s.b.l.
- DOWSETT-LEMAIRE, F. & DOWSETT, R.J. 2006. *The Birds of Malawi: An atlas and handbook*. Liège: Tauraco Press and Aves a.s.b.l.
- GEENE, R. (ED.). 2001. Waterbird count of Zanzibar and Pemba islands, Tanzania, January 1998. *Foundation Working Group International Waterbird and Wetland Research (WIWO)*. WIWO-report 73.
- HARRISON, J.A., ALLAN, D.G., UNDERHILL, L.G., HERREMANS, M., TREE, A.J., PARKER, V. & BROWN, C.J. 1997. *The Atlas of Southern African Birds*. Vol. 2: Passerines. Johannesburg: Birdlife South Africa.
- PACKENHAM, R.H.W. 1979. *The birds of Zanzibar and Pemba. Check-list No. 2*. London: British Ornithologists' Union.
- PEARSON, D.J. & TURNER, D.A. 1998. Review of Kenya bird records 1992–1996. *Scopus* 20: 79.
- SAFFORD, R.J. & HAWKINS, A.F.A. (EDS) 2013: *The Birds of Africa. Volume VIII: The Malagasy Region*. London: Christopher Helm.
- TURNER, D.A. East African Bird Report 1980. *Scopus* 4(5): 110.
- VAUGHAN, J.H. 1930. The Birds of Zanzibar and Pemba. Part II. *Ibis* 12(6): 1–48.
- ZIMMERMAN, D.A. 1978. Mascarene Martins in Kenya. *Scopus* 2(3): 74–75.

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The 'golden weaver' *Ploceus (subaureus) holoxanthus*: a need for a full systematic review

The name '*holoxanthus*', when applied to the ploceine weavers of Africa, has long disappeared from the ornithological literature. It was the name originally given by Hartlaub (1891) to a type of 'golden weaver' collected in early 1890 by Friedrich Bohndorff along the Ruvu River near Bagamoyo, Tanzania. The type specimen (an adult male) is currently housed in the American Museum of Natural History in New York along with one female specimen (LeCroy 2014); earlier, Shelley (1905) had described two males and females then held in the British Museum collection, although Hartlaub (*op. cit.*) only mentioned the holotype.

While clearly a bird of considerable interest, it has sadly long been relegated to the realm of simply being considered a synonym of *Ploceus subaureus aureoflavus* Smith 1839. Other than in Moreau & Greenway (1962), it has not been deemed worthy of a mention in any of the recent regional or world checklists (Dickinson 2003, Craig 2004, 2010, Dickinson & Christidis 2014, and del Hoyo & Collar 2016).

The critical reference to it was that of Hartert (1907) who closely examined Hartlaub's bird during his tenure at Lord Rothschild's Museum at Tring, where he referred to *holoxanthus* as being, "not at all the same as *aureoflavus*. Its wing is considerably shorter, measuring only 65–69 mm (compared to 75–76 mm in *aureoflavus*), the tail is canary-yellow and shorter, measuring only 4.5 mm instead of 5 mm (in *aureoflavus*)." Hartert (*op. cit.*) further commented that the back was almost pure yellow, the remiges quite canary-yellow, and that only the secondaries were washed with olive on the outer webs. Later, Hartert (1919) reluctantly referred to comments by Zedlitz (1916) who, having examined further specimens, commented that in his view the "so-called *holoxanthus* were only extreme yellow males."

Meanwhile, recent visitors to the Bagamoyo area and the Selous Game Reserve have been puzzled by the presence of a 'golden weaver' type bird that simply does not fit the descriptions given in current field guides. Figure 1, a photo taken by ASK in the Selous Game Reserve in October 2008, amply highlights the confusion that currently exists, and which would appear to agree entirely with the comments by Hartert (1907).



Figure 1. The un-named golden weaver, *Ploceus* species discussed here. (photo: Adam Scott Kennedy).

Clearly, this form of 'golden weaver' warrants further field and molecular study so that its true systematic position *vis-à-vis* the Golden Palm Weaver *Ploceus bojeri* can finally be determined.

References

- CRAIG, A.J.F.K. 2004. *Ploceus subaureus* in FRY, C.H. & KEITH, S. (EDS.) 2004. Family Ploceidae in *The Birds of Africa* Vol. 7. London: Christopher Helm.
- CRAIG, A.J.F.K. 2010. Family Ploceidae in *Handbook of Birds of the World*. Vol 15. Barcelona: Lynx Edicions.
- DEL HOYO, J. & COLLAR, N.J. 2016. *Handbook of the Birds of the World and Birdlife International. Illustrated Checklist of the Birds of the World*. Vol. 2: Passerines. Barcelona: Lynx Edicions.
- DICKINSON, E.C. (ED.) 2003. *The Howard & Moore Complete Checklist of the Birds of the World*. 3rd Edition. London: Christopher Helm.
- DICKINSON, E.C. & CHRISTIDIS, L. (EDS.) 2014. *The Howard & Moore Complete Checklist of the Birds of the World*. 4th Edition, Vol. 2. Eastbourne: Aves Press.
- HARTERT, E. 1907. On *Ploceus aureoflavus*, *bojeri* and *holoxanthus* pp 499–500 in *Notes on African Birds*. 1. *Novitates Zoologicae* 14: 484–503.
- HARTERT, E. 1919. Types of birds in the Tring Museum. B. Types in the general collection. I. Corvidae to Meliphagidae. *Novitates Zoologicae* 26: 123–178.
- LECROY, M. 2014. Type Specimens of Birds in the American Museum of Natural History. Part 12. Passeriformes: Family Ploceidae. *Bulletin of the American Museum of Natural History*. Number 393. Page 21.
- MOREAU, R.E. & GREENWAY, J.C. 1962. Family Ploceidae in MAYR, E. & GREENWAY, J.C. JR. (EDS). *Checklist of birds of the World*. Vol 15: 3–75. Cambridge, Massachusetts: Museum of Comparative Zoology.
- SHELLEY, G.E. 1905. *The birds of Africa*. Vol. 4 (2). London: R.H. Porter.
- ZEDLITZ, O. 1916. Das Süd-Somaliland also zoogeographisches Gebiet. (Part 3). *Journal für Ornithologie*. 64: 1–119.

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First record of Greater Short-toed Lark *Calandrella brachydactyla* for Tanzania

On 13 February 2016, during the annual water bird count for Tanzania, Nani Dowling and I were walking along the northeastern shore of Lake Eyasi. While our focus was on the lake shore, we still kept an eye out for other birds. This is how we suddenly saw a lark fly up and land not far from us. Since the only regular larks around our place are Red-capped Lark *Calandrella cinerea*, and Fischer's Sparrowlark *Eremopterix leucopareia*, we immediately knew that this bird was new to us.

We proceeded to take some photos of the rather confiding bird which seemed to seek the company of some Red-capped Larks in its vicinity (Fig. 1). We noticed that it was slightly smaller than them. At the time it did not occur to us that we were seeing something special, just an odd lark that would be identified when back at home.



Figure 1. Greater Short-toed Lark (photo: C. Schmeling).

When consulting our books (especially Zimmerman *et al.* 1996) the only lark that resembled it was the Somali Short-toed Lark *Calandrella somalica*; this, however, has a streaked breast, which our bird did not have. It also appears to be darker overall than 'our' lark.

We did what we always do when in doubt, send some photos of the bird to Neil and Liz Baker. Not long after we were made aware that this was thought to be the first record of Greater Short-toed Lark for Tanzania. The record and photos were submitted to the EARC and on 25 June 2016 we were rather proud to receive confirmation from Nigel Hunter of the EARC that the record had been accepted as the first for Tanzania (Fisher & Hunter 2017).

References

- FISHER, D. & HUNTER, N. 2017. East African Rarities Committee Report. *Scopus* 37(2): 46–48.
- ZIMMERMAN, D. A., TURNER, D. A. & PEARSON, D. J. 1996. *Birds of Kenya and northern Tanzania*. Princeton NJ: Princeton University Press.

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First record of Eurasian Wryneck *Jynx torquilla* for Tanzania

On 11 January 2010, Vicki Kennedy and I visited Arusha National Park with local driver/guide Basil Kessey. We entered the park mid-morning and, after driving around the main crater, took lunch by the Momella Lakes. Around 15:00, we followed the tracks by the southwest corner of the lakes where I spotted a small, grey-brown, warbler-like bird take off from the ground and land in a small tree beside the track. The bird immediately reminded me of Eurasian Wryneck, so I was keen to get some images of the bird. I had seen numerous Wrynecks in Europe so was in no doubt about



the identification of the bird but was keen to confirm it was not a Red-throated Wryneck *Jynx ruficollis*, which was a more likely proposition in this part of the world. The pale buff throat showing subtle barring was enough for me to confirm it was indeed a Eurasian Wryneck. I grabbed the camera and took a few record shots of the bird (regrettably out of focus as on wrong settings), just before it took off and flew across the track and into some taller trees some 30 m away, which was a considerable distance from the designated track. We agreed not to stay to search for the bird any longer.

Description

The size of a large *Sylvia* warbler, the greyish-brown bird showed a wide tail as it flew from the ground. When perched, the bird showed a dark streak through the eye, pale throat with fine barring. The back was mostly grey with two bold dark streaks, the belly and vent were pale and the brown flight feathers showed obvious barring. The bird was silent.

Once the bird had flown, I checked Stevenson & Fanshawe (2002) who write of the species "very scarce Palearctic visitor". The corresponding distribution map shows no coverage or vagrant records for Tanzania. As soon as I had phone reception, I called Neil Baker in Iringa to report my observation whereby he confirmed my suspicion that it was indeed the first record for the species in Tanzania (Fisher & Hunter 2014). My observation was made at 3°14' S, 37°00' E.

References

- FISHER, D. & HUNTER, N. 2014. East African Rarities Committee Report 2010–2013. *Scopus* 33: 87–91.
- STEVENSON, T. & FANSHAW, J. 2002. *Birds of East Africa*. London: T. & A.D. Poyser Ltd.

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Editors' note: A second photographic record for Tanzania was obtained at Kitumbeine (2°44' S, 36°16' E), northwest of Arusha on 20 February 2019 by Kevin Mlay (D.A. Turner, *in litt.*). The most southerly African record we can trace is of one photographed at Nguuni, near Mombasa, Kenya (4°00' S, 39°42' E) on 20 April 2012 by Doris Schaule (Pearson, D. & Jackson, C. (2016) *Scopus* 36(1): 31. In addition, two have been ringed by the Ngulia Ringing Group at Ngulia Lodge, Tsavo West National Park (3°00' S, 38°13' E) on 5 January 2000 and 1 December 2003 (G.C. Backhurst, *in litt.*).

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East African Rarities Committee Report for 2018

David Fisher (Chairman) and Nigel Hunter (Secretary) on behalf of the EARC

The East African Rarities Committee assesses records of new and very rare birds occurring in Kenya, Tanzania, Uganda, Rwanda, and Burundi. This includes up to the fifth record of any species from each of the five countries. Sightings of species for which there are fewer than five records for a country should be submitted to the EARC Secretary, Nigel Hunter, P.O. Box 24803, Karen 00502, Nairobi, Kenya; Email: nigelhunter@timbale.org. Please contact the Secretary to obtain clarification of whether a record requires a submission and for guidance on what details to include in the submission. Past records of rare species are also sought in order to bring the EARC database up to date. Nomenclature follows the forthcoming *Checklist of the Birds of Kenya* 5th edition (Bird Committee EANHS, in prep.) unless stated otherwise. Since the Committee's last report published in 2018 (*Scopus* 38(2): 25–29) the following records have been accepted:

Archer's Francolin *Scleroptila gutturalis*

Fourth record for Uganda. One bird well seen and two more heard in Kidepo Valley National Park on 12 July 2016. Sound recording obtained and submitted as part of the record (Michael Mills and Julian Francis). Placement of five species in *Scleroptila* (formerly in *Francolinus*) follows the recommendations of Bloomer & Crowe (1998) and Crowe *et al.* (1992, 2006b), and later followed by Dickinson & Remsen (2013), and del Hoyo & Collar (2014).

Archer's Francolin was formally known as *Francolinus levalliantoides archeri*, but with *gutturalis* taking precedence over *levalliantoides*, treatment of East African birds as Archer's Francolin *Scleroptila gutturalis* follows Turner & Pearson (2015).

Crested Francolin *Dendroperdix sephaena*

First, second and third records for Rwanda. The first one was seen and photographed in Akagera National Park adjacent to Lake Gishanju on 18 July 2017 (Gaël Vande weghe). The second and third records were seen and photographed some 2 kms apart in Akagera National Park north of Kirara Plain on 28 October 2017 (Jes Gruner).

Striped Crake *Amaurornis marginalis*

Fifth record for Uganda. Two birds were well seen and photographed at Lake Mburu National Park on 26 June 2018 (Brian Finch, Paul Tamwenya, Cecilia Verkley, Kathy Brown, Alan and Sandra Woodward, Bob and Katy Zappala).

White-crowned Plover (Lapwing) *Vanellus albiceps*

Third and fourth records for Uganda. A single bird was seen along the northern bank of the River Nile in Murchison Falls National Park on 1 August 2017 with a detailed description provided (Tertius Gous, Peter and Kate Edmonds, Nigel and Di Hardcastle, and Ben Yokel). The second observation was again of a single bird, seen and photographed along the bank of the River Nile in Murchison Falls National Park on 12 July 2018 (Michael Mills, Nick Fordyce, Ken Petersen, John Lobel, Les Holliwell, and Janet Donnan).

Black-tailed Godwit *Limosa limosa*

Second record for Rwanda. Approximately 100 birds were seen and photographed in Bugesera District, Gashora Sector, near the bridge separating Bugesera and Ngoma Districts, at about 20km from the tarmac road (Claudien Nsabagasani, Daniel and Joan Pennington). The only previous record for Rwanda dates back to 1988.

Pectoral Sandpiper *Calidris melanotos*

Second record for Tanzania. A single bird seen and photographed at 'Hippo Pool' in Lake Manyara National Park on 20 November 2017 (Zul Bhatia).



Figure 1. Pectoral Sandpiper *Calidris melanotos* (photo: Zul Bhatia).



Figure 2. Short-eared Owl *Asio flammeus* (photo: Marie-Paule Schaijjes).

Black Stork *Ciconia nigra*

Third record for Rwanda. A single bird was seen at Kayonza in Akagera National Park on 22 March 2015; a detailed description was provided (James Hogg and Jes Gruner).

Short-eared Owl *Asio flammeus*

Third record for Tanzania. Two birds were seen and photographed at Gol Kopjes, Serengeti National Park on 2 February 2018 (Marie-Paule Schaijjes, Donna Duggan and Moody-Tanzanian guide).

Hemprich's Hornbill *Lophoceros hemprichii*

Second and third records for Uganda. The first sighting was of two birds observed and the bird's voice recorded near Kidepo National Park on 13 July 2016 (Michael Mills and Julian Francis). The second sighting was again of two birds observed and photographed a few kilometres south of Karenga, Kotido District on 28 January 2018 (Szabolcs Kókay, Norbert Ferenczi, Péter Jakab, and Gergely Szabó).



Figure 3. Hemprich's Hornbill *Lophoceros hemprichii* (photo: Szabolcs Kókay *et al.*).



Figure 4. Woodchat Shrike *Lanius senator* (photo: Pascal Deo Munezero).

Woodchat Shrike *Lanius senator*

New for Rwanda. A single bird was seen and photographed by the roadside very near Lake Ruhondo, Northern Province on 20 April 2017 (Pascal Deo Munezero).

Grey-chinned Sunbird *Anthreptes rectirostris*

New for Tanzania. A pair was located along a track in Minziro Forest Nature Reserve and photographed on 19 July 2016 (Florence and Per Holman). Other records do exist for this species from Minziro, but they have not been submitted to the EARC. It probably exists at quite low densities throughout the Minziro area, especially at the forest edge. Further details of this species in Tanzania are provided in Baker & Baker (2019).



Figure 5. Grey-chinned Sunbird *Anthreptes rectirostris* (photo: Florence Holman).



Figure 6. Little Green Sunbird *Anthreptes setmundi* (photo: Neil Baker).

Little Green Sunbird *Anthreptes setmundi*

New for Tanzania. At least three birds were seen and photographed along an abandoned track in the western edge of Minziro Forest Nature Reserve on 27 January 2018 (Neil Baker). A bird thought to be this species was netted in July 1987, but no photographs were taken. However, this species is known to occur in Malibigambo Forest (Uganda), which is contiguous with Minziro. Therefore, this species is probably a low-density resident of Minziro. Further details of this species in Tanzania are provided in Baker (2019).

Steel-blue Whydah *Vidua hypocherina*

Fourth record for Uganda. One adult male in full breeding plumage was seen in Kidepo Valley National Park on 12 July 2016 with a description provided (Michael Mills and Julian Francis).

Red-rumped Swallow *Cecropis daurica rufula*

Third record for Kenya of the subspecies *C. d. rufula*. A single bird was seen and well photographed at Valley Dam on Loldaiga Hills Ranch (southern Laikipia County) on 6 November 2018 with a detailed description provided (Brian Finch, Per Aronsson, Paul Benson, Tom Butynski, Yvonne de Jong, Nigel and Julia Hunter).



Figure 7. Red-rumped Swallow *Cecropis daurica rufula* (photo: Per Aronsson).



Figure 8. South African Cliff Swallow *Petrochelidon spilodera* (photo: Tyler Davis).

South African Cliff Swallow *Petrochelidon spilodera*

Second record for Kenya. A single bird was seen and photographed in the Mara Triangle, Maasai Mara National Reserve on 21 June 2018 (Tyler Davis).

Ansorge's Greenbul *Eurillas ansorgei*

Second to at least the fifth records for Uganda. Many birds were seen and voice recorded between August 2005 and July 2018 on at least ten occasions at The Neck and Buhoma in Bwindi Impenetrable National Park (Michael Mills). Clearly this species is common at Bwindi Impenetrable NP and should no longer be considered a rarity.

Southern Black Flycatcher *Melaenornis pammelaina*

Second record for Uganda. A single bird seen and photographed in Lake Mburu National Park on 25 June 2018 (Brian Finch, Paul Tamwenya, Cecilia Verkley, Kathy Brown, Alan and Sandra Woodward, Bob and Katy Zappala).

Desert Wheatear *Oenanthe deserti*

Fourth record for Kenya. A single bird was seen and photographed at Lake Turkana Wind Power site, Marsabit County on 8 February 2018 (Sidney Shema and Peter Njoroge). Further details of this record are provided in Shema & Njoroge (2018).

The following records were rejected because the details provided were insufficient to establish the identification with certainty:

Black-winged Pratincole *Glareola nordmanni* at Lake Gaharawa, Bugersera District, Rwanda on 14 October 2014.

Dusky Indigobird *Vidua funerea* at Pian Upe Game Reserve, Karamoja, Uganda on 7 August 2018. Establishing the occurrence in Uganda of Dusky Indigobird and Cameroon Indigobird *Vidua camerunensis* is proving to be difficult. Purple Indigobird *Vidua purpurascens* also remains a possibility.

White-throated Swallow *Hirundo albigularis* at Lake Masek, northwestern Ngorongoro Conservation Area, Tanzania on 27 February 2018.

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References

- BAKER, N.E. 2019. Little Green Sunbird *Anthreptes seimundi* from Minziro Forest Reserve: the first documented record for Tanzania. *Scopus* 39(1): 66.
- BAKER, N.E., & BAKER, E.M 2019. The Grey-chinned Sunbird *Anthreptes rectirostris* in Tanzania. *Scopus* 39(1): 70–71.
- BLOOMER, P. & CROWE, T.M., 1998. Francolin phylogenetics: molecular, morphobehavioral, and combined evidence. *Molecular Phylogenetics & Evolution* 9: 236–254.
- BIRD COMMITTEE, NATURE KENYA, EAST AFRICA NATURAL HISTORY SOCIETY. IN PREP. *Checklist of the Birds of Kenya*. Fifth Edition. Nairobi: Bird Committee, NK (EANHS).
- CROWE, T.M., BOWIE, R.C., BLOOMER, P., MANDIWANA, T.G., HEDDERSON, T.A., RANDI, E., PEREIRA, S.L. & WAKELING, J. 2006. Phylogenetics, biogeography and classification of, and character evolution in gamebirds (Aves: Galliformes): effects of character exclusion, data partitioning and missing data. *Cladistics* 22: 495–532.
- CROWE, T.M., HARLEY, E.H., JAKUTOWICZ, M.B., KOMEN, J. & CROWE, A.A. 1992. Phylogenetic, taxonomic and biogeographical implications of genetic, morphological, and behavioral variation in francolins (Phasianidae: *Francolinus*). *The Auk* 109: 24–42.
- DEL HOYO, J. & COLLAR, N.J. 2014. *Handbook of the Birds of the World and Birdlife International. Illustrated Checklist of the Birds of the World*. Vol. 1: Non-passerines. Barcelona: Lynx Edicions.
- DICKINSON, E.C. & REMSEN, J.V. JR. (EDS.) 2013. *The Howard & Moore Complete Checklist of the Birds of the World*. 4th Edition, Vol.1. Eastbourne: Aves Press.
- FISHER, D. & HUNTER, N. 2018. East African Rarities Committee Report for 2017. *Scopus* 38(2): 25–29.
- HEMA, S. & NJOROGE, P. 2018. Desert Wheatear *Oenanthe deserti* at Lake Turkana – the fourth record of the species for Kenya. *Scopus* 38(2): 18.
- TURNER, D.A. & PEARSON, D.J. 2015. Systematic and taxonomic issues concerning some East African bird species, notably those where treatment varies between authors. *Scopus* 34: 1–23.

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Urban, E.K., Fry, C.H. & Keith, S. (eds) 1986. *The birds of Africa*. Vol. 2. London: Academic Press.

BirdLife International 2013. Species factsheet: *Balearica regulorum*. Downloaded from <http://www.birdlife.org> on 14/05/2013.

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