An annotated checklist of mammals of Kenya

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ABSTRACT
Kenya has a rich mammalian fauna. We reviewed recently published books and papers including the six volumes of Mammals of Africa to develop an up-to-date annotated checklist of all mammals recorded from Kenya. A total of 390 species have been identified in the country, including 106 species of rodents, 104 species of bats, 63 species of even-toed ungulates (including whales and dolphins), 36 species of insectivores and carnivores, five species of elephant shrews, four species of hyraxes and odd-toed ungulates, three species of afrosoricids, pangolins, and hares, and one species of aardvark, elephant, sirenian and hedgehog. The number of species in this checklist is expected to increase with additional surveys and as the taxonomic status of small mammals (e.g., bats, shrews and rodents) becomes better understood.

Keywords: Checklist; Rodents; Bats; Ungulate; Shrews; Kenya

INTRODUCTION
Kenya lies astride the equator on the eastern coast of Africa. It is a medium-sized country, covering an area of about 582,646 km². The geography of Kenya is highly diverse, with various landforms that include coastline, lake basins, plains, hills, high mountains, and deserts. Similarly, the Kenyan climate is diverse and varies with geographical location. For example, rainfall and temperature are influenced by changes in altitude and distance to the coast and Lake Victoria. The Kenyan coast (0–100 m a.s.l.) is warm and humid, receiving about 1,000 mm of rainfall per year; the central highlands (1,000–2,500 m a.s.l.) are cool and humid, receiving the highest rainfall (over 2,000 mm per year) in Kenya; the hot and dry regions of northern and eastern Kenya (200–700 m a.s.l.) receive the lowest rainfall (<300 mm per year) (Bennun & Njoroge, 1999). Frost regularly occurs above 2,400 m a.s.l., with the hottest area (mean maximum temperature of 34 °C) being Lake Turkana (Bennun & Njoroge, 1999). The variations in rainfall, temperature, topography and landuse together influence the biomes and ecoregions of Kenya. Due to the complex topography, vegetation types and variation in climate, Kenya harbors a large diversity of organisms, with about 25,000 species of fauna and 7,000 species of flora currently recorded, along with at least 2,000 species of fungi and bacteria (NBU, 1992).

Over 10% of the country’s land area is presently gazetted as a national park, national reserve or forest reserve (Bennun & Njoroge, 1999). However, these protected areas were primarily established because they: (1) contain considerable populations of ‘big game’ (i.e., large mammals), which attract visitors; (2) are important water catchment areas; (3) support valuable timber for exploitation; or (4) contain few resident people at

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the time of establishment (Bunnun & Njorge, 1999). Thus, these protected areas were typically not established for the conservation of Kenya’s many smaller mammalian species such as hedgehogs, bats, rodents, otter-shrews, shrews, hares and elephant-shrrews. More than 80% of Kenya’s land area is not under legal protection and is predominantly comprised of degraded vegetation, agriculture and settlement, resulting in ongoing loss of suitable natural habitats for mammals. However, a small but significant proportion of the unprotected zones are conserved as privately or community owned ranches and conservancies, which can support relatively undisturbed natural habitats, providing important refuges for some mammals. For many of Kenya’s protected areas, conservancies and ranches, only checklists of larger mammals are typically available. The remoteness, difficulty of access and security concerns in northern and some parts of eastern Kenya have made this region difficult to survey. For example, an apparently new giant sengi (Rhynchocyon sp.) was recorded in the Boni-Dodori Forest (Andanje et al., 2010) but the risk of attack and kidnappings by Somalia-based Al-Shabaab militants has prevented any further research on the species. The study of small mammals in Kenya, as elsewhere on the continent, is also hampered by a shortage of experienced taxonomists. Hence, compared with large mammals, there is a dearth of knowledge on the distribution and ecology of small mammals in Kenya.

Species checklists constitute alpha-diversity descriptors of the taxonomic richness of a given country (Whittaker, 1972), and are important tools for the effective conservation of threatened species at the national level (Amori et al., 2011). Past checklists of Kenyan mammals were published in the 1920s to early 1990s. These included checklists for Insectivora, Chiroptera, and Carnivora (Hollister, 1918), Chiroptera (Aggundey & Schlitter, 1984), Insectivora and Macroscelidea (Aggundey & Schlitter, 1986), Kingdon's volumes of East African Mammals (Kingdon, 1974a, 1974b, 1977, 1982a, 1982b, 1984), Kingdon's Field Guide to African Mammals (Kingdon, 1997), Mammals of East Africa, including Kenya (Davies & Vanden Berghe, 1994), and Key to Bats of East Africa (Patterson & Webala, 2012). However, these checklists are now outdated and incomplete. In the past 24 years since the last checklist (Davies & Vanden Berghe, 1994), no attempt has been made to compile and publish a revised checklist of mammals in Kenya, even though a good deal of research has been conducted during the same period. Therefore, an updated complete checklist of mammal species is both warranted and of great conservation importance. This current checklist attempts to update the list of all mammals recorded in Kenya, and thus reflects recent advances in research of Kenyan mammals.

METHOD OF CHECKLIST PREPARATION

The current checklist was compiled by reviewing the six volumes of the Mammals of Africa (MOA): Vol. 1 (Introductory Chapters and Afrotheria: Kingdon et al., 2013), Vol. 2 (Primates: Butynski et al., 2013), Vol. 3 (Rodents, Hares and Rabbits: Happold D, 2013a), Vol. 4 (Hedgehogs, Shrews and Bats: Happold M & Happold D, 2013), Vol. 5 (Pigs, Hippopotamuses, Chevrotain, Giraffes, Deer and Bovids: Kingdon & Hoffman, 2013a), and Vol. 6 (Carnivores, Pangolins, Equids and Rhinoceroses: Kingdon & Hoffman, 2013b); Rodents of Sub-Saharan Africa: A Biogeographic and Taxonomic Synthesis (Monadjem et al., 2015), Keys to the Bats (Mammalia: Chiroptera) of East Africa (Patterson & Webala, 2012), and the IUCN website (IUCN Red List of Threatened Species, 2017) (only for Cetaceans). Prior changes in the taxonomy of each taxon are not included in this checklist because respective volumes of the MOA provide detailed information on the same. However, changes stemming from more recent literature are noted. Nomenclature follows the MOA, except where noted. We recognized the families Miniopteridae (Miller-Butterworth et al., 2007) and Rhinonycteridae (Foley et al., 2015) for bats and Heterocephalidae for rodents (Patterson & Upham, 2014). The checklist, which covers both terrestrial and aquatic (freshwater and marine) species, is presented by order, family, genus, scientific name, species authority, preferred common English, Swahili (English Coastal Swahili Dictionary online (ECSDO), 2016; Kingdon, 1974a, 1974b, 1977, 1982a, 1982b, 1984, 1997), and Chinese names (mostly following Wang et al., 2001), distributional range in Africa and Kenya, and the broad habitat types where it occurs. Cetacean species (IUCN Red List of Threatened Species, 2017) were included in the list if their distribution range encompassed the shallow marine habitat over the continental shelf and deep sea of the Indian Ocean along Kenya’s coastline. Introduced species without a wild breeding population, those not confirmed to occur in Kenya, and those locally extinct are not included in the list.

CHECKLIST OF MAMMALS

ORDER HYRACOIDEA (Hyraxes—four species)

Family PROCAVIIDAE

Genus Dendrohyrax Gray, 1868. Tree Hyraxes


Genus Heterohyrax Gray, 1868. Bush Hyraxes

2 www.zoores.ac.cn
3. **Heterohyrax brucei** Gray, 1868. English: Bush Hyrax; Yellow-spotted Hyrax. Swahili: Perere Mawe; Pimb Madoa. Chinese: 小齿蹄兔. Recorded from Sudan and Eritrea from the east and Horn of Africa to South Africa, as well as SW DR Congo. In rocky kopjes, sheer cliffs or precipices, and piles of large boulders with openings, as well as in forests along rivers. In Kenya, widespread (Barry & Hoeck, 2013).

Genus **Procavia** Storr, 1780. Rock Hyraxes

4. **Procavia capensis** (Pallas, 1766). English: Rock Hyrax. Swahili: Pimbi/Pimbe. Chinese: 岩蹄兔. Recorded from S Mauritania through S Algeria and Libya to Egypt, western through to East Africa, including the Horn of Africa, as well as southern Africa. In a wide range of habitats, from arid deserts to rainforest, and from sea level to the alpine zone of Mt Kenya (3 200–4 300 m a.s.l.). In Kenya, widely distributed (Hoeck & Bloomer, 2013).

**ORDER PROBOSCIDEA** (African Elephant—one species)

Family ELEPHANTIDAE

Genus **Loxodonta** Anonymous, 1827. African Elephant


**ORDER SIRENIA** (Dugongs—one species)

Family DUGONGIDAE

Genus **Dugong** Lacépède, 1799. Dugongs


**ORDER MACROSCELIDEA** (Sengis–five species)

Family MACROSCELIDIDAE

Genus **Elephantulus** Thomas and Schwann, 1906. Sengis


Genus **Petrodromus** Peters, 1846. Four-toed Sengis

and N South Africa. Woody thickets in forests, woodlands and rocky habitats. In Kenya, recorded only in the SE (Rathbun, 2013a).

Genus Rhynchocyon Peters, 1847. Giant Sengis


ORDER TUBULIDENTATA (Aardvark—one species)

Family ORYCTEROPODIDAE

Genus Orycteropus G. Cuvier, 1798. Aardvark


ORDER PRIMATES (Primates—19 species)

Family HOMINIDAE

Genus *Homo* (Linnaeus, 1758). Humans


Family CERCOPITHECIDAE

Genus Colobus Illiger, 1811. Black-and-White Colobus Monkeys


18. **Colobus guereza** Rüppel, 1835. English: Guereza Colobus. Swahili: Mbega. Chinese: 东黑疣猴. Recorded from E Nigeria, N of the Congo Basin to E Africa, Gabon, Congo and E Ethiopia. In a wide array of forest types, including lowland and medium-altitude moist forest, montane forest, swamp forest, dry forest, gallery forest and disturbed forest. Four subspecies recognized in Kenya: *Colobus g. matschiei* Neumann, 1899. Mau Forest Guereza, recorded from CW Kenya, W of the Eastern Rift Valley; *Colobus g. kikuyensis* Lönnberg, 1912, Mount Kenya Guereza, endemic to the Central Highlands of Kenya, E of the Eastern Rift Valley; *Colobus g. percivali* Heller, 1913, Mount Uarges Guereza, endemic to Mathews Range, C Kenya (Fashing & Oates, 2013); and *Colobus g. caudatus* Oldfield Thomas, 1885, Mount Kilimanjaro guereza, restricted to Kitobo and Loitokitok Forest Reserves (Butynski & De Jong, 2015).

Genus Procolobus de Rochebrune, 1887. Olive Colobus Monkey, Red Colobus Monkey


Genus Cercocebus É. Geoffroy, 1812. Drill-Mangabeys


Genus Papio Erxleben, 1777. Baboons


**Genus Erythrocebus** Trouessart, 1897. Patas Monkey


**Genus Chlorocebus** Gray, 1870. Savanna Monkeys


27. **Cercopithecus mitis** Wolf, 1822. English: Gentle Monkey. Swahili: Kima. Chinese: 青长尾猴. Recorded from W Angola, N Ethiopia, SE Sudan, S Somalia, East Africa, E DR Congo, NE Zambia, N Mozambique, Zimbabwe and South Africa. In a wide range of habitats, including lowland, mid-altitude, montane, riverine, gallery, coastland bamboo forests, bushland and woodland (Lawes et al., 2013). Four subspecies recognized in Kenya: **Cercopithecus m. albogularis** (Sykes, 1831), Zanzibar Sykes’s Monkey, recorded from SE Kenya, S of Galana River, W to Kwbezi and Tsavo West National Park (NP) (De Jong & Butynski, 2012); **Cercopithecus m. stuhlmanni** Matschie, 1893, Stuhlmann’s Blue Monkey, recorded from SW Kenya, W of the Eastern Rift Valley; **Cercopithecus m. albotorquatus** Pousargues, 1896, Pousargues’s Monkey, near-endemic to the N coast of Kenya, N to at least Boni National Reserve (NR) and Dodori NR, and inland along Tana River to Meru NP (De Jong & Butynski, 2011); and **Cercopithecus m. kobli** Neumann, 1902, Kolb’s Monkey, endemic to the Kenyan Highlands, E of the Eastern Rift Valley.


**Family LORISIDAE**

**Genus Perodicticus** Bennett, 1831. Pottos


**Family GALAGIDAE**

**Genus Otolemur** Coquerel, 1859. Greater Galagos


**Genus Galago** É. Geoffroy, 1796. Lesser Galagos


**Genus Paragalago** Master et al., 2017. Dwarf Galagos

Previously placed within *Galagoides* A. Smith, 1833 (Dwarf Galagos) as *Galagoides cocos* but now moved to newly proposed genus *Paragalago* (Master et al., 2017).


**ORDER RODENTIA** (Rodents–106 species)

**Family SCIURIDAE**

**Genus Heliosciurus** Trouessart, 1880. Sun Squirrels


**Genus Paraxerus** Forsyth Major, 1893. Bush Squirrels


Genus *Xerus* Hemprich and Ehrenberg, 1833. Ground Squirrels


Family GLIRIDAE

Genus *Graphiurus* Smuts, 1832. Dormice

The taxonomy of dormice in Africa is controversial and species are difficult to identify.


Family SPALACIDAE

Genus *Tachyoryctes* Ruppell, 1835. Root-rats

The taxonomy of this genus is complex and not yet resolved. Musser & Carleton (2005) considered *T. ankolliae*, *T. annectens*, *T. audax*, *T. daemon*, *T. ibeanus*, *T. naivashae*, *T. rex*, *T. ruandae*, *T. ruddi*, *T. spalacinus* and *T. storeyi* as valid species in Kenya, whereas Jarvis (2013a) considered these as synonyms of *T. splendens*. We have followed Monadjem et al. (2015) who considered *T. rex*, *T. annectens*, *T. ibeanus*, *T. spalacinus* and *T. ruddi* as valid species in Kenya based on morphometric analysis and the distinct biogeographic and ecological distributions of each species.


48. *Tachyoryctes ibeanus* Thomas, 1900. English: Kenyan Root-rat. Swahili: Fuko/Mizizi Panya. Chinese: 肯尼亚睡鼠. Included within *T. splendens* by Jarvis (2013a). Musser & Carleton (2005) recognized the taxa *T. storeyi* and *T. naivashae* as specifically distinct from *T. ibeanus*. However, based on skull morphometrics and biogeography, Monadjem et al. (2015) considered these three taxa to be conspecific. Thus, pending molecular studies, we have treated these three taxa as conspecific. Endemic to Kenya. Subterranean in well-drained soils in savanna habitats. In Kenya, recorded near Nairobi and on the western part of the Athi Plains (Musser & Carleton, 2005; Monadjem et al., 2015).


Family NESOMYIDAE

Genus *Beamys* Thomas, 1909. Long-tailed Pouched Rats

Malawi and Zambia. Evergreen and slightly deciduous forests and riverine forests close to streams. In Kenya, recorded S of Mombasa and in the Arabuko-Sokoke Forest (Happold D, 2013c).

**Genus Cricetomys** Waterhouse, 1840. Giant Pouched Rats

53. **Cricetomys ansorgei** Thomas, 1904. English: Southern Giant Pouched Rat. Swahili: Panya Buku. Chinese: 非洲巨鼠. Previously included within *C. gambianus* (Duplantier, 2013), but shown to be specifically distinct (Olayemi et al., 2012). Widely distributed in southern and eastern Africa from SW Kenya and northern Tanzania to S DR Congo, Angola, Zambia, Malawi, Mozambique, Zimbabwe and South Africa (Musser & Carleton, 2005), although western limits are not yet known may extend into Uganda. Forests, savanna and human-modified habitats. Widespread in W and SE Kenya (Monadjem et al., 2015).


**Genus Dendromus** Smith, 1829. Climbing Mice


**Genus Steatomys** Peters, 1846. Pouched Mice


**Family CRICETIDAE**

**Genus Lophiomys** Milne-Edwards, 1867. Maned Rats


**Family MURIDAE**

**Genus Acomys** I. Geoffroy, 1838. Spiny Mice


**Genus Lophuromys** Peters, 1874. Brush-furred Rats

The taxonomy of the genus is controversial (Dieterlen, 2013e) and has not yet been resolved. Following Musser & Carleton (2005) and Monadjem et al. (2015), we recognize three species here.


**Genus Uracomys** Dollman, 1909. Brush-furred Rats

70. *Uracomys ruddi* Dollman, 1909. English: Rudd’s Brush-furred Rat. Swahili: Panya. Chinese: 白腹蓬毛鼠. Widely distributed in West Africa, but also discrete populations in Central, East and southern Africa. Moist savannas, grasslands and oil plantations (in West Africa) (Happold D, 2013f). The presence of this species in Kenya is only known by the type specimen from “Kirui, southern foothills of Mt. Elgon, Kenya” (Delany, 1975). Due to possible confusion regarding the exact locality mentioned in Dollman (1909), the presence of this species in Kenya requires confirmation.

**Genus Gerbilliscus** Thomas, 1897. Gerbils


75. *Gerbilliscus vicinus* (Peters, 1878). English: Vicinus Gerbil. Swahili: Panya. Chinese: 维氏大沙鼠. Formerly placed in the genus *Tatera*; included within *Gerbilliscus robustus* by Happold D (2013k). Recorded from Tanzania and Kenya. Dryland areas (Monadjem et al., 2015). In Kenya, found widely throughout the country but appears to be absent from the drier regions in the NE and highlands of the SW.

**Genus Gerbillus** Desmarest, 1804 Gerbils


Genus *Taterillus* Thomas, 1910. Taterils


Genus *Aethomys* Thomas, 1915. Veld Rats


Genus *Arvicanthis* Lesson, 1842. Grass Rats


Genus *Colomys* Thomas and Wroughton, 1907. African Water Rat


Genus *Dasymys* Peters, 1875. Shaggy Rats

87. *Dasymys incommutus* (Sundevall, 1847). English: Common Shaggy Rat. Swahili Panya. Chinese: 非洲水鼠. Widely distributed in eastern and southern Africa, as well as Ethiopia, Sudan and South Sudan. Reed-beds, long grass close to water, and damp areas on drainage lines (Pillay, 2013). In Kenya, widely distributed in the W and S, mostly west of the Rift Valley.

Genus *Grammomys* Thomas, 1915. Thickets Rats


90. *Grammomys dolichurus* (Smuts, 1832). English: Common Thicket Rat. Swahili: Panya. Chinese: 南非鼠. Recorded widely in the eastern half of Africa from Uganda and Kenya to South Africa, extending westwards S of the Congo basin to Angola. Woodland savanna and gallery forests (Happold D, 2013o). In Kenya, recorded from the SW, mostly W of the Rift Valley, with a narrow extension to the coast in the extreme SE.


Genus *Hylomyscus* Thomas, 1926. Wood Mouse


Genus *Lemniscomys* Trouessart, 1881. Grass Mice


Genus *Mastomys* Thomas, 1915. Multimammate Mice


Genus *Mus* Linnaeus, 1758. Old World Mice and Pygmy Mice


105. *Mus minutoides* Smith, 1834. English: Tiny Pygmy Mouse. Swahili: Panya. Chinese: 南非小家鼠。Based on molecular characterization, this species has been
recorded widely throughout sub-Saharan Africa, including West Africa (see Monadjem et al., 2015). The similar and closely related *Mus musculoides* (West African Pygmy Mouse) is widely recorded from West Africa, where it is sympatric with *M. minutoides*. Hence, recent molecular studies have clarified some of the confusion raised and discussed in the *Mammals of Africa* accounts (Happold D, 2013q; Monadjem, 2013e). Savannah woodlands, grasslands, rocky areas, broad-leaved woodlands and farmlands. In Kenya, recorded in the NW and S.


**Genus Mylomys** Thomas, 1906. Three-toed Grass Rat


**Genus Myomyscus** Shortridge, 1942. Meadow Mice


**Genus Oenomys** Thomas, 1904. Rufous-nosed Rats


**Genus Otomys** F. Curvier, 1824. Vlei Rats

The number of species in this genus increased dramatically with recent molecular studies (see Monadjem et al., 2015). Taylor (2013a) recognized 15 species in Africa, which was increased to 31 species by Monadjem et al. (2015). Of these, eight species have been recorded in Kenya.


**Genus Pelomys** Peters, 1852. Creek Rats


**Genus Praomys** Thomas, 1915. Soft-furred Mice

The taxonomy of the genus *Praomys* is controversial and has been the subject of debate for many years. The definition of the genus and constituent species are still uncertain (Happold D, 2013t). For Africa as a whole, 16 species are recognized (Happold D, 2013t), with three species occurring in Kenya.


**Genus Rattus** Fischer, 1803. Rats


**Genus Thallomys** Thomas, 1916. Four-striped Grass Mice


**Genus Thallomys** Thomas, 1920. Acacia Rats


**Genus Zelotomys** Osgood, 1910. Broad-headed Mice

S DR Congo and Angola. Moist grassland savanna, edge of swamps and forests, and grasslands (Nel, 2013). In Kenya, occurs widely in the SW.

Family ANOMALURIDAE
Genus Anomalurus Waterhouse, 1842. Anomalures


Family PEDETIDAE
Genus Pedetes Illiger, 1811. Springhares


Family BATHYERGIDAE
Genus Heliophobius Peters, 1846. Silvery Mole-rats


Family HETEROCEPHALIDAE

The single genus and species in this family was previously placed in the family Bathyergidae (Jarvis, 2013c) but is now placed in the newly recognized family Heterocephalidae (Patterson & Upham, 2014).

Genus Heterocephalus Ruppell, 1842. Naked Mole-rats


Family HYSTRICIDAE

Genus Atherurus F. Cuvier, 1829. Brush-tailed Porcupines


Genus Hystrix Linnaeus, 1758. Crested Porcupines


Family THRYONOMYIDAE
Genus Thryonomys Fitzinger, 1867. Cane Rats


Family MYOCASTORIDAE
Genus Myocastor Kerr, 1792. Coypu

eastern Africa. Swamps, rivers, farm ponds and dams. In Kenya, recorded in C regions (e.g., Laikipia, Nanyuki, Aberdare Ranges, Lake Naivasha) (Happold D, 2013zc).

ORDER LAGOMORPHA (Hares and Rock-hares–three species)

Family LEPORIDAE

Genus Lepus Linnaeus, 1758. Hares and rock-hares

141. Lepus capensis Linnaeus, 1758. English: Cape Hare; Swahili: Sungura. Chinese: 海角兔. Recorded throughout most of the continent, except in desert (and other arid areas) and rainforest; not present from Angola westwards to Mozambique. Grasslands and other open habitats (Happold D, 2013zd). In Kenya, recorded in most of the country, except the NE.


Genus Pronolagus Lyon, 1904. Rock-Hares


ORDER ERINACEOMORPHA (Hedgehogs–one species)

Family ERINACEIDAE

Genus Atelerix Pomel, 1848. Hedgehogs


ORDER SORICOMORPHA (Shrews–36 species)

The Swahili name for the cryptic, unobtrusive and hard-to-see shrew species of this order is ‘Kirukanjia/Njule’

Family SORICIDAE

Genus Crocidura Wagler, 1832. White-toothed Shrews


155. **Crocidura luna** Dollman, 1910. English: Moonshine Shrew. Chinese: 新月鼩鼱. With more than one species, this complex needs taxonomic revision (Castiglia et al., 2009). Recorded from NE DR Congo, Uganda, Kenya, most of Tanzania, Zambia, SE DR Congo, WC Mozambique, Malawi and Mozambique. In moist, cool areas, typically on the fringes of montane forests with dense cover and in matted grass along streams. In Kenya, recorded from the S and W (Baxter & Dippenaar, 2013a).

156. **Crocidura macarthuri** St. Leger, 1934. English: MacArthur's Shrew. Chinese: 麦考鼩鼱. Recorded from S Kenya (Nkuruman) and C Somalia. In wooded grasslands with widely scattered *Acacia* trees, e.g., *Acacia tortilis*, interspersed with *Themeda*, *Hyparrhenia* and *Cenchrus* grasses (S Kenya) (Oguge, 2013c) and Meru National Park (Hutterer, unpublished data).


159. **Crocidura montis** Thomas, 1906. English: Montane White-toothed Shrew. Chinese: 山林鼩鼱. This species is possibly restricted to Mt. Rwenzori, DR Congo (Stanley et al., 2015). Other populations in East Africa may represent different species, which require revision. In montane grasslands. In Kenya, recorded under this name from C and W regions (Hutterer, 2013d).


**Genus Suncus** Ehrenberg, 1832. Pygmy and House Shrews


176. *Suncus murinus* (Linnaeus, 1766). English: Asian House Shrew. Chinese: 臭鼩鼱. Introduced exotic species in disturbed and natural habitats along the coast from Egypt to Tanzania, as well as around Lake Victoria (Duplantier, 2013). In Kenya, recorded along the coast and Lake Victoria.

**Genus Surdisorex** Thomas, 1906. Mole-shrews


**Genus Sylvisorex** Thomas, 1904. Forest Shrew


**ORDER CHIROPTERA** (Bats–104 species)

The Kenyan bat fauna includes members of all 11 families of bats known from Africa (Patterson & Webala, 2012). The Swahili name for bat is “Popo”, and currently no other name exists for different species of bats found in Kenya.

**Family PTEROPODIDAE**

**Genus Eidolon** Rafinesque, 1815. Straw-coloured Fruit Bats

181. *Eidolon helvum* (Kerr, 1792). English: African Straw-coloured Fruit Bat. Chinese: 黄毛果蝠. Recorded widely in sub-Saharan Africa. In all forests and woodland savannas with trees producing enough fruit. In Kenya, recorded from W and C regions and in wetter areas along the Kenya-Tanzania border from the SW to the coastal strip as far as Pate Island, Lamu (Thomas & Henry, 2013a).

**Genus Epomophorus** Bennett, 1835. Epauletted Fruit Bats

182. *Epomophorus labiatus* Temminck, 1837. English: Little Epauletted Fruit Bat. Chinese: 小颈囊果蝠. Recorded disjunctly from NE Nigeria, S Chad and S Congo, and in some areas from C Sudan to Eritrea, Ethiopia and Djibouti and southwards to N Zambia and S Malawi. Found in a wide variety of woodland savannas (Happold M, 2013a). In Kenya, recorded from the W and SE half of the coastal strip.


Fruit Bats

Rhinolophus

Genus Rhinolophus Lacépède, 1799. Horseshoe Bats

189. **Rousettus aegyptiacus** (É. Geoffroy, 1810). English: Egyptian Rousette. Chinese: 北非果蝠. Disjunct records from the Nile Valley in Egypt and from most (but not all) countries in sub-Saharan Africa. Found in a wide variety of habitats where caves and fruiting trees are present (Happold M, 2013f). In Kenya, widely distributed in the western half of the country, C and extending to the southern half of the coastal strip.

Genus *Stenonycteris* Andersen, 1912. Long-haired Rousette

The genus *Stenonycteris* has recently been validated as distinct from the genus *Rousettus* (Nesi et al., 2013).

190. **Stenonycteris lanosus** (Thomas, 1906). English: Long-haired Rousette. Chinese: 狭齿果蝠. Recorded only from eastern Africa from SW Ethiopia to S Sudan, E DC Congo, W Kenya, E Tanzania and N Malawi. Found mostly in or near afro-montane vegetation, but also recorded in mosaics of evergreen bushland and secondary *Acacia* woodland, and occasionally in drier lowland rainforest, miombo woodland and various bushland and thicket habitats (Happold M, 2013g as *Rousettus lanosus*). In Kenya, recorded from several C and W localities.

Family RHINOLPHIDAE

Genus Rhinolophus Lacépède, 1799. Horseshoe Bats

191. **Rhinolophus clivosus** Cretzschmar, 1828. English: Geoffroy's Horseshoe Bat. Chinese: 佐氏菊头蝠. Disjunct records from northern, central, eastern and southern Africa, including the Horn of Africa. Found in a wide variety of habitats (Bernard & Happold M, 2013a). In Kenya, recorded widely in the NW and mid-W to C (including in caves in Naivasha and Mt Elgon National Park) and SE regions (Taita Hills) (López-Baucells et al., 2016).


194. **Rhinolophus fumigatus** Rüppell, 1842. English: Rüppell's Horseshoe Bat. Chinese: 达马拉菊头蝠. Highly disjunct records from Senegal to Cameroon in West Africa, and also disjunctions from NE Gabon and N Congo southwards to Angola and Namibia, and from Eritrea, E Sudan, Ethiopia and NE DR Congo southwards to NE South Africa. Found in woodland savannas (Cotterill & Happold M, 2013a). In Kenya, widely distributed in N-C regions (including Laikipia, Meru and Marsabit) and extending to the southern half of the coastal strip, mostly in *Acacia-Commiphora* deciduous bushland and thickets.

195. **Rhinolophus hildebrandtii** Peters, 1878. English: Hildebrandt's Horseshoe Bat. Chinese: 希氏菊头蝠. Currently considered to occur only in S Ethiopia and East Africa; in semi-arid and mesic woodland savannas and riverine forests (Taylor et al., 2012; Cotterill & Happold M, 2013b). Previous records from further S are now considered to represent other species (Taylor et al., 2012). In Kenya, widely recorded W of the Rift Valley and extending to the SE (including Chyulu Hills).

196. **Rhinolophus landeri** Martin, 1837 (publ. 1838). English: Landier's Horseshoe Bat. Chinese: 兰德菊头蝠. Widespread but disjunct records in sub-Saharan Africa from Senegal to Ethiopia and southwards to NE South Africa. Found in a very wide variety of habitats (Happold M, 2013i). A recent study showed that savanna populations in South and East Africa represent a distinct species of *R. lobatus* (Taylor et al., 2018), which is likely widely distributed in Kenya.

197. **Rhinolophus simulator** K. Andersen, 1904. English: Bushveld Horseshoe Bat. Chinese: 布什维尔德菊头蝠. Highly disjunct records in West Africa (Guinea to W Cameroon) and also disjuncts from C Ethiopia and S Sudan to NE South Africa. Found in various habitats, including rainforests, montane forests, wetter woodland savannas, coastal mosaics and valley bushveld, but probably only near caves and/or abandoned mines (Cotterill & Happold M, 2013c). In Kenya, recorded from the W and SE.

**Family HIPPOSIDERIDAE**

Species traditionally treated as within the genus *Hipposideros* have been recently allocated to three different genera, namely *Hipposideros*, *Doryrhina* and *Macronycteris* (Foley et al., 2017).

**Genus Doryrhina** Peters, 1871. Leaf-nosed Bats

Foley et al. (2017) placed *Hipposideros cyclops* in *Doryrhina*, but their study did not include *H. camerunensis*. Because *cyclops* and *camerunensis* are traditionally considered to be very closely related, we provisionally placed *camerunensis* in *Doryrhina*; however, this needs confirmation.

198. **Doryrhina camerunensis** (Eisentraut, 1956). English: Cameroon Leaf-nosed Bat. Chinese: 喀麦隆蹄蝠. Originally described as *Hipposideros camerunensis* but see Genus *Doryrhina* above. Disjunct records from S Cameroon, E DR Congo and W Kenya. Found in montane and lowland rainforests (Happold M, 2013i as *Hipposideros camerunensis*). In Kenya, recorded only from North Nandi and Kakamega forests in the W, in degraded montane forest and intermediate evergreen forest, respectively.

199. **Doryrhina cyclops** (Temminck, 1853). English: Cyclops Leaf-nosed Bat. Chinese: 大眼蹄蝠. Disjunct records from Senegal to coastal Kenya and Tanzania. Found mostly in lowland rainforests, but also in coastal, montane, swamp and mangrove forests (Fahr, 2013a as *Hipposideros cyclops*). In Kenya, recorded only from small areas in the SW and SE.

**Genus Hipposideros** Gray, 1831. Old World Leaf-nosed Bats

200. **Hipposideros caffer** (Sundevall, 1846). English: Sundevall’s Leaf-nosed Bat. Chinese: 松氏蹄蝠. Widespread in many African countries. Found in woodland savannas (Bernard & Happold M, 2013b). In Kenya, *H. caffer* is widely distributed from W of the Rift Valley to the C and E along the coastal strip. However, taxonomic revision is required as *H. caffer* is considered to be a species complex (Kock et al., 2008; Vallo et al., 2008). Three subspecies were listed by Simmons (2005), including: *H. c. angolensis* Seabra, 1898; *H. c. nanus* J.A. Allen, 1917; and *H. c. tephros* Cabrera, 1906. However, a study by Vallo et al. (2008) revealed two distinct clades, *H. c. caffer* and *H. c. tephros*, respectively, inhabiting southern Africa and the Maghreb, West Africa and Arabian Peninsula. Whether East African populations belong to either of the two clades or to a distinct one requires investigation.


202. **Hipposideros ruber** (Noack, 1893). English: Noack’s Leaf-nosed Bat. Chinese: 诸氏蹄蝠. Vallo et al. (2008) recognized several species lineages within the *caffer-ruber* complex throughout Africa, a view supported by Monadjem et al. (2013b). Molecular data are, therefore, required to resolve the taxonomy of the group. In fact, according to Vallo et al. (2008), *H. ruber* is only found in East Africa. In Kenya, the species is only recorded from the W and SE (Happold M, 2013i).

**Genus Macronycteris** Gray, 1866. Leaf-nosed Bats

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*Zoological Research* 40(1): 1–51, 2019

204. *Macronycteris vittata* (Peters, 1852). English: Striped Leaf-nosed Bat. Chinese: 大白纹蹄蝠. Highly disjunct records from N Nigeria and N Cameroon, from the eastern side of Africa (from Ethiopia and Somalia to NE South Africa), and from SW Angola. Found in a wide variety of habitats. In Kenya, recorded only in the SE, in coastal forests and adjacent bushland (Happold M, 2013n as *Hipposideros vittatus*).

**Family RHINOCTYTERIDAE**

Following Foley et al. (2015, 2017), we recognize the family Rhinonycteridae as distinct from the family Hipposideridae, to which we allocate the genera *Cloeotis* and *Triaenops*.

**Genus Cloeotis** Blyth, 1848. Percival's Trident Bat


**Genus Triaenops** Dobson, 1871. Trident Bat

206. *Triaenops afer* Dobson, 1871. English: African Trident Bat. Chinese: 非洲三叉蝠. Highly disjunct records from S Central African Republic Africa to NW Angola, and from Ethiopia, NE DR Congo and Somalia southwards to E Zimbabwe and S Mozambique. Found in various habitats, including coastal forests, riverine forests and farmlands with patches of miombo woodland and/or remnant rainforest (Happold M, 2013o). In Kenya, recorded widely from the NW to SE, as well as coastal forests and drier habitats, including *Acacia-Commiphora* deciduous bushland and thickets.

**Family MEGADERMATIDAE**

**Genus Cardioderma** Peters, 1873. Heart-nosed Bat


**Genus Lavia** Gray, 1838. Yellow-winged Bat

208. *Lavia irons* (É. Geoffroy, 1810). English: Yellow-winged Bat. Chinese: 黄翼蝠. Widespread but disjunct records from Senegal to Eritrea and W Somalia (although not most of Ethiopia) and southwards to Gabon, DR Congo, C Zambia, N Malawi and Tanzania. Mostly found in woodland savannas with abundant acacias, but also various other habitats (excluding closed rainforest) (Happold M, 2013q). In Kenya, widely distributed W of the Rift Valley and along the coastal strip.

**Family RHINOPOMATIDAE**

**Genus Rhinopoma** É. Geoffroy, 1818. Mouse-tailed Bats


**Family EMBALLONURIDAE**

**Genus Coleura** Peters, 1867. Sheath-tailed Bats


**Genus Saccolaimus** Temminck, 1838. Pouched Bats

211. *Saccolaimus peli* (Temminck, 1853). English: Pel's Pouched Bat. Chinese: 贝尔墓蝠. Disjunct records from parts of West and Central Africa (including DR Congo and Angola), and from Uganda and W Kenya. Found in rainforest zones, mostly in lowland, coastal and swamp forests but also in montane forests, mangroves, forest-savanna mosaics and (rarely) in miombo woodland and *Isoberlinia* woodland (Fahr, 2013b). In Kenya, recorded only in the W (Nandi Forest and Kaimosi).

**Genus Taphozous** É. Geoffroy, 1818. Tomb Bats


215. **Taphozous nudiventris** Cretzschmar, 1830. English: Naked-rumped Tomb Bat. Chinese: 森腹墓蝠. Widely scattered records N of the Equator (but not in all countries) and from N Tanzania. Found in woodland savannas, *Acacia-Commiphora* deciduous bushland and thickets, and more arid semi-desert and desert habitats (Happold M, 2013c). In Kenya, recorded only in the NW.

216. **Taphozous perforatus** É. Geoffroy, 1818. English: Egyptian Tomb Bat. Chinese: 埃及墓蝠. Highly disjunct records in parts of West Africa W of NW Nigeria, and in eastern Africa (excluding most of the Horn of Africa) from the Nile Delta to S Zimbabwe. Mostly found in open woodland savannas, moist habitats along the Nile Valley and Okavango Swamp in Botswana, and the East African coastal mosaics (Taylor, 2013). In Kenya, recorded only in the NW, C and SE along the coastal strip.

**Family NYCTERIDAE**

**Genus Nycteris** G. Cuvier and É. Geoffroy, 1795. Slit-faced Bats.

217. **Nycteris arge** Thomas, 1903. English: Bates's Slit-faced Bat. Chinese: 淡色凹脸蝠. Widespread but disjunct records from Sierra Leone to South Sudan, SW Kenya and NW Tanzania, and southwards to N Angola and S DR Congo. Mostly found in lowland rainforests, coastal forests and forest-savanna mosaics, but also in montane and swamp forests, in or near relict and riverine forests in the Guinea Savanna, *Acacia-Commiphora* deciduous bushland and thickets, and miombo woodland (Fahr, 2013c). In Kenya, recorded only from the W (Yala River, Kavirondo).


219. **Nycteris grandis** Peters, 1865. English: Large Slit-faced Bat. Chinese: 大凹脸蝠. Recorded widely from Senegal to NE DR Congo (in rainforest and rainforest mosaics), with apparently separate populations in Kenya and Tanzania (in East African coastal forest mosaics) and some scattered records in Zambia, S Malawi and S Mozambique (in woodlands and riverine forests near large rivers) (Happold M, 2013c). In Kenya, recorded from the SE in coastal forest mosaics.


221. **Nycteris macrotis** Dobson, 1876. English: Large-eared Slit-faced Bat. Chinese: 大耳凹脸蝠. Recorded widely (but with large gaps) in sub-Saharan Africa as far S as NE Angola, NE Botswana, N Zimbabwe and S Mozambique, and also along the River Nile in the Sudan. Found in lowland rainforest, savanna habitats coastal forests and woodlands (Cotterill & Happold M, 2013). In Kenya, recorded in the NW and widely in the southern half of the country in various habitats, including *Acacia-Commiphora* deciduous bushland and thickets, and coastal forests.


**Family MOLOSSIDAE**

African molossids are represented by at least six genera, including *Tadarida*. Traditionally, *Tadarida* contained...
several subgenera, including Chaerephon and Mops (cf. Happold M, 2013x). However, most subsequent phylogenetic work treated them as separate genera, a course adopted here following Lamb et al. (2011), Gregorin & Cirranello (2016) and Naidoo et al. (2016).

Genus Chaerephon Dobson, 1874. Free-tailed Bats


225. **Chaerephon bivittatus** (Heuglin, 1861). English: Spotted Free-tailed Bat. Chinese: 斑犬吻蝠. Disjunct records from eastern Africa from Eritrea to Zimbabwe (excluding the Horn of Africa). Mostly found in savanna woodlands and montane grassland (Cotterill, 2013c as *Tadarida bivittata*). In Kenya, recorded from the SW to C and in the SE.


227. **Chaerephon major** (Trouessart, 1897). English: Lappet-eared Free-tailed Bat. Chinese: 垂耳犬吻蝠. The relationship between major and other species of Chaerephon listed here needs further investigation. Recorded very disjunctly in West Africa (from W Liberia to Nigeria, and perhaps Senegal), from the Nile Valley in Sudan and South Sudan, and from two separate areas in East Africa. Mostly found in woodland and grassland savannas, and riverine habitats along the River Nile and its tributaries (Happold M, 2013y as *Tadarida major*). In Kenya, recorded disjunctly from the area around Lake Victoria and from the SE (coastal strip).

228. **Chaerephon pumilus** (Cretzschmar, 1830–1831). English: Little Free-tailed Bat. Chinese: 小犬吻蝠. Recorded from most of West Africa, and from parts of eastern, Central and southern Africa but with many gaps. Mostly found in woodland savannas and forest-savanna mosaics (Happold M, 2013z as *Tadarida pumila*). Probably absent from arid areas, except near rivers. In Kenya, widespread, except in most of the N.


Genus Mops Lesson, 1842. Free-tailed Bats


232. **Mops conyurus** (A. Smith, 1833). English: Angolan Free-tailed Bat. Chinese: 安哥拉犬吻蝠. Widespread but disjunct records from much of sub-Saharan Africa. Mostly found in woodland savannas but also in rainforest and secondary grassland mosaics and coastal mosaics (Happold M, 2013zc as *Tadarida conyurus*). In Kenya, recorded widely in the W and S and along the coastal strip.

233. **Mops midas** (Sundevall, 1843). English: Midas Free-tailed Bat. Chinese: 米达犬吻蝠. Widespread but highly disjunct records in sub-Saharan Africa. Mostly found in woodland savannas close to rivers and wetlands (Cotterill & Happold M, 2013e as *Tadarida midas*). In Kenya, recorded at one locality in the NW (Freeman, 1981).

234. **Mops nanulus** J.A. Allen, 1917. English: Dwarf Free-tailed Bat. Chinese: 侏犬吻蝠. Disjunct records from several countries in West Africa, as well as Central and eastern Africa, including S Sudan, W Ethiopia, Uganda and Kenya. Mostly found in various habitats near the edges of lowland rainforests, but occasionally in woodland savannas and riverine forests (Happold M, 2013zd as *Tadarida nanula*). In Kenya, recorded only in the W.

235. **Mops thersites** (Thomas, 1903). English: Railer Free-tailed Bat. Chinese: 无畏犬吻蝠. Somewhat disjunct records in small parts of West, Central and East Africa (excluding Tanzania). Found in lowland rainforests and secondary forests, invasive Guinea...
woodland savannas, and rainforest and secondary grassland mosaics (Happold M, 2013z as Tadarida thersites). In Kenya, recorded only from the SW.

Genus **Otomops** Thomas, 1913. Giant Mastiff Bats

236. **Otomops harrisoni** Ralph, Richards, Taylor, Napier & Lamb, 2015. English: Harrison’s Giant Mastiff Bat. Chinese: 哈氏巨犬吻蝠. **Otomops harrisoni** was previously included in **Otomops martiensseni**. Disjunct records in Djibouti, Ethiopia and Kenya in a wide range of habitats (Ralph et al., 2015). In Kenya, found in a narrow central band from the NW to SE (Yalden & Happold M, 2013 as **Otomops martiensseni**).

237. **Otomops martiensseni** (Matschie, 1897). English: Large-eared Giant Mastiff Bat. Chinese: 大耳犬吻蝠. Widely scattered localities from Guinea-Bissau to Kenya, Uganda and south to Angola and South Africa. In Kenya, known with certainty only from forests in Marsabit but may occur broadly in Kenya (Patterson et al., 2018).

Genus **Platymops** Thomas, 1906. Peters’s Flat-headed Bat


Genus **Tadarida** Rafinesque, 1814. Free-tailed Bats

239. **Tadarida aegyptiaca** (É. Geoffroy, 1818). English: Egyptian Free-tailed Bat. Chinese: 北非犬吻蝠. Recorded from widespread but very disjunct localities in Africa (including North-West and North-East Africa and the Sahara, C Nigeria and eastern Africa) but with most records from southern Africa. Mostly found in open woodland and bushland savannas (Bernard & Happold M, 2013ld). Found in some very arid areas but probably only where drinking water, insects and suitable day-roosts are available. In Kenya, recorded in the SE.

240. **Tadarida fulminans** (Thomas, 1903). English: Madagascan Free-tailed Bat. Chinese: 岛犬吻蝠. Recorded from several disjunct areas and localities from Kenya to Zimbabwe in woodland savannas (Cotterill, 2013d). In Kenya, recorded only from the mid-W and mid-SW.


242. **Tadarida ventralis** (Heuglin, 1861). English: Giant Free-tailed Bat. Chinese: 非洲犬吻蝠. Recorded from several localities in eastern and southern Africa, from Eritrea and Ethiopia to E Zambia, W Mozambique, S Malawi, Zimbabwe and NE South Africa (but not most of Tanzania and Mozambique). Mostly found in dry woodland savannas but also in some montane habitats (Cotterill, 2013f). Most records are from Kenya. In Kenya, widely recorded except in the NE and E, in the Kenyan Highlands, semi-desert grassland and shrubland near Lake Turkana, and *Acacia-Commiphora* bushland (Cotterill, 2013f).

Family **MINIOPTERIDAE**

Previously considered to be a subfamily of Vespertilionidae (see also Simmons, 2005), but now recognized as a valid family (e.g., Hoofer & Van Den Bussche, 2003; Miller-Butterworth et al., 2007).

Genus **Miniopterus** Bonaparte, 1837. Long-fingered Bats

243. **Miniopterus africanus** Sanborn, 1936. English: African Long-fingered Bat. Chinese: 非洲长翼蝠. Previously considered a subspecies of *M. inflatus*, but its specific status was confirmed by Juste et al. (2007). Recorded from Eritrea, Ethiopia, Kenya and Tanzania in various dry habitats. In Kenya, recorded from the W, S and SE and in the Rift Valley and comparatively dry savanna habitats (Happold M, 2013zg as *M. i. africanus*).


245. **Miniopterus inflatus** Thomas, 1903. English: Greater Long-fingered Bat. Chinese: 大长翼蝠. Recorded from very isolated and small localities in sub-Saharan Africa, from Liberia to Kenya and south to N Namibia, Zimbabwe, Malawi and Mozambique. Found in dry savanna habitats, *Acacia* scrub, montane forests and lowland rainforests (Happold M, 2013zh). In Kenya, recorded from a narrow area in the W-SW in wetter habitats than that of *M. africanus*.


**Zoological Research** 40(1): 1–51, 2019 23
very isolated localities in the Congo (near Congo R.) and DR Congo, and also from the coastal strip near the Kenya-Tanzania border. Western records are from woodland savanna near caves, eastern records are from coastal savanna and forest mosaics (Happold M, 2013z2). In Kenya, recorded only from SE and N of Mombasa.


248. Miniopterus natalensis (A. Smith, 1834). English: Natal Long-fingered Bat. Chinese: 纳塔尔长翼蝠. Recorded widely in eastern, south-central and southern Africa, from South Sudan and Ethiopia, and from Kenya southwards through part of Tanzania, to Zambia, Zimbabwe, Namibia, NE Botswana, S Mozambique, and parts of South Africa; in various habitats but not forests (Bernard & Happold M, 2013f). In Kenya, currently recorded in a band from the mid-W to SE, mostly in *Acacia-Commithora* deciduous bushland and thickets. However, identification/affinities of specimens from wetter habitats (including afro-montane vegetation and forest-savanna mosaics) in the W and SE need confirmation (Bernard & Happold M, 2013f).

Family VESPERTILIONIDAE

Genus Eptesicus Rafinesque, 1820. Serotines


Genus Glaconycteris Dobson, 1875. Butterfly Bats


252. *Glaconycteris kenyacola* Peterson, 1982. English: Kenyacola Butterfly Bat. Chinese: 肯尼亚蝶蝠. Endemic to Kenya. As yet, recorded only from coastal forest at the mouth of Tana River, where it is known only from its type specimen (Happold M, 2013z1).


Genus Hypsugo Kolenati, 1856. Pipistrelle Bats

Van Cakenbergh & Happold M (2013b) provisionally treated *Hypsugo* and all other African pipistrelles as members of the genus *Pipistrellus*. We followed Monadjem et al. (2013a) in treating *Hypsugo* as distinct.


Genus Kerivoula Gray, 1842. Woolly Bats

255. *Kerivoula argenta* Tomes, 1861. English: Damara Woolly Bat. Chinese: 银彩蝠. Disjunct records from some parts of Central, eastern and southern Africa. Found in evergreen and riverine forests, and both mesic and dry woodland savannas (Cotterill, 2013g). Two records from Angola need confirmation. In Kenya, recorded from the SE.


Genus Laephotis Thomas, 1901. African Long-eared Bats

**Genus Mimetillus** Thomas, 1904. Moloney’s Mimic Bat


**Genus Myotis** Kaup, 1829. Mouse-eared Bats

260. *Myotis bocagii* (Peters, 1870). English: Rufous Myotis. Chinese: 棕红鼠耳蝠. Disjunct records in sub-Saharan Africa (except the Horn of Africa) and from C Angola, Namibia, Zimbabwe to most of South Africa. Found in lowland rainforests, rainforest-savanna mosaics, and woodland savannas and coastal forests, but probably only within reach of open water (Happold M, 2013zn). In Kenya, recorded from the SW.

261. *Myotis tricolor* (Temminck, 1832). English: Temminck’s Myotis. Chinese: 南非鼠耳蝠. Widespread but highly disjunct records in sub-Saharan Africa from Ethiopia to South Africa in the eastern half of the continent, and from two isolated localities in Senegal and SW DR Congo. Found in a wide variety of habitats. In Kenya, recorded from the W to C and towards the SE but not reaching the coast; in rainforest, montane forest and *Acacia-Commiphora* deciduous bushland and thickets (Bernard, 2013).


**Genus Neoromicia** Hill and Harrison, 1987. Schlieffen’s Twilight Bat

263. *Neoromicia schlieffeni* (Peters, 1859). English: Schlieffen's Twilight Bat. Chinese: 施氏菟蝠. Widespread but disjunct records from S Mauritania to Sudan (with outlying localities in N Egypt), and southwards (mostly on E side of continent) to NE South Africa. Found in semi-arid grasslands, shrublands, various woodlands and some coastal habitats (Happold M, 2013zp). In Kenya, recorded very widely from the NW to S and E, mostly in *Acacia-Commiphora* deciduous bushland and thickets and semi-arid grassland.

**Genus Neoromicia** Roberts, 1926. Pipistrelle Bats

264. *Neoromicia capensis* (A. Smith, 1829). English: Cape Pipistrelle. Chinese: 南非伏翼. Recorded very widely (but with large gaps) in sub-Saharan Africa from West Africa to Eritrea and southwards to South Africa. Found in most vegetation zones, except large deserts and some coastal habitats (Kearney, 2013b as *Pipistrellus capensis*). In Kenya, widespread.

265. *Neoromicia* cf. *helios* auctorum non Heller, 1912. English: Samburu Pipistrelle. Chinese: 任氏伏翼. The taxonomy of cf. *helios* is uncertain. It is not yet known whether or not some Kenyan bats referred to as *helios* (e.g., by Hill & Harrison, 1987) or studied in Kenya by O’Shea (1980) as *Pipistrellus nanus* belong to a species that is distinct from the type of *helios* (Heller, 1912) (Happold M & Van Cakenbergh, 2013 as *Pipistrellus* cf. *helios*). Many characteristics distinguish cf. *helios* from *Neoromicia nana*, including roosting behavior, social behavior, tail glands, bacular morphology and lower molars. However, the confusion between *helios*, cf. *helios* and *nana* calls for further molecular investigation. Recorded in eastern Africa from S Somalia, S Sudan, Uganda, Kenya and NE Tanzania, with an outlying record from Djibouti needing confirmation. Found in a variety of habitats (Happold M & Van Cakenbergh, 2013 as *Pipistrellus* cf. *helios*). In Kenya, widespread except in the N and NE, mostly in *Acacia-Commiphora* deciduous bushland and thickets and semi-desert grassland and shrubland, but also in montane vegetation, rainforest and secondary grassland mosaicis, and East African coastal forest mosaics.

266. *Neoromicia nana* (Peters, 1852). English: Banana Pipistrelle. Chinese: 香蕉伏翼. Recorded throughout most of sub-Saharan Africa (except the Horn of Africa and the SW, including most of Namibia, Botswana, W Zimbabwe and South Africa). Found in diverse forests, savanna and sub-desert steppe habitats, but possibly only where banana plants and/or other musaceous plants are found (Happold M, 2013q as *Pipistrellus nanus*). In Kenya, recorded only in a narrow band along the Kenya-Tanzania border from Uganda to the coastal strip.

sub-Saharan Africa from Senegal to S Somalia and southwards to South Africa, but not in all countries. Mostly found in woodland savannas and degraded lowland rainforest habitats on the rainforest zone border (Van Cakenberghe & Happold M, 2013c as Pipistrellus rendalli). In Kenya, recorded in some C to SE areas, mostly in *Acacia-Commiphora* decidual bushland and thickets.

268. *Neoromicia somalica* (Thomas, 1901). English: Somali Pipistrelle. Chinese: 索马里伏翼. Recorded in sub-Saharan Africa from Gambia to Djibouti, N and S Somalia, Kenya and N Tanzania, with isolated records from Congo and DR Congo. Mostly found in savanna habitats, rainforest-savanna mosaics, bushlands, riverine forests and the East African coastal forest mosaics (Van Cakenberghe & Happold M, 2013d as *Pipistrellus somalicus*). Possibly also occurs southwards to Namibia, Botswana, Mozambique and South Africa but this needs confirmation because of confusion between *N. somalica* and *N. zuluensis* (Van Cakenberghe & Happold M, 2013d as *Pipistrellus somalicus*). In Kenya, recorded from the SW to SE and along the coastal strip, mostly in areas of dense thorn scrub (dominated by *Combretum, Commiphora* and *Acacia*) with scattered patches of grassland, but also in riverine woodland along the Athi River and in coastal forest mosaics.

269. *Neoromicia tenuipinnis* (Peters, 1872). English: White-winged Pipistrelle. Chinese: 白翼伏翼. Disjunct records in sub-Saharan Africa from West Africa to eastern Africa and some parts of Central Africa. Mostly found in lowland rainforests and swamp and coastal forests, but also in mangroves, montane forests, forest-savanna mosaics and various woodland savannas (Fahr, 2013a as *Pipistrellus tenuipinnis*). In Kenya, recorded only from the SW.

270. *Neoromicia zuluensis* (Roberts, 1924). English: Zulu Pipistrelle. Chinese: 祖鲁伏翼. *Neoromicia zuluensis* was formerly treated as a synonym of *N. somalica* (e.g., Koopman, 1984). However, karyotypic data confirmed *zuluensis* as distinct from *somalica* (Rautenbach et al., 1993), though some records in East Africa may reflect the former synonymy of these taxa. Additionally, while much of the literature indicates that isolated populations of *N. zuluensis* occur in dry savanna habitats of *Acacia-Commiphora* deciduous bushland and thickets in Ethiopia, S Sudan, E Uganda, W and E Kenya and southern Africa (e.g., Happold M et al., 2013), doubt exists as to whether the species occurs N of southern Africa from where the type specimen comes. Therefore, a comprehensive revision of the two species in eastern Africa is required.


275. *Pipistrellus rueppelli* (Fischer, 1829). English: Rüppell's Pipistrelle. Chinese: 吕氏伏翼. Widespread but disjunct records from most African countries. Mostly found in woodland and grassland savannas but occasionally in desert habitats, montane forests and along some river systems in rainforest zones (Happold M, 2013z). In Kenya, recorded only from the SW.

In Africa, there are light-winged and dark-winged forms. The taxonomy of the four dark-winged forms recognized by Hill (1974) needs revision because sexual dimorphism was not considered when they were distinguished and, in some cases, subsequently placed in distinct species (Happold M, 2013zs). Aggundey & Schlitter (1984) referred to extensive records of *Scotoecus hindei hindei* and *S. h. albigua* from across Kenya. Monadjem et al. (2010) grouped *S. albigua* and *S. hindei* as they could not differentiate them. They suggested that the two species were probably conspecific, but this requires genetic/molecular confirmation. Until this taxonomic issue is resolved, we only recognized one dark-winged species.

277. **Scotoecus albofuscus** (Thomas, 1890). English: Light-winged Lesser House Bat. Chinese: 淡翼宽吻蝠. Recorded from widespread localities from Gambia to Cameroon in West Africa, and from Uganda and Kenya to NE South Africa (but not in all countries within these ranges). Found in woodland savannas, grassland and thicket mosaics, and in various forests and woodlands (but not in rainforest zones) (Happold M, 2013zt). In Kenya, recorded only from the SE in the East African coastal mosaics.


**Genus Scotophilus** Leach, 1821. Yellow house Bats

Many Kenyan records of yellow house bats have traditionally been referred to either *Scotophilus dinganii* or *S. viridis*. Both taxa were originally described from southern Africa. Trujillo et al. (2009) showed that these Kenyan bats clearly belonged to clades that differed from typical *S. dinganii* and *S. viridis*. Brooks & Bickham (2014) proposed four new species for clades defined by Trujillo et al. (2009) but failed to distinguish their new taxa from various older names, especially *colias* Thomas, 1904, which has a type locality of Fort Hall (Muranga) in Kenya.

279. **Scotophilus andrewewborii** Brooks & Bickham, 2014. English: Andrew Rebori's House Bat. Chinese: 安氏黄蝠. Formerly listed as *S. dinganii*. As yet, only recorded from Kenya where it is widespread from the W of the country to coastal areas, in a wide range of savanna and woodland habitats (Brooks & Bickham, 2014).

280. **Scotophilus leucogaster** (Cretzschmar, 1830). English: White-bellied House Bat. Chinese: 白腹黄蝠. Disjunct records from West Africa to Sudan and W Ethiopia and southwards to southern Africa (but not all countries). Found in a wide variety of habitats (Van Cakenbergh & Happold M, 2013zh). In Kenya, recorded from four disjunct localities in the NW, NC, SW and SE.


283. **Scotophilus nux** Thomas, 1904. English: Nut-coloured House Bat. Chinese: 喙黄蝠. Disjunct records from Sierra Leone to SE Nigeria, SW Nigeria and Cameroon, and NW DR Congo to W Kenya. Found in lowland rainforests and rainforest clearings (and swamp forests in Côte d'Ivoire) (Van Cakenbergh & Happold M, 2013i). In Kenya, recorded only from the SW in forests near the Kakamega Forest.


**ORDER CARNIVORA** (Carnivora—36 Species)

**Family CANIDAE**

**Genus Canis** Linnaeus, 1758. Jackals and Wolves

The Golden Jackal is restricted to Asia and does not occur in Africa. Recent taxonomy on Golden Jackals (Atickem et al., 2017; Gaubert et al., 2012; Viranta et al., 2017) considers the entire African “golden jackal” group to be the African Wolf (*Canis lupaster*). In addition, Gaubert et al. (2012) suggested that an African Golden Jackal (distinct from both the Asian Golden Jackal and *C. lupaster*) may exist in Africa, but there is no clear evidence for this.

285. **Canis lupaster** Hemprich and Ehrenberg, 1832. English: African Wolf. Swahili: Mbweha. Chinese: 非洲狼. Previously known as *Canis aureus* (Moehlman & Jhala, 2013), though the name was recently changed to *C.
lupaster (Atickem et al., 2017; Viranta et al., 2017) after molecular review. Recorded from northern Africa, including Senegal to Morocco through to the Horn of Africa as well as East Africa (Moehlman & Jhala, 2013 as *C. aureus*). In desert and semi-desert habitats as well as savanna woodlands. In Kenya, confirmed records in the Solio Ranch in the SE Laikipia County as well as in the N part of the country.

Genus *Lycaon* Schreber, 1775. African Wild Dog

Following Viranta et al. (2017) and Atickem et al. (2017), we recognise the genus *Lycaon*.


Following Viranta et al. (2017) and Atickem et al. (2017), we recognise the genus *Lupulella*.


Genus *Aonyx* Lesson, 1827. Clawless Otters


Genus *Hydrictis* Pocock, 1921. Spotted-necked Otter


Genus *Mellivora* Storr, 1780. Ratel


Family NANDINIIDAE

Genus *Nandinia* Gray, 1843. Two-spotted Palm Civet


Family FELIDAE

Genus *Panthera* Oken, 1816. Roaring Cats


**Genus Profelis** Severtzov, 1858. African Golden Cat


Genus *Caracal* Gray, 1843. Caracal


**Genus Leptailurus** Severtzov, 1858. Serval


Genus *Acinonyx* Brookes, 1828. Cheetah


**Genus Felis** Linnaeus, 1758. Small Cats


Family VIVERRIDAE

**Genus Genetta** Cuvier, 1816. Genets


Genus *Civettictis* Pocock, 1915. African Civet


Family HYAENIDAE

**Genus Hyaena** Brisson, 1762. Striped and Brown Hyenas


Genus *Crocuta* Kaup, 1828. Spotted Hyena


Genus *Proteles* I. Geoffroy Saint-Hilaire, 1824. Aardwolf

Family HERPESTIDAE

Genus Atilax F. G. Cuvier, 1826. Marsh Mongoose


Genus Herpestes Illiger, 1811. Common Mongooses


Genus Bdeogale Peters, 1850. Bushy-tailed Mongooses


Genus Ichneumia I. Geoffroy Saint-Hilaire, 1837. White-tailed Mongoose


Genus Mungos E. Geoffroy Saint-Hilaire and F. G. Cuvier, 1795. Banded Mongooses


Genus Helogale Gray, 1861. Dwarf Mongooses


ORDER PHOLIDOTA (Pangolins—three species)

Family MANIDAE

Genus Phataginus Rafinesque, 1821. Tree Pangolins


Genus Smutsia Gray, 1865. Ground Pangolins


ORDER PERISSODACTYLA (Odd-toed Ungulates–four species)

Family EQUIDAE

Genus Equus Linnaeus, 1758. Zebras


Family RHINOCEROTIDAE

Genus Ceratotherium Gray, 1867. White Rhinoceros


Genus Diceros Gray 1821. Black Rhinoceros


ORDER CETARTIODACTYLA (Even-toed Ungulates, Whales and Dolphins–63 species)

Family SUIDAE

Genus Potamochoerus Thomas, 1904. Bushpig


Genus Hylochoerus Thomas, 1904. Forest Hog


Genus Phacochoerus F. Cuvier, 1826. Warthogs


Family HIPPOPOTAMIDAE

Genus Hippopotamus Linnaeus, 1758. Common Hippopotamus


Family BALAENOPTERIDAE

The Swahili name for whale is ‘Nyangumi’ and dolphin is ‘Pombo’.

Genus Balaenoptera Lacépède, 1804. Rorquals (Baleen Whales)


**Genus Megaptera** Gray, 1846. Humpback Whale


**Family DELPHINIDAE**

**Genus Ferusa** Gray, 1870. Pygmy Killer Whales


**Genus Globicephala** Lesson, 1828. Pilot Whales


**Genus Lagenodelphis** Fraser, 1956. Fraser’s Dolphin


**Genus Orcinus**Lesson, 1808. Killer Whale


**Genus Pseudorca** Reinhardt, 1862. False Killer Whale


**Genus Sousa** Gray, 1866. Humpback Dolphins


**Genus Stenella** Gray, 1866. Oceanic Dolphins


**Genus Steno** Gray, 1846. Rough-toothed Dolphin


**Family PHYSETERIDAE**

**Genus Tursiops** Gervais, 1855. Bottlenose Dolphins


**Genus Physeter** Linnaeus, 1758. Toothed Sperm Whale


**Genus Physeter** Linnaeus, 1758. Toothed Sperm Whale


**Family ZIPHIIDAE**

**Genus Indopacetus** Moore, 1968. Longman’s Beaked Whale


**Genus Mesoplodon** Gervais, 1850. Beaked Whales


**Family GIRAFFIDAE**

**Genus Giraffa** Brisson, 1762. Giraffe


**Family BOVIDAE**

**Genus Syncerus** Hodgson, 1847. African Buffalo


**Genus Tragelaphus** de Blainville, 1816. Spiral-horned Antelopes


**Genus Nesotragus** C. H. Smith, 1827. Suni


**Genus Philantomba** Blyth, 1840. Blue Duikers


**Genus Sylvicapra** Ogilby, 1836. Common Duiker


**Genus Cephalophus** Hamilton Smith, 1827. Forest Duikers


Genus *Raphicerus* C. H. Smith, 1827. Steenbok


Genus *Madoqua* Ogilby, 1836. Dik-diks


373. *Madoqua kirkii* (Günther, 1880). English: Kirk’s Dik-dik Species Group. Swahili: Digidi/Suguya. Chinese: 柯氏羚. This species is treated as a species/subspecies complex, which provisionally includes four species (*M. kirkii*, *M. cavendishii*, *M. thomasi* and *M. damarensis*), with proposed subspecies within each of the four species (Brotherton, 2013). Molecular evidence strongly suggests that these are effectively full species, but the details of taxonomy and biogeography of the species remain uncertain, which is why members of this complex are placed under a single profile. The provisional distribution range of two species found in Kenya include; *Madoqua kirkii* mainly in SE-N Kenya and some parts in Tanzania; and *Madoqua kirkii* mainly in S-NW Kenya and parts of Tanzania. In arid areas of scrub or open woodland (Brotherton, 2013).


Genus *Eudorcas* Fitzinger, 1869. Ring-horned Gazelles


Genus *Nanger* Lastate, 1885. Greater Gazelles

376. *Nanger granti* (Brooke, 1872). English: Grant’s Gazelle Species Group. Swahili: Swala Granti. Chinese: 格氏羚. In the past treated as a single species, now recognized as a species group consisting of three distinct species (*Nanger g. granti*, *Nanger g. notata* and *Nanger g. petersii*) based on the level of genetic differentiation (Siegismund et al., 2013), even though there is overwhelming evidence (Lorenzen et al., 2008) for raising the three groups to species level (Siegismund et al., 2013). The provisional distribution range of *Nanger g. granti* is mainly in E to N Kenya, and small ranges in Uganda, South Sudan, Ethiopia and Somalia; *Nanger g. notata* mainly in Tanzania and a small range in S Kenya; and *Nanger g. petersii* mainly in E Kenya and a small range in Somalia. Grant’s Gazelles occur in open savannas and *Acacia* and savanna woodlands (Siegismund et al., 2013).

Genus *Litocranius* Kohl, 1886. Gerenuk


Genus *Ourebia* Laurillard, 1842. Oribi

and mixed woodlands maintained by fire and grazing. Two subspecies recognized in Kenya; *Ourebia o. cotti* found in the SW and *Ourebia o. haggardi* (Haggard's Oribi) in coastal forests N of Lamu (Boni-Dodori Forests); *Ourebia o. kenyae* occurred on the lower slopes of Mt. Kenya but is now extinct (Brashares & Arcese, 2013; Hillman et al., 1988).

Genus *Redunca* C. H. Smith, 1827. Redbucks


Genus *Kobus* Smith, 1840. Kobs

381. *Kobus ellipsiprymnus* (Ogilby, 1833). English: Waterbuck. Swahili: Kuro/Kobu/Kuru. Chinese: 水羚. This waterbuck is considered to have two subspecies (*Kobus e. ellipsiprymnus* and *Kobus e. defassa*) in Africa, both occurring in Kenya (Springe, 2013). *Kobus e. ellipsiprymnus* from Senegal to Ethiopia and some parts of southern Africa; *Kobus e. defassa* from southern to East Africa, including Somalia. In bushland and woodland habitats close to water (Springe, 2013). In Kenya, widely distributed, except for the N and NE.

Genus *Oreotragus* A. Smith, 1834. Klipspringer


Genus *Aepyceros* Sundevall, 1845. Impala

383. *Aepyceros melampus* (Lichtenstein, 1812). English: Impala. Swahili: Swala Pala. Chinese: 黑斑羚. This impala is considered to have two subspecies in Africa, only one of which occurs in Kenya. *Aepyceros m. melampus* recorded from southern to East Africa. In light woodlands, savannas and open *Acacia* savanna habitats (Fritz & Bourgarel, 2013). In Kenya, widely distributed.

Genus *Beatragus* Heller, 1912. Hirola


Genus *Damaliscus* Sclater and Thomas, 1894. Damalisks

385. *Damaliscus lunatus* (Burchell, 1824). English: Topi. Swahili: Nyamera. Chinese: 南非大羚羊. This topi is considered to have six subspecies recorded in different countries, with only three confirmed in Kenya. *Damaliscus l. jimela* (from East Africa in Great Lakes regions); *Damaliscus l. tiang* (SE Chad to SW Ethiopia and NW Kenya); and *Damaliscus l. topi* (in Kenya N of Malindi and S Somalia). In flood-plain habitats centered on wetlands (Duncan, 2013).

Genus *Alcelaphus* de Blainville, 1816. Hartebeests

386. *Alcelaphus busefalaphus* (Pallas, 1766). English: Hartebeest. Swahili: Kongoni/Konz. Chinese: 麋羚. There are eight subspecies considered for this hartebeest, with some having relatively large distribution ranges in Africa, with only three confirmed to occur in Kenya. *Alcelaphus b. cokii* (S Kenya and N Tanzania); *Alcelaphus b. lelaw* (SE Chad, Central African Republic, SE Ethiopia, N Kenya and NW Tanzania); and *Alcelaphus b. cokii X A. b. lelaw* (intergrade populations between these subspecies in Kenya) (Gosling & Capellini, 2013). In woodland-associated grasslands and savanna clearings.

Genus *Connochaetes* Lichtenstein, 1821. Wildebeest

387. *Connochaetes taurinus* (Burchell, 1823). English: Blue Wildebeest. Swahili: Nyumbu ya Montu. Chinese: 斑纹角马. There are five subspecies recognized under this species of wildebeest restricted to East and southern Africa. In relatively dry areas with short grass. Two subspecies occur in Kenya (Kingdon, 1997): *Connochaetes t. albojubatus* (recorded from the Athi Plains in S Kenya to the edge of Tsavo West and across N Tanzania to the N shores of Lake Tanganyika) and *Connochaetes t. mearnsyi* confined to the Serengeti-Mara ecosystem and adjacent grasslands both in Kenya and Tanzania (Estes, 2013a).

Genus *Hippotragus* Sundevall, 1845. Roan and Sable Antelopes

Recorded from West Africa to Ethiopian, and some parts in East and Central Africa. In savannas and woodlands. In Kenya, recorded from the W (Ruma NP) (Chardonnet & Crosmany, 2013).


**Genus Oryx** de Blainville, 1816. Oryxes

390. *Oryx beisa* (Rüppell, 1835). English: Beisa Oryx. Swahili: Choroa/Barabara. Chinese: 东非长角羚. Recorded from the Horn of Africa, from the Red Sea to Somalia, and East Africa, including South Sudan. In arid grasslands and bushlands. There are two subspecies recognized under this species that occur in Kenya: *Oryx b. beisa* (arid parts of Ethiopia and the Horn of Africa, SE Sudan and much of E and N Kenya); and *Oryx b. callotis* recorded from SE Kenya (S of the Tana River) and NE Tanzania (Wacher & Kingdon, 2013).

**DISCUSSION**

Kenya has a rich diversity of mammalian species (390), representing one third of the 1 116 mammal species recorded in Africa (Butynski et al., 2013; H Prepared D, 2013a; Happold M & Happold D, 2013; Kingdon & Hoffman, 2013a; Kingdon & Hoffman, 2013b; Kingdon et al., 2013). Comprehensive mammal surveys, inside and outside protected areas, are likely to yield additional species in the future. In addition, the taxonomy of some bats, rodents and shrews is still in a state of flux, and additional systematic work is likely to uncover species new to science and well as valid species currently treated as synonyms, thus adding to the list. Indeed, small mammals and primates comprise taxonomic groups where large numbers of new species have been discovered in recent years (Reeder et al., 2013). In conclusion, this is the first attempt to compile a comprehensive list of the mammals of Kenya. It is likely that the number of species will be revised in the future with increasing surveys and taxonomic revisions, particularly among small mammals.

**COMPETING INTERESTS**

The authors declare that they have no competing interests.

**AUTHORS’ CONTRIBUTIONS**

S.M. and G.W. prepared the first draft and A.M., P.W., B.D.P., R.H., Y.A.D.J. and T.M.B. revised drafts manuscripts before submission. Z.Z.C. and X.L.J. compiled Chinese names. All authors read and approved the final version of the manuscript.

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