**Kerivoula smithii** **SMITH’S WOOLLY BAT**

Fr. Chauve-souris peinte de Smith; Ger. Smiths Wollfledermaus

**Taxonomy** Synonyms: none. Sometimes spelled *smithi* but original spelling is *smithii* and *smithi* is an invalid emendation. Frequently confused with *K. cuprosa* (see Distribution). Chromosome number: not known.

**Description** Very small microbat without noseleaf and with tail more or less fully enclosed in interfemoral membrane; six upper and six lower cheekteeth on each side; ears funnel-shaped; pelage frizzled; upper canine not grooved; FA: 34.1 (32–36) mm; dorsal pelage dark brown with conspicuous frosting; posterior margin of interfemoral membrane without comb-like fringe of bristle-like hairs; inner upper incisor bicuspid; outer lower incisor unicusp. Sexes similar. Pelage dense, woolly, frizzled (many hairs with hooked tips); mid-dorsal pelage ca. 9 mm. Dorsal pelage greyish-brown to dark brown with silvery sheen and silvery or straw-coloured frosting; hairs blackish or dark brown, many with a silvery or straw-coloured tip. Ventral pelage paler brown; hairs greyish-brown or blackish-brown, usually with a pale brown or fawn tip but some with a whitish-silvery tip. Head high-domed; muzzle long, pointed, partly hidden by facial pelage. Eyes minute. Ears widely separated, dark brown or blackish, comparatively and relatively short for a vespertilionid (39 [33–44]% of FA); deeply emarginated below tips. Tragus long (58 [53–64]% of E), tapering, curved outwards; base with small triangular lobule over a shallow emargination (Figure 153e). Wings blackish or dark brown; pelage extending with scattered hairs to dorsal surface of forearm, third digit, thumb, tibia and tail. Interfemoral membrane dark brown; posterior margin with sparse hairs but no comb-like fringe of hooked, bristle-like hairs. Tail 107 (92–131)% of HB.

Skull delicate; braincase high-domed; rostrum narrow; frontal region sharply angular to plane of rostrum. Inner upper incisor comparatively long (cf. *K. cuprosa*), bicuspid (with secondary cusp reaching ca. half to two-thirds height of main cusp) and taller than outer incisor. Outer upper incisor unicusp or weakly bicuspid, the main cusp attaining the height of secondary cusp of inner incisors. Anterior upper premolar slightly higher than middle premolar but both much smaller than the posterior premolar. Inner and middle lower incisors tricuspid. Outer lower incisor unicusp, cingulum not distinctly raised on both sides of main cusp and therefore does not appear cup-shaped. Lower premolars subequal in size.

**Geographic Variation** None recorded but data are limited.

**Similar Species** Three other African *Kerivoula* do not have a comb-like fringe of hooked, bristle-like hairs on posterior margin of interfemoral membrane (Table 31, p. 724):

*Kerivoula cuprosa*. Outer lower incisor with tricuspid appearance (cingulum distinctly cup-shaped and forming a cusp on each side of the main cusp). Upper incisors comparatively short. Often smaller (FA: 31.7 [30–33] mm; GLS: 12.3–13.1 mm) and lighter (4.0–4.5 g). Tragus almost always shorter (5.5–7.4 mm).

**Distribution** Endemic to Africa. Mainly found in the Rainforest BZ (West Central, South Central and East Central Regions) with one fairly isolated record in the central Congo Basin and two isolated records from the Afromontane–Afroalpine and the Somalia–Masai Bushland BZs in Kenya. Distribution disjunct. Known from 12 localities in Nigeria, Cameroon, DR Congo, Uganda (Mwela [Bugoma Forest]; LACM) and Kenya (Thomas 1880, 1912b, Eisentraut 1956, Harrison 1963b, Koopman 1965, Hayman et al. 1966 [partim]; Rahm 1966, J. Fahr unpubl.). Records from Liberia and Côte d’Ivoire (Happold 1987, Koopman 1993, Koopman et al. 1995) have not been confirmed and probably represent either *K. phalaena* or *K. lanosa*, which occur in both Liberia and Côte d’Ivoire (J. Fahr unpubl.). The record from Fort Warwick (Eastern Aberdare Mts), published as *K. cuprosa* by Harrison (1957c), has been re-identified as *K. smithii* (J. Fahr unpubl.). The same is true for many of the specimens from DR Congo that were published as *K. cuprosa* (e.g. Allen 1917a, Schouteden 1944) but later re-identified as *K. smithii* by Koopman (1965), Hayman et al. (1966) and J. Fahr (unpubl.).

**Habitat** Mostly recorded from lowland rainforest (seven localities), but also found in mangroves at Old Calabar, Nigeria, Congolian swamp forests at Mafanya, DR Congo and (sub-) montane forests in the

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*K. phalaena*. Pelage not frosted. Inner upper incisor unicusp or with small secondary cusp at posterior base. Smaller (FA: 25–30 mm; GLS: 11.9–12.5 mm) and lighter (2.2–5.0 g).


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Family VESPERTILIONIDAE

Cameroon Highlands (ca. 900 m), the Albertine Rift Mts east of L. Albert in Uganda (ca. 1200 m) and the Eastern Aberdare Mts (ca. 2700 m) in Kenya. Also recorded from Bura, near Garissa (Harrison 1963b) on the Tana R., which, in this area, runs through riverine forest within the Somalia–Masai Bushland BZ.

**Abundance** Unknown but apparently localized and fairly rare (see also *K. cuprosa*).

**Adaptations** Some specimens were captured when they flew into a house at night; others were taken in a hut, and some were found when saplings near a stream were felled during the day (Lang & Chapin 1917b, Eisentraut 1956, Harrison 1957c, Rahm 1966).

**Foraging and Food** No information but diet likely to consist of small and soft-bodied arthropods. Other species of *Kerivoula* (from Malaysia and Australia) are known to glean their prey (Schulz 1997, 2000, Kingston et al. 1999).

**Social and Reproductive Behaviour** No information.

**Reproduction and Population Structure** Litter-size: one (*n* = 5). Reproductive chronology not known (data inconclusive). At ca. 0–1° S in inland Kenya, a pregnant ♀ was reported in Sep from Bura, near Garissa, and another in Dec from Fort Warwick (Harrison 1957c, 1963b). At 01° 12’ N in Uganda (Bugoma Forest), two ♀ ♀ were pregnant in late Nov (LACM). At 1–3° N in NE DR Congo (Akenge and Avakubi), two ♀ ♀ each with an attached young were found in early Oct (Lang & Chapin 1917b, RMCA).

**Predators, Parasites and Diseases** Ectoparasites include a mite *Rodhammysus mysis* (Acari: Gastronyssidae) (Anciaux de Faveaux 1984 as *K. smithii*).

**Conservation** IUCN Category: Least Concern.

**Measurements**

*Kerivoula smithii*

<table>
<thead>
<tr>
<th>Trait</th>
<th>Range</th>
<th><em>n</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>FA</td>
<td>34.1 (32–36) mm</td>
<td>16</td>
</tr>
<tr>
<td>WS (c)</td>
<td>257 (250–267) mm</td>
<td>4</td>
</tr>
<tr>
<td>TL</td>
<td>84.5 (79–93) mm</td>
<td>12</td>
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<td>T</td>
<td>43.1 (40–49) mm</td>
<td>14</td>
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<td>E</td>
<td>13.4 (11–15) mm</td>
<td>12</td>
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<td>Tr</td>
<td>7.9 (7.3–9.0) mm</td>
<td>7</td>
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<tr>
<td>Tib</td>
<td>14.9 (14–16) mm</td>
<td>10</td>
</tr>
<tr>
<td>HF</td>
<td>7.3 (5.7–8.2) mm</td>
<td>14</td>
</tr>
<tr>
<td>WT</td>
<td>6.2 (5.9–7.0) g</td>
<td>5</td>
</tr>
<tr>
<td>GLS</td>
<td>13.7 (13.1–14.1) mm</td>
<td>14</td>
</tr>
<tr>
<td>GWS</td>
<td>8.7 (8.5–8.9) mm</td>
<td>6</td>
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<tr>
<td>C–M3</td>
<td>5.5 (5.1–5.8) mm</td>
<td>15</td>
</tr>
</tbody>
</table>

Nigeria (holotype, ♂), Cameroon, DR Congo, Uganda, Kenya (AMNH, BMNH, HZM, LACM, NMW, RMCA, SMNS)

**Key References** Allen 1917a; Harrison 1957c, 1963b; Koopman 1965; Thomas 1880.