**Rhinolophus guineensis**  
GUINEAN HORSESHOE BAT  
Fr. Rhinolophe de Guinée; Ger. Guinea-Hufeisenase

**Taxonomy**  

**Description**  
Small microbat with noseleaf (posterior component subtriangular with erect tip); medium-small for an African rhinolophid; anterior upper premolar within toothrow; connecting process subtriangular; lancet hastate; sella parallelsided; first phalanx of fourth finger relatively short; tibia 21–22 mm. Sexes similar in body measurements but \( H_{20040} \), on average, larger craniodentally. Pelage soft, fluffy; mid-dorsal hairs 7–8 mm. Dorsal pelage brown to greyish-brown, sepia brown, orange-brown or pale reddish-brown; hairs with tip darker than base. Ventral pelage slightly paler. No orange-phase known. Axillary tufts in \( H_{20040} \), when present, usually white although in one case reddish-brown (Eisentraut 1960, Böhme & Hutterer 1978). Ears comparatively and relatively short (17–22 mm; 41.3 [38–47]% of FA), each with 11–12 internal folds. Noseleaf with lancet hastate. Connecting process subtriangular in profile; tip pointed (Figure 59g). Sella naked and parallel-sided. Horseshoe narrow (8.3–9.3 mm); no lateral leaflets; median emargination present. Lower lip with one groove. Wings and interfemoral membrane dark grey. First phalanx of fourth finger relatively short (19.6 [17–21]% of fourth metacarpal, \( n = 11 \)). Tibia 45.4 (42–48)% of FA, \( n = 12 \).

Skull of medium build, zygomatic arches moderately broad; zygomatic width slightly greater than mastoid width. Nasal swellings relatively narrow but high. Frontal depression shallow. Palatal bridge 26–31% of \( C - M^1 \) (Csorba *et al.* 2003). Anterior upper premolar comparatively large, within toothrow or only slightly displaced labially; canine and posterior premolar well separated. Middle lower premolar very small to vestigial, fully displaced labially; anterior and posterior lower premolars in contact. Anterior lower premolar smaller than posterior lower premolar and only ca. half of its height, or less (cf. *R. l. landeri*). Dental formula \( 1^{123}/2^{113} = 32 \).

**Geographic Variation**  
None.

**Similar Species**  
Only two other *Rhinolophus* in sub-Saharan Africa have the following combination of characters: anterior upper premolar within toothrow; connecting process triangular and pointed; first phalanx of fourth finger relatively short; axillary tufts in \( \delta \delta \) usually present (Table 14, p. 304):

*Rhinolophus landeri*. Usually smaller, especially in West Africa where FA: 39–45 mm, Tib: 17–21 mm, \( CrrC: \) 16.9–18.9 mm, \( C - M^1: \) 6.3–7.0 mm. Anterior lower premolar larger, more than half and usually two-thirds of the height of the posterior premolar. Axillary tufts in \( \delta \delta \) usually reddish or reddish-brown. Horseshoe narrower (6.0–8.0 mm).

*R. alycone*. Body measurements usually larger (FA: 48–56 mm, Tib: 21–27 mm). Skull larger (\( CrrC: \) 21.0–23.3 mm, \( C - M^1: \) 7.9–9.2 mm). Sagittal crest more developed. Axillary tufts in \( \delta \delta \) usually orange-red or brown.

**Distribution**  
Endemic to Africa. Recorded mainly from the Afromontane–Afroalpine BZ, Rainforest BZ and Northern Rainforest–Savanna Mosaic (and very marginally from the Sudan Savanna BZ). Known from only 15 localities within an area of ca. 180,000 km². The distribution follows the highlands from the Man region in Côte d’Ivoire (Déoulé waterfall, FMNH; published by Csorba *et al.* 2003, as *R. landeri*) through Mt Nimba to Liberia, Sierra Leone and the Fouta Djallon in Guinea (Eisentraut & Knorr 1957, Eisentraut 1960, Brosset 1984, Koopman 1989, Koopman *et al.* 1995, J. Fahr unpubl.). There are also two fairly isolated records in S Senegal (Böhme & Hutterer 1978). Several records from Guinea (Darsalam, Nyembaro, Tahiré) and Sierra Leone (Makeni) referred to *R. landeri guineensis* by Rosevear (1965) are listed erroneously by Csorba *et al.* (2003) under *R. landeri*.

**Habitat**  
Sub-montane to montane forests in highlands of Guinea, Liberia and Côte d’Ivoire, and lowland rainforest and forest–savanna mosaic in Senegal and Guinea. On Mt Nimba (Liberia, Guinea), found in montane grasslands below 1400 m (Brosset 1984) and, at Makeni (Sierra Leone), recorded from ‘degraded landscape with small relict patches of forest’ (Rosevear...
Family RHINOLOPHIDAE

Abundance  Usually captured in small numbers in its day-roosts or with mist-nets. Apparently comparatively rare, although 38 individuals were collected during Mar 1990 near Ziggida in the Wonegizi Mts, Liberia (AMNH).

Remarks  Day-roosts most often reported are caves and artificial substitutes such as mines (Eisentraut & Knorr 1957, Brosset 1984). Two individuals were found in the hollow trunk of a tree (Böhme & Hutterer 1978). Roosts are regularly shared with other bats including *Lissonycteris angolensis smithii*, *Nycteris macrota*, *N. gambiensis*, *Rhinolophus simulator alticolus*, *R. denti knorri*, *R. hillorum*, *R. fumigatus diversus*, *R. maclaudi*, *Hipposideros jonesi* and *H. ruber*. During the day at ca. 1400 m, *R. guineensis* and *R. hillorum* were torpid in their roosts while *R. simulator alticolus* was active (Brosset 1984). Echolocation call-shape FM/CF/FM; CF-frequency 85 kHz (significantly lower than in *R. landeri*; Fahr & Ebigbo 2003). Reproduction: no conclusive information.

Conservation  IUCN Category: Vulnerable. Only 15 localities known; distribution small and patchy. Population size probably small; population trend not known but decline inferred because of loss and degradation of habitat. Dependent on caves; colonies small; hence potentially also threatened by exploitation as bushmeat. Ongoing and planned large-scale mining poses special threat in several areas (Fahr & Ebigbo 2003).

Measurements  *Rhinolophus guineensis*

- FA: 46.3 (44–50) mm, n = 14
- WS: n. d.
- TL: 77.8 (72–87) mm, n = 12
- T: 25.8 (23–30) mm, n = 11
- E: 19.1 (17–22) mm, n = 13
- NL (breadth): 8.6 (8.3–9.3) mm, n = 8
- Tib: 21.1 (21–22) mm, n = 12
- HF: 9.8 (8–10) mm, n = 10
- WT: 9.1 (8.0–11.0) g, n = 9
- CrnC: 20.0 (19.2–20.6) mm, n = 10
- GWS: 10.1 (9.5–10.6) mm, n = 10
- C–M3: 7.5 (6.9–7.9) mm, n = 13

Senegal, Guinea, Sierra Leone, Côte d’Ivoire (BMNH, FMNH, MNHN, SMNS [incl. holotype], ZFMK, J. Fahr unpubl.)

Key References  Böhme & Hutterer 1978; Csorba et al. 2003; Brosset 1984; Eisenraut 1960; Eisenraut & Knorr 1957.

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