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Hipposideros cyclops.

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Hipposideros Gray, 1831

Vespertilio Linnaeus, 1758:31. Part.
Rhinolophus Lacépède, 1799:15. Part.
Hipposideros Gray, 1831:37. Type species *Vespertilio speoris* Schneider, 1800 (part of Schreber, 1775–1855, part 1, plate 59b), by subsequent designation (Sclater 1901).
Hipposiderus Gray, 1834:53. Unjustified emendation.
Phyllorrhina: Bonaparte, 1837: part 21, [3rd page]. Type species *Rhinolophus diadema* Geoffroy, 1813, by subsequent designation (Sclater 1901). Not *Phyllorhina* Leach, 1816.
Macronycteris Gray, 1866:82. Type species *Rhinolophus gigas* Wagner, 1845, by monotypy.
Gloionycteris Gray, 1866:82. Type species *Rhinolophus armiger* Hodgson, 1835, by monotypy.
Rhinophylla: Gray, 1866:82. Type species *Phyllorrhina labuanensis* Tomes, 1859, by monotypy, preoccupied by *Rhinophylla* Peters (1865a, 1865b), a phyllostomid genus.
Speorifera Gray, 1866:82. Type species *Hipposideros vulgaris* Blyth, 1853, by monotypy = *Rhinolophus larvatus* Horsfield, 1823.
Chrysonycteris Gray, 1866:82. Type species *Hipposideros fulvus* Gray, 1838, by monotypy.
Doryrhina Peters, 1871:314. Type species *Phyllorrhina cyclops* Temminck, 1853, by monotypy.
Sideroderma Peters, 1871:324. Type species *Phyllorrhina fuliginosa* Temminck, 1853, by monotypy.
Ptychorhina Peters, 1871:325. Type species *Rhinolophus caffer* Sundevall, 1846, by monotypy.
Cyclorhina Peters, 1871:326. Type species *Phyllorhina obscura* Peters, 1861, by subsequent designation (Tate 1941).
Thyreorhina Peters, 1871:327. Type species *Phyllorhina coronata* Peters, 1871, by monotypy.
Syndesmotis Peters, 1871:329. Type species *Phyllorrhina megalotis* Heuglin, 1862.

CONTEXT AND CONTENT. Order Chiroptera, suborder Yinpterochiroptera (Springer et al. 2001; Teeling et al. 2002), superfamily Rhinolophoidea, family Hipposideridae, tribe Hipposiderini, genus *Hipposideros*. Genus is distinguished as follows (Koopman 1994): saggital crest not developed primarily in the immediate postorbital region; tail well developed; lumbar vertebrae not fused; dental formula, i 1/2, c 1/1, p 2/2, m 3/3, total 30, forearm length, 32–115 mm. The genus is apparently paraphyletic, but alternative phylogenies (Bogdanowicz and Owen 1998; Hand and Kirsch 1998) disagree about genus and species relationships.

In the following keys, we retain the traditional contents of *Hipposideros*. We present a key to the 7 species groups and a key to the members of the *cyclops* group based on Flannery and Colgan (1993), Hill (1963, 1985), and Koopman (1994). These keys have not been tested. Key to the 7 species groups (Hill 1963):

1 Ears united at base by low frontal band ..... *megalotis* group (*H. megalotis*)
Ears separate 2
2 Ears long, narrow, and pointed ..... *cyclops* group
Ears short, broad, and rounded or triangular 3
3 Ears rounded or broadly triangular and bluntly pointed; upper incisors weak ..... *bicolor* group
Ears triangular and pointed, upper incisors strong 4
4 Noseleaf with 2 lateral leaflets; frontal depression of cranium well defined, maxillae elongated ..... *pratti* group
Noseleaf with 3 or 4 lateral leaflets; frontal depression of cranium lacking or shallow, maxillae not elongated 5
5 Noseleaf with upper edge of posterior leaf slightly lobate; posterior leaf narrower than horseshoe ..... *armiger* group
Noseleaf with upper edge of posterior leaf forming an arc or circle; posterior leaf equal in width to horseshoe 6
6 Ears with a small projection at the antitragal fold ..... *speoris* group
Ears without antitragal modification ..... *diadema* group

Key to the *cyclops* group (Flannery and Colgan 1993; Hill 1985; Koopman 1994):

1 Posterior lateral leaflet not extending anteriorly beneath anterior leaflet onto upper lip; premaxillae wide posteriorly, forming a broad junction with palate; anterior palatal foramina enclosed 2
Posterior lateral leaflet extending anteriorly beneath anterior leaflet onto upper lip; premaxillae narrow posteriorly, forming a narrow, spatulate junction with palate; anterior palatal foramina open posteriorly 3
2 Length of forearm 56–73 mm; antorbital foramen large compared to overall skull size ..... *H. cyclops*
Length of forearm 74–76 mm; antorbital foramen small compared to overall skull size ..... *H. camerunensis*
3 Median processes of intermediate and posterior leaves not

FIG. 1. Female *Hipposideros cyclops* at IET-Station, Taï National Park, Côte d'Ivoire, on 8 March 1999. Photograph by J. Fahr.

FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of *Hipposideros cyclops* from 30 km West of Bertoua, Cameroon (female, AMNH 241046). Greatest length of cranium is 28.5 mm. Photographs by J. Decher.

greatly developed or especially club-shaped; cranium without frontal depression 4

Median processes of intermediate and posterior leaves well developed, usually club-shaped; cranium with frontal depression 5

4 Posterior leaf lacking any posterior supplementary structure; rostral eminences not much inflated; rostral profile nearly flat; width of cochleae 4–5 times their distance apart; known only from eastern New Guinea ..... *H. muscinus*

Posterior leaf with a posterior supplementary structure, twin-walled, cellular; rostral eminences inflated; rostral profile concave; width of cochleae 6 or more times their distance apart; confined to western and central New Guinea ..... *H. wollastoni*

5 Interorbital region wide; rostrum elongate; shallow sphenoidal depression present; width of cochleae ca. 4 times their distance apart; posterior ridge of M3 reduced, N-pattern of tooth incomplete; m3 with subrectangular posterior trigonid 6

Interorbital region narrow; rostrum short; no sphenoidal depression; width of cochleae ca. 6 or more times their distance apart; posterior ridge of M3 little reduced, N-pattern of tooth nearly complete; m3 with triangular posterior 7

6 Dorsal fur color Hair Brown, ventral fur silver-tipped, hair on midback ca. 14 mm long; lower club-shaped process on noseleaf very long and tubular; Telefomin area, central New Guinea ..... *H. corynophyllus*

Dorsal fur color Prout's Brown with reddish tinge; ventral fur Cinnamon Rufus, hair on midback ca. 9 mm long; lower club-shaped process of noseleaf shorter and laterally flattened; near Imonda, northern central New Guinea ..... *H. edwardshilli*

7 Median process of posterior leaf large, club-shaped; skull larger (rostral width 5.6–6.3 mm), C–M3 6.5–7.3 mm; cranial frontal depression shallow; rostral eminences greatly inflated; known only from eastern New Guinea and northeastern Queensland, Australia ..... *H. semoni*

Median process of posterior leaf tuberclelike, not especially club-shaped; skull smaller (rostral width 5.1 mm); C–M3 5.6 mm; cranial frontal depression deep; rostral eminences moderately inflated; confined to Northern Territory, northwestern Australia, and northwestern Queensland, Australia ..... *H. stenotis*

Hipposideros cyclops (Temminck, 1853)

Cyclops Leaf-nosed Bat

Phyllorrhina cyclops Temminck, 1853:75. Type locality "sur la rivière Boutry, côte de Guiné," Butri River, Ghana.

Rhinolophus micaceus de Winton, 1897:524. Type locality "Como River, 75 miles from Gaboon."

Hipposideros cyclops: de Winton, 1899:354. First use of current name combination.

Hipposideros langi J. A. Allen, 1917:434. Type locality "Avakubi," Oriental Province, Congo (Kinshasa).

CONTEXT AND CONTENT. Context as for genus. *H. cyclops* is monotypic.

DIAGNOSIS. *Hipposideros cyclops* (Fig. 1) and the very similar species *H. camerunensis* partly overlap in Cameroon, Congo, Kenya, and Uganda. *H. cyclops* and *H. camerunensis* are distinguished from other members of the *cyclops* group by their posterior lateral leaflet not extending beneath anterior leaflet onto upper lip and by wide premaxillae that enclose the anterior palatal foramen and make a broad junction with the maxillae. *H. cyclops* is smaller than *H. camerunensis* with a narrower braincase and rostrum, larger antorbital foramen, a forearm length of 59.3–69.0 mm as opposed to 72.5–77.8 mm in *H. camerunensis*, and a greatest skull length of 27.2–28.3 mm compared to 30.4–31.5 mm in *H. camerunensis* (Fig. 2; Eisentraut 1956, 1963; Hill 1963:80). In comparison to its body size, hind foot of *H. cyclops* (16.0–18.0 mm) is proportionately longer than that of *H. camerunensis* (17–20 mm).

GENERAL CHARACTERS. The woolly, curly, and ruffled nature of the pelage of *H. cyclops* was mentioned in the original description (Temminck 1853). For both *H. cyclops* and *H. camerunensis*, the pelage is unique among African hipposiderids; both have long, dense, and woolly fur, blackish brown, with a lighter grizzle on tips of hairs, resulting in a barklike appearance (Kingdon 1974). *H. cyclops* does not have reddish or orange color phases like most other African hipposiderids. Wings are dark blackish brown. Ears are long and narrow, tapering to a triangular point; antitragus is relatively deep. Horseshoe of noseleaf is large and broad, covering muzzle. Two supplementary lateral leaflets (a short and wide anterior leaflet and a posterior leaflet) extend to join base of posterior leaf but do not extend anteriorly beneath anterior leaf. Noseleaf has 2 characteristic clublike structures, 1 arising above nostrils from middle of anterior noseleaf, the other protruding from median margin of posterior leaf (Hill 1963:figure 20; Rosevear 1965:figure 62). Both sexes have a well-developed longitudinal frontal sac (a glandular pouch just behind and concealed by posterior noseleaf). This orifice is lined with long, stiff, white hairs and forms a conspicuous tuft when everted (Rosevear 1965:figure 63). Males have another (glandular?) sac between penis and anus, which, when everted, reveals 2 tufts of stiff, red-brown hair, 1 large and 1 small (Eisentraut 1941; Verschuren 1957). Females lack this

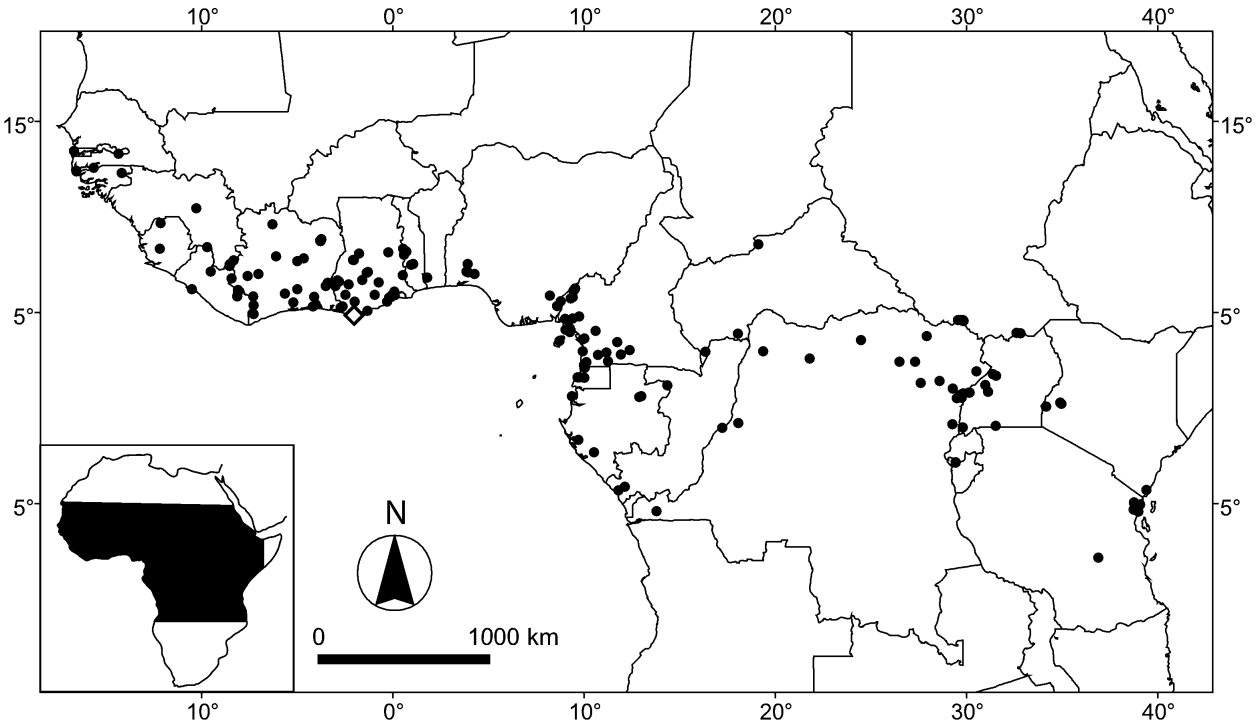

FIG. 3. Geographic distribution of *Hipposideros cyclops* showing documented records (black solid dots) of sites in West, Central, and East Africa. Diamond indicates approximate location of type locality (Butri River, Ghana).

sac but have a small tuft of stiff brown hair in front of vagina. In front of this tuft, females have a pair of false nipples with 1 being generally longer than the other (Eisentraut 1956; Verschuren 1957). One pair of mammary nipples is located at the sides of the chest.

Skull is robust and elongate, sagittal crest is low, and rostrum is broad. Zygomata are massive. Cochleae are greatly enlarged.

Size of *H. cyclops* is fairly variable. Sexual dimorphism is pronounced, with females significantly larger than males. Average measurements in mm (range and sample size in parentheses) of males and females, respectively, from across the geographic range are (J. Fahr, in litt.): total length, 109.6 (98.0–133.0, 42), 113.5 (100.0–128.0, 77); length of tail, 26.5 (21.0–36.0, 42), 29.2 (20.0–39.0, 77); length of hind foot (with claws), 19.8 (18.0–22.0, 41), 20.5 (18.0–22.0, 73); length of ear, 33.0 (29.0–38.0, 41), 33.7 (27.6–37.0, 79); length of forearm, 65.3 (60.6–71.4, 53), 68.3 (62.6–74.0, 45); length of 3rd metacarpal, 52.1 (47.9–58.1, 6), 55.1 (50.1–61.6, 8); length of 4th metacarpal, 51.2 (45.1–57.6, 5), 54.3 (49.8–60.4, 8); length of 5th metacarpal, 50.4 (46.2–55.9, 6), 52.3 (47.7–56.9, 8); wingspan, 398 (374–425, 9), 416 (410–421, 2); length of tibia, 31.6 (28.9–35.1, 8), 32.7 (30.6–34.9, 11); greatest length of cranium to front of canine, 28.4 (26.3–30.0, 3), 28.1 (26.4–29.8, 11); condylocanine length, 24.7 (23.2–26.2, 2), 24.9 (23.8–26.0, 10); mastoid width, 12.2 (11.8–12.7, 4), 12.0 (11.6–12.7, 11); zygomatic breadth, 15.2 (14.2–16.3, 6), 15.3 (14.0–16.1, 10); C–C, 7.5 (7.0–8.2, 4), 7.6 (6.6–8.4, 11); M3–M3, 11.0 (10.5–11.4, 5), 10.8 (9.3–11.7, 11); C–M3, 10.4 (9.9–10.7, 3), 10.4 (9.9–10.8, 8); postorbital width, 3.6 (3.3–3.9, 4), 3.3 (3.2–4.0, 10); length of mandible, 18.8 (17.9–20.2, 5), 19.2 (18.2–20.3, 10); c–m3, 11.2 (10.7–11.9, 4), 11.4 (11.0–11.9, 10); body mass (g), 29.0 (20.0–40.0, 77), 34.9 (22.0–56.0, 99).

Dental formula is i 1/2, c 1/1, p 2/2, m 3/3, total 30 (Veiga-Ferreira 1949). Upper incisors are weakly bilobed, upper canines lack cusps but have prominent cingula, and anterior upper premolar is very small and tucked into an external corner formed by C and P2. The latter is the tallest cheektooth and subcaniniform in appearance. Anterior lower premolar is much reduced, one-fourth the length and one-half the height of posterior lower premolar (Hill 1963; Rosevear 1965).

DISTRIBUTION. *Hipposideros cyclops* (Fig. 3) occurs in West Africa from southern Senegal through Gambia, Guinea Bissau, Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Benin to Nigeria (Böhme and Hutterer 1979; De Vree et al. 1969; Fahr 1996; Grubb et al. 1999; Happold 1987; Jones 1992; Koopman 1989; Kuhn 1965; Rainho and Franco 2001; Robbins 1980; Verschuren 1977; Wolton et al. 1982; Ziegler et al. 2002). In Central Africa, *H. cyclops* occurs in Cameroon, Equatorial Guinea (Rio Muni and Bioko), Gabon, Central African Republic, Congo (Brazzaville), Congo (Kinshasa), and the southern tip of Sudan (Aellen 1952; Allen 1917; Brosset 1966; Dowsett et al. 1991; Eisentraut 1956, 1973; Fedden and Macleod 1986; Hayman et al. 1966; Hill 1983; Jones 1971; Juste and Ibáñez 1994; Koopman 1975; Lunde et al. 2001; Verschuren 1957). In East Africa, it occurs in Uganda, Kenya, and in the coastal forests and the Eastern Arc Mountains of Tanzania (Cockle et al. 1998; Harrison 1961; Hayman 1935; Kingdon 1974; Schlitter et al. 1986). In West Africa, the highest reported altitudes for *H. cyclops* are 1,100 m on Mt. Kupe in Cameroon and 1,000–1,200 m on Mt. Nimba in Liberia (Hill 1968; Wolton et al. 1982).

FOSSIL RECORD. Fossils of *H. cyclops* are unknown, but fossils assigned to the genus are known from the Early Miocene of Africa (Butler 1978) and from the Miocene of Australia (Hand 1997).

FORM AND FUNCTION. The brownish, grizzled pelage may camouflage *H. cyclops* when it rests on rough-barked trees (Kingdon 1974). Genital gland of males produces a clear fatty secretion with a strong musklike smell (Eisentraut 1957; Lang and Chapin 1917; Verschuren 1957). The frontal sac produces a waxy secretion (Rosevear 1965). The large diameter of the eye has led to the assumption that *H. cyclops* partially relies on vision for orientation (Fahr 1996). False nipples in females serve for the attachment of young (Eisentraut 1956). Mean length of intestinal tract is 228 mm ($n = 8$), 3 times the mean body length of 75 mm (Eisentraut 1941, 1957).

ONTOGENY AND REPRODUCTION. Timing of the reproductive cycle of *H. cyclops* varies throughout Africa. In Uganda, males with enlarged testes were collected in December together with females that were not pregnant (Kingdon 1974). In Garamba National Park, Congo (Kinshasa), mating takes place at the beginning of December. Gestation may last up to 3.5 months. Pregnant females were captured only on 7 February ($n = 3$) and 8 March ($n = 7$). Parturition occurs in mid-March and lactation lasts from mid-March to mid-May. Two lactating females and 1 free-flying juvenile, which had both milk and insects in the stomach and a forearm

length of 63 mm, were caught on 15 May and 3 postlactating females were caught on 19 May (Verschuren 1957). At Virunga National Park, Congo (Kinshasa), 1 pregnant female was found on each of 29 February, 2 March, and 6 March (Verschuren 1966). Females with enlarged nipples but no longer lactating were found on 3 March in Mubenge-Isongo, Cameroon (Eisentraut 1956), and in Uganda in June (Kingdon 1974). On 10 December, 3 females from Malende, Cameroon, each carried a small embryo (Eisentraut 1963). In eastern Congo, pregnant *H. cyclops* were found in late January and very young cyclops leaf-nosed bats were found in late April (Lang and Chapin 1917). In the rain forest zone of Côte d'Ivoire (Forêt du Banco, Yapo Sud), pregnant females were found between mid-July and mid-August (Fahr 1996). Litter size is always 1.

ECOLOGY AND BEHAVIOR. *Hipposideros cyclops* has been characterized as a forest species (Happold 1987; Lang and Chapin 1917; Rosevear 1965; Verschuren 1957); however, it extends far into the forest–savanna mosaic throughout its range (Fahr 1996). In Senegal, *H. cyclops* was described as a relict species characterizing the forest remnants of the Casamance River gallery forest zone (Böhme und Hutterer 1979). On the relatively dry coastal Accra Plains of Ghana, *H. cyclops* is restricted to forest remnants with tall canopy preserved in sacred groves (Decher 1997), whereas it is common in the gallery and island forests of Comoé National Park, Côte d'Ivoire (Fahr 1996). At Mt. Nimba, Liberia, *H. cyclops* avoided anthropogenic habitat (Verschuren 1977), but elsewhere it occurred in cocoa and rubber plantations and disturbed forest (Fedden and Macleod 1986; Jeffrey 1975; Juste and Ibáñez 1994; Lang and Chapin 1917). *H. cyclops* and *H. camerunensis* were numerous in *Cynometra* forest in lowland forest of Uganda and western Kenya, and both species were netted in the same localities and from very similar roosts in western Uganda (Kingdon 1974).

In Gabon, *H. cyclops* roosted suspended from bumps in the upper parts of tree cavities, often at great height above the ground and, according to local observers, exhibited roost fidelity (Brosset 1966). Because of its preference for tree cavities, *H. cyclops* is classified among the phytophilous group of bats at Garamba National Park, Congo (Kinshasa—Verschuren 1957). At Virunga National Park, Congo (Kinshasa), hollow trees used by *H. cyclops* often had an opening close to the ground, and 10% of hollow trees were occupied by this species (Verschuren 1966). Trees, including palms, used by *H. cyclops* were *Borassus aethiopium*, *Ceiba pentandra*, *Cordia*, *Cynometra*, *Klainedoxa gabonensis*, *Macaranga*, *Mitragyna stipulosa*, and *Rhicinodendron heudelotii*, and this bat showed a preference for gallery forest (Fahr 1996; Verschuren 1957, 1966). One *H. cyclops* was shot inside a house in Liberia (Allen and Coolidge 1930). *H. cyclops* roosted in a church belfry in Cameroon and in a disused mine (Aellen 1952; Rosevear 1965).

Colonies usually comprise 1–3 males and several females (Aellen 1952; Fedden and Macleod 1986; Verschuren 1957). The sex ratio of 36 adult *H. cyclops* from 11 day roosts at Garamba National Park, Congo (Kinshasa), was 1 male to 1.8 females. No maternity colonies were found (Verschuren 1957). Group size is up to 12 individuals (Eisentraut 1941, 1956; Kingdon 1974; Lang and Chapin 1917). At Mt. Nimba, Liberia, and in Gabon, *H. cyclops* roosted only in pairs or singly (Brosset 1966; Verschuren 1977). Singly-roosting individuals are mostly males.

Other bats associated with *H. cyclops* included *Lissonycteris angolensis*, *Mops leonis*, *Nycteris major*, *N. thebaica*, *Rhinolophus alcyone*, and *R. landeri* (Eisentraut 1956; Verschuren 1957, 1966). Documented roosting associations with other mammals include a nocturnal primate (*Galago*), dormice (*Graphiurus*), scaly-tailed flying squirrels (*Anomalurus*, *Idiurus macrotis*, and *I. zenkeri*), and the murid *Praomys tullbergi* (Bates 1905; Brosset 1966; Fedden and Macleod 1986; Jones 1971; Kuhn 1962; Rosevear 1965; Verschuren 1957, 1966, 1977). Geckos and an unidentified snake associated with *H. cyclops* in hollow trees of the gallery forest in northeastern Congo (Verschuren 1957).

Cyclops leaf-nosed bats cull the wings and other parts of their prey, which then accumulate at the bottom of their roosts (Brosset 1966; Kingdon 1974; Verschuren 1957, 1966), allowing identification of prey. In Garamba National Park, Congo (Kinshasa), cicadas (Homoptera: Cicadidae) and hawk moths (Lepidoptera: Sphingidae) were the predominant food identified from remains, but the diet also included beetles (Coleoptera: Scarabaeidae, Elateridae), flatbugs (Heteroptera: Aradidae), owlflies (Neuroptera: Ascalaphidae), and wasps (Hymenoptera: Eumenidae—Verschuren 1957). An analysis of stomach contents revealed ants (Hymenoptera: Formicidae), bark lice (Psocoptera), and moth flies (Diptera: Psychodidae—Verschuren 1957).

Ectoparasites on *H. cylops* were streblid flies *Raymondia intermedia* and *R. brachyphysa* (Diptera: Streblidae—Jobling 1956) and the mite *Steatonyssus hipposideros* (Acari: Macronyssidae) from specimens from Yapo, Côte d'Ivoire (Till 1958; Till and Evans 1964). Protozoan endoparasites in *H. cyclops* from Gabon included *Dionisia bunoi* (Haemosporidia: Haemoproteidae—Landau et al. 1980), *Plasmodium cyclopsi* (Hemosporidia: Plasmodiidae—Landau and Chabaud 1978), *Polychromophilus* (Haemosporidia: Haemoproteidae), and *Trypanosoma* (*Megatrypanum*) *lizae* (Kinetoplastida: Trypanosomidae—Miltgen and Landau 1979). The nematode worm *Litomosa pujoli* (Nematoda: Dipetalonematidae) was found in *H. cyclops* from Mombeka, Central African Republic (Bain 1967). Also reported was the pentastomid *Armillifer* (Pentastomida: Porocephalidae—Heymons 1940, cited in Anciaux de Faveaux 1984). Predators of *H. cyclops* include a small carnivore (probably a genet) at Dzanga-Sangha-National Park, Central African Republic (Hutterer and Ray 1996).

Audible vocalizations of *H. cyclops* include little squeaking sounds while flying over villages at dusk, though these calls were not audible for some people (Bates 1905). At Garamba National Park, *H. cyclops* was quieter in the roost than *H. abae* and *H. caffer* (Verschuren 1957). Echolocation calls of *H. cyclops* are constant frequency-frequency modulated calls (CF-FM) with the constant frequency component in resting bats at 59.7 (58.4–60.8) kHz (Ebigbo 2000). The frequency of 101–109 kHz (Novick 1958) is an error (J. Fahr, pers. comm.).

Only prolonged smoke (>90 min) dislodged *H. cyclops* and associated dormice (*Graphiurus*) from hollow trees (Verschuren 1957). Captive *H. cyclops* did not adjust well to being handled and were voracious eaters, filling their cheeks rapidly with mealworms, which they chewed while on a safe perch (Eisentraut 1941).

GENETICS. A partial sequence of the 12S ribosomal RNA gene, a complete sequence of the tRNA-Val gene, and a partial sequence of the 16S ribosomal RNA gene are available for *H. cyclops*, American Museum of Natural History (AMNH) 268380, Central African Republic, under GenBank Accession Number AY 395857 (Hoofer and Van Den Bussche 2003).

CONSERVATION STATUS. Although not endangered throughout its range, *H. cyclops* may disappear from many areas that are threatened by deforestation, especially on the extreme limits of its distribution such as in Senegal (Böhme and Hutterer 1979). At Garamba National Park, Congo (Kinshasa), destruction of large hollow trees in gallery forest threatens the survival of *H. cyclops* (Verschuren 1957). The conservation status of this species was assessed as "Lower risk: least concern" by IUCN (Hutson et al. 2001).

REMARKS. The generic name *Hipposideros* is from the Greek *hippos* horse and *sideros* iron, referring to the horseshoe shape of the anterior noseleaf. The specific name *cyclops* is that of the 1-eyed giants of Greek mythology and alludes to the orifice in the center of the forehead of these bats (Rosevear 1965). An alternate vernacular name for *H. cyclops* is cyclops roundleaf bat (Wilson and Cole 2000). The closely related African *H. cyclops* and *H. camerunensis* were considered the "most primitive" of the *cyclops* group (Hill 1963:73), being much larger and less specialized than the Australasian members, which include *H. corynophyllus*, *H. edwardshilli*, *H. muscinus*, *H. semoni*, *H. stenotis*, and *H. wollastoni* (Flannery and Colgan 1993; Hill 1963; Koopman 1994). Koopman (1994) recognizes 53 extant species of *Hipposideros*, whereas Simmons (in press) lists 67 species. We omitted the subfamily name Hipposiderinae because of evidence of paraphyly among previously used tribes, subfamilies, and genera (Bogdanowicz and Owen 1998; Hand and Kirsch 1998, 2003; Simmons, in press).

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