

Figures

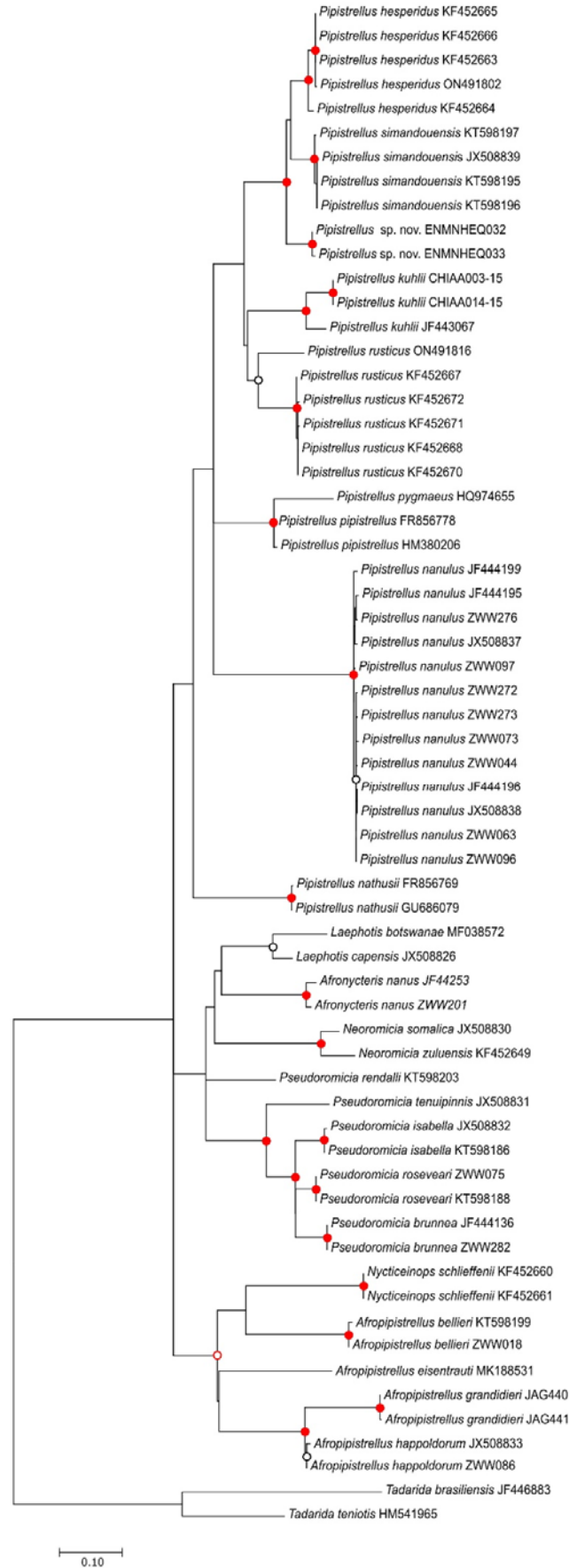


Figure S1. Results of maximum likelihood (ML) and Bayesian inference analysis combined on a ML tree of mitochondrial Cytochrome c Oxidase Subunit I sequences of African pipistrelloids incorporating *Pipistrellus* sp. nov. based on the General Time Reversal + Gamma (G) + Invariable sites (I) model. Filled red circles on nodes denote bootstrap (BS) values $\geq 70\%$ and Bayesian posterior probabilities (PP) ≥ 0.90 . Open circles outlined in black indicate BS $\geq 70\%$ and PP < 0.90 , and open circles outlined in red indicate BS $< 70\%$ and PP > 0.90 . Labels include species name and GenBank accession number or specimen/sample number (Supporting Information Table S2).

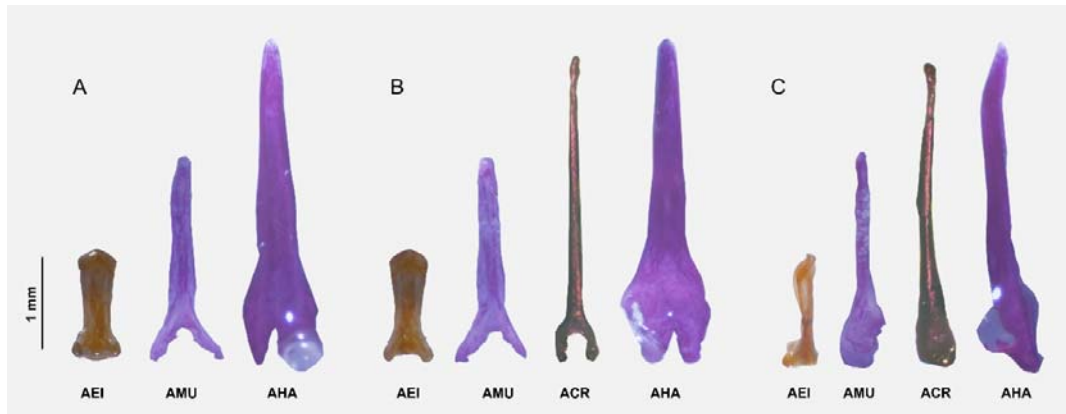


Figure S2. Dorsal (A), ventral (B) and lateral (C) views of bacula of four species of *Afropipistrellus*: AEI—*Af. eisentrauti* (EBD 19104M), AMU—*Af. musculus* (EBD 20568M), ACR—*Af. crassulus* (EBD 34811M), AHA—*Af. happoldorum* (EBD 16827M) from Mainland Equatorial Guinea. For ACR the dorsal view was not available.

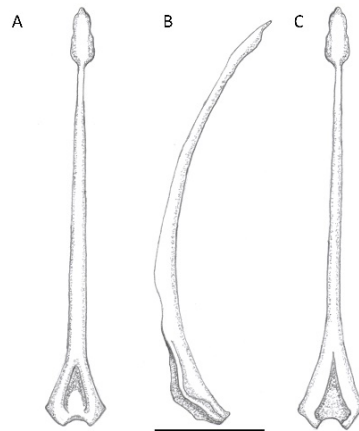


Figure S3. Dorsal (A), lateral (B) and ventral (C) views of the baculum *Afropipistrellus bellieri* (DM 13222) from Liberia (Monadjem *et al.*, 2013). Scale = 1 mm.

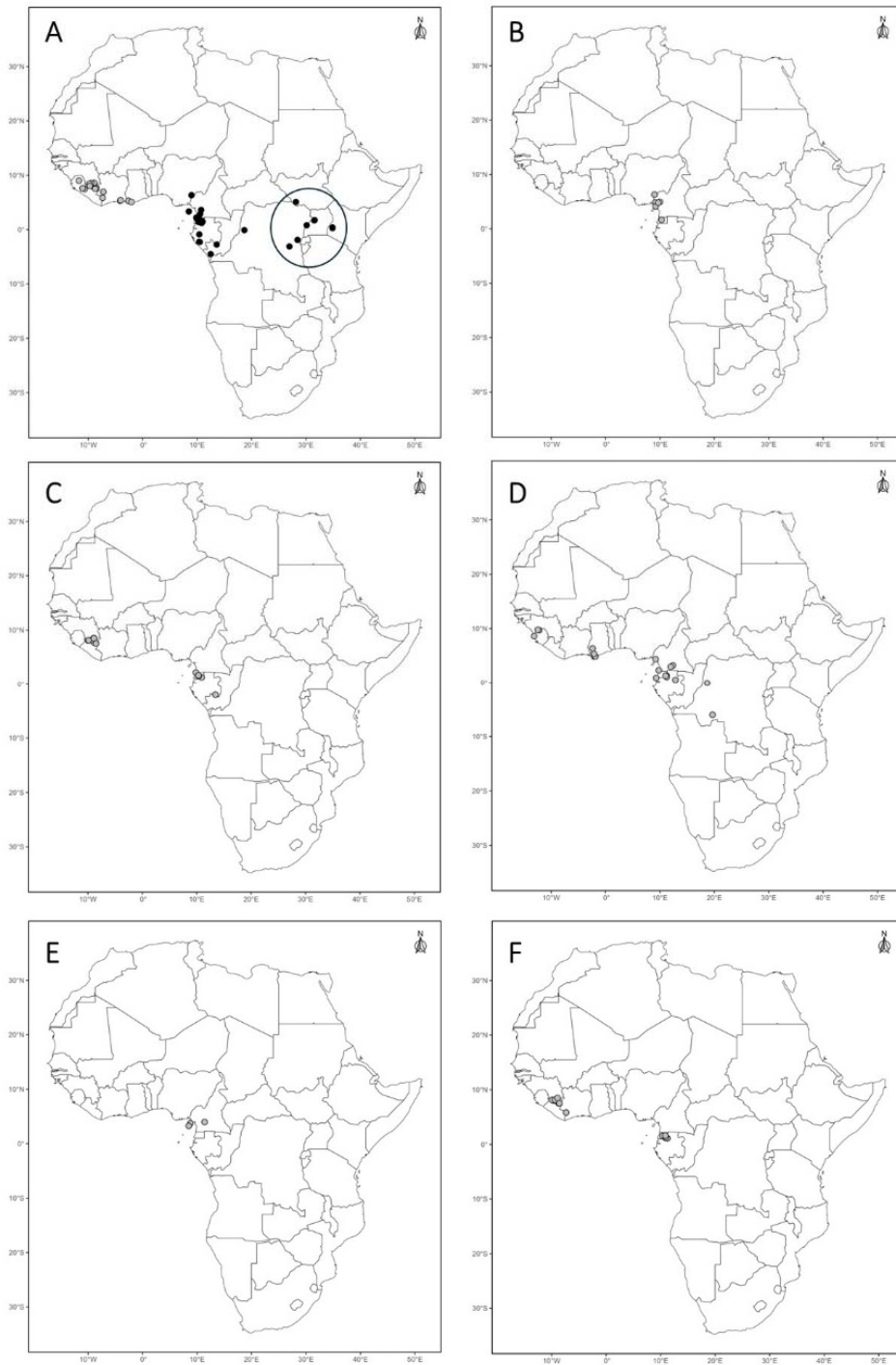


Figure S4. Distribution maps, incorporating the records from this study, of (A) *Afropipistrellus crassulus* (black dots), *Af. cf. crassulus* (black dots within the circle) and *Af. bellieri* (grey dots), (B) *Af. eisentrauti*, (C) *Af. happoldorum*, (D) *Af. musciculus*, (E) *Pseudoromicia mbamminkom* and (F) *Ps. roseveari*. The circle from map A represents *Af. cf. crassulus* eastern population (from Kenya, Uganda, South Sudan and eastern Democratic Republic of the Congo).



Figure S5. Tragi of five *Pipistrellus* species examined for this study: *Pi. sp. nov.*—*Pi. etula* holotype (EBD 19203M), PSI—*Pi. simandouensis* (DM 13220), PHE—*Pi. hesperidus* (DM 8477), PRU—*Pi. rusticus* (DM 13587) and PNA—*Pi. nanulus* (EBD 20450M).

Tables

Table S1. List of pipistrelloid bat species described in the past decade in Africa.

Species	Authors	Year	Locality	African region
<i>Pipistrellus simandouensis</i>	Monadjem <i>et al.</i> , 2021a	2021	Simandou Mountains, Guinea	West
<i>Neoromicia isabella</i>	Decher <i>et al.</i> , 2015	2015	Simandou Mountains, Guinea	West
<i>Neoromicia roseveari</i>	Monadjem <i>et al.</i> , 2013	2013	Mount Nimba, Liberia	West
<i>Afropipistrellus happoldorum</i>	Hutterer <i>et al.</i> , 2019a	2019	Simandou Mountains, Guinea	West
<i>Laephotis kirinyaga</i>	Monadjem <i>et al.</i> , 2021b	2021	Marsabit National Park, Kenya	East
<i>Pseudoromicia kityoi</i>	Monadjem <i>et al.</i> , 2021b	2021	Mabira Forest Reserve, Uganda	East
<i>Pseudoromicia nyanza</i>	Monadjem <i>et al.</i> , 2021b	2021	Kisumu Impala Sanctuary, Kenya	East
<i>Pseudoromicia mbamminkom</i>	Grundwald <i>et al.</i> , 2023	2023	Mount Mbam Minkom, Cameroon	Central
<i>Afropipistrellus macrocephalus</i>	Hutterer <i>et al.</i> , 2019b	2019	Democratic Republic of the Congo, Rwanda	Central
<i>Neoromicia hlandzeni</i>	Taylor <i>et al.</i> , 2022	2022	Mlawula Nature Reserve, Eswatini	South
<i>Pseudoromicia principis</i>	Juste <i>et al.</i> , 2023	2023	Santo António city, Príncipe Island	Island
<i>Neoromicia bemaity</i>	Goodman <i>et al.</i> , 2015	2015	Kirindy forest, Madagascar	Island
<i>Neoromicia stanleyi</i>	Goodman <i>et al.</i> , 2017	2017	Okavango Delta, Botswana	Island

Table S2. Cytochrome b (Cytb) and Cytochrome c Oxidase Subunit I (COI) sequences of pipistrelloid species and outgroups used in this study.

Table S3. Estimates of evolutionary divergence were determined for the Vespertilionini tribe based on the average number of base substitutions between groups of species. Analyses were conducted using the Tamura-Nei model (Tamura *et al.*, 2021). The analysis involved 122 nucleotide sequences. Codon positions included were 1st+2nd+3rd+Noncoding. All positions containing gaps and missing data were eliminated. There was a total of 41 positions in the final dataset.

Table S4. External measurements (mm) and mass (g) of *Afropipistrellus* species from Equatorial Guinea. Measurements are presented as mean \pm standard deviation, range and sample size (N).

Species	Body mass	Forearm length	Total length	Tail length	Ear length	Hindfoot length
<i>Afropipistrellus crassulus</i>	4.8 \pm 1.96 (3.6-5.9), N = 6	28.8 \pm 1.49 (27.5-31.7), N = 7	70.7 \pm 5.23 (65.0-77.0), N = 5	28.0 \pm 2.00 (26.0- 30.0), N = 3	9.2 \pm 1.28 (8.0-11.0), N = 5	7.0 \pm 1.41 (6.0 and 8.0), N = 2
<i>Afropipistrellus eisentrauti</i>	8.0, N = 1	32.5, N = 1	90.0, N = 1	NA	11.2, N = 1	NA
<i>Afropipistrellus happoldorum</i>	8.5 \pm 0.95 (7.0-9.2), N = 8	35.4 \pm 1.00 (34.0-36.5), N = 8	NA	NA	NA	NA
<i>Afropipistrellus musciculus</i>	3.7 \pm 0.42 (3.4 and 4.0), N = 2	25.8 \pm 0.46 (25.5 and 26.1), N = 2	69.0, N = 1	NA	9.0 \pm 1.77 (7.7 and 10.2), N = 2	NA

Table S5. Cranial measurements (mm) of *Afropipistrellus* species from Equatorial Guinea. Measurements are presented as mean \pm standard deviation, range and sample size (N).

Species	GSKL	ZYGO	MAST	POB	GSH
<i>Afropipistrellus crassulus</i>	12.78 \pm 0.31 (12.35-13.21), N = 7	8.43 \pm 0.56 (7.55-9.21), N = 7	7.63 \pm 0.22 (7.34-7.84), N = 6	3.77 \pm 0.19 (3.63-4.17), N = 7	4.41 \pm 0.18 (4.13-4.59), N = 7
<i>Afropipistrellus eisentrauti</i>	13.72, N = 1	9.02, N = 1	8.04, N = 1	4.24, N = 1	5.16, N = 1
<i>Afropipistrellus happoldorum</i>	14.33 \pm 0.45 (13.72-14.72), N = 8	9.55 \pm 0.33 (9.29-10.05), N = 8	8.09 \pm 0.23 (7.83-8.38), N = 8	4.04 \pm 0.10 (3.87-4.12), N = 8	5.04 \pm 0.27 (4.64-5.33), N = 8
<i>Afropipistrellus musciculus</i>	11.53 \pm 0.18 (11.40 and 11.65), N = 2	7.38 \pm 0.21 (7.23 and 7.53), N = 2	6.30 \pm 0.01 (6.29 and 6.30), N = 2	3.42 \pm 0.18 (3.29 and 3.54), N = 2	5.09 \pm 0.95 (4.42 and 5.76), N = 2

Table S6. Dental measurements (mm) of *Afropipistrellus* species from Equatorial Guinea. Measurements are presented as mean \pm standard deviation, range and sample size (N).

Species	C-M ³	C-C	M ³ -M ³	c-m ₃
<i>Afropipistrellus crassulus</i>	4.45 \pm 0.28 (4.15-4.88), N = 7	4.08 \pm 0.21 (3.70-4.29), N = 7	5.63 \pm 0.23 (5.29- 5.91), N = 7	4.70 \pm 0.23 (4.43- 5.17), N = 7
<i>Afropipistrellus eisentrauti</i>	4.90, N = 1	4.39, N = 1	6.14, N = 1	5.42, N = 1
<i>Afropipistrellus happoldorum</i>	5.04 \pm 0.08 (4.94- 5.16), N = 8	4.66 \pm 0.11 (4.50- 4.76), N = 8	6.54 \pm 0.10 (6.40- 6.67), N = 8	5.57 \pm 0.11 (5.44- 5.73), N = 8
<i>Afropipistrellus musciculus</i>	3.81 \pm 0.01 (3.80 and 3.82), N = 2	3.45 \pm 0.06 (3.41 and 3.49), N = 2	4.90 \pm 0.05 (4.86 and 4.93), N = 2	4.00 \pm 0.21 (3.85 and 4.15), N = 2

Table S7. Baculum total length, basal and tip widths of five *Afropipistrellus* species reviewed in this study.

Species	Baculum total length (mm)	Baculum basal width (mm)	Baculum tip width (mm)
<i>Afropipistrellus crassulus</i>	3.46 (EBD 13937M)	0.63 (EBD 13937M)	0.23 (EBD 13937M)
<i>Afropipistrellus bellieri</i>	4.20 (DM 13222)	0.42 (DM 13222)	0.16 (DM 13222)
<i>Afropipistrellus eisentrauti</i>	1.26 (EBD 19104M)	0.53 (EBD 19104M)	0.41 (EBD 19104M)
<i>Afropipistrellus happoldorum</i>	3.59 (EBD 16827M)	0.54 (EBD 16827M)	0.11 (EBD 16827M)
<i>Afropipistrellus musciculus</i>	2.54 (EBD 15554M) and 2.29 (EBD 20568M)	0.92 (EBD 15554M) and 0.75 (EBD 20568M)	0.06 and 0.14 (EBD 20568M)