



## UvA-DARE (Digital Academic Repository)

### **A synthesis of African and western Indian Ocean Island mammal taxa (class: Mammalia) described between 1988 and 2008: An update to Allen (1939) and Ansell (1989)**

Hoffmann, M.; Grubb, P.; Groves, C.P.; Hutterer, R.; van der Straeten, E.; Simmons, N.; Bergmans, W.

#### **Publication date**

2009

#### **Published in**

Zootaxa

[Link to publication](#)

#### **Citation for published version (APA):**

Hoffmann, M., Grubb, P., Groves, C. P., Hutterer, R., van der Straeten, E., Simmons, N., & Bergmans, W. (2009). A synthesis of African and western Indian Ocean Island mammal taxa (class: Mammalia) described between 1988 and 2008: An update to Allen (1939) and Ansell (1989). *Zootaxa*, 2205, 1-36. <http://www.mapress.com/zootaxa/2009/2/zt02205p036.pdf>

#### **General rights**

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

#### **Disclaimer/Complaints regulations**

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

*UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)*

## A synthesis of African and western Indian Ocean Island mammal taxa (Class: Mammalia) described between 1988 and 2008: an update to Allen (1939) and Ansell (1989)

MICHAEL HOFFMANN<sup>1,2,9</sup>, PETER GRUBB<sup>3</sup>, COLIN P. GROVES<sup>4</sup>, RAINER HUTTERER<sup>5</sup>,  
ERIK VAN DER STRAETEN<sup>6</sup>, NANCY SIMMONS<sup>7</sup> & WIM BERGMANS<sup>8</sup>

<sup>1</sup>IUCN/SSC - CI/CABS Biodiversity Assessment Unit, c/o Center for Applied Biodiversity Science, Conservation International, 2011  
Crystal Drive, Suite 500, Arlington, VA 22202, USA. E-mail: m.hoffmann@conservation.org

<sup>2</sup>IUCN Species Programme, IUCN – International Union for Conservation of Nature, Rue Mauverney, 1196 Gland, Switzerland  
<sup>3</sup>35 Downhills Park Rd, London N17 6PE, United Kingdom (deceased)

<sup>4</sup>School of Archaeology and Anthropology, Australian National University, Canberra, ACT 0200, Australia.  
E-mail: colin.groves@anu.edu.au

<sup>5</sup>Zoologisches Forschungsmuseum Alexander Koenig, Section of Mammals, Adenauerallee 160, D-53113 Bonn, Germany.  
E-mail: r.hutterer.zfmk@uni-bonn.de

<sup>6</sup>Kerkstraat 90, 7655 Wellington, South Africa. E-mail: erik.vanderstraeten@antwerpen.be

<sup>7</sup>Chairman, Division of Vertebrate Zoology, Curator-in-Charge, Department of Mammalogy, American Museum of Natural History,  
Central Park West at 79th Street, New York, NY 10024, USA. E-mail: simmons@amnh.org

<sup>8</sup>Zoologisch Museum, Mauritskade 61, Postbus 94766, 1090 GT Amsterdam, The Netherlands. E-mail: w.bergmans@uva.nl

<sup>9</sup>Corresponding author

### Table of contents

Abstract .....	2
Introduction .....	3
Methods .....	3
Results .....	4
Afrosoricida .....	4
Tenrecidae .....	4
Chrysochloridae .....	5
Macroscelidea .....	5
Primates .....	5
Cheirogaleidae .....	5
Lemuridae .....	8
Lepilemuridae .....	8
Indriidae .....	11
Lorisidae .....	11
Galagidae .....	12
Cercopithecidae .....	12
Hominidae .....	14
Rodentia .....	14
Nesomyidae .....	14
Muridae .....	15
Anomaluridae .....	18
Bathyergidae .....	18
Soricomorpha .....	18
Soricidae .....	18
Chiroptera .....	19
Pteropodidae .....	19
Rhinolophidae .....	20

Hipposideridae .....	20
Emballonuridae .....	20
Myzopodidae .....	20
Molossidae .....	21
Vespertilionidae .....	21
Carnivora .....	22
Herpestidae .....	22
Viverridae .....	22
Artiodactyla .....	23
Bovidae .....	23
Discussion .....	23
Acknowledgements .....	26
References .....	26

## Abstract

We provide a synthesis of all mammal taxa described from the African mainland, Madagascar and all surrounding islands in the 20 years since 1988, thereby supplementing the earlier works of G.M. Allen (1939) and W.F.H. Ansell (1989), and bringing the list of African mammals described over the last 250 years current to December 2008. We list 175 new extant taxa, including five new genera, one new subgenus, 138 new species and 31 new subspecies, including remarks, where relevant, on the current systematic position of each taxon. Names of seven species of primates are emended, according to the requirements of the ICZN. The taxonomic group in which the largest number of new taxa has been described is the Primates, with two new genera, 47 new species and 11 new subspecies, while geographically the biggest increase in new species descriptions has been on the island of Madagascar, accounting for roughly half (67) of all new species described in the past 20 years. Nearly half of all new species listed currently are assessed as Data Deficient on the IUCN Red List of Threatened Species (49 of 101 listed species) suggesting further research is urgently needed to help clarify the status of those recently described species.

**Key words:** African mammals; species description; taxonomy

## Introduction

The most recent classification of mammals recognizes 5,416 species in 1,229 genera (Wilson & Reeder 2005). An average of 223 new valid species have been described per decade since the birth of modern taxonomic nomenclature in 1758, and this rate is increasing. Between mid-1992, when the second edition of *Mammal Species of the World* (Wilson & Reeder 1993) was going to press, and mid-2006, 341 new living mammal species were described—a rate of 24+ new descriptions per year (Reeder *et al.* 2007).

Glover M. Allen provided the names of Recent African mammal taxa in his landmark *A Checklist of African Mammals* published in 1939. This work listed all African mammals described from the starting point of zoological nomenclature (Linnaeus in 1758) to July 1938, and has been the foundation for subsequent taxonomic treatises on African mammals (e.g. Ellerman *et al.* 1953; Meester & Setzer 1971–1977; Meester *et al.* 1986). Over the 50 years following the issue of Allen's *Checklist*, substantial advances were made in the study of African mammals and many new taxa were described. A revision of Allen's list became necessary, and Frank Ansell, a veteran authority on African mammals (e.g. Ansell 1960, 1978; Ansell & Dowsett 1988) assumed responsibility for undertaking an update of Allen's list. In 1989, he published an extension to Allen's tome, entitled *African Mammals: 1938–1988* (Ansell 1989), which provided information on mammal taxa described between the completion of Allen's work in July 1938 and 31st December 1988—just over half a century—and included a number of names omitted from Allen's earlier synthesis.

The last two decades have been a very exciting period for Afrotropical mammalogy. The region continues to enjoy the attention of much regional and international research. An increasing number of countries that

previously were excluded from study, or received only minor attention, have begun to benefit from increased interest. Furthermore, the advent of novel molecular techniques has aided in the elucidation of phylogenetic relationships (e.g., Stanhope *et al.* 1998) and the resolution of many cryptic species complexes. As a result many new discoveries have been made, proving that mammalian diversity has been considerably underestimated in some regions, particularly on the island of Madagascar.

The primary purpose of this paper is to present a complete list of the African mammal taxa described and published since the appearance of Ansell's work, bringing the list of African mammals described over the last 250 years fully up to date.

## Methods

The format of this work generally is in keeping with the prior publications of both Allen and Ansell. The geographical area covered is the same, namely the African mainland, excluding the Sinai Peninsula, and including Madagascar and all surrounding islands (Canary Islands, Cape Verde Islands, islands in the Gulf of Guinea, Mascarenes, Seychelles, Comoros), as well as the adjacent seas. The time-frame extends from 1 January 1989 (the cut-off point for Ansell 1989) to 31 December 2008—a period of 20 years.

The taxonomic scope of the work is all mammals, including marine taxa. We follow the sequence of orders and families in Wilson & Reeder (2005: xxvi-xxx). Suborders, subfamilies and tribes are not indicated; genera, species and subspecies are arranged alphabetically within families.

Allen (1939) indicated that his list included “all species known to have lived within historic times”. No explicit cut-off date is given, but numerous taxa that are known or suspected to have died out in the Holocene (Turvey 2009) are not listed in either Allen (1939) or Ansell's (1989) work. This work therefore lists extant taxa, including any that survived until after 1500 (per MacPhee & Fleming 1999). Consequently, some forms that lived into the Holocene, such as *Crocidura balsamifera* (Hutterer 1994) described from mummified shrews embalmed 2400 B.P., are not listed.

In the References we list full citations to the papers in which new taxa were described, while in the main text we list only the author, year and the number of the page on which the species is described. In this sense, the current work marks a departure from Allen and Ansell who did not provide the complete references to original sources. Type localities are presented as originally published, with clarifications indicated in square brackets. Where relevant, under a subheading “Remarks”, we indicate the current systematic position of a given taxon, stating where it has been raised or lowered to another rank, or regarded as a synonym. We also discuss nomenclatural problems concerning some of the names cited.

At the end of each species-level entry, within square brackets, we indicate the IUCN Red List Category for those species that have been assessed on the *2008 IUCN Red List of Threatened Species* (see [www.iucnredlist.org](http://www.iucnredlist.org)). The categories are as follows: CR—Critically Endangered; EN—Endangered; VU—Vulnerable; NT—Near Threatened; LC—Least Concern; DD—Data Deficient. No recently described species have been categorized as Extinct.

There are many incorrect subsequent spellings in the literature that have not been recorded in any checklist. Examples are *Aegererus* for *Aegocerus*, a suppressed synonym of *Hippotragus*, *Alcephalus* for *Alcelaphus*, *Equus burschelli* for *E. burchellii*, and *Hippopothamus* for *Hippopotamus*. We do not list such unavailable names, although we do include nomina nuda, another class of unavailable names. We also do not list unjustified emendations, unless in prevailing usage. Several names listed here are known to the authors to represent incorrect original spellings, and we have attempted to emend these accordingly. We follow the fourth edition of the Code (International Commission on Zoological Nomenclature 1999): “The provisions of this Code supersede those of the previous editions with effect from 1 January 2000.”

Appendix I is reproduced from a list compiled by W.F.H. Ansell and issued on February 28<sup>th</sup>, 1991. These Addenda and Corrigenda are not widely available and, therefore, are included for the sake of completeness. We list additional corrections to Ansell's original text and also to his Addenda and Corrigenda in Appendix II,

and briefly mention some additional names not mentioned by either Allen (1939) or Ansell (1989) in Appendix III.

## Results

### Afrosoricida

#### Tenrecidae

*Microgale dryas* Jenkins, 1992: 53. "Site 1, Ambatovaky Special Reserve, [northeast] Madagascar, 16°51'S, 49°08'E, in primary rainforest, between 600–750 m altitude". [VU]

*Microgale fotsifotsy* Jenkins, Raxworthy & Nussbaum, 1997: 2. "Camp 2, Antomboka River Fitsahana, Parc National de la Montagne d'Ambre, Antsiranana Fivondronana, Antsiranana Province 12°29'S 49°10'E, altitude 650 m, rain forest" [Madagascar]. [LC]

*Microgale gymnorhyncha* Jenkins, Goodman & Raxworthy, 1996: 211. "38 km S Ambalavao, RNI d'Andringitra, on ridge E of Volotsangana River, Fianarantsoa Province, 22°11'39"S 46°58'16"E, altitude 1625 m" [Madagascar]. [LC]

*Microgale jenkinsae* Goodman & Soarimalala, 2004: 253. "Madagascar: Province de Toliara, Forêt des Mikea, 9.5 km west Ankiloaka, 22°46.7'S, 43°31.4'E, elevation about 80 m above sea level". [EN]

*Microgale jobihely* Goodman, Raxworthy, Maminirina & Olson, 2006: 387. "Madagascar: Province de Mahajanga (Massif de Tsaratanana), forêt du lac Matsaborimena, 4 km N de Bemanevika village, 14°19.859'S, 48°35.240'E, 1600–1680 m". [EN]

*Microgale monticola* Goodman & Jenkins, 1998: 149. "11 km WSW of Befingitra, Réserve Spéciale d'Anjanaharibe-Sud, 14°44'S, 49°26'E, 1550 m" [Madagascar]. [VU]

*Microgale nasoloi* Jenkins & Goodman, 1999: 156. "Vohibasia Forest [Forêt de Vohibasia], 59 km northeast of Sakaraha, Province de Toliara, southwestern Madagascar, 22°27.5'S 44°50.5'E, 780 m". [VU]

*Microgale soricoides* Jenkins, 1993: 2. "Mantady National Park, ca. 15 km north of Perinet, Madagascar, 18°51'S 48°27'E, in primary rainforest, between 1100 and 1150 m elevation". [LC]

#### Chrysochloridae

*Amblysomus hottentotus meesteri* Bronner, 2000: 49. "President Street, Graskop (24°56'S, 30°51'E), Mpumalanga, South Africa. Elevation = 1750 m a.s.l."

*Amblysomus robustus* Bronner, 2000: 42. "Verloren-Vallei Provincial Nature Reserve (25°18'S, 30°08'E), 22 km north-east of Dullstroom, Mpumalanga, South Africa. Elevation 2150 m a.s.l.". [VU]

**Macroscelidea**

*Rhynchocyon udzungwensis* Rathbun & Rovero, 2008: 127. “Vikongwa River Valley, Ndundulu Forest, West Kilombero Scarp Forest Reserve, Udzungwa Mountains, Iringa Region, Tanzania [7°48.214'S, 36°30.354'E (Arc 1960 datum)], at 1350 m a.s.l. This location is c. 15 km south-east of Udekwa Village, Iringa Region, Tanzania”. [VU]

*Elephantulus pilicaudus* Smit, 2008: 1263. “Vondelingsfontein Farm, Calvinia, Northern Cape Province, South Africa (31°48'S, 19°49'E; 1,449 m above sea level)”. [VU]

**Primates****Cheirogaleidae**

*Cheirogaleus minusculus* Groves, 2000: 960. “Ambositra, on the central plateau at about 20°S, 47°E” [Madagascar]. [DD]

*Cheirogaleus ravus* Groves, 2000: 960. “Tamatave (about 18°S, 14°E)” [Madagascar]. [DD]

*Microcebus arnholdi* Louis Jr., Engberg, McGuire, McCormick, Randriamampionona, Ranaivoarisoa, Bailey, Mittermeier & Lei, 2008: 31. “Madagascar: Province de Antsiranana [(sic) Province d'Antsiranana], Montagne d'Ambre National Park and Montagne d'Ambre Special Reserve (approximately 12°31'28.1"S; 049°10'22.8"E, 990 m above sea level)”. [DD]

*Microcebus berthae* Rasoloarison, Goodman & Ganzhorn, 2000: 1001. “Madagascar: Province de Toliara, Forêt de Kirindy/CFPF, 60 km NE de Morondava, 20°04'S, 44°39'E, about 40 m above sea level”. [EN]

*Microcebus bongolavensis* Olivieri, Zimmermann, Randrianambinina, Rasoloharijaona, Rakotondravony, Guschanski & Radespiel, 2007: 321. “Madagascar, Province of Mahajanga, a forest fragment (S15°29'54”; E47°28'47”) belonging to the village Ambodimahabibo near Port-Bergé”. [DD]

*Microcebus danfossi* Olivieri, Zimmermann, Randrianambinina, Rasoloharijaona, Rakotondravony, Guschanski & Radespiel, 2007: 322. “Madagascar, Province of Mahajanga, a forest fragment (S 14°56'29”; E 47°42'44”) belonging to the village Ambarijeby (between Analalava and Antsohihy)”. [DD]

*Microcebus jollyae* Louis Jr., Coles, Andriantompohavana, Sommer, Engberg, Zaonarivelo, Mayor & Brenneman, 2006: 382. “Madagascar: Province de Fianarantsoa, Kianjavato, S21°22'825”, E047°52'050” at 71 m above sea level”. [DD]

*Microcebus lehilahytsara* Roos & Kappeler, 2005: 20. “Madagascar: Province Toamasina, Andasibe (18°55'S, 48°25'E)”. [DD]

*Microcebus lokobensis* Olivieri, Zimmermann, Randrianambinina, Rasoloharijaona, Rakotondravony, Guschanski & Radespiel, 2007: 323. “Madagascar, Province of Mahajanga, from the forest fragment near the village of Ampasimphy (S 13°23'24”; E 48°20'31”) which is the border of the Integrated Nature Reserve of Lokobe on the island of Nosy Be”. [DD]

**Remarks:** Olivieri *et al.* (2007) described the form *M. lokobensis* from Nosy Be. However, the type localities of *M. lokobensis* and *M. mampiratra* are the same, and the descriptions of the two forms are identical. Since *M. mampiratra* has priority, *M. lokobensis* is considered a junior synonym (see Mittermeier *et al.* 2008 for further discussion).

*Microcebus macarthurii* Radespiel, Olivieri, Rasolofoson, Rakotondratsimba, Rakotonirainy, Rasoloharijoana, Randrianambinina, Ratsimbazafy, Ratelolahay, Randriamboavonjy, Rasolofoharivelo, Craul, Rakotozafy & Randrianarison, 2008: 1044. “Anjiahely (S15°24'22.5", E49°29'54.3"), in a savoka at about 380m a.s.l., close to the village Anjiahely, about 26km west of Maroantsetra, Province of Antsiranana, Madagascar”.

*Microcebus mampiratra* Andriantompohavana, Zaonarivelo, Engberg, Randriamampionona, McGuire, Shore, Rakotonomenjanahary, Brenneman & Louis Jr., 2006: 14. “MADAGASCAR: Province de Antsiranana [(sic) Province d'Antsiranana], Nosy Be, Lokobe Special Reserve (approximately 13°24'16.9"S, 048°18'11.2"E at 13m.)”. [DD]

**Remarks:** *M. lokobensis*, also described from Nosy Be, is now considered a synonym of *M. mampiratra*.

*Microcebus margotmarshae* Louis Jr., Engberg, McGuire, McCormick, Randriamampionona, Ranaivoarisoa, Bailey, Mittermeier & Lei, 2008: 30. “Madagascar: Province de Antsiranana [(sic) Province d'Antsiranana], Antafondro Classified Forest Special Reserve (approximately 14°02'44.5"S, 48°13'23.4"E, 134 m above sea level)”.

*Microcebus mittermeieri* Louis Jr., Coles, Andriantompohavana, Sommer, Engberg, Zaonarivelo, Mayor & Brenneman, 2006: 381. “Madagascar: Province de Antsiranana, Anjanaharibe-Sud Special Reserve, S14°47'772", E049°28'411" at 1056 m above sea level”. [DD]

*Microcebus ravelobensis* Zimmermann, Ehresmann, Zietemann, Radespiel, Randrianambinina & Rakotoarison, 1997: 26. “Madagascar: Province de Mahajanga, Réserve Forestière (RF) d'Ankarafantsika, Station Forestière d'Ampijoroa, Jardin Botanique B, 16°35'S, 46°52'E, about 200 m above sea level”. [EN]

**Remarks:** Although Zimmermann *et al.* (1998) gave a full description of this species, and despite the justification put forth by Rasoloarison *et al.* (2000), Groves (2001) pointed out that “the first introduction of the name in Zimmermann *et al.* (1997) had ‘characters purporting to differentiate the taxon’ and that, therefore, the name is available.” Zimmermann *et al.* (1997, 1998) indicated that the type locality is “Madagascar: 2 km north of Ampijoroa, 16°35'S, 46°82' [sic] E”. However, Rasoloarison *et al.* (2000) indicated that the description was based on two captive animals, which would be preserved as voucher material upon their death. Although the animals have since died, no voucher material exists. Rasoloarison *et al.* (2000) designated a neotype (neotype locality given above). They suggested that the coordinates given in Zimmermann *et al.* (1998) are incorrect, owing to a typographical error (52'E, not 82'E).

*Microcebus sambiranensis* Rasoloarison, Goodman & Ganzhorn, 2000: 982. “Madagascar: Province de Mahajanga, Réserve Spéciale (RS) de Manongarivo, Forêt de Bekolosy, 2.3 km E de Beraty, 14°02'S, 48°16'E, about 360 m above sea level”. [EN]

*Microcebus simmonsii* Louis Jr., Coles, Andriantompohavana, Sommer, Engberg, Zaonarivelo, Mayor & Brenneman, 2006: 383. “Madagascar: Province de Tamatave, Betampona Special Reserve, S17°55'871", E049°12'200" at 956 m above sea level”. [DD]

*Microcebus tavaratra* Rasoloarison, Goodman & Ganzhorn, 2000: 977. “Madagascar: Province d’Antsiranana, Réserve Spéciale (RS) de l’Ankarana, Campement des Anglais, 9 km NO de Mahamasina, 13°05'S, 49°06'E, about 180 m above sea-level”. [EN]

*Mirza zaza* Kappeler & Roos, 2005: 18. “Madagascar: Province d’Antsiranana, "Baie de Pasandava" [= Ampasindava], Congoni (13°40'S, 48°15'E)”. [DD]

*Phaner furcifer electromontis* Groves & Tattersall, 1991: 47. “Madagascar: Montagne d’Ambre (Ambohitra), approximately 12°40'S, 49°10'E)”. [EN]

**Remarks:** Included in *P. furcifer* (Blainville, 1839: *Osteogr. Mamm., Primates*, p. 35) by Groves (1993), who later (2001) treated it as a distinct species under the Phylogenetic Species Concept; see also Mittermeier *et al.* (2008).

*Phaner furcifer pallescens* Groves & Tattersall, 1991: 47. “Madagascar: Tabiky (22°10'S, 44°15'E), ca. 20 km NW of Ankazoabo”.

**Remarks:** Included in *P. furcifer* (Blainville, 1839: *Osteogr. Mamm., Primates*, p. 35) by Groves (1993), who later (2001) treated it as a distinct species under the Phylogenetic Species Concept; see also Mittermeier *et al.* (2008).

*Phaner furcifer parienti* Groves & Tattersall, 1991: 47. “Madagascar: Sjangoi (=Djangoa, 13°50'S, 48°20'E), 20 km SW of Ambanja”.

**Remarks:** Included in *P. furcifer* (Blainville, 1839: *Osteogr. Mamm., Primates*, p. 35) by Groves (1993), who later (2001) treated it as a distinct species under the Phylogenetic Species Concept; see also Mittermeier *et al.* (2008).

## Lemuridae

*Hapalemur griseus ranomafanensis* Rabarivola, Prosper, Zaramody, Andriaholinirina & Hauwy, 2007: 48. “Reserve of Ranomafana (approx. 21°20'–21°21' S, 47°47'E)” [Madagascar].

**Remarks:** Although colour details were mentioned in the type description of *H. g. ranomafanensis*, the status of this form is impossible to determine because at the same time no such details were given for *H. g. griseus*; the essence of the new subspecies was, in effect, that it is chromosomally polymorphic at Ranomafana and Ambongo (2n = 54, 55 or 56, whereas in *H. g. griseus* 2n = always 54), while at Ambolomavo, Bemaraha and Vatoalatsaka, also ascribed to this new subspecies, only 2n=56 occurs.

*Hapalemur griseus gilberti* Rabarivola, Prosper, Zaramody, Andriaholinirina & Hauwy, 2007: 48. “Beanamalao (approx. 47°48'S, 19°50'E), Province Fianarantsoa, Madagascar”.

**Remarks:** Elevated to species level by Mittermeier *et al.* (2008) under the Phylogenetic Species Concept.



**Lepilemuridae**

*Lepilemur aeeclis* Andriaholinirina, Fausser, Roos, Rabarivola, Ravoarimanana, Zinner, Thalmann, Ganzhorn, Meier, Hilgartner, Walter, Zaramody, Langer, Hahn, Zimmermann, Radespiel, Craul, Tomiuk, Tattersall & Rumpler, 2006: 6. “Antafia (approx. 16°03.057'S, 45°54.522'E), north-east side of the Mahavavy du Sud River, Fokotany Ambatomahavavy, Firaisana Antongomena-Bevary, Fivondronona Mitsinjo, Province Mahajanga, Madagascar”. [DD]

*Lepilemur ahmansoni* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 19. “MADAGASCAR, Province de Mahajanga, Tsiombikibo Classified Forest, 16°02'24.7”S, 045°48'10.6”E, and northwest of the Mahavavy River”. [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is “proposed in honor of Robert Ahmanson and the Ahmanson Foundation”. In accordance with article 31.1.2 of the Code, “a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to be formed by adding to the stem of that name... -orum if of men or of man (men) and woman (women) together...”. *Lepilemur ahmansoni* is therefore an incorrect original spelling and is herein emended to *Lepilemur ahmansonorum*.

*Lepilemur betsileo* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 20. “MADAGASCAR, Province de Fianarantsoa, Fandriana Classified Forest, (approximately 20°23'40.5”S, 047°38'06.6”E), and on the Mananjary River”. [DD]

*Lepilemur fleuretae* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 21. “MADAGASCAR, Province de Toliary, Manangotry, Andohahela National Park (approximately 24°45'46.0”S, 046°51'47.0”E)”. [DD]

*Lepilemur grewcocki* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 21. “MADAGASCAR, Province de Mahajanga, Anjiamangirana Classified Forest (approximately 15°09'14.9”S, 047°43'41.0”E)”. [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is “proposed in honor of Bill and Berniece Grewcock”. In accordance with article 31.1.2 of the Code, “a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to be formed by adding to the stem of that name... -orum if of men or of man (men) and woman (women) together...”. *Lepilemur grewcocki* is therefore an incorrect original spelling and is herein emended to *Lepilemur grewcockorum*.

*Lepilemur hubbardi* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 23. “MADAGASCAR, Province de Toliary, Zombitse National Park (approximately 22°53'18.7”S, 044°41'43.3”E)”. [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is “proposed in honor of Theodore F. and Claire M. Hubbard Family Foundation”. In accordance with article 31.1.2 of the Code, “a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to

be formed by adding to the stem of that name... -orum if of men or of man (men) and woman (women) together...". *Lepilemur hubbardi* is therefore an incorrect original spelling and is herein emended to *Lepilemur hubbardorum*.

*Lepilemur jamesi* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 24. "MADAGASCAR, Province de Fianarantsoa, Manombo Special Reserve (approximately 23°01'69.5"S, 047°43'84.1"E)". [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is "proposed in honor of the Larry, Jeannette, and Barry James' Family". In accordance with article 31.1.2 of the Code, "a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to be formed by adding to the stem of that name... -orum if of men or of man (men) and woman (women) together...". *Lepilemur jamesi* is therefore an incorrect original spelling and is herein emended to *Lepilemur jamesorum*.

*Lepilemur manasamody* Craul, Zimmermann, Rasoloharijaona, Randrianambinina & Radespiel, 2007: 8. "Madagascar: Province de Mahajanga, Ambongabe (15°19'38.3"S, 46°40'44.4"E) and Anjiamangirana I (15°09'24.6"S, 47°44'06.2"E)". [DD]

**Remarks:** Zinner *et al.* (2007) indicated that *L. manasamody* is probably a junior synonym of *L. grewcocki*, as sampling sites were less than two kilometres apart, with no evident geographic barrier.

*Lepilemur milanoii* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 25. "MADAGASCAR, Province de Antsiranana [(sic) Province d'Antsiranana], Daraina, Andranotsimaty (approximately 13°08'52.5"S, 049°41'11"E)". [DD]

*Lepilemur mittermeieri* Rabarivola, Zaramody, Fausser, Andriaholinirina, Roos, Zinner, Marcel & Rumpler, 2006: 48. "Ampasindava peninsula, Province d' Antsiranana (Diego-Suarez) (approx. 47°54 E; 13°36 S)". [DD]

*Lepilemur otto* Craul, Zimmermann, Rasoloharijaona, Randrianambinina & Radespiel, 2007: 7. "Madagascar: Province de Mahajanga, Ambodimahabibo (15°29'54,2"S, 47°28'47,2"E)". [DD]

*Lepilemur petteri* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 26. "MADAGASCAR, Province de Toliary, Beza-Mahafaly (approximately 23°39' 11.4"S, 044°37'90.6"E)". [DD]

*Lepilemur randrianasoli* Andriaholinirina, Fausser, Roos, Rabarivola, Ravoarimanana, Zinner, Thalmann, Ganzhorn, Meier, Hilgartner, Walter, Zaramody, Langer, Hahn, Zimmermann, Radespiel, Craul, Tomiuk, Tattersall & Rumpler, 2006: 8. "Andramasay (approx. 44°29'E, 19°28'S), Province Toliary, Madagascar". [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is "named in honour of our late colleague, Georges Randrianasolo". In accordance with article 31.1.2 of the Code, "a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to be formed by adding to the stem of that name -i if the personal name is that of a man...". *Lepilemur randrianasoli* is therefore an incorrect original spelling and is herein emended to *Lepilemur randrianasoloi*.

*Lepilemur sahamalazensis* Andriaholinirina, Fausser, Roos, Rabarivola, Ravoarimanana, Zinner, Thalmann, Ganzhorn, Meier, Hilgartner, Walter, Zaramody, Langer, Hahn, Zimmermann., Radespiel, Craul, Tomiuk, Tattersall & Rumpler, 2006: 9. “Sahamalaza Peninsula (approx. 47°58'E, 14°16'S), Province Mahajanga, Madagascar”. [DD]

*Lepilemur scottorum* Lei, Engberg, Andriantompohavana, McGuire, Mittermeier, Zaonarivelo, Brenneman & Louis Jr., 2008: 28. “Madagascar: Province de Antsiranana [(sic) Province d’Antsiranana], Masoala National Park (approximately S15°40'246", E049°57'537").”

*Lepilemur seali* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 26. “MADAGASCAR, Province de Antsiranana [(sic) Province d’Antsiranana], Anjanaharibe-Sud Special Reserve (approximately 14°47'45.1”S, 049°27'88.5”E)”. [DD]

*Lepilemur tymerlachsoni* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 27. “MADAGASCAR, Province de Antsiranana [(sic) Province d’Antsiranana], Nosy Be, Lokobe National Park (approximately 13°23'27.6”S, 048°18'15.2”E)”. [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is “proposed in honor of the Howard and Rhonda Hawk Family”. In accordance with article 31.1.2 of the Code, “a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to be formed by adding to the stem of that name... -orum if of men or of man (men) and woman (women) together...”. *Lepilemur tymerlachsoni* is therefore an incorrect original spelling and is herein emended to *Lepilemur tymerlachsonorum*.

*Lepilemur wrighti* Louis Jr., Engberg, Lei, Geng, Sommer, Randriamampionona, Randriamanana, Zaonarivelo, Andriantompohavana, Randria, Prosper, Ramaromilanto, Rakotoarisoa, Rooney & Brenneman, 2006: 28. “MADAGASCAR, Province de Toliary, Kalambatritra Special Reserve, Befarara (approximately 23°25'05.4”S, 046°26'55.4”E)”. [DD]

**Remarks:** Louis *et al.* (2006b) remarked that the species name is “proposed in honor of Dr Patricia Wright”. In accordance with article 31.1.2 of the Code, “a species-group name, if a noun in the genitive case (see Article 11.9.1.3) formed directly from a modern personal name, is to be formed by adding to the stem of that name... -ae if of a woman...”. *Lepilemur wrighti* is therefore an incorrect original spelling and is herein emended to *Lepilemur wrightae*.

## Indriidae

*Avahi betsileo* Andriantompohavana, Lei, Zaonarivelo, Engberg, Nalanirina, McGuire, Shore, Andrianasolo, Herrington, Brenneman & Louis Jr., 2007: 44. “Madagascar, Province de Fianarantsoa, Region Amoron’i Mania, District of Fandriana, Bemosary Classified Forest, 20°20'60.1”S, 47°33'36.1”E, and south of Mangoro River”. [DD]

*Avahi cleesei* Thalmann & Geissmann, 2005: 373. “18°59’S, 44°45’E, approximately 3 km east-northeast of the village of Ambalarano, western Madagascar”. [EN]

*Avahi meridionalis* Zaramody, Fausser, Roos, Zinner, Andriaholinirina, Rabarivola, Norscia, Tattersall & Rumpler, 2006: 18. “Sainte Luce (approx. 47°11'E, 24°47'S), Province Toliara, Madagascar”. [DD]

*Avahi meridionalis ramanantsoavani* Zaramody, Fausser, Roos, Zinner, Andriaholinirina, Rabarivola, Norscia, Tattersall & Rumpler, 2006: 19. “Reserve of Manombo (approx. 47°41'E, 23°01'S), Province Finarantsoa, Madagascar”.

**Remarks:** Originally described by Zaramody *et al.* (2006) as one of two subspecies of *meridionalis*, but Andriantompohavana *et al.* (2007) considered it to be a full species based on the Phylogenetic Species Concept.

*Avahi mooreorum* Lei, Engberg, Andriantompohavana, McGuire, Mittermeier, Zaonarivelo, Brenneman & Louis Jr., 2008: 26. “Madagascar: Province de Antsiranana, Masoala National Park (approximately S15°40'008", E049°57'476")”.

*Avahi peyrierasi* Zaramody, Fausser, Roos, Zinner, Andriaholinirina, Rabarivola, Norscia, Tattersall & Rumpler, 2006: 17. “Mahasoarivo (Ranomafana approx. 47°26'E, 21°16'S), Province Fianarantsoa, Madagascar”. [DD]

*Avahi unicolor* Thalmann & Geissmann, 2000: 934. “Cacamba (=Kakamba), on the peninsula of Ampasindava, northwestern Madagascar, approximately 13°35'S, 47°57'E”. [DD]

**Remarks:** Not listed in Groves (2001), probably because it was published too late to be included, but recognized as distinct by Groves (2005).

## Lorisidae

*Pseudopotto* Schwartz, 1996: 8. Type species: *Pseudopotto martini* Schwartz, 1996.

**Remarks:** Recognized by Groves (2001, 2005), although Sarmiento (1998) considered the species to fall within the range of *Perodicticus*. Grubb *et al.* (2003) were of the opinion that there was insufficient evidence that this name refers to a real, distinct population, and recommended that the name not be included in the taxonomy of African primates.

*Pseudopotto martini* Schwartz, 1996: 8. “Equatorial Africa”.

**Remarks:** See comments under *Pseudopotto*.

*Perodicticus potto stockleyi* Butynski & De Jong, 2007: 136. “1830 m asl on Mount Kenya, Kenya”.

## Galagidae

*Galagoides demidoff rondoensis* Rowe, 1996: 22. *Nomen nudum*.

**Remarks:** Cited as “the subspecies *G. d. rondoensis*”, with a reference to Groves (1989), although this taxon is not mentioned in the work cited. Rowe (1996: 22) also illustrated this galago by a photograph with the caption “The rondo [sic] dwarf bush baby was recently discovered in southeast Tanzania and may be a new

species.” There is no description or definition that states in words characters that are purported to differentiate the taxon, so *G. d. rondoensis* Rowe, 1996, is a *nomen nudum*.

*Galagoides rondoensis* Honess, 1996: 9. “the tiny Rondo galago ... has a very restricted distribution in a few evergreen and coastal forests in southeast Tanzania”. *Galagoides rondoensis* Honess in Kingdon, 1997: 106. “Currently known from remnant forest patches on the seaward rim of the Rondo plateau [Tanzania]”. “1997 *Galagoides rondoensis* Honess, in Kingdon, *The Kingdon Field Guide to African Mammals*, p. 106” in Honess & Bearder ('1996'. *African Primates* 2:77), with locality of holotype (actually, lectotype) cited (p. 78) as “Rondo Forest Reserve, Lindi District, Lindi Region, Tanzania (10°07'S, 39°23'E)”. [CR]

**Remarks:** The third citation is dated December 1996 but must have been published after that date, as the part of the volume containing the article quotes several papers published in 1997. The original publication of *Galagoides rondoensis* and *G. udzungwensis* (below) has only been identified recently (P. Grubb, unpubl.). Listed as *Galago rondoensis* by Groves (2001), but as *Galagoides rondoensis* by Grubb *et al.* (2003).

*Galagoides udzungwensis* Honess, 1996: 9. “first found in the lowland evergreen forests of the Udzungwa Mountains [Tanzania]”. *Galagoides udzungwensis* Honess in Kingdon, 1997: 106. “known from low-lying secondary rainforest growing below the Uzungwa ... mountain chain [Tanzania]”. “1997 *Galagoides udzungwensis* Honess, in Kingdon *The Kingdon Field Guide to African Mammals*, pp. 106–107” in Honess & Bearder ('1996'. *African Primates* 2:76), with locality of holotype (actually, lectotype) cited (p. 76) as “Ichima, Kilombero District, Morogoro Region, Tanzania (8°01'S 36°31'E)”.

**Remarks:** A parallel case to the previous one. Listed as *Galago udzungwensis* by Groves (2001), but as a synonym of *Galagoides zanzibaricus* by Grubb *et al.* (2003).

## Cercopithecidae

*Cercopithecus cephus ngottoensis* Colyn, 1999: 143. “Sangara, près de Boyali (18°13'E, 04°04'N), à 66 km de Bangui sur l'axe routier Bangui-Mbaiki” [Central African Republic].

*Cercopithecus erythrogaster pococki* Grubb, Lernould & Oates, 1999: 391. ““Lagos” [= inland from Lagos, Nigeria]”.

*Colobus badius semlikiensis* Colyn, 1991: 71. “Tungala (= Kilia) dans le secteur Nord du Parc National des Virunga” [Democratic Republic of Congo].

**Remarks:** Listed as *Piliocolobus foai semlikiensis* by Groves (2001, 2005) but as a synonym of the subspecies *elliotti* (species allocation uncertain) by Grubb *et al.* (2003).

*Colobus rufomitratu parmentierorum* Colyn, 1993: 319, footnote. Unjustified emendation of *C. r. parmentieri* Colyn & W. Verheyen, 1987: 126.

**Remarks:** The authors of this subspecies wrote “Nous dédions cette nouvelle sous-espèce de colobe rouge à Monsieur et Madame F. Parmentier qui résidaient à l'époque de nos recherches près de Ubundu” (Colyn & W. Verheyen 1987). The name could be taken to be an incorrect original spelling under the rules then applying (Article 32 C, ICZN 1985b) on the grounds that the monkey is named after M. and Mme. Parmentier, and therefore the name should take the plural genitive form “*parmentierorum*” (in Colyn, 1993). However, the Code does not state that a species-group name formed from a personal name shared by two or more persons

relevant to the naming of the organism in question must be used in a plural form. This monkey is “dedié à” not “nommé d'après” M. and Mme. Parmentier. The authors have commemorated the family name rather than specifically naming the monkey after the two persons. The distinction may seem pedantic but it could save us from changing the spelling to *parmentierorum*. Listed as *Piliocolobus foai parmentierorum* Colyn & W. Verheyen, 1987 by Groves (2001) on the assumption that *parmentieri* is an Incorrect Original Spelling, and as subspecies *parmentieri* (species allocation uncertain) by Grubb *et al.* (2003).

*Miopithecus ogouensis* Kingdon, 1997: 55. “Endemic to the equatorial coastal watersheds between Cabinda and the River Nyong” (Kingdon, 1997: 55). [LC]

**Remarks:** Groves (2001) stated that “Kingdon (1997) noted that a description of this species had been awaited since 1969 and ... that he was using the name as a ‘*nomen nudum* ... in anticipation of a formal description”. But an excellent description is given by him, and the name is certainly no *nomen nudum*, but is available from Kingdon’s work.” *Miopithecus ogoouensis* Gautier-Hion, Colyn & Gautier, 1999: 57 is an unjustified emendation of *ogouensis*. There is nothing in Kingdon's (1997) account to suggest in any way that he did not intend to use the spelling *ogouensis*. Regardless of the usual spelling of the Ogôoué River, Kingdon's name is available and has its own author and date and is a junior objective synonym of the name in its original spelling (see Article 33.2.3 of the Code).

*Procolobus badius epieni* Grubb & Powell, 1999: 68. “Sampou village (Apoi Clan), 4°55'N, 6°00'E, 12 km SW of the junction of Sagbama and Egbedi Creeks, and 13 km WSW of Amassoma. The locality is in the Delta of the Niger in the Southern Ijaw Local Government Area of Bayelsa State (previously part of Rivers State). Elevation is just above sea level, no more than 10 m” [Nigeria].

**Remarks:** Listed as *Piliocolobus pennantii epieni* by Groves (2001), and as *Procolobus pennantii epieni* by Grubb *et al.* (2003).

*Lophocebus kipunji* Ehardt, Butynski, Jones & Davenport, 2005: 1162. “Rungwe-Livingstone (09°07'S to 09°11'S and 33°40'E to 33°55'E), Southern Highlands, Tanzania”. [CR]

**Remarks:** Originally described in genus *Lophocebus*, but later given its own genus *Rungwecebus*.

*Rungwecebus* Davenport, Stanley, Sargis, De Luca, Mpunga, Machaga & Olson, 2006: 1379. Type species: *Lophocebus kipunji* Ehardt, Butynski, Jones & Davenport, 2005

**Remarks:** Additional molecular evidence supports the distinction between *Rungwecebus* and *Lophocebus* (Olson *et al.* 2008).

## Hominidae

*Gorilla beringei bwindi* Wolfe, 2001: legends to photographs on pp. 133, 151. *Nomen nudum*.

**Remarks:** The gorillas in Bwindi are not regarded as a separate subspecies at present (Grubb *et al.* 2003), though there are indications that they might be distinguishable from *G. b. beringei*. There is no description or bibliographic reference to one of these gorillas in Wolfe's text so the name is unavailable, hence a *nomen nudum*.

**Rodentia****Nesomyidae**

*Eliurus antsingy* Carleton, Goodman & Rakotondravony, 2001: 974. “Madagascar, Toliara Province, Antsingy Forest, near Bekopaka, about 19°07.5'S, 44°49.0'E”. [DD]

*Eliurus danieli* Carleton & Goodman, 2007: 3. “Madagascar, Fianarantsoa Province, Parc National de l'Isalo, 28 km SE Berenty-Betsileo, along Sahanafa River near foot of Bevato Mountain, 650 m; geographic coordinates: 22°19.09S, 45°17.69E”. [DD]

*Eliurus ellermani* Carleton, 1994: 39. “Madagascar, Toamasina Province, near Hiaraka, about 18km ESE of Maroantsetra, 850 m, ca. 15°30'S; 49°56'E”. [DD]

**Remarks:** Carleton (1994) originally gave the type locality as: “Hiaraka, near Maroantsetra, 850 m altitude. MacPhee (1987) located Hiaraka as 40 km NW Maroantsetra (Toamasina Province, about 15°10'S/49°30'E)”. The type locality was amended by Carleton & Goodman (1998:181).

*Eliurus grandidieri* Carleton & Goodman, 1998: 165. “Madagascar, Province d'Antsiranana, Réserve Spéciale d'Anjanaharibe-Sud, 11 km WSW of Befingitra, 1550 m, 14°44.5'S, 49°27.5'E”. [LC]

*Eliurus petteri* Carleton, 1994: 37. “8 km from Fanovana” [Madagascar; 18°55'S; 48°34'E]. [VU]

*Macrotarsomys petteri* Goodman & Soarimalala, 2005: 453. “Madagascar: Province de Toliara, Forêt des Mikea, 16 km west Vorehy, Forêt d'Andaladomo, 22°16.0'S, 43°28.7'E, elevation about 80 m above sea level”. [DD]

*Monticolomys* Carleton & Goodman, 1996: 233. Type species: *Monticolomys koopmani* Carleton & Goodman, 1996.

*Monticolomys koopmani* Carleton & Goodman, 1996: 235. “Madagascar, Antananarivo Province, Manjakatempo, ca. 19°20'S, 47°26'E”. [LC]

*Voalavo* Carleton & Goodman, 1998: 182. Type species: *Voalavo gymnocaudus* Carleton & Goodman, 1998

*Voalavo antsahabensis* Goodman, Rakotondravony, Randriamanantsoa & Rakotomalala-Razanahoera, 2005: 866. “Madagascar: Province d'Antananarivo, Fivondronana d'Anjozorobe, Commune Rurale d'Anjozorobe, Fokontany d'Antsahabe, Forêt d'Analamahavery, 6.3 km E Antsahabe (village), 18°24.60'S, 47°56.32'E, elevation 1425 m above sea level”.

*Voalavo gymnocaudus* Carleton & Goodman, 1998: 182. “Madagascar, Province d'Antsiranana, Réserve Spéciale d'Anjanaharibe-Sud, 12.2 km WSW of Befingitra, 1950 m, 14°44.8'S, 49°26'E”. [LC]

**Muridae**

*Dasymys cabrali* W. Verheyen, Hulselmans, Dierckx, Colyn, Leirs & E. Verheyen, 2003: 39. “near the Okavango river (Omatoka Junction) - Groot Fontein District, S. W. Africa [Namibia] (17.56S–20.25E; alt.± 1080 m)”.

*Dasymys robertsii* Mullin, Taylor & Pillay, 2004: 219. “Klipfontein, 30 km NE Vaalwater, Waterberg, 1091 m, South Africa”.

*Dasymys rwandae* W. Verheyen, Hulselmans, Dierckx, Colyn, Leirs & E. Verheyen, 2003: 45. “Kinigi, Rwanda (01.26S–29.36E; alt. 2250 m)”.

*Dasymys shortridgei* Mullin, Taylor & Pillay, 2004: 219. “Okavango-Omatako, Grootfontein, 1080 m, Namibia”.

**Remarks:** Apparently a renaming and synonym of the earlier *Dasymys cabrali* W. Verheyen, Hulselmans, Dierckx, Colyn, Leirs & E. Verheyen, 2003.

*Dasymys sua* W. Verheyen, Hulselmans, Dierckx, Colyn, Leirs & E. Verheyen, 2003: 41. “Mbeta (06.52S–37.41E) near Morogoro (Tanzania) on the flanks of the Uluguru-range at ±1540 m altitude (Kitundu forest)”.

*Desmomys yaldeni* Lavrenchenko, 2003: 320. “Sheko Forest, south-western Ethiopia, 07°04'N, 35°30'E, 1930 m”. [EN]

*Gerbillus rupicola* Granjon, Aniskin, Volobouev & Sicard, 2002: 183. “Emnal'here, right bank of the main course of the Niger River, 12 km east [of] Mopti, Mali (14° 28' 26" N; 4° 05' 16" W)”. [LC]

**Remarks:** Now included in the genus *Dipodillus*, following the classification of Pavlinov *et al.* (1990) and Musser & Carleton (2005).

*Grammomys brevirostris* Kryštufek, 2008: 222. “Kenya, Lemesikio, Loliondo, Loita Plains (S 01°30', E 35°09'”)”.

*Hylomyscus arcimontensis* Carleton & Stanley, 2005: 629. “Tanzania, Tanga Region, Muheza District, East Usambara Mountains, 4.5 km WNW Amani, Monga Tea Estate, control site; elevation 900 m; geographic coordinates, as recorded by the collector, 05°06'S–38°36'E”.

*Hylomyscus walterverheyeni* Nicolas, Wendelen, Barriere, Dudu & Colyn, 2008: 225. “Doudou Mounts, southwestern Gabon, Ogooue-Maritime Province (GPS 02°09'S, 10°30'E), 110 m”.

*Lemniscomys hoogstraali* Dieterlen, 1991: 11. “Paloich, Niayok, 12 miles N. (approx. 10°26'N, 32°33'E), Upper Nile Prov., Sudan”. [DD]

*Lophuromys angolensis* W. Verheyen, Dierckx & Hulselmans, 2000: 255. “Mbwambala (05°03'S, 18°55'E) at an altitude of 500 m” [Angola].

*Lophuromys chercherensis* Lavrenchenko, W. Verheyen, E. Verheyen, Hulselmans & Leirs, 2007: 102. “22 km northeast Hirna (near road Hirna – Deder), Chercher Mountains, Eastern Ethiopia (09°19'43”N 41°15'53”E, 2700 m ASL)”.

*Lophuromys dieterleni* W. Verheyen, Hulselmans, Colyn & Hutterer, 1997: 173. “Border of the crater lake of Mt Oku (Lager IV, 06°12'N, 10°32'E, 2100 m), Bamenda-Banso highlands, southwest Cameroon”. [EN]

*Lophuromys dudu* W. Verheyen, Hulselmans, Dierckx & E. Verheyen, 2002: 147. “Masako (00.36'N -



25.13'E; alt. 440m) in the rainforest of the Tshoporiver" [Democratic Republic of Congo].

*Lophuromys huttereri* W. Verheyen, Colyn & Hulselmans, 1996: 255. "equatorial forest, alt. 450m, near the village Yaenero in Zaire" [Democratic Republic of Congo]. [LC]

*Lophuromys kilonzoii* W. Verheyen, Hulselmans, Dierckx, Mulungu, Leirs, Corti & Verheyen, 2007: 33. "Magamba (04. 45°S - 38. 17° E; altitude 1550 m)" [Tanzania].

*Lophuromys machangui* W. Verheyen, Hulselmans, Dierckx, Mulungu, Leirs, Corti & E. Verheyen, 2007: 34. "Mount Rungwe (09. 10°S - 33. 39°E; altitude 2300 m; forest)" [Tanzania].

*Lophuromys makundii* W. Verheyen, Hulselmans, Dierckx, Mulungu, Leirs, Corti & E. Verheyen, 2007: 38. "Gerodom (foot of Mount Hanang along a brook) (04. 28°S - 35. 23°E; at approximately 2000 meter above sea level)" [Tanzania].

*Lophuromys menageshae* Lavrenchenko, W. Verheyen, E. Verheyen, Hulselmans & Leirs, 2007: 99. "Suba Forest Station, Menagesha Forest, Central Ethiopia (08°57'N 38°33'E, 2600 m ASL)".

*Lophuromys pseudosikapusi* Lavrenchenko, W. Verheyen, E. Verheyen, Hulselmans & Leirs, 2007: 106. "Sheko Forest, South-West Ethiopia (07°04'N 35°30'E, 1930 m ASL). The exact place of capture was in disturbed humid afro-montane forest situated *ca.* 800 m northwards from the local agricultural office of the Sheko settlement".

*Lophuromys roseveari* W. Verheyen, Hulselmans, Colyn & Hutterer, 1997: 167. "Musake (04.08N, 09.12E) on the slope of Mount Cameroun at an altitude of 1850–2200 m" [Cameroon]. [LC]

*Lophuromys sabunii* W. Verheyen, Hulselmans, Dierckx, Mulungu, Leirs, Corti & E. Verheyen, 2007: 36. "Mbizi on the Ufipa Plateau (07. 42°S - 31. 40°E; altitude ±1750 m; forest rim" [Tanzania].

*Lophuromys stanleyi* W. Verheyen, Hulselmans, Dierckx, Mulungu, Leirs, Corti & E. Verheyen, 2007: 31. "Mount Ruwenzori-Bujuku (00. 22°N - 29. 58° E; altitude 3700 m)" [Uganda].

*Lophuromys verhageni* W. Verheyen, Hulselmans, Dierckx & E. Verheyen, 2002: 153. "Mount Meru (03.13'47"S-36°41'34" E – alt. 2600 m)" [Tanzania].

*Mastomys awashensis* Lavrenchenko, Likhnova & Baskevich, 1998: 44. "bank of the Awash River near Koka Lake, Ethiopia (08°23'N 39°09'E)". [VU]

*Mastomys verheyeni* Robbins & Van der Straeten, 1989: 4. "Mudu, 12°03'N-14°15'E, Bornu Region, Nigeria".

**Remarks:** Treated as a junior synonym of *Mastomys kollmannspergeri* by Musser & Carleton (2005), a classification confirmed by recent molecular and cytogenetic analyses (Dobigny *et al.* 2008).

*Otomys occidentalis* Dieterlen & Van der Straeten, 1992: 386. "Chappal Waddi, Gotele Mts, southeast Nigeria" [07°01'N 11°41'E, 1900 m]. [VU]

*Praomys angolae* Crawford-Cabral, 1989: 7. "Mount Moco [Huambo Distrito], Angola, c. 12° 25' S 15° 11 E".

**Remarks:** Crawford-Cabral (1989) believed that there were two species of mouse in Angola confused under one name. He used the generic name *Praomys* in a broad sense to include *Myomyscus* and *Mastomys* as subgenera. What he informally called the "Capangombe mouse" is *Praomys angolensis* (Bocage, 1890), known from syntypes (adult female and three juveniles) from Capangombe, which have since been destroyed. A second species has mistakenly been identified as *P. angolensis* and for this "Angola mouse" he provided the new name *P. angolae*. *Praomys angolensis* is said to be more like *Praomys sensu stricto* or *Myomyscus*. The type locality is at 527 m above sea level at the foot of a high scarp, the divide between Moçamedes and Huíla Distritos, in dry savanna just beyond the southernmost locality for *P. angolae*. *Praomys angolae* is more like *Mastomys*. It occurs widely on the Angolan plateau and at least in the southern part of its range most collecting localities are at about 1000 m or more, in different life zones from the one occupied by *P. angolensis*. Musser & Carleton (2005) did not agree with Crawford-Cabral's conclusions. They regarded *angolae* as a renaming of *angolensis*, which they assigned to the genus *Myomyscus*. Crawford-Cabral (1998) divided *Praomys sensu lato* into several genera and allocated *angolae* to the paucimammate species-group of *Mastomys*, but placed *angolensis* in *Myomyscus*. Once topotypes of *P. angolensis* are obtained and studied, the status of the names *angolensis* and *angolae* can be finally resolved.

*Praomys coetzeei* Van der Straeten, 2008: 124. "Angola, Duque de Bragança (25 km N – 15 km E)".

*Praomys degraaffi* Van der Straeten & Kerbis Peterhans, 1999: 81. "Nyamugari (abris) (Burundi), 2200 m." [03°12'S 29°33'E]. [VU]

*Praomys hartwigi obscurus* Hutterer & Dieterlen, 1992: 402. "at 2300 m at Gangirwal, Gotel Mts, south-eastern Nigeria" [07°01'N 11°42'E, 1950–2419 m].

**Remarks:** Elevated to species rank by Musser & Carleton (2005).

*Praomys mutoni* Van der Straeten & Dudu, 1990: 75. "N Zaire (Haut-Zaire) [Democratic Republic of Congo], Batiabongena (Masako Forest Reserve), 00°36'N, 25°13'E". [DD]

*Praomys petteri* Van der Straeten, Lecompte & Denys, 2003: 333. "Boukoko (La Maboké), République Centrafricaine, 03°54'N, 17°56'E". [LC]

*Taterillus tranieri* Dobigny, Granjon, Aniskin, Bâ & Volobouev, 2003: 301. "Dilly, Mali (15°01'N, 07°40'W)". [LC].

## Anomaluridae

*Anomalurus pelii peralbus* Schunke & Hutterer, 2005: 327. "Gueboua, Côte d'Ivoire" [05°59'N, 05°41'W].

## Bathyergidae

*Cryptomys anelli* Burda, Zima, Scharff, Macholan & Kawalika, 1999: 37. "Court of the Chainama Hills Golf Club in the north-eastern part of Lusaka, Zambia". [NT]

*Cryptomys kafuensis* Burda, Zima, Scharff, Macholan & Kawalika, 1999: 39. "'Hot Springs" in Itezhi-Tezhi, Kafue National Park, Southern Province, Zambia, within the degree square 1526 C1 (following the mapping of Ansell, 1978)". [VU]

*Fukomys* Kock, Ingram, Frabotta, Honeycutt & Burda, 2006: 52. Type species: *Bathyergus damarensis* Ogilby, 1838.

## Soricomorpha

### Soricidae

*Congosorex phillipsorum* Stanley, Rogers & Hutterer, 2005: 271. “9 km E Udekwa, Ndundulu Forest, West Kilombero Scarp Forest Reserve, Udzungwa Mountains, Iringa District, Iringa Region, Tanzania; 7°45.117'S, 36°27.803'E, 1900 m”. [CR]

*Congosorex verheyeni* Hutterer, Barriere & Colyn, 2002: 10. “Mbomo, 00.24N, 14.44E, Parc National d'Odzala, RC” [Republic of Congo]. [LC]

*Crocidura bottegoides* Hutterer & Yalden, 1990: 67. “grassy clearing in *Schefflera* / *Hagenia* forest near Katcha Camp (06° 42' N 39° 44' E), 2400 m, Harenna Forest, Bale Province, Ethiopia”. [EN]

*Crocidura desperata* Hutterer, Jenkins & W. Verheyen, 1991: 165. “the mountain bamboo zone of the Rungwa Mountains (09°08'S, 33°40'E; above 2000 m), southern Tanzania”. [EN]

*Crocidura goliath nimbasylvanus* Hutterer, 2003: 370. New name for *Crocidura odorata guineensis* Heim de Balsac, 1968: 348, Ziela, Mt Nimba, Guinea, not *Crocidura occidentalis guineensis* Cabrera, 1903: 22, Cape San Juan, Rio Muni (Equatorial Guinea).

*Crocidura harenna* Hutterer & Yalden, 1990: 64. “in *Schefflera* / *Hagenia* forest at Katcha Camp (06° 42' N 39° 44' E), 2400 m, Harenna Forest, Bale Province, Ethiopia”. [CR]

*Crocidura osorio* Molina & Hutterer, 1989: 86. “Monte Osorio, north-eastern Gran Canaria, Canary Islands” [Spain].

**Remarks:** New morphological and genetic data show that *osorio* should be included in *C. russula* (Vogel *et al.* 2003; Hutterer 2005).

*Myosorex gnoskei* Kerbis Peterhans, Hutterer, Kaliba & Mzaibuko, 2008: 23. “The trapping station was 200 m north of the Chilinda Guest House within Nyika National Park, Malawi (10°34'37”S, 33°48'30”E, 2285 m)”.

*Myosorex kahaulei* Stanley & Hutterer, 2000: 20. “Udzungwa Scarp Forest Reserve in central Tanzania, 19.5 km N, 0.5 km W Chita, 8°20'50”S, 35°56'20”E, 2000”. [EN]

**Remarks:** This species was announced in Hutterer *et al.* (1991) but left undescribed due to imperfectly preserved specimens.

*Myosorex longicaudatus boosmani* Dippenaar, 1995: 1085. “Boosmansbos Wilderness Area, ca. 6 km S Lemoenshoek, Langeberge” [South Africa].

*Sylvisorex konganensis* Ray & Hutterer, 1996: 93. “unlogged mixed species forest near Kongana camp (02°47'N, 16°25'E), Dzanga-Sangha Forest Reserve, SW Central African Republic”. [DD]

**Remarks:** The second issue of *Ecotropica* appeared in print in 1996, not 1995, as given on the cover.

*Sylvisorex pluvialis* Hutterer & Schlitter, 1996: 61. “Ikenge Research Station, Korup National Park, 160 m (05° 16' N, 09° 08' E), South West Province, Cameroon”. [DD]

## Chiroptera

### Pteropodidae

*Eidolon helvum annobonensis* Juste, Ibáñez & Machordom, 2000: 373. “San Antonio de Palé (1°24'S, 5°38'E), Annobón island”.

*Epomophorus anelli* Bergmans & van Strien, 2004: 258. “Lisanthu (13°00'S, 33°10'E), 1,000 m a.s.l., Kasungu N.P, Malawi”. [DD]

*Epomophorus minimus* Claessen & De Vree, 1991: 216. “Bahadu, 10°05'–40°37'E, 600 m, Shewa Prov., Ethiopia”. [LC]

*Lissonycteris angolensis goliath* Bergmans, 1997: 46. “Gleneagles, Inyanga, Zimbabwe” [18°13'S 32°46'E].

**Remarks:** Raised to specific rank by Cotterill (2001), under the Evolutionary Species Concept, which was followed by Van Cakenberghe & Seamark (2008), but not by Simmons (2005).

*Lissonycteris angolensis petraea* Bergmans, 1997: 44. “10 km from Agaro, at the road to Jimma” [Ethiopia; at about 07° 50' N 36° 40' E].

**Remarks:** Raised to specific rank by Cotterill (2001), under the Evolutionary Species Concept, which was followed by Van Cakenberghe & Seamark (2008), but not by Simmons (2005).

*Rousettus aegyptiacus princeps* Juste & Ibáñez, 1993: 123. “Roça Bela Vista 2 km S from the city of Santo Antonio de Principe (1°37'N, 7°24'E), Principe Island, over the Papagaio River” [Republic of São Tomé and Príncipe].

*Rousettus aegyptiacus tomensis* Juste & Ibáñez, 1993: 124. “Bindá (Santa Catarina) 0°16'N, 6°29'E, São Tomé island” [Republic of São Tomé and Príncipe].

### Rhinolophidae

*Rhinolophus clivus hillorum* Koopman, 1989: 4. “John Hegbe Farm near Zozoma, ca. 2 mi SW Voinjama in Lofa County, extreme northwestern Liberia at ca. 500 m elevation. This would place it at ca. 8° 25'N, 9° 35'W”.

**Remarks:** Regarded as a full species by Cotterill (2002), under the Evolutionary Species Concept, and Simmons (2005).

*Rhinolophus maendeleo* Kock, Csorba & Howell, 2000: 234. “Amboni Cave Forest, 05° 05' S–39° 02' E, 0–80 m, Mkulumuzi River Gorge, 2.5 km W of Tanga, Tanga Distr., NE-Tanzania”. [DD]

*Rhinolophus sakejiensis* Cotterill, 2002: 166. "Kavunda (11° 17' S, 24° 21' E) between the Sakeji and Zambezi rivers: c. 11 km north-north-east of the source of the Zambezi River in the Ikelenge Pedicle, Mwinilunga District of north-west Zambia". [DD]

**Remarks:** According to Cotterill (2002), the type locality is located on the watershed of the Zambezi and Congo river systems at 1388 m elevation. This watershed is demarcated in part by the international boundary between Zambia and Democratic Republic of Congo.

*Rhinolophus ziama* Fahr, Vierhaus, Hutterer & Kock, 2002: 109. "western edge of Sérédou near park station, border of 'Réserve de la Biosphère du Massif du Ziama', Guinée Forestière, Guinea". [EN]

### Hipposideridae

*Triaenops pauliani* Goodman & Ranivo, 2008: 685. "Aldabra Atoll, Picard Island, c. 09°24'S, 46°12'E" [Seychelles].

### Emballonuridae

*Emballonura tiavato* Goodman, Cardiff, Ranivo, Russell & Yoder, 2006: 6. "Madagascar: Province d'Antsiranana, Réserve Spéciale d'Ankarana, 2.6 km E of Andrafiabe, in forest near Andrafiabe Cave, 12°55.9'S, 49°03.4'E, ± 50 m". [LC]

### Myzopodidae

*Myzopoda schliemanni* Goodman, Rakotondraparany & Kofoky, 2007: 68. "Province de Mahajanga [Parc National d'Ankarafantsika], SF [Station Forestière] d'Ampijoroa, Jardin Botanique A, 16°19.40S, 46°48.40E, 160m" [Madagascar]. [LC]

### Molossidae

*Chaerephon jobimena* Goodman & Cardiff, 2004: 230. "Madagascar: Province d'Antsiranana, Réserve Spéciale d'Ankarana, 2.6 km E Andrafiabe, in forest near Andrafiabe Cave, 12°55.9'S, 49°03.4'E, about 50 m a.s.l.". [LC]

*Chaerephon tomensis* Juste & Ibáñez, 1993: 901. "Praia das Conchas, 3 km NW Guadalupe, São Tomé Island, Republic of São Tomé and Príncipe (0°24'N, 6°37'E)". [EN]

*Mops bakarii* Stanley, 2008: 184. "Tanzania, Pemba Island, Kaskazini Region, Ngezi Forest, Kipangani village, 4.96487°S, 39.71456°E, 12 m a.s.l., in attic of hospital".

*Mormopterus francoismoutoui* Goodman, Jansen van Vuuren, Ratrimomanarivo, Probst & Bowie 2008: 1318. "La Réunion, Commune de La Possession, Pont de Balthazar, 2.2 km SSW La Possession, 20°56.732'S, 55°19.848'E, 40 m".

**Vespertilionidae**

*Afropipistrellus* Thorn, Kock & Cuisin, 2007: 75. Subgenus of *Pipistrellus*. Type species: *Vesperugo grandidieri* Dobson, 1876.

*Barbastella barbastellus guanchae* Trujillo, Ibáñez & Juste, 2002: 544. "Spain, Canary Islands, Tenerife, La Guancha, Barranco de La Cantera, 300 m a.s.l."

*Glauconycteris curryae* Eger & Schlitter, 2001: 2. "Cameroon: 10 km W Bipindi (03° 05' N, 10° 25' E), approximately 300 m above sea level". Justified emendation of *Glauconycteris curryi* Eger & Schlitter 2001, by Eger (2001). [DD]

**Remarks:** The authors did not explain how the specific name was formed but as there is no 'y' in Latin, the original name "*curryi*" must have been formed directly from the modern personal name and as it is the name of a woman (Noreen Curry), should be corrected to "*curryae*" (see Article 31.1.2; ICZN 1999).

*Miniopterus gleni* Peterson, Eger, & Mitchell, 1995: 128. "dans une grotte marine entre Sadrano et Saint-Augustin, à 20 k au Sud de Tuléar" [Madagascar]. [LC]

*Miniopterus minor occidentalis* Juste & Ibáñez, 1992: 362. "Meya-Nzouari Cave, Koilou (3°53'S, 14°31'E), Republic of Congo".

*Miniopterus petersoni* Goodman, Bradman, Maminirina, Ryan, Christidis & Appleton, 2008: 201. "Madagascar: Province de Toliara, Cascade de Manantantely, 5.2 km NW of Tolagnaro, 24°59.343'S, 46°55.370'E, 65m". [DD]

*Miniopterus sororculus* Goodman, Ryan, Maminirina, Fahr, Christidis & Appleton, 2007: 1219. "Madagascar: Province de Fianarantsoa, 3 km south of Ambatofinandrahana, in unnamed cave, 20°34.321'S, 46°48.530'E, 1,450 m". [LC]

*Myotis dieteri* Happold, 2005: 11. "Grotte du Viaduc à Loudima, Republic of Congo (04°15'S, 13°00'E)". [DD]

*Pipistrellus africanus meesteri* Kock, 2001: 129. New name for *Pipistrellus nanus australis* Roberts, 1913: 67, Port St. Johns, South Africa (preoccupied by *Pipistrellus hesperus australis* Miller, 1897, a North American bat).

**Remarks:** As a result of taxonomic confusion at the generic and specific levels, this subspecies has been variously known as *Pipistrellus africanus meesteri*, *Pipistrellus nanus meesteri*, and *Neoromicia nanus meesteri* (see Bronner *et al.* 2003). The epithet *africanus* predates *nanus*, but Opinion 2120 of the International Commission on Zoological Nomenclature (ICZN) (Anonymous 2005) argued to retain *nanus* on the grounds of nomenclatural stability (based on Happold's (2003) original application, Case 3240). *Neoromicia nanus* is retained by Simmons (2005), but see Lausen & Barclay (2005).

*Pipistrellus hanaki* Hulva & Benda, 2004: 207. "Libya, Cyrenaica, upper part of the Wadi Al Kuf (the Jabal Akhdar Mts.), ca. 5 km southwest of Al Bayda, Al Jabal Al Akhdar Dist., 32°44'N, 21°41'E; ca. 495 m a.s.l.". [DD]

*Pipistrellus raceyi* Bates, Ratrimomanarivo, Harrison & Goodman, 2006: 301. "Kianjavato, Province de Fianarantsoa, Madagascar, 21°22.84'S, 47°51.96'E, 75 m a.s.l.". [DD]

*Plecotus balensis* Kruskop & Lavrenchenko, 2000: 6. "Haremma Forest, Bale Mountains National Park, southern Ethiopia, 06°45'N, 39°44'E, 2760 m". [DD]

*Plecotus teneriffae gaisleri* Benda, Kiefer, Hanák & Veith, 2004: 28. "Wadi al Kuf, SW Massah, Cyrenaica, Libya".

*Scotophilus marovaza* Goodman, Ratrimomanarivo & Randrianandrianina, 2006: 23. "Madagascar, Province de Mahajanga, Marovaza, 14°56'S, 47°16'E, 5 m above sea level". [LC]

*Scotophilus tandrefana* Goodman, Jenkins & Ratrimomanarivo, 2005: 875. "Madagascar, Province de Mahajanga, just outside the limit of the Parc National de Bemaraha, 1.8 km SE from Bekopaka and 0.6 km NE from Andadoany, 19°08.454'S, 44°48.732'E, about 50 m above sea-level". [DD]

## Carnivora

### Herpestidae

*Crossarchus ansorgei nigricolor* Colyn & Van Rompaey, 1990: 95. "Amadjabe (00°04'S, 25°17'E), between the Lusa and Kitcho-ya-tembo Rivers, Zaire" [Democratic Republic of Congo]"

### Viverridae

*Civettictis civetta pauli* Kock, Künzel & Rayaleh, 2000: 244. "Douda Wadi, 11°32'N, 43°10'E, ca. 5 km SSE of Djibouti-Ville, ca. 2km from the coast, Rep. of Djibouti".

*Genetta servalina archeri* Van Rompaey & Colyn, 1998: 43. "Near Kitogani (06°17'S, 39°26'E), S.E. of Jozani Forest, Island of Zanzibar, Tanzania".

*Genetta bourloni* Gaubert, 2003: 95. "Guinea, Sérédou, Cercle de Macenta". [NT]

### Artiodactyla

#### Bovidae

*Cephalophus silvicultor curticeps* Grubb & Groves, 2002: 719. "Mt. Sabinio, Uganda".

*Cephalophus nigrifrons hypoxanthus* Grubb & Groves, 2002: 726. "Mianga, 3.48.S, 28 52 E" [Democratic Republic of Congo].

*Damaliscus superstes* Cotterill, 2003: 20. "Muke Muke flats, Luapula Province, northeast Zambia, 12°21'S; 30°00'E" (as restricted herein). [LC; as *D. lunatus superstes*]

**Remarks:** The "Type locality" cited by Cotterill (2003: 20) is the known distribution of the taxon. The locality of the holotype, and therefore the type locality is "Muke Muke flats, Luapula Province, northeast Zambia, 12°21'S; 30°00'E".

*Kobus anselli* Cotterill, 2005: 119. “Katobwe, Lualaba River, Upemba Swamps 8°51 S; 26°05 E”. [CR; as *K. leche anselli*]

## Discussion

We list 175 new extant taxa, including five new genera, one new subgenus, 138 new species and 31 new subspecies, described since the publication of Ansell’s (1989) revision. Two additional names are *nomina nuda*.

The taxonomic group in which the largest number of new taxa has been described is the Primates, with two new genera, 47 new species and 11 new subspecies (Table 1). This taxonomic explosion has been most remarkable among the lemurs, with an effective doubling of known lemur diversity in the last 10 years (Mittermeier *et al.* 2008); one paper alone described no fewer than 11 new species in the genus *Lepilemur* (Louis *et al.* 2006b) and is largely responsible for the spike in species descriptions seen during 2006 (Figures 1 and 2). Some have questioned whether this phenomenon represents a case of cryptic diversity or taxonomic inflation (Tattersall 2007). New primate taxa also have been discovered on the African mainland, including *Rungwecebus kipunji* from Tanzania (Jones *et al.* 2005), subsequently recognized to represent a new genus (Davenport *et al.* 2006).

The Orders Rodentia and Chiroptera account for 48 and 32 new taxa that have been described, respectively, although the rodents have also seen the description of three new genera. Interestingly, only two new rodent subspecies were described in the last 20 years compared with 10 bat subspecies. Of the 43 new species of rodents described in the last 20 years, 14 are in the genus *Lophuromys*. The year 2008 also saw the description of two new species of sengis or elephant-shrews (Order Macroscelidea); prior to these descriptions, the last sengi taxon described was *Rhynchocyon shirensis* by Corbet & Hanks (1968).

There have been very few descriptions of new large African mammal taxa, among them four carnivoran taxa (one viverrid species, and two viverrid and one herpestid subspecies) and four bovids. The most recent description of a new artiodactyl taxon is the Upemba Lechwe *Kobus anselli*, a new species of antelope described by Cotterill (2005) from south-central Africa under the Evolutionary Species Concept.

**TABLE 1.** African mammal taxa described between January 1 1989 and December 31 2008 (excluding the two *nomina nuda*).

	Genera	Subgenera	Species	Subspecies
Afrosoricida	0	0	9	1
Macroscelidea	0	0	2	0
Primates	2	0	47	11
Rodentia	3	0	45	2
Soricomorpha	0	0	10	2
Chiroptera	0	1	22	10
Carnivora	0	0	1	3
Artiodactyla	0	0	2	2
Total	5	0	138	31

Geographically, the biggest increase in new species descriptions has been on the island of Madagascar, accounting for roughly half (67) of the 138 species described in the past 20 years. Again, this explosion is largely due to the number of recently described lemurs, but also due to nine new species of tenrecs and several bats.

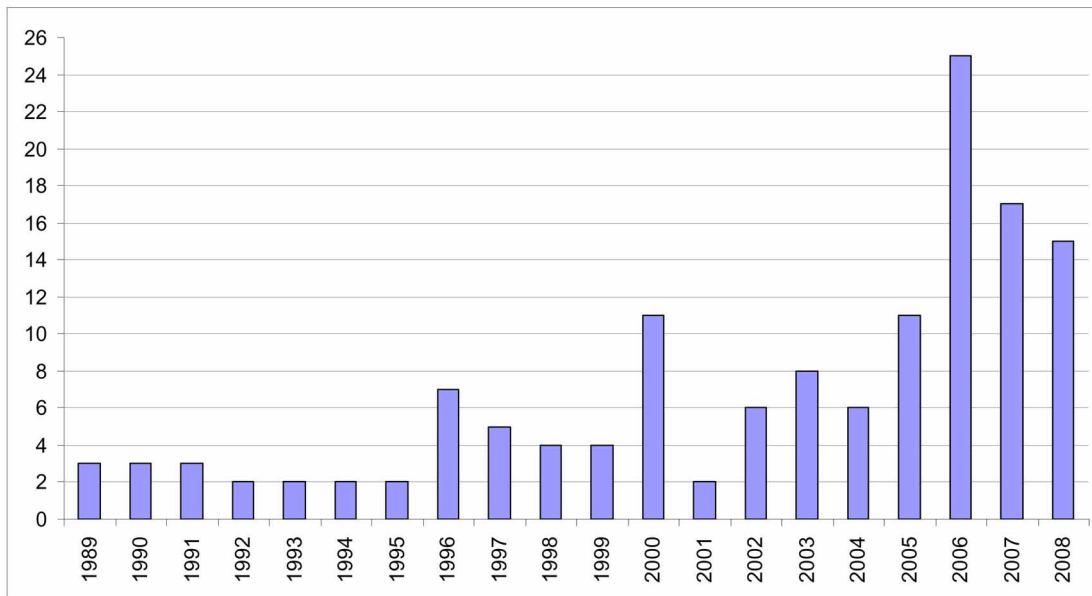


Sadly, rates of species descriptions may be matched by current extinction rates. The recent possible extinction of at least one previously described subspecies has been posited: Miss Waldron's Red Colobus, *Procolobus badius waldroni* (Oates *et al.* 2000), endemic to the forests of West Africa, which likely represents the first case of the extinction of a widely recognized primate in the 20th century. Of the 17 or so forms of red colobus, two other taxa are Critically Endangered: Bouvier's Red Colobus, *Procolobus pennanti bouvieri*, from Republic of Congo, has not been recorded for several decades, while the Tana River Red Colobus, *Procolobus rufomitratu*s, occurs in a few isolated patches of forest along Kenya's Tana River, and numbers less than 1,500 animals (Struhsaker 2005).

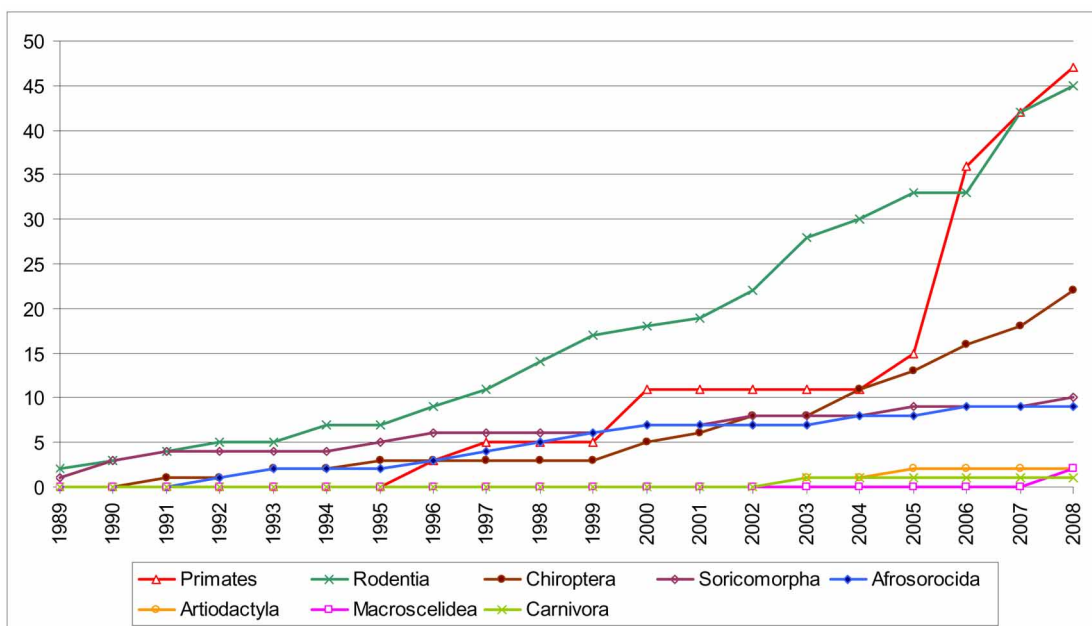
The conservation status of many recently described species remains poorly known, either because a degree of taxonomic uncertainty remains or because there is genuinely a lack of information available to reliably assess the species in question (Schipper *et al.* 2008). Indeed, a large proportion of the new species listed in the current paper are assessed as Data Deficient on the IUCN Red List of Threatened Species (49 of 101 listed species). Nonetheless, a number are evidently threatened with extinction under the IUCN system. For example, *Rungwecebus kipunji* is known only from two populations separated by ca. 350 km of non-forested land in Tanzania and has a total population size of ca. 1,000 animals (Davenport *et al.* 2008). On the other hand, at least 21 species here listed are categorized as Least Concern because there is no reason to believe they are currently at risk of extinction in the wild. Clearly, further research is urgently needed to help clarify the status of those recently described species currently assessed as Data Deficient under IUCN criteria (in particular, many of the recently described lemurs in Madagascar).

Systematists continue to refine the techniques used to distinguish between taxa that are morphologically very similar and closely related. Considering that 74 new mammalian species have been described from the region in the last five years alone, it is likely that coming decades will see the description of many more taxa new to science with the deployment of sophisticated morphological and molecular methods. Indeed, many of the newly described taxa listed in this paper, such as the 11 new species of *Lepilemur* described by Louis *et al.* (2006b), have been diagnosed solely on the basis of molecular characters (specifically, on the basis of mtDNA distances from their geographical neighbors or their apparent closest relatives), an indication of the very different arena in which species are now being named. Certainly, none of the species listed by Allen or Ansell were diagnosed in such a fashion.

Furthermore, some systematists are calling into question the continued use of a biological species concept, and instead adopt an evolutionary or phylogenetic species concept. Their "diagnosability" criterion for deciding whether a nominal taxon is a species or a synonym could, if widely applied, result in species status being assigned to many subspecies (for example, see Cotterill 2002).



**FIGURE 1.** African mammal species described between January 1 1989 and December 31 2008, per year. The spike in 2006 is due largely to Louis *et al.* (2006b).



**FIGURE 2.** Accrual of newly described species per year, by Order, between January 1 1989 and December 31 2008.

Our intent with this paper is to provide a clear synopsis of recently described mammal taxa from the African mainland, Madagascar and other offshore islands that can be used to develop future taxonomic treatises. The paper highlights some taxa described in difficult to access journals or books. It also emphasizes the vital role that systematists play in elucidating relationships among closely related taxa, and the relevance of these findings to conservation practice, such as the compilation of IUCN Red Lists and threat assessment. There is clearly much more to discover about the diversity of mammals in Africa and its neighbouring islands, and considerable work remains to be done in order to clarify the systematics of complex and poorly studied taxa.

## Acknowledgements

We are very grateful to colleagues who provided us with assistance in various ways during the preparation of this manuscript: Gary Bronner, Tom Butynski, Michael Carleton, Paula Jenkins, Javier Juste, Leonid Lavrenchenko, Justina Ray, Anthony Rylands, and the late Harry van Rompaey and Walter Verheyen. Many of these people kindly checked the details of taxa they themselves described. Michael Carleton, Christiane Denys, Steve Goodman, Bill Stanley and two anonymous reviewers provided many insightful comments that tremendously improved the readability, consistency and accuracy of the manuscript. Janice Chanson assisted with production of Figure 2. We dedicate this paper to Frank Ansell (1925–1996)—friend, colleague, and African mammal enthusiast.

## References

- Allen, G.M. (1939) A checklist of African mammals. *Bulletin of the Museum of Comparative Zoology*, 83, 1–763.
- Andriaholinirina, N., Fausser, J.-L., Roos, C., Zinner, D., Thalmann, U., Rabarivola, C. Ravoarimanana, I., Ganzhorn, J., Meier, B., Hilgartner, R., Walter, L. Zaramody, A., Langer, C. Hahn, T. Zimmermann, E., Radespiel, U., Craul, M., Tomiuk, J., Tattersall, I. & Rumpler, Y. (2006) Molecular phylogeny and taxonomic revision of the sportive lemurs (*Lepilemur*, Primates). *BMC Evolutionary Biology*, 6, 1–13
- Andriantompohavana, R., Lei, R., Zaonarivelo, J. R., Engberg, S.E., Nalanirina, G., McGuire, S.M., Shore, G.D., Andrianasolo, J., Herrington, K., Brenneman, R.A. & Louis Jr., E.E. (2007) Molecular phylogeny and taxonomic revision of the woolly lemurs, genus *Avahi* (Primates: Lemuriformes). *Museum of Texas Tech University, Special Publications*, 51, 1–59
- Andriantompohavana, R., Zaonarivelo, J., Engberg, S., Randriamampionona, R., McGuire, S., Shore, G., Rakotonomenjanahary, R., Brenneman, R. & Louis, E. (2006) Mouse lemurs of northwestern Madagascar with a description of a new species at Lokobe Special Reserve. *Occasional Papers, Museum of Texas Tech University*, 259, 1–24.
- Anonymous (2005) Opinion 2120. *Vespertilio nanus* Peters, 1852 (currently *Pipistrellus nanus*; Mammalia, Chiroptera): specific name given precedence over *Vespertilio pipistrellus africanus* Rüppell, 1842. *Bulletin of Zoological Nomenclature*, 62, 120–121.
- Ansell, W.F.H. (1960) *Mammals of Northern Rhodesia*. Government Printer, Lusaka.
- Ansell, W.F.H. (1978) *The mammals of Zambia*. The National Parks and Wildlife Service, Chilanga.
- Ansell, W.F.H. (1989) *African mammals, 1938–1988*. The Trendrine Press, St. Ives, Cornwall.
- Ansell, W.F.H. & Dowsett, R.J. (1988) *Mammals of Malawi: an annotated check-list and atlas*. The Trendrine Press, St. Ives, Cornwall.
- Bates, P.J.J., Ratrimomanarivo, F.H., Harrison, D.L. & Goodman, S.M. (2006) A description of a new species of *Pipistrellus* (Chiroptera: Vespertilionidae) from Madagascar, with a review of related Vespertilioninae from the island. *Acta Chiropterologica*, 8, 299–324.
- Bechstein, J.M. (1800) *Thomas Pennant's allgemeine Übersicht der Vierfüssigen Thiere. Aus dem englischen übersetzt und mit Anmerkungen und Zusätzen versehen von J.M. Bechstein*. Vol. 2. Landes-Industrie-Comptoir, Weimar.
- Benda, P., Hulva, P. & Gaisler, J. (2004) Systematic status of African populations of *Pipistrellus pipistrellus* complex (Chiroptera: Vespertilionidae), with a description of a new species from Cyrenaica, Libya. *Acta Chiropterologica*, 6, 193–217.
- Benda, P., Kiefer, A., Hanák, V. & Veith, M. (2004) Systematic status of African populations of Long-eared bats, genus *Plecotus* (Mammalia: Chiroptera). *Folia Zoologica* 53, *Monograph*, 1, 1–47.
- Bergmans, W. (1997) Taxonomy and biogeography of African fruit bats (Mammalia, Megachiroptera). 5. The genera *Lissonycteris* Andersen, 1912, *Myonycteris* Matschie, 1899 and *Megaloglossus* Pagenstecher, 1885; General remarks and conclusions; Annex: Key to all species. *Beaufortia*, 47, 11–90.
- Bergmans, W. & van Strien, N.J. (2004) Systematic notes on a collection of bats from Malawi. I. Megachiroptera: Epomophorinae and Rousettinae (Mammalia, Chiroptera). *Acta Chiropterologica*, 6, 249–268.
- Blainville, H.M.D., de (1839) *Ostéographie ou description iconographique comparée du squelette et du système dentaire des mammifères récents et fossiles pour servir de base à la zoologie et à la géologie*. Text Vol. 1, Atlas Vol. 1. Paris.
- Bronner, G.N. (2000) New species and subspecies of Golden Mole (Chrysochloridae: *Amblysomus*) from Mpumalanga, South Africa. *Mammalia*, 64, 41–54.
- Bronner, G.N. & Jenkins, P.D. (2005) Order Afrosoricida. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore,

Maryland, pp 71–81.

- Bronner, G.N., Hoffmann, M., Taylor, P.J., Chimimba, C.T., Best, P.B., Matthee, C.A. & Robinson, T.J. (2003) A revised systematic checklist of the extant mammals of the southern African subregion. *Durban Museum Novitates*, 28, 56–106.
- Burda, H., Zima, J., Scharff, A., Macholan, M. & Kawalika, M. (1999) The karyotypes of *Cryptomys anelli* sp. nova and *Cryptomys kafuensis* sp. nova: new species of the common mole-rat from Zambia (Rodentia, Bathyergidae). *Zeitschrift für Säugetierkunde*, 64, 36–50.
- Butynski, T. & De Jong, Y. (2007) Distribution of the Potto *Perodicticus potto* (Primates: Lorisidae) in Eastern Africa, with a description of a new subspecies from Mount Kenya. *Journal of East African Natural History*, 96, 113–147.
- Carleton, M.D. (1994) Systematic studies of Madagascar's endemic rodents (Muroidea: Nesomyinae): Revision of the genus *Eliurus*. *American Museum Novitates*, 3087, 1–55.
- Carleton, M.D. & Goodman, S.M. (1996) Systematic studies of Madagascar's endemic rodents (Muroidea: Nesomyinae): A new genus and species from the Central Highlands. In: Goodman, S.M. (Ed), *A Floral and Faunal Inventory of the eastern Slopes of the Réserve Naturelle Intégrale d'Andringitra, Madagascar: with reference to elevational variation*. *Fieldiana Zoology* n.s., 85, 231–256.
- Carleton, M.D. & Goodman, S.M. (1998) New taxa of nesomyine rodents (Muroidea: Muridae) from Madagascar's Northern Highlands, with taxonomic comments on previously described forms. In: Goodman, S.M. (Ed), *A Floral and Faunal Inventory of the Réserve Spéciale d'Anjanaharibe-Sud, Madagascar: with reference to elevational variation*. *Fieldiana Zoology* n.s., 90, 163–200.
- Carleton, M.D. & Goodman, S.M. (2007) A new species of the *Eliurus majori* complex (Rodentia: Muroidea: Nesomyidae) from south-central Madagascar, with remarks on emergent species groupings in the genus *Eliurus*. *American Museum Novitates*, 3547, 1–21.
- Carleton, M.D. & Stanley, W.T. (2005) Review of the *Hylomyscus denniae* complex (Rodentia: Muridae) in Tanzania, with a description of a new species. *Proceedings of the Biological Society of Washington*, 118, 619–646.
- Carleton, M.D., Goodman, S.M. & Rakotondravony, D. (2001) A new species of tufted-tailed rat, genus *Eliurus* (Muridae: Nesomyinae), from western Madagascar, with notes on the distribution of *E. myoxinus*. *Proceedings of the Biological Society of Washington*, 114, 972–987.
- Claessen, C.J. & De Vree, F. (1991) Systematic and taxonomic notes on the *Epomophorus anurus-labiatus-minor* complex with the description of a new species. *Senckenbergiana biologica*, 71, 209–238.
- Colyn, M. (1991) L'importance Zoogéographique du bassin du fleuve Zaire pour la spéciation: la cas des primates simiens. *Koninklijk Museum voor Midden-Afrika, Tervuren, Belgique, Annalen, Zoologische Wetenschappen*, 264: i-ix, 1–250.
- Colyn, M. (1993) Coat colour polymorphism of red colobus monkeys (*Colobus badius*, Primates, Colobinae) in eastern Zaire: taxonomic and biogeographic implications. *Revue de Zoologie africaine*, 107, 301–320.
- Colyn, M. (1999) Étude populationnelle de la super-espèce *Cercopithecus cephus* habitant l'enclave forestière Sangha-Oubangui (Republique Centrafricaine). Description de *C. cephus ngottoensis* subsp. nov. *Mammalia*, 63, 137–147.
- Colyn, M. & Van Rompaey, H. (1990) *Crossarchus ansorgei nigricolor*, a new subspecies of Ansorge's cusimanse (Carnivora, Viverridae) from south-central Zaire. *Zeitschrift für Säugetierkunde*, 55, 94–98.
- Colyn, M. & Verheyen, W. N. (1987a) *Colobus rufomitratu parmentieri*, une nouvelle sous-espèce du Zaire (Primates, Cercopithecidae). *Revue de Zoologie africaine*, 101, 125–132.
- Corbet, G.B. & Hanks, J. (1968) A revision of the elephant-shrews, family Macroscelididae. *Bulletin of the British Museum (Natural History), Zoology Series*, 16, 45–111.
- Cotterill, F.P.D. (2001) New records for two species of fruit bats (Chiroptera: Pteropodidae) in southeast Africa, with taxonomic comments. *Durban Museum Novitates*, 26, 53–56.
- Cotterill, F.P.D. (2002) A new species of horseshoe bat (Microchiroptera: Rhinolophidae) from south-central Africa: with comments on its affinities and evolution, and the characterization of rhinolophid species. *Journal of Zoology, London*, 256, 165–179.
- Cotterill, F.P.D. (2003) Insights into the taxonomy of tsessebe antelopes *Damaliscus lunatus* (Bovidae: Alcelaphini) with the description of a new evolutionary species in south-central Africa. *Durban Museum Novitates*, 28, 11–29.
- Cotterill, F.P.D. (2005) The Upemba lechwe, *Kobus anselli*: an antelope new to science emphasizes the conservation importance of Katanga, Democratic Republic of Congo. *Journal of Zoology, London*, 265, 113–132.
- Craul, M., Zimmermann, E., Rasoloharijaona, S., Randrianambinina, B. & Radespiel, U. (2007) Unexpected species diversity of Malagasy primates (*Lepilemur* spp.) in the same biogeographical zone: a morphological and molecular approach with the description of two new species. *BMC Evolutionary Biology*, 7, 83.
- Crawford Cabral, J. (1989) *Praomys angolensis* (Bocage, 1890) and the identity of *Praomys angolensis* auct. (Rodentia: Muridae), with notes on their systematic positions. *Garcia de Orta, Serie de Zoologia*, 15, 1–10.
- Crawford Cabral, J. (1998) *The Angolan rodents of the superfamily Muroidea: An account on their distribution*. Institute de Investigação Científica Tropical, Lisboa.
- Davenport, T.R.B., De Luca, D.W., Jones, T., Mpunga, N.E., Machaga, S.J., Kitegile, A. & Phillipps, G.P. (2008) The

- Critically Endangered Kipunji *Rungwecebus kipunji* of southern Tanzania: first census and conservation status assessment. *Oryx* 42, 352–359.
- Davenport, T.R.B., Stanley, W.T., Sargis, E., De Luca, D.W., Mpunga, N.E., Machaga, S.J. & Olson, L. (2006) A new genus of African monkey, *Rungwecebus*: morphology, ecology and molecular phylogenetics. *Science*, 312, 1378–1381.
- Dieterlen, F. (1991) *Lemniscomys hoogstraali*, a new murid species from Sudan. *Bonner Zoologische Beiträge*, 42, 11–15.
- Dieterlen, F. & Van der Straeten, E. (1992) Species of the genus *Otomys* from Cameroon and Nigeria and their relationship to East African forms. *Bonner Zoologische Beiträge*, 43, 383–392.
- Dippenaar, N.J. (1995) Geographic variation in *Myosorex longicaudatus* (Soricidae) in the southern Cape Province, South Africa. *Journal of Mammalogy*, 76, 1071–1087.
- Dobigny, G., Granjon, L., Aniskin, V., Ba, K. & Volobouev, V. (2003) A new sibling species of *Taterillus* (Rodentia, Gerbillinae). *Mammalian Biology*, 68, 299–316.
- Dobigny, G., Lecompte, E., Tatard, C., Gauthier, P., Bâ, K., Denys, C., Duplantier, J.M. & Granjon, L. (2008) An update on the taxonomy and geographic distribution of the cryptic species *Mastomys kollmannspergeri* (Muridae, Murinae) using combined cytogenetic and molecular data. *Journal of Zoology, London*, 276, 368–374.
- Eger, J.L. (2001) Emendation of *Glauconycteris curryi*. *Acta Chiropterologica*, 3, 248.
- Eger, J.L. & Schlitter, D.A. (2001) A new species of *Glauconycteris* from West Africa (Chiroptera: Vespertilionidae). *Acta Chiropterologica*, 3, 1–10.
- Ellerman, J.R., Morrison-Scott, T.C.S. & Hayman, R.W. (1953) *Southern African mammals 1758-1951: a reclassification*. Trustees, British Museum (Natural History), London.
- Fahr, J., Vierhaus, H., Hutterer, R. & Kock, D. (2002) A revision of the *Rhinolophus maclaudi* species group with the description of a new species from West Africa. *Myotis*, 40, 95–126.
- Gaubert, P. (2003) Description of a new species of genet (Carnivora; Viverridae; genus *Genetta*) and taxonomic revision of forest forms related to the large-spotted genet complex. *Mammalia*, 67, 85–108.
- Gautier-Hion, A., Colyn, M. & Gautier, J.-P. 1999. *Histoire naturelle des Primates d'Afrique Centrale*. ECOFAC, Libreville.
- Goodman, S.M. & Cardiff, S.G. (2004) A new species of *Chaerephon* (Molossidae) from Madagascar with notes on other members of the family. *Acta Chiropterologica*, 6, 227–248.
- Goodman, S.M. & Jenkins, P.D. (1998) The insectivores of the Réserve Spéciale d'Anjanaharibe-Sud, Madagascar. *Fieldiana Zoology n.s.*, 90, 139–161.
- Goodman, S.M. & Ranivo, J. (2008) A new species of *Triaenops* (Mammalia, Chiroptera, Hipposideridae) from Aldabra Atoll, Picard Island (Seychelles). *Zoosystema*, 30, 681–693.
- Goodman, S.M. & Soarimalala, V. (2004) A new species of *Microgale* (Lipotyphla: Tenrecidae: Oryzoricinae) from the Forêt des Mikea of southwestern Madagascar. *Proceedings of the Biological Society of Washington*, 117, 250–264.
- Goodman, S.M. & Soarimalala, V. (2005) A new species of *Macrotarsomys* (Rodentia: Muridae: Nesomyinae) from southwestern Madagascar. *Proceedings of the Biological Society of Washington*, 117, 265–279.
- Goodman, S.M., Bradman, H.M., Maminirina, C.P., Ryan, K.E., Christidis, L.L. & Appleton, B. (2008) A new species of *Miniopterus* (Chiroptera: Miniopteridae) from lowland southeastern Madagascar. *Mammalian Biology*, 73, 199–213.
- Goodman, S.M., Cardiff, S.G., Ranivo, J., Russell, A.L. & Yoder, A.D. (2006) A new species of *Emballonura* (Chiroptera: Emballonuridae) from the Dry Regions of Madagascar. *American Museum Novitates*, 3538, 1–24.
- Goodman, S.M., Jansen van Vuuren, B., Ratrimomanarivo, F., Probst, J.-M. & Bowie, R.K. (2008) Specific status of populations in the Mascarene Islands referred to *Mormopterus acetabulosus* (Chiroptera: Molossidae), with description of a new species. *Journal of Mammalogy*, 89, 1316–1327.
- Goodman, S.M., Jenkins, R.K.B. & Ratrimomanarivo, F.H. (2005) A review of the genus *Scotophilus* (Chiroptera: Vespertilionidae) on Madagascar, with the description of a new species. *Zoosystema*, 27, 862–882.
- Goodman, S.M., Rakotondraparany, F. & Kofoky, A. (2007) The description of a new species of *Myzopoda* (Myzopodidae: Chiroptera) from western Madagascar. *Mammalian Biology*, 72, 65–81.
- Goodman, S.M., Rakotondravony, D., Randriamanantsoa H.N. & Rakotomalala-Razanahoera, M. (2005) A new species of rodent from the montane forest of central eastern Madagascar (Muridae: Nesomyinae: *Voalavo*). *Proceedings of the Biological Society of Washington*, 118, 863–873.
- Goodman, S.M., Ratrimomanarivo, F.H. & Randrianandrianina, F.H. (2006) A new species of *Scotophilus* (Chiroptera: Vespertilionidae) from western Madagascar. *Acta Chiropterologica*, 8, 21–37.
- Goodman, S.M., Raxworthy, C.J., Maminirina, C.P. & Olson, L.E. (2006) A new species of shrew tenrec (*Microgale jibihely*) from northern Madagascar. *Journal of Zoology, London*, 270, 284–298.
- Goodman, S.M., Ryan, K.E., Maminirina, C.P., Fahr, J., Christidis, L. & Appleton, B. (2007) Specific status of populations on Madagascar referred to *Miniopterus fraterculus* (Chiroptera: Vespertilionidae), with description of a new species. *Journal of Mammalogy*, 88, 1216–1229.

- Granjon, L., Aniskin, V.M., Volobouev, V. & Sicard, B. (2002) Sand-dwellers in rocky habitats: a new species of *Gerbillus* (Mammalia: Rodentia) from Mali. *Journal of Zoology, London*, 256, 181–190.
- Groves, C. P. (1989) *A theory of human and primate evolution*. Clarendon Press, Oxford.
- Groves, C.P. (1993) Order Primates. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Second edition. Smithsonian Institution Press, Washington, DC., pp 243–277.
- Groves, C.P. (1996) The nomenclature of the Tanzanian mangabey and the Siberut macaque. *Australian Primatology*, 10, 2–5.
- Groves, C.P. (2000) The genus *Cheirogaleus*: unrecognized biodiversity in dwarf lemurs. *International Journal of Primatology*, 21, 943–962.
- Groves, C.P. (2001) *Primate taxonomy*. Smithsonian Institution Press, Washington, D.C.
- Groves, C.P. (2005) Order Primates. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore, Maryland, pp 111–184.
- Groves, C.P. & Eaglen, R.H. (1988) Systematics of the Lemuridae (Primates, Strepsirhini). *Journal of Human Evolution*, 17, 513–538.
- Groves, C.P. & Tattersall, I. (1991) Geographical variation in the fork-marked lemur, *Phaner furcifer* (Primates, Cheirogaleidae). *Folia Primatologica*, 56, 39–49.
- Grubb, P. (2004) Controversial scientific names of African mammals. *African Zoology*, 39, 91–109.
- Grubb, P. (2005) Order Artiodactyla. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore, Maryland, pp 637–722.
- Grubb, P. & Groves, C.P. (2002) Revision and classification of the Cephalophinae. In: Wilson, V.J. (Ed.), *Duikers of Africa: Masters of the African forest floor*. Chipangali Wildlife Trust, Bulawayo, pp. 703–728.
- Grubb, P. & Powell, C.B. (1999) Discovery of red colobus monkeys (*Procolobus badius*) in the Niger Delta with the description of a new and geographically isolated subspecies. *Journal of Zoology, London*, 248, 67–73.
- Grubb, P., Butynski, T.M., Oates, J.F., Bearder, S.K., Disotell, T.D., Groves, C.P. & Struhsaker, T.T. (2003) Assessment of the diversity of African primates. *International Journal of Primatology*, 24, 1301–1357.
- Grubb, P., Lerno, J.-M. & Oates, J.F. (1999) Validation of *Cercopithecus erythrogaster pococki* as the name for the Nigerian white-throated guenon. *Mammalia*, 63, 389–392.
- Handley, C.O. (1959) A revision of American bats of the genus *Euderma* and *Plecotus*. *Proceedings of the United States National Museum*, 110, 95–246.
- Happold, M. (2003) *Vespertilio nanus* Peters, 1852 (currently *Pipistrellus nanus*; Mammalia, Chiroptera): proposed conservation of the specific name. *Bulletin of Zoological Nomenclature*, 60, 42.
- Happold, M. (2005) A new species of *Myotis* (Chiroptera: Vespertilionidae) from central Africa. *Acta Chiropterologica*, 7, 9–21.
- Holden, M.E. (1993) Family Myoxidae. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Second edition. Smithsonian Institution Press, Washington, DC., pp 763–770.
- Homewood, K.M. & Rodgers, W.A. (1981) A previously undescribed mangabey from southern Tanzania. *International Journal of Primatology*, 2, 47–55.
- Honess, P.E. (1996) New primatological discoveries in Tanzania: a discussion about speciation. *Social Biology and Human Affairs*, 61, 7–18.
- Honess, P.E. & Bearder, S. (1996) Descriptions of the dwarf galago species of Tanzania. *African Primates*, 2, 75–79.
- Hutterer, R. (1994) Shrews of ancient Egypt: biogeographical interpretation of a new species. *Carnegie Museum of Natural History Special Publication*, 18, 407–413.
- Hutterer, R. (2003) Two replacement names and a note on the author of the shrew family Soricidae (Mammalia). *Bonner Zoologische Beiträge*, 50, 369–370.
- Hutterer, R. (2005) Order Soricomorpha. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore, Maryland, pp. 220–311.
- Hutterer, R. & Schlitter, D.A. (1996) Shrews of Korup National Park, Cameroon, with the description of a new *Sylvisorex* (Mammalia: Soricidae). In: Genoways, H.H. and Bakers, R.J. (Eds), *Contributions in Mammalogy: A Memorial Volume Honoring Dr. J. Knox Jones, Jr.* Museum of Texas Tech University, Lubbock, pp. 57–66.
- Hutterer, R. & Yalden, D.W. (1990) Two new species of shrews from a relic forest in the Bale Mountains, Ethiopia. In: Peters, G. & Hutterer, R. (Eds), *Vertebrates in the Tropics: Proceedings of the International Symposium on Vertebrate Biogeography and Systematics in the Tropics, Bonn, June 5–8, 1989*. Alexander Koenig Zoological Research Institute and Zoological Museum, Bonn, pp 63–72.
- Hutterer, R., Barriere, P. & Colyn, M. (2002) A new myosoricine shrew from the Congo Basin referable to the forgotten genus *Congosorex* (Mammalia: Soricidae). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Biologie*, 72 Supplement, 7–16.
- Hutterer, R., Dieterlen, F. & Nikolaus, G. (1992) Small mammals from forest islands of eastern Nigeria and adjacent Cameroon, with systematical and biogeographical notes. *Bonner Zoologische Beiträge*, 43, 393–413.

- Hutterer, R., Jenkins, P.D. & Verheyen, W. (1991) A new forest shrew from southern Tanzania. *Oryx*, 25, 165–168.
- Hutterer, R., van der Straeten, E. & Verheyen, W.N. (1987) A checklist of the shrews of Rwanda and biogeographical considerations on African Soricidae. *Bonner Zoologische Beiträge*, 38, 155–172.
- International Commission on Zoological Nomenclature (1999) *International Code of Zoological Nomenclature*. Fourth edition. The International Trust for Zoological Nomenclature, London.
- Jenkins, P.D. (1992) Description of a new species of *Microgale* (Insectivora: Tenrecidae) from eastern Madagascar. *Bulletin of the British Museum (Natural History) Zoology*, 58, 53–59.
- Jenkins, P.D. (1993) A new species of *Microgale* (Insectivora: Tenrecidae) from eastern Madagascar with an unusual dentition. *American Museum Novitates*, 3067, 1–11.
- Jenkins, P.D. & Goodman, S.M. (1999) A new species of *Microgale* (Lipotyphla, Tenrecidae) from isolated forest in southwestern Madagascar. *Bulletin of the Natural History Museum Zoology Series*, 65, 155–164.
- Jenkins, P.D., Goodman, S.M. & Raxworthy, C.J. (1996) The shrew tenrecs (*Microgale*) (Insectivora: Tenrecidae) of the Réserve Naturelle Intégrale d'Andringitra, Madagascar. In: Goodman, S.M. (Ed), *A Floral and Faunal Inventory of the eastern Slopes of the Réserve Naturelle Intégrale d'Andringitra, Madagascar: with reference to elevational variation*. *Fieldiana: Zoology*, n.s., 85, 191–217.
- Jenkins, P.D., Raxworthy, C.J. & Nussbaum, R.A. (1997) A new species of *Microgale* (Insectivora, Tenrecidae), with comments on the status of four other taxa of shrew tenrecs. *Bulletin of the Natural History Museum Zoology Series*, 63, 1–12.
- Jones, T., Ehardt, C.L., Butynski, T.M., Davenport, T.R.B., Mpunga, N.E., Machaga, S.J. & De Luca, D.W. (2005) The highland mangabey *Lophocebus kipunji*: A new species of African monkey. *Science*, 308, 1161–1164.
- Juste, J. & Ibáñez, C. (1992) Taxonomic review of *Miniopterus minor* Peters, 1867 (Mammalia: Chiroptera) from western central Africa. *Bonner Zoologische Beiträge*, 43, 355–365.
- Juste, J. & Ibáñez, C. (1993) Geographic variation and taxonomy of *Rousettus aegyptiacus* (Mammalia: Megachiroptera) in the islands of the Gulf of Guinea. *Zoological Journal of the Linnean Society*, 107, 117–129.
- Juste, J. & Ibáñez, C. (1993) A new *Tadarida* of the Subgenus *Chaerephon* (Chiroptera, Molossidae) from Sao-Tome Island, Gulf of Guinea (West-Africa). *Journal of Mammalogy*, 74, 901–907.
- Juste, J., Ibáñez, C. & Machordom, A. (2000) Morphological and allozyme variation of *Eidolon helvum* (Mammalia: Megachiroptera) in the islands of the Gulf of Guinea. *Biological Journal of the Linnean Society*, 71, 359–378.
- Kappeler, P.M., Raoloarison, R.M., Razafimanantsoa, L., Walter, L. & Roos, C. (2005) Morphology, behaviour and molecular evolution of giant mouse lemurs (*Mirza* spp.) Gray, 1870, with description of a new species. *Primate Report*, 71, 3–26.
- Kerbis Peterhans, J.C., Hutterer, R., Kaliba, P. & Mazibuko, L. (2008) First record of *Myosorex* (Mammalia: Soricidae) from Malawi with description as a new species, *Mysorex gnoskei*. *Journal of East African Natural History*, 97, 19–32.
- Kingdon, J. (1997) *The Kingdon field guide to African mammals*. Academic Press, London.
- Kock, D. (2001). *Pipistrellus africanus meesteri*, nom. nov. for *Pipistrellus nanus australis* Roberts, 1913 (Mammalia: Chiroptera: Vespertilionidae). *Acta Chiropterologica*, 3, 129–130.
- Kock, D., Csorba, G. & Howell, K.M. (2000) *Rhinolophus maendeleo* n. sp. from Tanzania, a horseshoe bat noteworthy for its systematics and biogeography (Mammalia, Chiroptera, Rhinolophidae). *Senckenbergiana biologica*, 80, 233–239.
- Kock, D., Ingram, C.M., Frabotta, L.J., Honeycutt, R.L. & Burda, H. (2006) On the nomenclature of *Bathyergidae* and *Fukomys* n. gen. (Mammalia: Rodentia). *Zootaxa*, 1142, 51–55.
- Kock, D., Künzel, T. & Rayalleh, H.A. (2000) The African civet, *Civettictis civetta* (Schreber 1776), of Djibouti representing a new subspecies (Mammalia, Carnivora, Viverridae). *Senckenbergiana biologica*, 80, 241–246.
- Koopman, K.F. (1989) Systematic notes on Liberian bats. *American Museum Novitates*, 2946, 1–11.
- Krumbiegel, I. (1939) *Die Giraffe*. Monographien der Wildsäugetiere 8. Paul Schöps, Leipzig.
- Krumbiegel, I. (1971) *Die Giraffe*. Die Neue Brehm-Bücherei 428. A. Ziemsen Verlag, Wittenberg.
- Kruskop, S.V. & Lavrenchenko, L.A. (2000) A new species of long-eared bat (*Plecotus*; Vespertilionidae, Mammalia) from Ethiopia. *Myotis*, 38, 5–17.
- Kryštufek, B. (2008) Description of a new thicket rat from Kenya: *Grammomys brevirostris* n. sp. *Acta Zoologica Lituana*, 18, 221–227.
- Lausen, C.L. & Barclay, R.M.R. (2005) *Pipistrellus nanus*. *Mammalian Species*, 784, 1–7.
- Lavrenchenko, L.A. (2003) A contribution to the systematics of *Desmomys* Thomas, 1910 (Rodentia, Muridae) with the description of a new species. *Bonner Zoologische Beiträge*, 50, 313–327.
- Lavrenchenko, L.A., Likhnova, O.P., Baskevich, M.I. & Bekele, A. (1998) Systematics and distribution of *Mastomys* (Muridae, Rodentia) from Ethiopia, with the description of a new species. *Zeitschrift für Säugetierkunde*, 63, 37–51.
- Lavrenchenko, L.A., Verheyen, W.N., Verheyen, E., Hulselmans, J. & Leirs, H. (2007) Morphometric and genetic study of Ethiopian *Lophuromys flavopunctatus* Thomas, 1888 species complex with description of three new 70-chromosomal species (Muridae, Rodentia). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Biologie*,

77, 77–117.

- Lei, R., Engberg, S.E., Andriantompohavana, R., McGuire, S.M., Mittermeier, R.A., Zaonarivelo, J.R., Brenneman, R.A. & Louis Jr., E.E. (2008) Nocturnal lemur diversity at Masoala National Park. *Museum of Texas Tech University, Special Publications*, 53, 1–41.
- Leyland, J. (1866) *Adventures in the far interior of South Africa. Including a journey to Lake Ngami and rambles in Honduras*. George Routledge and Sons, London.
- Linnaeus, C. (1758) *Systema Naturae*, Ed. X. (Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Tomus I. Editio decima, reformata.) Holmiae. *Systema Naturae* ed. 10 i-ii + 1-824.
- Louis Jr., E.E., Coles, M.S., Andriantompohavana, R., Sommer, J.A., Engberg, S.E., Zaonarivelo, J.R., Mayor, M.I. & Brenneman, R.A. (2006a) Revision of the mouse lemurs (Primates, *Microcebus*) of eastern Madagascar. *International Journal of Primatology*, 27, 347–389.
- Louis Jr., E., Engberg, S., Lei, R., Geng, H., Sommer, J., Randriamampionona, R., Randriamanana, J., Zaonarivelo, J., Andriantompohavana, R., Randria, G., Prosper, Ramaromilanto, B., Rakotoarisoa, G., Rooney, A. & Brenneman, R. (2006b) Molecular and morphological analyses of the sportive lemurs (family Megaladapidae: genus *Lepilemur*) reveals 11 previously unrecognized species. *Museum of Texas Tech University Special Publication*, 49, 1–49.
- Louis Jr., E.E., Engberg, S.E., McGuire, S.M., McCormick, M.J., Randriamampionona, R., Ranaivoarisoa, J.F., Bailey, C.A., Mittermeier, R.A. & Lei, R. 2008. Revision of the mouse lemurs, *Microcebus* (Primates, Lemuriformes), of northern and northwestern Madagascar with descriptions of two new species at Montagne d'Ambre National Park and Antafondro Classified Forest. *Primate Conservation*, 23, 19–38.
- MacPhee, R.D.E. & Flemming, C. (1999) *Requiem Æternam: The Last Five Hundred Years of Mammalian Species Extinctions*. In: MacPhee, R. D. E. (Ed.), *Extinctions in Near Time: Causes, Contexts, and Consequences*. Plenum Press, New York, pp 333–371.
- Meester, J. (1972) A new golden mole from the Transvaal (Mammalia: Chrysochloridae). *Annals of the Transvaal Museum*, 28, 35–46.
- Meester, J.A.J. (1973) Le Vaillant's mammal paintings. In: Quinton, J.C., Lewin, A.M. & Sellicks, P.W.M. (Eds), *Francois Le Vaillant: Traveller in South Africa and his Collection of 165 Water-colour Paintings*. Vol. 2. Library of Parliament, Cape Town, pp. 1–24.
- Meester, J. & Setzer, H.W. (1971–1977) *The mammals of Africa: an identification manual*. Smithsonian Institution Press, Washington D.C.
- Meester, J.A.J., Rautenbach, I. L., Dippenaar, N. J. & Baker, C. M. (1986) *Classification of Southern African Mammals*. Transvaal Museum Monograph No. 5. Transvaal Museum, Pretoria.
- Mittermeier, R.A. (1986) A global overview of primate conservation. In: Else, J.G. & Lee, P.C. (Eds), *Primate ecology and conservation*. Cambridge University Press, Cambridge, pp 325–340.
- Mittermeier, R.A., Ganzhorn, J.U., Konstant, W.R., Glander, K., Tattersall, I., Groves, C.P., Rylands, A.B., Hapke, A., Ratsimbazafy, J., Mayor, M.I., Louis Jr, E.E., Rumpler, Y., Schwitzer, C. & Rasoloarison, R.M. 2008. Lemur diversity in Madagascar. *International Journal of Primatology*, 29, 1607–1656.
- Molina, O.M. & Hutterer, R. (1989) A cryptic new species of *Crocodyra* from Gran Canaria and Tenerife, Canary Islands (Mammalia: Soricidae). *Bonner Zoologische Beiträge*, 40, 85–97.
- Mullin, S.K., Taylor, P.J. & Pillay, N. (2004) Skull size and shape of *Dasymys* (Rodentia, Muridae) from sub-Saharan Africa. *Mammalia*, 68, 185–216.
- Musser, G.G. & Carleton, M.D. (1993) Family Muridae. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Second edition. Smithsonian Institution Press, Washington, DC, pp 501–755.
- Musser, G.G. & Carleton, M.D. (2005) Superfamily Muroidea. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore, pp 894–1531.
- Neumann, O. (1900) Die von mir in den Jahren 1892-95 in Ost- und central-Afrika, speciell in den Massai-Ländern und den Ländern am Victoria Nyansa gesammelten und beobachteten Säugethiere. *Zoologische Jahrbücher. Abtheilung für Systematik, Geographie und Biologie der Thiere*, 13, 529–562.
- Nicolas, V., Wendelen, W., Barriere, P., Dudu, A. & Colyn, M. (2008) Morphometric variation in *Hylomyscus alleni* and *H. stella* (Rodentia: Muridae), and description of a new species. *Journal of Mammalogy*, 89, 222–231.
- Oates, J.F., Abedi-Lartey, M., McGraw, W.S., Struhsaker, T.T. & Whitesides, G.H. (2000) Extinction of a West African red colobus monkey. *Conservation Biology*, 14, 1526–1532.
- Olivieri, G., Zimmermann, E., Randrianambinina, B., Rasoloharjaona, S., Rakotondravony, D., Guschanski, K. & Radespiel, U. (2007) The ever-increasing diversity in mouse lemurs: Three new species in north and northwestern Madagascar. *Molecular Phylogenetics and Evolution*, 43, 309–327
- Olson, L.E., Sargis, E.J., Stanley, W.T., Hildebrandt, K.P.H. & Davenport, T.R.B. (2008) Additional molecular evidence strongly supports the distinction between the recently described African primate *Rungwecebus kipunji*



- (Cercopithecidae, Papionini) and *Lophocebus*. *Molecular Phylogenetics and Evolution*, 48, 789–794.
- Peterson, R.L., Eger, J.L. & Mitchell, L. (1995) Chiroptères. *Faune de Madagascar*, 84, 1–204.
- Petter, F. (1972) The rodents of Madagascar: the seven genera of Malagasy rodents. In: Battistini, R. & Richard-Vindard, G. (Eds), *Biogeography and ecology in Madagascar*. W. Junk, The Hague, pp. 661–666.
- Rabarivola, C., Prosper, P., Zaramody, A., Andriaholinirina, N. & Hauwy, M. (2007) Cytogenetics and taxonomy of the genus *Hapalemur*. *Lemur News*, 12, 46–49.
- Rabarivola, C., Zaramody, A., Fausser, J.-L., Andriaholinirina, N., Roos, C., Zinner, D., Marcel H. & Rumpler, Y. (2006) Cytogenetic and molecular characteristics of a new species of sportive lemur from northern Madagascar. *Lemur News* 11, 45–49.
- Radespiel, U., Olivieri, G., Rasolofoson, D.W., Rakotondratsimba, G., Rakotonirainy, O., Rasoloharijaona, S., Randrianambinina, B., Ratsimbazafy, J.H., Ratelolahy, F., Randriamboavonjy, T., Rasolofoharivelo, T., Craul, M., Rakotozafy, L. & Randrianarison, R.M. (2008) Exceptional diversity of mouse lemurs (*Microcebus* spp.) in the Makira region with the description of one new species. *American Journal of Primatology*, 70, 1033–1046.
- Rasoloarison, R.M., Goodman, S.M. & Ganzhorn, J.U. (2000) Taxonomic revision of mouse lemurs (*Microcebus*) in the western portions of Madagascar. *International Journal of Primatology*, 21, 963–1019.
- Ray, J.C. & Hutterer, R. (1996) Structure of a shrew community in the Central African Republic based on the analysis of carnivore scats, with the description of a new *Sylvisorex* (Mammalia: Soricidae). *Ecotropica*, 1(2), 85–97.
- Reeder, D.M., Helgen, K.M. & Wilson, D.E. (2007) Global trends and biases in new mammal species discoveries. *Occasional Papers, Museum of Texas Tech University*, 269, 1–35.
- Robbins, C.B. & van der Straeten, E. (1989) Comments on the systematics of *Mastomys* Thomas 1915 with the description of a new West African species. *Senckenbergiana Biologica*, 69, 1–14.
- Roberts, A. (1951) *The mammals of South Africa*. 'The mammals of South Africa' book fund, Johannesburg.
- Rookmaaker, L.C. (1989) *The zoological exploration of Southern Africa 1650–1790*. A.A. Balkema, Rotterdam.
- Rovero, F., Rathbun, G.B., Perkin, A., Jones, T., Ribble, D.O., Leonard, C., Mwakisoma, R.R. & Daggart, N. (2008) A new species of giant sengi or elephant-shrew (genus *Rhynchocyon*) highlights the exceptional biodiversity of the Udzungwa Mountains of Tanzania. *Journal of Zoology, London*, 274, 126–133.
- Rowe, N. (1996) *The pictorial guide to the living primates*. Pogonias Press, New York.
- Sarmiento, E.E. (1998) The validity of “*Pseudopotto martini*.” *African Primates*, 3, 44–45.
- Schipper, J., Chanson, J., Chiozza, F., Cox, N., Hoffmann, M., Katariya, V., Lamoreux, J., Rodrigues, A.S.L., Stuart, S.N., Temple, H.J., Baillie, J.E.M., Boitani, L., Lacher, T.E., Mittermeier, R.A., Smith, A.T., Absolon, D., Aguiar, J.M., Amori, G., Bakkour, N., Baldi, R.A., Berridge, R.J., Bielby, J., Black, P.A., Blanc, J.J., Brooks, T.M., Burton, J.A., Butynski, T.M., Catullo, G., Chapman, R., Cokeliss, Z., Collen, B., Conroy, J., Cooke, J.G., da Fonseca, G.A.B., Derocher, A.E., Dublin, H.T., Duckworth, J.W., Emmons, L., Emslie, R.H., Festa-Bianchet, M., Foster, M., Foster, S.N., Garshelis, D.L., Gates, C., Gimenez-Dixon, M., Gonzalez, S., Gonzalez-Maya, J.F., Good, T.C., Hammerson, G., Hammond, P.S., Happold, D., Happold, M., Hare, J., Harris, R.B., Hawkins, C.E., Haywood, M., Heaney, L., Hedges, S., Helgen, K.M., Hilton-Taylor, C., Hussain, S.A., Ishii, N., Jefferson, T.A., Jenkins, R.K.B., Johnston, C.H., Keith, M., Kingdon, J., Knox, D., Kovacs, K.M., Langhammer, P., Leus, K.M., Lewison, R., Lichtenstein, G., Lowry, L.F., Macavoy, Z., Mace, G.M., Mallon, D.P., Masi, M., McKnight, M.W., Medellín, R., Medici, P., Mills, G., Moehlman, P.D., Molur, S., Mora, A.E., Nowell, K., Oates, J.F., Olech, W., Oliver, W.L.R., Oprea, M., Patterson, B., Perrin, W.F., Polidoro, B.A., Pollock, C., Powel, A., Protas, Y., Racey, P.A., Ragle, J., Ramani, P., Rathbun, G., Reeves, R.R., Reilly, S.B., Reynolds III, J.E., Rondinini, C., Rulli, M., Rylands, A.B., Savini, S., Schank, C.J., Sechrest, W., Self-Sullivan, C., Shoemaker, A., Sillero-Zubiri, C., Silva, N., Smith, D.E., Srinivasulu, C., Stephenson, P.J., van Strien, N., Talukdar, B.K., Taylor, B.L., Timmins, R., Tirira, D.G., Tognelli, M.F., Tsytsulina, K., Veiga, L.M., Vié, J.-C., Williamson, L., Wyatt, S.A., Xie, Y. & Young, B.E. (2008) The status of the world's land and marine mammals: diversity, threat and knowledge. *Science*, 322, 225–230.
- Schunke, A. & Hutterer, R. (2005) Geographic variation in the West African scaly-tail squirrel *Anomalurus pelii* (Schlegel and Müller, 1845) with description of a new subspecies (Rodentia: Anomaluridae). In: Huber, B.A., Sinclair, B.J. & Lampe, K.-H. (Eds), *African Biodiversity: Molecules, Organisms, Ecosystems. Proceedings of the 5th International Symposium on Tropical Biology*. Museum Koenig, Bonn. Springer, New York, pp 321–328.
- Schwartz, J.H. (1996) *Pseudopotto martini*: a new genus and species of extant loriform primate. *Anthropological Papers of the American Museum of Natural History*, 78, 1–14.
- Simmons, N. (2005) Order Chiroptera. In: Wilson, D.E. & Reeder, D.M. (Eds), *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore, pp 312–529.
- Simons, E.L. (1988) A new species of *Propithecus* (Primates) from northeast Madagascar. *Folia Primatologica*, 50, 143–151.
- Simons, E.L. & Rumpler, Y. (1988) *Eulemur*, a new generic name for species of *Lemur* other than *Lemur catta*. *Comptes-Rendus de l'Académie des Sciences (Paris)*, sér 3, 307, 547–551.
- Smit, H.A., Robinson, T.J., Watson, J. & Jansen Van Vuuren, B. (2008) A new species of elephant-shrew (Afrotheria: Macroscelidea: *Elephantulus*) from South Africa. *Journal of Mammalogy*, 89, 1257–1269.

- Spinage, C.A. (1994) First discoveries of new antelopes in Botswana. *Botswana Notes and Records*, 26, 109–113.
- Stanhope, M.J., Madsen, O., Waddell, V.G., Cleven, G.C., de Jong, W.W. & Springer, M.S. (1998) Highly congruent molecular support for a diverse superordinal clade of endemic African mammals. *Molecular Phylogenetics and Evolution*, 9, 501–508.
- Stanley, W.T. (2008) A new species of *Mops* (Molossidae) from Pemba Island, Tanzania. *Acta Chiropterologica*, 10, 183–192.
- Stanley, W.T. & Hutterer, R. (2000) A new species of *Myosorex* Gray, 1832 (Mammalia: Soricidae) from the Eastern Arc mountains, Tanzania. *Bonner Zoologische Beiträge*, 49, 19–29.
- Stanley, W.T., Rogers, M.A. & Hutterer, R. (2005) A new species of *Congosorex* from the Eastern Arc Mountains, Tanzania, with significant biogeographical implications. *Journal of Zoology, London*, 265, 269–280.
- Struhsaker, T.T. (2005) Conservation of Red Colobus and their habitats. *International Journal of Primatology*, 26, 525–538.
- Swynnerton, G.H. & Hayman, R.W. (1950) A check list of the land mammals of the Tanganyika Territory and the Zanzibar Protectorate. *Journal of the East Africa Natural History Society*, 20, 274–392.
- Tattersall, I. (2007) Madagascar's Lemurs: Cryptic diversity or taxonomic inflation. *Evolutionary Anthropology*, 16, 12–23.
- Thalmann, U. & Geissmann, T. (2000) Distribution and geographic variation in the western woolly lemur (*Avahi occidentalis*), with description of a new species (*A. unicolor*). *International Journal of Primatology*, 21, 915–941.
- Thalmann, U. & Geissmann, T. (2005) New species of woolly lemur *Avahi* (Primates: Lemuriformes) from Bemaraha (Central Western Madagascar). *American Journal of Primatology*, 67, 371–376.
- Thomas, O. (1908) A new species of the Mascarene genus *Eliurus*. *Annals and Magazine of Natural History*, series 8, 2, 453–454.
- Thorn, E., Kock, D. & Cuisin, J. (2007) Status of the African bats *Vesperugo grandidieri* Dobson 1876 and *Vesperugo flavescens* Seabra 1900 (Chiroptera, Vespertilionidae), with description of a new subgenus. *Mammalia*, 71, 70–79.
- Trujillo, D., Ibáñez, C. & Juste, J. (2002) A new subspecies of *Barbastella barbastellus* (Mammalia: Chiroptera: Vespertilionidae) from the Canary Islands. *Revue suisse de Zoologie*, 190, 543–550.
- Turvey, S.T. (2009) Holocene mammal extinctions. In: Turvey, S.T. (Ed.), *Holocene extinctions*. Oxford University Press, Oxford, pp. 41–61.
- Van Cakenberghe, V. & Seamark, E.C.J. (eds.) (2008) African Chiroptera Report. 2008: i-xiv, 1-1867. African Chiroptera Project, Pretoria. <http://www.Africanbats.org>
- Van der Straeten, E. (2008) Notes on the *Praomys* of Angola with the description of a new species (Mammalia: Rodentia: Muridae). *Stuttgarter Beiträge zur Naturkunde A, Neue Serie*, 1, 123–131.
- Van der Straeten, E., Lecompte, E. & Denys, C. (2003) *Praomys petteri*: une nouvelle espèce des Muridae africains (Mammalia, Rodentia). *Bonner zoologische Beiträge*, 50, 329–345.
- Van der Straeten, E. & Dudu, A.M. (1990) Systematics and distribution of *Praomys* from the Masako Forest Reserve (Zaire), with the description of a new species. In: Peters, G. & Hutterer, R. (Eds.), *Proceedings of the International Symposium on Vertebrate Biogeography and Systematics in the Tropics, Bonn, June 5–8, 1989*. Alexander Koenig Zoological Research Institute and Zoological Museum, Bonn, pp 73–83.
- Van der Straeten, E. & Kerbis Peterhans, J.C. (1999) *Praomys degraaffi*, a new species of Muridae (Mammalia) from central Africa. *South African Journal of Zoology*, 34, 80–90.
- Van Rompaey, H. & Colyn, M. (1998) A new servaline genet (Carnivora, Viverridae) from Zanzibar Island. *South African Journal of Zoology*, 33, 42–46.
- Verheyen, W., Dierckx, T. & Hulselmans, J. (2000) The brush-furred rats of Angola and southern Congo: description of a new taxon of the *Lophuromys sikapusi* complex. *Bulletin van het Koninklijk Belgisch Instituut voor Natuurwetenschappen: Biologie*, 70, 253–267.
- Verheyen, W., Hulselmans, J., Dierckx, T. & Verheyen, E. (2002) The *Lophuromys flavopunctatus* Thomas 1888 s. l. species complex: a craniometric study, with the description and genetic characterization of two new species (Rodentia-Muridae-Africa). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Biologie*, 72, 141–182.
- Verheyen, W.N., Colyn, M. & Hulselmans, J. (1996) Re-evaluation of the *Lophuromys nudicaudus* Heller, 1911 species-complex with a description of a new species from Zaire (Muridae - Rodentia). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Biologie*, 66, 241–273.
- Verheyen, W.N., Hulselmans, J., Colyn, M. & Hutterer, R. (1997) Systematics and zoogeography of the small mammal fauna of Cameroun: Description of two new *Lophuromys* (Rodentia: Muridae) endemic to Mount Cameroun and Mount Oku. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Biologie*, 67, 163–186.
- Verheyen, W.N., Hulselmans, J., Dierckx, T., Colyn, M., Leirs, H. & Verheyen, E. (2003) A craniometric and genetic approach to the systematics of the genus *Dasymys* Peters, 1875, selection of a neotype and description of three new taxa (Rodentia, Muridae, Africa). *Bulletin de l'Institut Royale des Sciences Naturelles de Belgique Biologie*, 73, 27–71.
- Verheyen, W.N., Hulselmans, J.L.J., Dierckx, T., Mulungu, L., Leirs, H., Corti, M. & Verheyen, E. (2007) The

- characterization of the Kilimanjaro *Lophuromys aquilus* True 1892 population and the description of five new *Lophuromys* species (Rodentia, Muridae). *Bulletin de l'Institut Royale des Sciences Naturelles de Belgique Biologie*, 77, 23–75.
- Vogel, P., Cosson, J.-F. & López-Jurado, L.F. (2003) Taxonomic status and origin of the shrews (Soricidae) from the Canary Islands inferred from a mtDNA comparison with the European species. *Molecular Phylogenetics and Evolution*, 27, 271–282.
- Wasser, S.K. (1985) Current conservation status of Mwanihana Rain Forest, Uzungwa Mountains, Sane, Tanzania. *Primate Conservation*, 6, 34.
- Wilson, D.E. & Reeder, D.M. (Eds). (1993) *Mammal species of the world: a taxonomic and geographic reference*. Second edition. Smithsonian Institution Press, Washington, D.C.
- Wilson, D.E. & Reeder, D.M. (Eds). (2005) *Mammal species of the world: a taxonomic and geographic reference*. Third edition. Johns Hopkins University Press, Baltimore.
- Wolfe, A. (2001) *Africa*. The Harvill Press, London.
- Zaramody, A., Fausser, J.-L., Roos, C., Zinner, D., Andriaholinirina, N., Rabarivola, C., Norscia, I., Tattersall, I. & Rumpler, Y. (2006) Molecular phylogeny and taxonomic revision of the eastern woolly lemurs (*Avahi laniger*). *Primate Report*, 74, 9–22.
- Zimmermann, E., Cepok, S., Rakotoarison, N., Zietemann, V. & Radespiel, U. (1998) Sympatric mouse lemurs in north-west Madagascar: A new rufous mouse lemur species (*Microcebus ravelobensis*). *Folia Primatologica*, 69, 106–114.
- Zimmermann, E., Ehresmann, P., Zietemann, V., Radespiel, U., Randrianambinina, B. & Rakotoarison, N. (1997) A new primate species in northwestern Madagascar: the golden-brown mouse lemur (*Microcebus ravelobensis*). *Primate Eye*, 63, 26–27.
- Zinner, D., Roos, C., Fausser, J.-L., Groves, C.P. & Rumpler, Y. (2007) Disputed taxonomy classification of sportive lemurs (*Lepilemur*) in NW Madagascar. *Lemur News*, 12, 53–56.

#### Appendix 1 (cited references not included in Reference list)

Addenda and Corrigenda (as compiled by W.F.H. Ansell, and issued February 28<sup>th</sup>, 1991)

Page 12. *Amblysomus juliani* is a lapsus for *Amblysomus juliana*e Meester, 1972

Page 17 and Appendix B. *Hipposideros curtus* G.M. Allen, 1921, *Rev. Zool. Afr.*, 9(2): 194. Sakbayeme, Cameroons (Cameroun, 04°06'N, 10°30'E). Listed as a species of the *bicolor* group, *galeritus* subgroup, by Hill (1963, *Bull. Br. Mus. nat. Hist. Zool.* 11:12, 60–61). Not in Allen (1939). It is surprising that Allen should have omitted a species that he had himself described.

Page 17 and Appendix B. *Vespertilio hottentota* A. Smith, 1833, *S. Afr. Quart. J.* 2:59. Uitenhage and Albany. Restricted by Ellerman *et al.* (1953: 76) to Uitenhage, which is at 33°46'S, 25°24'E, Cape Province, South Africa. This is the nominate form of *Eptesicus hottentotus* and was retained in the *serotinus* group of the restricted genus *Eptesicus* by Hill and Harrison (1987, *Bul. Br. Mus. nat. Hist. Zool.* 52:253). Not in Allen (1939).

Pages 21 and 22. *Eulemur* v. *Petterus*. Accepting 9<sup>th</sup> September 1988 as the publication date of the relevant issue of *J. Hum. Evol.* in accordance with the advice of the publisher (Harcourt Brace Jovanovich, *in litt.*), *Petterus* Groves and Eaglen was regarded as having six days priority over *Eulemur* Simons and Rumpler, published on 15<sup>th</sup> September 1988. But, from information since obtained, it seems that 9<sup>th</sup> September was probably the date of printing rather than the date it became obtainable as required by Article 8(a)(2) of the ICZN to constitute publication. Taking this in conjunction with ICZN Article 21 (c)(i) *Eulemur* Simons and Rumpler, 1988 should be regarded as having priority over *Petterus* Groves and Eaglen, 1988

Page 27. Under *Genetta servalina cristata* Hayman [in Sanderson], 1940 [Nigeria, 05°45'N, 08°25'E] should be corrected to [Cameroun, 05°45'N, 09°25'E].

Page 35. *Cephalophia* Ellerman *et al.* (1953: 178) is a lapsus for *Cephalophia* Knottnerus-Meyer, 1907, *Arch. f. Naturgesch.* 73A (I): 44

- Page 42 and Appendix B. *Eliurus penicillatus* Thomas 1908, *Ann. Mag. nat. Hist.* (8)11: 454. Ampitambe, N.E. Betsileo, Madagascar [16°15'S, 48°50'E]. Conspecific with *E. myoxinus* Milne-Edwards (Petter, 1972: 664, in Battistini and Richard-Vindard, *Biogeography and Ecology in Madagascar*, Junk, The Hague). Not in Allen (1939).
- Page 46. *Gerbillus syrticus* Misonne, 1974, *Bull. Inst. r. Sci. nat. Belg.* 50(6): 1. 12 km au nord de Nofilia, côte de Libye [Libya, about 30°53'N, 17°48'E]. Lay (1983, *Z. Saugetierk.* 48: 347) stated: "Relationships of this form should be evaluated in a revision."
- Page 50. *Petromyscus shortridgei kaokoensis* was a *lapsus* for *Petromyscus shortridgei kaokensis* Roberts, 1938 originating from Ellerman *et al.* (1953: 298), rather than from Meester *et al.* (1986: 263)
- Page 55 and Appendix B. *Mus neumanni* Matschie, 1894, *Sber. Ges. naturf. Freunde, Berlin.*: 204. Massai Nyika inter Mgera et Irangi [Irangi is 04°12' to 05°06'S, and 35°40' to 36°55'E.; Mgera is 05°26'S, 37°32'E]. This is currently regarded as *Arvicanthis abyssinicus neumanni*, but the genus is in need of revision. Not in Allen (1939).
- Page 55 and Appendix B. *Mus rufinus* TEMM. var. *marungensis* Noack, 1887, *Zool. Jahrb.*: 231. Qua Mpala (Marungu) [Mpala, Zaire, 06°43'S, 29°31'E]. This is *Oenomys hypoxanthus marungensis*. Not in Allen (1939).
- Page 62. *Pronolagus kobosensis kaokoensis* Roberts (1951: 530) was a *lapsus* by the author himself for *Pronolagus kobosensis kaokensis* Roberts, 1946. Therefore delete the reference to *Pronolagus randensis kaokensis* Meester *et al.* (1986: 307).
- Page 66. *Platymops (Sauromys) haagneri umbratus* Shortridge and Carter 1938, listed on page 20, should be added to Appendix B.

## Appendix II. Additional comments on Ansell (1989) and the Addenda and Corrigenda (1991)

- Ansell (1989) listed two additional species not formally named at the time: the Northern Talapoin (now formally named as *Miopithecus ogouensis* Kingdon, 1997) and *Cercocebus sanjei*. Homewood & Rodgers (1981) discovered mangabeys in the Mwanihana Forest Reserve, and observed a troop closely at Sanje Falls. They also examined and photographed a captive juvenile at an animal orphanage in Arusha, Tanzania. They called it the Sanje Mangabey. Wasser (1985) mentioned it, calling it (inadvertently?) *Cercocebus galeritus sanjei*, but without description or bibliographic reference to a description (a *nomen nudum*). Mittermeier (1986: 338) listed *Cercocebus galeritus sanjei* with a reference to Homewood & Rodgers' (1981) paper. Groves (1996: 3) argued that Mittermeier's (1986) reference is the prior available usage and (p.4) designated the captive male as lectotype. Mittermeier mentioned "Uzungwa Mts., Tanzania", which is a bit broad but nonetheless rates as a type locality designation.
- Under Addenda and corrigenda of "African mammals 1938-1988" (see Appendix 1), Ansell listed "*Mus neumanni* Matschie, 1894." This name was listed as a synonym of *Arvicanthis somalicus* Thomas, 1903 by Musser & Carleton (1993), but clearly has priority and in the third printing (1995) of their contribution to "Mammal Species of the World" they listed *somalicus* as a synonym of *Arvicanthis neumanni* (and see Musser & Carleton 2005).
- Ansell's comment in his Addenda and corrigenda that *Eliurus penicillatus* Thomas, 1908 is conspecific with *E. myoxinus* Milne-Edwards (1886) is not correct. See Carleton (1994) and Carleton & Goodman (1998).
- Ansell (1989) listed "*Giraffa camelopardalis renatae* Krumbiegel, 1939, *Die Giraffe*, Monographien der Wildsäugetiere, 8, Leipzig: 93". Two publications with the same title have been confused here (Krumbiegel 1939, 1971). The correct citation is "*Giraffa camelopardalis renatae* Krumbiegel, 1971, *Die Giraffe*, Die Neue Brehm-Bucherei 428, Wittenberg, p. 93." In the 1939 publication, the animal that was to become the type of *renatae* is illustrated in Fig. 30 (page 46) and listed on page 59, under "*Giraffa camelopardalis* subsp. *camelopardalis peralta* [sic] Thomas 1898". Not until 1971 was it treated as a different subspecies.

### Appendix III

The following names were omitted by both Allen (1939) and Ansell (1989):

*Antilope anderessoni* Leyland, 1866. Thamalakane River, near Maun, Botswana.

**Remarks:** A senior synonym of *Tragelaphus spekii selousi* Rothschild, 1898 that was overlooked until noticed by Spinage (1994) and, therefore, a *nomen oblitum* (Article 23.9.2; ICZN 1999) no longer having priority over *selousi* (see Grubb 2005). We have not seen the original publication and Spinage (1994) did not cite the page number.

"*Antilope (Cephalophus) orbicularis* Peters, S.B. Ges. Naturf. Fr. Berlin [Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin], for 17 February, 1852 (published in the Spenersche Z[eitung]. of 22 February, 1852). Plains at Sena, Tete, Macanga and Boror (16°-18° S). Sena here selected."

**Remarks:** Now *Sylvicapra grimmia orbicularis* (Grubb 2005). The original publication was of proceedings of a society published in a local newspaper. The preceding quotation is from Ellerman *et al.* (1953:182).

*Vespertilio megalotis* Bechstein, 1800, p. 622. Great Namaqualand, 50 miles north of the Orange River. *Nomen oblitum*.

**Remarks:** This name is a senior synonym of *Lavia frons* (É. Geoffroy Saint-Hilaire, 1810) according to Handley (1959) and Meester (1973), but has not been cited by compilers, including Roberts (1951), Ellerman *et al.* (1953), or Meester *et al.* (1986). The history of *Vespertilio megalotis* is given in Rookmaaker (1989) and Grubb (2004). It must now be regarded as a *nomen oblitum* (Article 23.9.2; ICZN 1999).

*Eliomys murinus subrufus* Neumann, 1900: 547. North-east coast of Tanzania at "Tanga".

**Remarks:** *Eliomys* is a Palearctic genus of dormice and this taxon would now be named *Graphiurus murinus subrufus*. Presumably on geographic grounds alone, Swynnerton and Hayman (1950) regarded *subrufus* as a synonym of *G. smithii* (Thomas, 1893), whose type locality is Tanzania, Lake Victoria, south shore of Speke Gulf, Nasa. *Graphiurus murinus subrufus* is not mentioned by Allen (1939), Ansell (1989) or Holden (1993), and *G. smithii*, though cited by Allen, is not mentioned by Holden either. Neumann's description of his new subspecies is quite sufficient to make the name valid, but he provided no measurements, so it is not possible to determine whether *subrufus* belongs to one of the larger or smaller species of African dormice. The holotype in the Berlin museum has been traced. Probably both *subrufus* and *smithii* should provisionally be assigned to *G. murinus* sensu lato, a concept adopted by Holden (1993) to include nominal taxa of African dormice whose affinities have not been determined.