

Controversial scientific names of African mammals

Peter Grubb

35 Downhills Park Road, London, N17 6PE, United Kingdom
E-mail: pgrubb35@aol.com

Received 10 July 2002, Accepted 30 May 2003

A number of problems still exist among African mammal names. *Vespertilio megalotis*, *Genetta maculata*, *Choeropotamus* and *Myomys* should be recognized as invalid synonyms of *Lavia frons*, *Genetta pardina*, *Potamochoerus* and *Mastomys* respectively. *Tragelaphus spekii* was named by Speke (not P.L. Sclater) in 1863 (not 1864). By designation of a lectotype, *Antelope doria* becomes a synonym of *Cephalophorus zebra* and so is confirmed as the type species of *Cephalophula*. The authors and dates of publication of the following are cited and discussed: *Galagoides rondoensis*, *G. udzungwensis*, *Hippotraginae*, *Hippotragus*, *H. equinus*, *Alcelaphus caama*, *Xerus erythropus*, *Arvicanthis*, and *A. niloticus*. Unjustified and justified emendations of names are summarized. The valid name in the following cases appears to be controversial and may require a ruling by the International Commission on Zoological Nomenclature: *Galagoides demidoff* or *G. demidovii*, *Procolobus pennantii parmentieri* or *P. p. parmentierorum*, *Strepsicerotini* or *Tragelaphini*, *Peleinae* or *Reduncinae*, *Damaliscus dorcas* or *D. pygargus*, *Graphiurus hueti* or *G. nagtglasii*, and *Cricetomys dissimilis* or *C. emini*. In spite of seniority, *Sylvicaprinae* and *Connochaetinae* do not replace *Cephalophinae* and *Alcelaphinae* respectively. The correct name for the rusty-spotted genet, which has been called *Genetta rubiginosa*, has yet to be determined. *Myotis cf. megalotis* from Congo-Brazzaville may not be correctly named and could be an unnamed species.

Key words: mammals, Africa, nomenclature.

INTRODUCTION

In his monumental checklist, G.M. Allen (1939) listed the scientific names of African mammals recorded up until July 1938. Additional contributions have brought Allen's work up to date (Moreau *et al.* 1946; Ellerman *et al.* 1953; Meester *et al.* 1986; Ansell 1989; many regional works). In spite of all this effort, there are still some matters of nomenclature that have not been settled, and the publication of the new (fourth) edition of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature 1999) is an opportune moment to review these issues.

METHOD

In this paper, the authors of scientific names are not listed in the references, unless their publications are discussed in the text, nor are the authors of changes in rank of family-group names. The International Commission on Zoological Nomenclature is the author of the Code of Zoological Nomenclature (1985b, 1999) and is abbreviated to ICZN in this paper. A nomen dubium is a name of unknown or doubtful application, while a nomen oblitum is a name unused since 1899 and which

does not take precedence over a younger synonym or nomen protectum (Article 23.9.2, ICZN 1999). 'BM' (British Museum) is the acronym for The Natural History Museum, London.

PROBLEM NAMES OF TAXA

Yellow-winged bat, *Lavia frons*

Vespertilio megalotis Bechstein, 1800. Great Namaqualand, 50 miles north of the Orange River. Nomen oblitum.
Megaderma frons É. Geoffroy Saint-Hilaire, 1810. *Annales du Muséum National d'Histoire Naturelle, Paris* 15: 192. Senegal. Nomen protectum.

Lavia frons is preoccupied by *Vespertilio megalotis*, a name based on a bat that is said to have flown into the tent of the explorer François Levaillant during his second expedition (1783/84). Levaillant's watercolours of the bat are in Cape Town ('La chauve souris à quatre oreilles des bords de la Rivière des Elephants') and Leiden ('La chauve souris à quatre oreilles ou l'oreillard de Païs des Grands Namaquois') and they agree with the description in Levaillant's account of his travels (Rookmaaker 1989). The name has not been

cited by compilers G.M. Allen (1939), Roberts (1951), Ellerman *et al.* (1953), or Meester *et al.* (1986). From the description, Anderson & Wroughton (1907) confirmed that it belonged to the Megadermatidae but because no other specimen of this family had been recorded so far south in Africa and because the measurements quoted were so strange, they thought it was safer to leave it unidentified, as a nomen dubium. Handley (1959) agreed that the measurements were anomalous but was confident in identifying it as *Lavia frons*. So was Meester (1973), who reproduced the Cape Town watercolour. Grey pelage; pinkish-yellow nose-leaf, ears, wings and limbs; and the shape of the nose-leaf are accurate enough to confirm that it can be no other megadermatid bat. The supposed collecting locality, the only record from the whole of the southern African Sub-region, remains a complete puzzle. Possibly the bat originally seen in the wild was a different species and the description and the watercolours were based on a specimen of the yellow-winged bat obtained later. Nevertheless this was the first record of the species and it was not described again until 20 years after Levaillant had published his travels. *Vespertilio megalotis* is a soundly based name and can now be confidently regarded as a nomen oblitum (Article 23.9.2, ICBN 1999).

Large-footed *Myotis* near *M. longipes* or *M. daubentonii*

The description of a large-footed vespertilionid bat of the genus *Myotis* and subgenus *Leuconoe* from sub-Saharan Africa (Aellen & Brosset 1968) requires a consideration of the following taxa:

'*Vespertilio africanus*, n. subsp.' i.e. *V. murinus africanus* Dobson, 1875. *Annals and Magazine of Natural History* (4)16: 260. Collection number BM 73.4.16.5. Gabon. Since allocated to the closely related *M. blythii blythii*, the lesser mouse-eared bat (= *Vespertilio blythii* Tomes, 1857. *Proceedings of the Zoological Society of London* 1857: 53. Nasirabad, Rajputana, India) (Blanford 1891; Thomas 1915; Hayman & Hill 1971; Corbet & Hill 1992).

Vespertilio megalopus Dobson, 1875. *Annals and Magazine of Natural History* (4)16: 261. Collection number BM 73.4.16.1. Gabon. Regarded as a synonym of *Myotis longipes*, the Kashmir cave bat (= *Vespertilio longipes* Dobson, 1873. *Proceedings Asiatic Society of Bengal* 1873:110. Bhima Divi caves, Kashmir) (Blanford 1891; Thomas 1915; Hayman 1967; Hayman & Hill

1971; Corbet & Hill 1992). *Serotine, Vesperugo serotinus* var. *gabonensis* Trouessart, 1901. *Catalogus Mammalium tam Viventium quam Fossilium*, 2nd edn, 1: 108. Gabon. Collection numbers BM 73.4.16-19, based on *Vesperugo serotinus* var. *a* in Dobson (1878). From northern India or Kashmir according to manuscript notes by Oldfield Thomas in a Natural History Museum (London) copy of Dobson's (1878) *Catalogue of the Chiroptera* (Hayman 1967; Hayman & Hill 1971; Ibáñez & Valverde 1985; Corbet & Hill 1992), so probably a junior synonym of *Eptesicus serotinus pachyonus*, the Indian race of the serotine (= *Scotophilus pachyonus* Tomes, 1857. *Proceedings of the Zoological Society of London* 1857: 50. Rajputana, India). Alternatively, a senior synonym of *Eptesicus platyops* according to Kock (1969).

These three nominal subspecies or species of bats come from a collection in the Natural History Museum, London, with collection numbers BM 73.4.16.1-26, purchased from the dealer Gerard. The series consists of Palaearctic or Indian species of bats and rodents (Hayman & Hill 1971). The weight of opinion is that these bats did not come from Africa. Yet it is a curious coincidence that three Palaearctic bats had wrongly been claimed to come from Gabon, whereas specimens very similar to two of these species have been reliably reported from tropical Africa:

Vespertilio platyops Thomas, 1901. *Annals and Magazine of Natural History* (7)8: 31. Lagos, Nigeria. Rosevear (1965) reported a second specimen from Senegal in Brussels. A subspecies of the Palaearctic *Eptesicus serotinus* possibly preoccupied by *gabonensis* (Kock 1969); related to *E. serotinus* but a distinct species, *E. platyops* (Hayman & Hill 1971); or a subspecies of *E. serotinus* according to Ibáñez & Valverde (1985) who recorded additional specimens from Bioko island (Equatorial Guinea).

Myotis cf. *megalopus*, a large-footed *Myotis* collected at Loudima, Congo, and identified by Aellen & Brosset (1968) as *M. megalopus*. They believed that *M. longipes* and *M. megalopus* were distinct. The first resembles *M. capaccinii* while the second resembles *M. daubentonii*.

The hypothesis that *Myotis megalopus* and *Eptesicus gabonensis* are really African bats needs to be tested by a more thorough report of all the

relevant material so as to resolve outstanding differences of opinion. Until then we cannot be sure whether the large-footed *Myotis* from Congo-Brazzaville is unnamed or not.

Demidoff's bushbaby, *Galagooides demidoff* or *G. demidovii*

'[*Galago*] Demidoff [sic], totus ex rufo-fuscus, gulla nigrescente'. G. Fischer [von Waldheim], 1806. *Mémoires de la Société des Naturalistes de l'Université Impériale de Moscou* 1: 23–26. No locality.

Galago demidovii G. Fischer [von Waldheim], 1808. *Commentationes Societatis Physico-Medicae, apud Universitatem Literarum Caesaream Mosquenseis Institutae* 1(1): 57. Senegal.

Elliot (1913) quoted the original citation as *Galago demidoffi* G. Fischer, 1806, and so did J.A. Allen (1925) but Allen made it clear that he had not seen the original publication. Schwarz (1931) had seen the original publication and interpreted the name as '*Galago*, Demidoff [sic]', believing it to be non-binomial. He cited the species as *Galago demidovii* G. Fischer, 1808. Subsequently G.M. Allen (1939), Hill (1952) and other authors used this name. Ellerman *et al.* (1953) called it *Galago demidovii* Fischer, 1806, but admitted that they had not seen the original. The spelling 'demidoff' was introduced to the nomenclature only in recent years (Olson 1986, Jenkins 1987, Nash *et al.* 1989).

G. Fischer [von Waldheim] (1806) had called his animal 'Le Galago de Demidoff' and stated that 'Le nom spécifique de cet animal rare a été donné en l'Honneur de Mons. Le Conseiller d'Etat actuel et Chevalier Paul Gregorievitsch de Demidoff.' 'On peut distinguer les trois espèce de Galago ainsi qu'il fait:

Galago Geoffroy, ex griseo-flavus, capite griseo, cauda fusca.

— Demidoff, totus ex rufo-fuscus, gulla nigrescente.
— Cuvier, totus griseus.'

Fischer referred to galagos that had been described by É. Geoffroy Saint-Hilaire and Cuvier, as well as the new one he had associated with Demidoff. There is at least a prima facie case that '*Galago Geoffroy*', '*[Galago] Demidoff*' and '*[Galago] Cuvier*' were not Linnean (binomial) names but parts of the Latin narrative that diagnosed the species. As a binomial consisting of two nouns in apposition, *Galago demidoff* would not be meaningful (unlike, say, *Equus caballus*). Such combinations are to be avoided in future because an example such as '*Galago geoffroy*', which could incorrectly be writ-

ten '*Galago Geoffroy*', could very easily be confused with '*Galago Geoffroy*' (the generic name and its author). Binomials formed in this way are not to be altered in retrospect (Article 31, ICBN 1999) and can be valid names (for instance the avian names *Megapodius reinwardt* and *M. freycinet*). But because G. Fischer [von Waldheim] (1808) himself later provided formal species-group names in the genitive case (*geoffroyi*, *demidovii*, and *cuvieri*), it is possible that he had not intended the earlier allusions to represent scientific names. Schwarz (1931) had indicated that '*[Galago] Demidoff*' was not part of binomial nomenclature and his conclusion had been widely accepted. Therefore it would have been desirable to explain why Schwarz's (1931) view was rejected at the time when '*demidoff*' was resuscitated. To clarify the situation, a ruling confirming that *[Galago] demidoff* was available could have been requested from the International Commission for Zoological Nomenclature.

Rondo bushbaby, *Galagooides rondoensis*

Galagooides rondoensis Honess, 1996. Speciation among galagos (Primates, Galagidae) in Tanzanian forests, p. 65. Unpublished D.Phil. dissertation. Unavailable.

G[alagooides]. d[emidoff]. rondoensis Rowe, 1996. *Pictorial Guide Living Primates*, p. 22. Nomen nudum. Attributed in error to Groves (1989), *Theory of Human and Primate Evolution*, where there is no reference to this taxon.

'Rondo Galago *Galagooides* sp. nov. (named *rondoensis* by P. Honess 1996)' in Kingdon, 1997. *The Kingdon Field Guide to African Mammals*, p. 106. Rondo Forest Reserve, Rondo Plateau, Lindi District, Tanzania. An available name.

1997 *Galagooides rondoensis* Honess, in Kingdon, *The Kingdon Field Guide to African Mammals*, p. 106' in Honess & Bearder ('1996'), *African Primates* 2: 77. This paper is dated December 1996 but must have been published after that date because the part of the volume containing the article cites several papers published in 1997, as well as Kingdon's (1997) book. Rylands *et al.* (2001) confirmed that the publication postdated that of Kingdon (1997).

'*Galagooides rondoensis* Honess 1996', in Rylands *et al.* (2001), *Neotropical Primates* 9: 76. 'Honess 1996' does not meet the criterion of publication, as it is an unpublished

doctoral dissertation.

Article 50(a) in the relevant edition of the Code (ICZN 1985b) states that 'If it is clear from the contents of the publication that some other person is alone responsible both for the name and for satisfying the criteria of availability other than publication, then that person is the author of the name.' The name *rondoensis* was taken from Honess's (1996) unpublished doctoral thesis (Rylands *et al.* 2001) but Kingdon (1997) did not indicate this beyond citing Honess's name and the year in which the doctorate was awarded. Kingdon's (1997) illustration of *G. rondoensis* was first used in Honess (1996), so can be regarded as part of Honess's description of this taxon, while Kingdon's textual description seems to paraphrase that of Honess. Hence it would appear that Honess satisfies both the requirements stipulated by Article 50(a), cited above, and therefore Honess and not Kingdon is the author of the name, but others may disagree with this interpretation. While it would be desirable to have a ruling on the authorship of the name in this difficult case, I understand that the Commission is most reluctant to deal with cases that ought to be settled by following the Code (A. Gentry, pers. comm.).

Zanzibar bushbaby, *Galagooides zanzibaricus*

Galago zanzibaricus Matschie, 1893. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1893: 111. Zanzibar.

Galagooides udzungwensis Honess, 1996. Speciation among galagos (Primates, Galagidae) in Tanzanian forests, p. 44. Unpublished D.Phil. dissertation. Unavailable.

'Matundu Galago *Galagooides* sp. nov. (named *udzungwensis* by P. Honess 1996)' in Kingdon, 1997. *The Kingdon Field Guide to African Mammals*, p. 106. Ichima, Kilombero District, Morogoro Region, Tanzania. An available name.

'1997 *Galagooides udzungwensis* Honess, in Kingdon *The Kingdon Field Guide to African Mammals*, pp. 106–107' in Honess & Bearder ('1996'), *African Primates* 2: 76.

'*Galagooides udzungwensis* Honess 1996', in Rylands *et al.* (2001), *Neotropical Primates* 9: 76.

This is a parallel case, but the new species has since been regarded as conspecific with *G. zanzibaricus* (Bearder 1999; pers. comm.).

Pardine or West African blotched genet, *Genetta pardina*

Viverra maculata Gray, 1830. *Spicilegia Zoologica*, p. 9. 'North Africa'. Invalid (preoccupied).

Genetta pardina I. Geoffroy Saint-Hilaire, 1832. *Magazine Zoologique* 2: cl. 1, pl. 8 and text. Senegal.

Viverra maculata Gray, 1830 has been considered to be available and valid as *Genetta maculata* for the West African blotched genet, by G.M. Allen (1939), Schlawe (1980, 1981), Honacki *et al.* (1982), and Wozencraft (1993). Gray (1864) had placed *maculata* in the synonymy of *G. vulgaris* = *G. genetta* (Linnaeus, 1758) without comment, although the original description and associated illustration (Gray 1830) indicate a blotched animal of the *tigrina-pardina* group. *Viverra maculata* Gray, 1830, is preoccupied by *Viverra maculata* Kerr, 1792, (the tiger cat or tiger quoll, an Australian dasyurid marsupial *Dasyurus* or *Dasyurops maculatus*) and hence is invalid (Rosevear 1974; Coetze 1977; Ansell 1978; Crawford-Cabral 1981; Grubb *et al.* 1998). Meester *et al.* (1986) defended the validity of *G. maculata* (Gray) by indicating that two identical species-group names placed in different genera that bear homonymous names are not themselves homonyms (Article 57(h), ICZN 1964, 1985b). These authors may have understood that *Viverra* for dasyurids and *Viverra* for viverrids were distinct homonymous generic names (therefore with different authors and different type species). But originally *Viverra maculata* Kerr, 1792, and *Viverra maculata* Gray, 1830, had not been placed in different genera with homonymous names: they had been placed in the same genus (*Viverra* Linnaeus, 1758). The subsequent allocation to *Dasyurus* and *Genetta* respectively was not relevant. Schlawe (1981) thought that assignment of these two names to higher orders of classification negated the invalidity, but this is also irrelevant. Under the new Code (Article 23.9.5, ICZN 1999), newly discovered primary homonyms for names no longer considered congeneric are to be placed before the Commission, but the present case does not qualify as a new discovery and *Genetta pardina* is the valid name. Gaubert *et al.* (2003) wish to conserve *maculata* but as the name of a different species, the rusty-spotted genet, a proposal that will be contested by the author.

Rusty-spotted genet, *Genetta cf. rubiginosa*

Genetta rubiginosa Pucheran, 1855. *Revue de Zoologie, Paris* 7: 154. 'Cape of Good Hope'.

If the rusty spotted genet is a different species from *G. pardina*, *G. poensis* or *G. tigrina*, then *G. rubiginosa* appears to be the earliest available name. Schlawe (1981) studied the literature and examined the type. He concluded that it may be from Senegal, not South Africa, and could belong to the species now usually termed *G. thierryi* (Haussa genet) and his conclusions have recently been confirmed (P. Gaubert, in litt.). It might be thought necessary to replace *G. rubiginosa* with *G. fieldiana* Du Chaillu, 1860, the next most senior name. But to maintain stability, there is an alternative option that could be considered, namely to ask the Commission to set aside the existing name-bearing type of *G. rubiginosa* and designate a neotype that is certainly a rusty-spotted genet from South Africa (Article 75.6, ICZN 1999). The scientific name for the rusty-spotted genet will only be finalized by rulings of the ICZN, using its Plenary Powers (Gaubert *et al.* 2003).

Bush-pig and red river-hog, *Potamochoerus*

Choiropotamus Gray, 1843. *List of the Specimens of Mammalia in the British Museum*, p. 185. Type of genus '*Choiropotamus africanus* Gray, 1843' = *Sus africanus* von Schreber, 1791 = *Sus koiropotamus* Desmoulin, 1831 = *Potamochoerus larvatus koiropotamus*. Not a homonym of *Chaeropotamus* [lapsus?] Cuvier, 1821, or *Choeropotamus* [justified emendation?] Cuvier, 1822 (Ellerman *et al.* 1953; Article 56, ICZN 1999), names given to Upper Eocene and Oligocene artiodactyls according to Simpson (1945). *Nomen oblitum*.

Koiropotamus Gray, 1843. *List of the Specimens of Mammalia in the British Museum*, p. xxvii. *Nomen nudum*.

Potamochoerus Gray, 1854. *Proceedings of the Zoological Society of London* 1852: 129. Type of genus *Choiropotamus pictus* Gray, 1852 = *Potamochoerus porcus* (Linnaeus, 1758).

Ellerman *et al.* (1953) said they would ask the Commission to place *Potamochoerus* on the Official List, and to set aside *Koiropotamus* and *Choiropotamus* but they never did (W.F.H. Ansell, in litt. to Meester *et al.* 1986). It might seem that one of these names would have to be used in preference to *Potamochoerus*, because both have priority. However *Koiropotamus* does not qualify, because it can be treated as a *nomen nudum*, and *Choiropotamus* is no longer available either, because it is a *nomen oblitum* (ICZN 1999).

Tragelaphine antelopes, *Tragelaphini*

Strepsiceriae Gray, 1846. *Annals and Magazine of Natural History* 18: 230. With incorrect prefix and suffix; corrected and changed in rank to *Strepsicerotini* by Simpson (1945; *Bulletin of the American Museum of Natural History* 85: 157).

Tragelaphinae Blyth, 1863. *Catalogue of Mammals in the Museum of the Asiatic Society of Bengal*, p. 164. Changed in rank to *Tragelaphini* by Sokolov (1953; *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR* 14: 45).

Strepsicerotini has priority over the synonym *Tragelaphini* and has been used by some authors in the twentieth century (Grubb 2001b). Pending an application to the Commission, the more commonly used *Tragelaphini* should be employed.

Nyala, *Tragelaphus angasii*

Tragelaphus angasii Angas, 1849. *Proceedings of the Zoological Society of London* 1848: 89 [1849].

The name *angasii* is usually attributed to Gray (see Grubb 1999), because Angas (1849) stated 'Mr Gray has named this species after my father, George Fife Angas, Esq. of South Australia' but this is insufficient to make Gray the author (Article 50.1.1, ICZN, 1999).

Sitatunga, *Tragelaphus spekii*

Tragelaphus Spekii [sic] Speke, 1863. *Journal of the Discovery of the Source of the Nile*, p. 223 (footnote). Lake Lwelo, Tanzania.

Antelope (Tragelaphus) Spekei [sic] Heuglin, 1869. *Reise in das Gebiet des Weissen Nil*, p. 319. Incorrect subsequent spelling.

As the following examples indicate, there is disagreement concerning the spelling, date and authorship of the name for the sitatunga, which was sometimes placed in a different genus or subgenus *Limnotragus*:

Limnotragus spekii (P.L. Sclater in Speke, 1864); in Allen (1939).

T. (Limnotragus) spekei Sclater in Speke, 1864; in Ellerman *et al.* (1953).

T. spekei Sclater, 1864; in Ansell (1972).

T. spekei Speke, 1863; in Honacki *et al.* (1982) and Meester *et al.* (1986).

T. spekii Sclater in Speke, 1863; in Grubb (1993).

T. spekii Speke, 1863; in Grubb *et al.* (1998).

Speke (1863) encountered the 'nzoé' or 'water-boc' at Lake Lwelo in the northwest corner of Tanzania and reported in a footnote that Sclater had named the species *Tragelaphus Spekii* [sic], but

this is insufficient to make Sclater the author (Article 50, ICZN 1999).

Speke's book is dated 1863, and includes his introduction, dated December 1863. 1863 is the year of publication cited by P.L. Sclater & Thomas (1900) and unless explicit contrary evidence was to become available, the date given in the book is to be accepted. P.L. Sclater (1864) described the species more fully in a later paper.

The name 'spekii' is commonly cited as 'spekei', the spelling adopted in some other mammal names (*Gazella spekei*, *Pectinator spekei*). Spekii is the genitive of the Latinized Spekius (Spek-i-us), whereas Spekei is the genitive of Spekeus (Speke-us). Both constructions are acceptable. The original spelling has been widely used and the genitive ending -ii is to be maintained (Article 33.4, ICZN 1999). If a change in the name were thought to be desirable then an appropriate proposal to the International Commission on Zoological Nomenclature would be required.

Duikers, *Cephalophinae*

Sylvicaprina Sundevall, 1845. *Öfversigt af Kongl. Vetenskaps-Akademiens Förfärdningar* 1845, 2(3): 31. With incorrectly formed suffix; corrected to *Sylvicaprinae* by Knottnerus-Meyer (1907; *Archiv für Naturgeschichte* 73: 42) as one of two subfamilies of a family *Cephalophidae*, the other being *Cephalophinae*.

Cephalophinae Blyth, 1863. *Catalogue of Mammals in the Museum of the Asiatic Society of Bengal*, p. 167.

Since Knottnerus-Meyer did not acknowledge the priority of *Sylvicaprinae* (Grubb 2001b), this older name does not displace the junior but universally used *Cephalophinae* (Article 35.5, ICZN 1999).

Zebra duiker, *Cephalophus (Cephalophula)*

zebra

Antilope zebra Robert, 1836. *L'Echo du Monde Savant* for Sunday 1 May, p. 1. 'Sénégal'. Unavailable; placed on the Index (Opinion 1291, ICZN 1985a).

Antilope Doria [sic] Ogilby, 1837. *Proceedings of the Zoological Society of London* 1837: 121. No locality. Available, but *zebra* has precedence whenever the two names are considered to be synonyms (Opinion 1291, ICZN 1985a). Lectotype here designated: BM 15.12.24.294, a zebra duiker.

Antilope Zebra [sic] Gray, 1838. *Annals and Magazine of Natural History* (1)1: 27. Sierra Leone.

Cephalophus doriae Thomas, 1902. *Proceedings of the Zoological Society of London* 1892: 424.

Ogilby's (1837) original account of *Antilope doria* is 'the beautiful species mentioned by Mr. Bennett (Proc. Zool. Soc., 1833, p. 1) which is a real *Antilope*, and which I hope shortly to have an opportunity of describing under the name of *A. Doria*, as a friend, who has connections with the West Coast of Africa, has kindly undertaken to procure me skins.' Many authors assumed that the name applies to the zebra duiker and used it for the species but the bibliographic reference is to a gazelle, the mhorr *Nanger dama mhorr* (Bennett, 1833), as noticed by G.M. Allen (1939). Ogilby probably made a mistake and had meant to cite a different paper (Bennett 1832: 122–123) where the skin of a zebra duiker was described (Kuhn 1966). Nevertheless, *doria* refers *de facto* to a gazelle so it is unsatisfactory as the valid name for the duiker. Following a request by Ansell (1980), the Commission ruled that *zebra* should be given precedence over *doria* whenever they are regarded as synonymous (Opinion 1291, ICZN 1985a). The Commission placed *doria* on the Official List and it remains available, yet no type has been designated so its synonymy is still unclear. We need to identify the type of *doria* because Knottnerus-Meyer (1907) proposed a new subgenus *Cephalophula* with type by monotypy *Cephalophus doria* and we must decide whether the type of *Cephalophula* should be regarded as misidentified (Article 70.3, ICZN 1999). Since no one has employed *doria* for the mhorr, it would conflict with past general usage to select a type from the latter species. It would be more in accord with past usage to agree with Kuhn (1966) and assume that Ogilby (1837) made an error and cited the wrong reference. I therefore select the skin of a zebra duiker BM 55.12.24.294 as the type of *doria*, the very specimen that has already been presumed to be the type (Sclater & Thomas 1895; Lydekker & Blaine 1914). Stability is thereby maintained and we need not think that the type of *Cephalophula* was misidentified; Opinion 1291 (ICZN 1985a) remains in force.

Reedbuck and waterbuck, *Reduncinae*

Adenotinae Blyth, 1863. *Catalogue of Mammals in the Museum of the Asiatic Society of Bengal*, p. 168. *Nomen oblitum*.

Heleotragidae Gray 1872. *Catalogue of Ruminant*

Mammals in the British Museum, p. 15. With incorrect original spelling, because it is based on *Eleotragus* Gray; justifiably emended to *Eleotragidae* by Gray (1873), *Handlist of Edentate Thick-skinned Ruminant Mammals in the British Museum*, p. 15. *Nomen oblitum*.

Peleadae Gray, 1872. *Cat. Ruminant Mamm. Brit. Mus.* p. 29. With incorrect original spelling; justifiably emended to *Peleinae* by Roberts (1951), *The Mammals of South Africa*, pp. 272, 294.

Cervicaprinae Brooke, 1876. In Wallace, *Geographical Distribution of Animals*, p. 224. Does not retain priority over *Reduncinae* because it is based on a junior homonym, *Cervicapra de Blainville* = *Redunca*, of *Cervicapra* Sparrman = *Antilope* Pallas (Article 39, ICBN 1999).

Reduncidae Knottnerus-Meyer 1907. *Archiv für Naturgeschichte* 73: 39, 98, 117. Reduced to subfamily status by Lydekker & Blaine (1914), *Catalogue of the Ungulate Mammals in the British Museum (Natural History)*, pp. xii, 197.

Recent work has suggested that *Pelea* should be included in the *Reduncinae* (Gatesy *et al.* 1997; Hassanin & Douzery 1999; Vrba & Schaller 2000). *Peleinae* has priority over *Reduncinae* but *Reduncinae* is a much more familiar and widely used name, and a proposal will be made to the International Commission on Zoological Nomenclature for the conservation of *Reduncinae*.

Hippotragine antelopes, Hippotraginae

Hippotragina Sundevall, 1845. *Öfversigt af Kongl. Vetenskaps-Akademiens Förfärlingar* 1845, 2(3): 31. With incorrect original suffix; corrected to *Hippotraginae* by Brooke in Wallace (1876, *Geographical Distribution of Animals*, p. 223); now placed on the Official List of Family-Group Names in Zoology (ICZN 2003) but had been unavailable while *Hippotragus* Sundevall, 1845 remained suppressed.

Hippotragina Sundevall in Retzius & Lovén, 1845. *Archiv Skandinavischer Beiträge zur Naturgeschichte, Greifswald* 1: 445. Available with corrected suffix since 1929, while *Hippotragus* Sundevall, 1845 was suppressed, but now that *Hippotragina* Sundevall, 1845, has been conserved (IUCN 2003), simply a citation of that name.

Bloubok and roan and sable antelopes, Hippotragus

Hippotragus Sundevall, 1845. *Öfversigt af Kongl. Vetenskaps-Akademiens Förfärlingar* 1845, 2(3): 31. Type of genus *H. equinus* by monotypy. An available and valid name; though suppressed by Direction 23 (ICZN 1955) and placed on the Index, this suppression has now been rescinded (ICZN 2003).

Hippotragus Sundevall in Retzius & Lovén, 1845. *Archiv Skandinavischer Beiträge zur Naturgeschichte, Greifswald* 1: 445. Type of genus *H. equinus* by monotypy; the senior available name during the time when the previous name was suppressed.

Hippotragus Sundevall, 1846. *Kungliga Svenska Vetenskaps-Akademiens Handlingar* 1844: 196. Type of genus *H. leucophaeus* by subsequent designation; placed on the Official List of Generic Names in Zoology (Opinion 90, ICZN 1929) but the entry has now been deleted (ICZN 2003).

Senior homonyms *Hippotragus* Sundevall, 1845, and *Hippotragus* Sundevall in Retzius & Lovén, 1845, were overlooked when *Hippotragus* Sundevall, 1846, was placed on the Official List in 1929. Any name on the List became a *nomen conservandum* (ICZN 1958). That means it was protected against unnoticed senior synonyms, which if discovered would automatically become unavailable. Ellerman *et al.* (1953) drew attention to the earlier '*Hippotragus* Sundevall, 1845' without remarking that it had become unavailable. As if this were insufficient to prevent its use, '*Hippotragus* Sundevall, 1845' was then formally suppressed and placed on the Index (Direction 23, ICZN 1955). Although the ruling on conservation of names on Official Lists was never ratified and has now lapsed (footnote, p. 171 in ICZN, 1985b), so that *Hippotragus* Sundevall, 1845, should have become available once again, it remained suppressed because of Direction 23. But the forgotten third publication (Retzius & Lovén 1845) was not covered by the Direction and '*Hippotragus* Sundevall in Retzius and Lovén, 1845' became the earliest available publication of *Hippotragus*. Direction 23 had only been used to cover up an oversight. With the discovery of Retzius & Lovén (1845) it became pointless. This complex history had not been explained in any checklist or treatise or indeed in any other publication until recently, when Grubb (2001c) made an application to the Commission to remove *Hippotragus* Sundevall, 1845,

from the Index and place it on the Official List. The ICBN (2003) has now ruled in favour of this request.

Hartebeest and wildebeest, Alcelaphinae

Connochetidae Gray, 1872. *Catalogue of Ruminant Mammals in the British Museum*, p. 42. With incorrect prefix; emended to Connochaetinae by Knottnerus-Meyer (1907), *Archiv für Naturgeschichte* 73: 85; or to Connochaetini by Sokolov (1953), *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR* 14: 200.

Alcephalinae [sic] Brooke in Wallace, 1876. *Geographical Distribution of Animals*, p. 224. Incorrect original spelling; justifiably emended to Alcelaphinae by Pilgrim (1939), *Memoires of the Geological Survey of India, Palaeontology Indica N. S.* 26: 63.

Authors who would assign Connochaetes to a different tribe or subfamily have used the name Connochaetini or Connochaetinae but have not recognized its seniority over Alcelaphini or Alcelaphinae, so the older name is not to displace the younger one (Article 35.5, ICBN 1999).

Bontebok, *Damaliscus pygargus*

Antilope dorcas Pallas, 1766. *Miscellanea Zoologica*, p. 6. Kafferkuils R., Riversdale district, Western Cape, South Africa. Unavailable, because it is a junior secondary homonym (replaced before 1961) of *Antilope dorcas* (Linnaeus, 1758), the dorcas gazelle (originally named *Capra dorcas* and now *Gazella dorcas*).

Antilope pygargus Pallas, 1767. *Spicilegia Zoologica* 1: 10. Swart R., Caledon district, Western Cape, South Africa.

Harper (1939) revived the rejected name *dorcas*, which had not been in use for 160 years, treating it as the senior synonym. Not all workers followed him (e.g. Roberts 1951) and the name *A. dorcas* Pallas should be permanently invalid (Article 59[a], ICBN 1985b; Rookmaaker 1991). Nevertheless, it has since been in use for 52 years from 1939 to 1991. Grubb (1999) recounted the history of the case. If *dorcas* of Pallas had first been rejected only after 1960, it could have become valid under the new Code (Article 59.4, ICBN 1999). Now, if a revival of *dorcas* were desired, a submission would have to be made to the Commission, requesting appropriate use of its Plenary Powers.

Sub-Saharan ground squirrel, *Xerus erythropus*

Sciurus erythropus [sic] É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 178. Locality unknown. Original spelling incorrectly cited as *erythropus* by G. M. Allen (1939); *erythropus* deemed to be an incorrect original spelling; emended to *erythropus* and placed on the Official List (ICBN 1971). The type was one of the specimens seized from the Stadholder's museum by Napoleon and taken to Paris to be studied by Geoffroy.

'L'écureuil fossoyeur (sc. [Sciurus] *erythropus* [sic] Geof.) in Desmarest 1804. *Nouveau Dictionnaire d'Histoire Naturelle* 24(4): 21. Because a description is given, this is an available name. It is to be regarded as having an incorrect original spelling, which should be emended to *erythropus*.

'ECUREUIL A BANDES BLANCHES *Sciurus albovittatus*, Desm.' [Sonnerat's écureuil de Gingi or *Sciurus dschinschicus* Gmelin], including 'Var B., Ecureuil fossoyeur, *Sciurus albovittatus erythropus* [sic], *Sciurus rufoflavescens* [sic], *Sc. erythropus* [sic], Geoff.' in Desmarest 1817. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Édition* 10: 110. Because a description is given, this is an available name, but *erythropus* is to be regarded as having an incorrect original spelling, which should be emended to *erythropus*. *Sciurus albovittatus* is a synonym of *Xerus inauris* and so is *S. dschinschicus* according to Ellerman *et al.* (1953) though alternatively the latter name may be a synonym of *Callosciurus notatus* according to Corbet & Hill (1992). No author is cited for *S. rufoflavescens*, which is not listed in compendia. '*Sciurus erythropus* [sic]' in É. Geoffroy Saint-Hilaire & F. Cuvier (1842), *Histoire Naturelle des Mammifères*, Livraison 62 [unpaginated]. Senegal and Bornu.

This squirrel is a conspicuous and familiar animal in West Africa and has long been known as *Xerus* or *Euxerus erythropus*, but the type specimen was probably not from West Africa and belongs to a different species, while its name was possibly not intended to be *erythropus* ('red-foot').

Museum specimens taken from the Netherlands by Napoleon had originally come from the Dutch East Indies and the Cape of Good Hope. Several small mammals in the collection were from the

Cape. It is extremely unlikely that just one specimen, a small squirrel, should have been brought to the Netherlands from West Africa. The type of *Sciurus erythropus* is far more likely to have come from South Africa too, and to represent the South African ground squirrel *Xerus inauris* (Zimmermann, 1780). The West African and South African species are sufficiently similar superficially for Geoffroy's description of the pelage and claws to apply to either. Body dimensions can not differentiate them. Desmarest (1817) associated *erithopus* or *erythropus* with synonyms of *X. inauris*.

In his original description, Geoffroy called his new species 'L'écureuil fossoyeur', the gravedigger squirrel. It was 'remarquable par la longueur extraordinaire des ses ongues'. Geoffroy hence made two allusions to the large claws but nowhere indicated that it had reddish feet, and no African ground squirrels have red feet, so the name *erythropus* when emended to *erythropus* seems anomalous. Possibly the intended name was 'erithopus', from Ancient Greek 'erithos' (a day labourer, hired servant, mower or reaper) and 'pous' (foot). Geoffroy may have intended a fanciful reference to the function of the claws. Desmarest (1804) called it *Sciurus erithopus* and later (Desmarest 1817) used both the spellings *S. erithopus* and *S. erythropus* but made no reference to 'red foot' or 'erythropus' when he linked this name with other names of squirrels.

É. Geoffroy Saint-Hilaire & F. Cuvier (1842) illustrated and described a ground squirrel from living specimens, calling it the écureuil fossoyeur, *Sciurus erythropus* [sic] qui n'a encore été rapporté à ce que nous croyons, que du Sénégal et du Bournou'. They associated the name with West Africa and so were applying it to a different species. They understood nevertheless that Desmarest had confused African ground squirrels with an Indonesian tree squirrel described by Sonnerat, *Sciurus bilineatus* (= *Sciurus notatus* Boddaert, 1785 = *Callosciurus notatus*, of which *Sciurus dschinschicus* Gmelin, 1788, may be a synonym).

It would seem that *Sciurus erythropus* is a junior synonym of *Xerus inauris* (Zimmerman, 1780) and that the specific name was not intended to mean *erythropus*, so should not have been emended to that spelling. However, it is far too late to restore the status quo ante. The name in the emended form has been used very widely for the sub-Saharan ground squirrel for 160 years, the next available name (*Sciurus leucoumbrinus* Rüppell, 1835) is

not familiar, and retaining *erythropus* would be preferable. Husson & Holthius (1968) thought it best to validate what they called the grammatically correct and generally accepted emendation and it is now placed on the Official List (Opinion 945, ICBN 1971), dated from Geoffroy, 1803. The type specimen of *Xerus erythropus* has apparently been lost (Rode 1943), so one cannot prove that it is not a sub-Saharan ground squirrel. Rode (1943) noted that specimen No. 423 in the Paris Museum was labelled as the 'type' but this is not correct as it had been acquired by Florent Prevost in 1820, long after the original description.

Hoffman *et al.* (1993) cited the name of the species as '*Xerus erythropus* Desmarest, 1817', appropriately corrected from *erythropus*, though it should have been '*Xerus erythropus* (É. Geoffroy Saint-Hilaire in Desmarest, 1817)' and this name is preoccupied. '*Xerus erythropus* (É. Geoffroy Saint-Hilaire in Desmarest, 1804)' was published earlier and is available. It would be valid if '*Xerus erythropus* (É. Geoffroy Saint-Hilaire, 1803)' had not been conserved (ICBN 1971).

Large grey dormouse, *Graphiurus nagtglasii*

Graphiurus hueti de Rochebrune, 1883. *Actes de la Société Linnaéenne de Bordeaux* (4)7: 110. St Louis, Sorres, northern Senegal. Nomen dubium.

Graphiurus nagtglasii Jentink, 1888. *Notes of the Leyden Museum* 10: 38. DuQueah and Farmington Rivers, Liberia.

The name *hueti* is regarded as a nomen dubium unless or until the type specimen is rediscovered, because the original description is hardly diagnostic of a large African dormouse and the type locality is far outside the known habitat of this forest species (Grubb & Ansell 1996).

Emin's pouched rat, *Cricetomys dissimilis*

Cricetomys dissimilis de Rochebrune, 1885. *Bulletin de la Société Philomathique de Paris* (7)9: 86. Landana, Cabinda enclave, Angola.

Cricetomys gambianus emini Wroughton, 1910. *Annals and Magazine of Natural History* (8)5: 106. 'Gaddu' (= Gadda), Monbuttu, Democratic Republic of the Congo.

De Rochebrune (1885) described his new species as follows (translated from the Latin): Like *C. gambianus* in appearance but smaller (head-and-body length 22.6 cm, tail length 38.5 cm); back dusky chestnut, intermingled with black; sides dirty tawny; edge of upper lip, underside of neck

and throat, abdomen, and inside of limbs pale grey-white; outside of arms and legs tawny yellow margined with bright whitish tone; digits white; snout covered with very short reddish hairs; whiskers black; ears inside yellowish, outside reddish, thinly haired; anterior part of tail chestnut, posterior part white, middle section spotted with chestnut and covered in whitish bristles.

The specimen was in the collection of A. Bouvier and was obtained by A. Lucan and Louis Petit, who collected at Landana between 1876 and 1884 (Rand *et al.* 1959). It is not known where the specimen might be, if it survives. The tail seems proportionally very long but the body measurements were possibly made on the preserved specimen and may not be accurate. Probably it is immature. The description is compatible with the sleek-furred forest species commonly called *C. emini*. In a preliminary revision of *Cricetomys*, Hinton (1919) recognized *gambianus*, *emini* and other unspecified species-groups as divisions in the genus but did not refer to *C. dissimilis*. Hatt (1940) provided a more extensive revision. He recognized *C. dissimulus* (lapsus for *dissimilis*) as one of three species in the Democrat Republic of the Congo. He stated (p. 495, footnote) that 'A specimen in the Musée du Congo Belge from Ganda Sundi [4°47'S 12°54'E] is from sufficiently near the type locality of *C. dissimulus* [sic] Rochebrune (Landana [5°14'S 12°08'E]) that I base my estimate of that form on the specimen', and included *emini* as a subspecies of *C. dissimulus* [sic]. Genest-Villard (1967: 321) regarded *dissimilis* as a nomen dubium but provided no explanation and made no mention of Hatt's conclusions or why they should be rejected. Since Genest-Villard's revision, *C. emini* has been accepted as the name for the sleek-furred forest forms of *Cricetomys*. The name *dissimilis* was potentially in use as the species name for 27 years, whereas the name *emini* has been current for 35 years. However, Hatt's (1940) conclusions seem reasonable and until they are rebutted, there is a case for using the name *dissimilis* for the sleek-furred species because it has priority over *emini*. If authors wish to retain the name *emini* then they should make appropriate applications to the Commission.

Nile rats, *Arvicanthis*

Arvicanthis Lesson, 1842. *Nouveau Tableau de Règne Animal. Mammifères*, p. 147. Type species: *Lemmus niloticus* É. Geoffroy Saint-Hilaire, 1803.

Isomys Sundevall, 1843. *Kungliga Svenska Vetenskaps-Akademiens Handlingar* 1842: 219. Type species: 'Mus variegatus Brants, 1827' = *Hypudaeus variegatus* Lichtenstein, 1823 = *Arvicanthis niloticus*.

Musser & Carleton (1993) cited *Lemmus niloticus* Desmarest, 1822 as the type of *Arvicanthis* Lesson, but Desmarest's name published in 1822 was *Arvicola* (not *Lemmus*) *niloticus* and it is not the type of *Arvicanthis* Lesson. The type of the genus was cited correctly as *Lemmus niloticus* É. Geoffroy Saint-Hilaire by other authors (G.M. Allen 1939; Ellerman & Morrison-Scott 1951; Corbet 1978), though they did not quote the year of publication (1803), and like Musser & Carleton (1993) they based the specific name *Arvicanthis niloticus* on *Arvicola niloticus* [É. Geoffroy Saint-Hilaire in] Desmarest, 1822 published 19 years later. It is not possible for a genus to pre-date the name of its type species. Either *Arvicanthis* Lesson is unavailable or *Lemmus niloticus* Geoffroy is available. If the former, then *Isomys* could replace *Arvicanthis*. This would be most undesirable because *Arvicanthis* has become a very familiar name. As it has now been confirmed that *Lemmus niloticus* É. Geoffroy Saint-Hilaire, 1803 is available (Opinion 2005, ICZN 2002), *Arvicanthis* Lesson, 1842, is available as well.

Multimammate rats, *Mastomys*

Mastomys Thomas, 1915. *Annals and Magazine of Natural History* 16: 477. Type species: *Mus coucha* A. Smith, 1836.

Myomys Thomas, 1915. *Annals and Magazine of Natural History* 16: 477. Type species: *Epimys colonus* A. Smith = *Mus colonus* Brants, 1827 = *Mastomys* species.

Myomys has been treated as a genus including *M. verreauxi* and other species of rat (G.M. Allen 1939; Rosevear 1969; Musser & Carleton 1993). The type species, *M. colonus*, has been treated as a senior synonym of *M. shortridgei* (G.M. Allen 1939) or of *M. verreauxi* (Roberts 1951), or an invalid synonym of *M. verreauxi*, in spite of its seniority (Musser & Carleton 1993). It has also been regarded as unidentifiable, so that *Myomys* becomes a nomen dubium (Ellerman *et al.* 1953; Meester *et al.* 1986). But the type of *Mus colonus* Brants is now known to be a *Mastomys*, though the specimen cannot be identified to species (Van der Straeten & Robbins, 1997). Therefore *Mus colonus* is not a senior synonym of *Mus verroxii* A. Smith, 1834 (= *Myomyscus verreauxi*) nor can *Myomys* be a

senior synonym of *Myomyscus* Shortridge, 1942, of which *Mus verroxii* is the type.

TAXA NAMED IN GEOFFROY'S 'CATALOGUE DES MAMMIFÈRES'

Authors had been inconsistent in quoting from É. Geoffroy Saint-Hilaire (1803), a work that was never declared to be unavailable. Grubb (2001a) requested that its availability be formally established and the ICBN (2002b) has now confirmed that it is available for nomenclatural purposes. Names of African mammals attributed to É. Geoffroy Saint-Hilaire (1803) are listed below, together with later citations that were once considered to provide the first available names. Some of Geoffroy's names have never been cited by other authors and these are now nomina obliterata.

Long-eared hedgehog, *Hemiechinus auritus aegyptius*

Erinaceus aegyptius É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 69. Egypt.

'*E. aegyptius* Geoffr.' in J. B. Fischer, 1829. *Synopsis Mammalium*, p. 262. Next available name.

Red fox, *Vulpes vulpes niloticus*

Canis niloticus É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 134. Egypt.

'*Canis egyptius* Geoffr.' in Desmarest, 1804. *Nouveau Dictionnaire d'Histoire Naturelle* 24(4): 18. Should be regarded as '*Canis egyptius* Desmarest, 1804'; nomen nudum.

'*Canis aegyptiacus* Geoffr.' in Desmarest [and Sonnini], 1816. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Édition* 6: 524. Should be regarded as '*Canis aegyptiacus* Desmarest, 1816'; next available name. The name is usually attributed to Sonnini but both authors made separate contributions to the article in which it was published, not all of which were initiated. Since Desmarest had already made the error of citing Geoffroy's name '*niloticus*' as '*egyptius*', it is more probable that he is the author of '*aegyptiacus*'.

African civets, *Civettictis*

Civetta É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle* p. 113. Type species, by tautonymy: *Civetta vulgaris* É. Geoffroy

Saint-Hilaire, 1803 (ibidem, p. 111) = *Viverra civetta* von Schreber, 1776 (*Säugethiere* pl. 111) = *Civettictis civetta*. Nomen oblitum.

Civettictis Pocock, 1915. *Proceedings of the Zoological Society of London* 1915: 134. Nomen protectum.

Brown hyaena, *Parahyaena brunnea*

Hyaena fusca É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 136. Nomen oblitum. Locality unknown.

'*hyaena* [*Hyaena*] *fusca* Geoffr.' in Desmarest 1804. *Nouveau Dictionnaire d'Histoire Naturelle* 24(4): 18. Nomen nudum.

Hyaena brunnea Thunberg, 1820. *Kungliga Svenska Vetenskaps-Akademiens Handlingar*, Stockholm, p. 59, pl. 2. Nomen protectum. Cape of Good Hope.

'*Hyaena fusca* Geoffr. St.-Hil.' in I. Geoffroy Saint-Hilaire, 1825. *Dictionnaire Classique d'Histoire Naturelle* 8: 444.

Roan antelope, *Hippotragus equinus*

Antilope equina É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 259. Locality unknown.

Antilope equina É. Geoffroy Saint-Hilaire in Desmarest, 1804. *Nouveau Dictionnaire d'Histoire Naturelle* 24(1): 32. Next available name.

Grubb (1999) cited Geoffroy's (1803) name as '*Antilope equina*' but a closer inspection of the text indicated that '*Antilope*' was correctly printed.

Red hartebeest, *Alcelaphus caama*

Antilope Caama [sic] É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle* p. 269. Cape of Good Hope.

Antilope caama G. Cuvier, 1804. *Dictionnaire des Sciences Naturelles* 2: 242. Next available name.

Lemmus albicaudatus

Lemmus albicaudatus É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle* p. 186. Locality unknown.

'*Lemmus albicaudatus*. C'est encore M. Geoffroy Saint-Hilaire qui a distingué cette nouvelle espèce' in Desmarest (1816c: 81. *Nouveau*

Dictionnaire d'Histoire Naturelle, Nouvelle Edition 5: 81). Next available name.

Possibly a senior homonym of *Otomys* (= *Mystromys*) *albicaudatus* A. Smith, 1834, but this has yet to be confirmed.

Greater gerbil, *Gerbillus pyramidum*

Dipus pyramidum É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle* p. 202. The Great Pyramids, Egypt.

'*gerbillus* [sic; for *Gerbillus*] *pyramidum* nob.; *dipus* [*Dipus*] Geoff.' in Desmarest 1804. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Edition 29*: 70; 22. Nomen nudum.

'*Dipus pyramidum*, Geoffr.' in Desmarest 1817. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Edition 13*: 122. Cited in synonymy with a description of the Paris specimen under the heading of *Gerbillus aegyptius* = *G. gerbillus* (Olivier, 1800).

'*Dipus pyramidum*, Geoffr.' in Desmarest 1822. *Encyclopédie Méthodique. Mammalogie ou Description des Espèces de Mammifères* 2: 321. Cited in synonymy with a description of the Paris specimen listed under the heading of *Gerbillus aegyptius* = *G. gerbillus* (Olivier, 1800).

'*Gerbillus pyramidum*' in I. Geoffroy Saint-Hilaire 1825: 321. *Dictionnaire Classique d'Histoire Naturelle* 7: 321. Next available name.

Spiny mouse, *Acomys cahirinus*

Mus cahirinus É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 195. Egypt.

Mus cahirinus É. Geoffroy Saint-Hilaire in Desmarest, 1819. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Edition 29*: 70. Next available name.

Black rat, *Rattus rattus alexandrinus*

Mus alexandrinus É. Geoffroy Saint-Hilaire, 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 192. Egypt.

Mus alexandrinus É. Geoffroy Saint-Hilaire in Desmarest, 1819. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Edition 29*: 70. Next available name.

Nile rat, *Arvicantis niloticus*

Lemmus niloticus É. Geoffroy Saint-Hilaire,

1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*, p. 186. Egypt.

lemmus [*Lemmus*] *niloticus* É. Geoffroy Saint-Hilaire in Desmarest, 1804. *Nouveau Dictionnaire d'Histoire Naturelle* 24(4): 23. Nomen nudum.

'*Lemmus niloticus* M. Geoffroy donne ce nom à une nouvelle espèce' in Desmarest 1816. *Nouveau Dictionnaire d'Histoire Naturelle, Nouvelle Edition 5*: 80. Next available name.

'*arvicola* [*Arvicola*] *niloticus*, *Lemmus niloticus* Geoff. Descript. de l'Egypte' [the relevant volume did not appear until 1829, and the species was cited there as *Echimys niloticus*] in Desmarest 1822. *Encyclopédie Méthodique. Mammalogie ou Description des Espèces de Mammifères* 2: 281. The name *niloticus* is usually attributed to this citation but it is not the first one available after Geoffroy (1803).

NAMES WITH INCORRECT ORIGINAL SPELLING

The Rules of Nomenclature (ICZN 1999) determine whether scientific names are spelt 'correctly' or 'incorrectly', irrespective of generally accepted and conventional usage in other contexts. A conventionally incorrect spelling can nevertheless be 'correct' under the Rules. Where a scientific name is spelt unconventionally, the conventional spelling has sometimes been restored and has come into prevailing scientific usage, adopted by at least a substantial majority of most recent authors. In these circumstances, the new spelling is deemed to have become a 'correct original spelling' (Article 33.2.3, 33.3, ICZN 1999) and the old spelling then reverts to the status of an 'incorrect original spelling'. Names which were not spelt originally in accordance with common practice but whose spellings have never been disputed stay as they are. An example is the waterbuck *Kobus ellipsiprymnus adolfi-friderici* (*Kobus adolfi-friderici* Matschie, 1906. *Weidwerk in Wort und Bild* 15: 234), named after Adolf Friedrichs, Herzogs zu Mecklenberg.

Ansell's shrew, *Crocidura ansellorum*

Crocidura anelli Hutterer & Dippenaar, 1987. *Bonner Zoolgische Beiträge* 38: 1. 'Named after W. F. H. Ansell and his son P.D.H. Ansell'. Incorrect original spelling.

Crocidura ansellorum Hutterer & Dippenaar, 1987. Correct original spelling in Hutterer & Dippenaar (1987), *Bonner Zoolgische Beiträge*

38: 269. The species was named after two persons, so a plural genitive species-name is required.

Egyptian fruit-bat, *Rousettus aegyptiacus*

Pteropus aegyptiacus É. Geoffroy Saint Hilaire, 1810. *Annales du Muséum National d'Histoire Naturelle, Paris* 15: 96. Incorrect original spelling.

Rousettus aegyptiacus (É. Geoffroy Saint Hilaire, 1810). Correct original spelling as *Pteropus aegyptiacus* in É. Geoffroy Saint Hilaire (1818), *Description de l'Egypte. Mammifères* 2: 134.

This case has been fully discussed by Kock (2001).

Anchieta's pipistrelle, *Pipistrellus anchietae*

Vesperugo anchietae Seabra, 1900. *Jornal de Ciencias Mathematicas, Physicas e Naturaes* (2)6(21): 26. Incorrect original spelling.

Pipistrellus anchietae (Seabra, 1900). Correct original spelling as *Vesperugo anchietae* in Seabra (1900), *Jornal de Ciencias Mathematicas, Physicas e Naturaes* (2)6(22): 120.

Pipistrellus anchietae Ellerman, Morrison-Scott & Hayman, 1953. *Southern African Mammals*, pp. 79, 80, 81. Incorrect subsequent spelling.

This case has been fully discussed by Kock (2001).

Ms Curry's butterfly bat, *Glauconycteris curryae*

Glauconycteris curryi Eger & Schlitter, 2001. *Acta Chiropterologica* 3: 2. 'Named in honour of Noreen Curry.' Incorrect original spelling.

Glauconycteris curryae Eger & Schlitter, 2001. Correct original spelling in Eger (2001), *Acta Chiropterologica* 3: 248.

The authors did not explain how the specific name was formed but as there is no 'y' in Latin, the name 'curryi' can be assumed to have been formed directly from the modern personal name and therefore, as it is the name of a woman, must be corrected to 'curryae' (Article 31.1.2, ICBN 1999).

European free-tailed bat, *Tadarida teniotis rueppellii*

Dyposes rüpellii Temminck, 1827. *Monographie Mammalium* 1: 224, pl. 18. Incorrect original spelling.

Tadarida teniotis rueppellii (Temminck, 1827). Correct original spelling in Qumsiyeh (1985),

Special Publications, Museum Texas Tech University 23: 71.

Bushbabies, *Galagidae*

Galagonina Gray, 1825. *Annals of Philosophy* 26: 338. Incorrect original spelling.

Galaginae Gray, 1825. Correct original spelling in Mivart (1864), *Proceedings of the Zoological Society of London*, p. 637.

According to Article 29(b)(ii) of the Code (ICZN 1985b), the author who first establishes a family-group name on the strength of a non-classical name determines the stem by which it is formed. Hence 'Galago' has been given the stem 'Galagon-', not 'Galag-' (Jenkins 1987). However, 'Galagidae' has been more widely used than 'Galagonidae'. Schwartz *et al.* (1998) applied to the Commission for the form 'Galagidae' to be conserved, and the Commission has now conserved this spelling (Opinion 1995, ICBN 2002a).

Pottos and lorises, *Lorisidae*

Loridae Gray, 1821. *London Medical Repository*, 15: 298. Incorrect original spelling.

Lorisinae Gray, 1821. Correct original spelling in Flower & Lydekker (1891), *Mammals Living and Extinct*, p. 691.

This is a parallel case to that of Galagonidae.

Temminck's bay colobus, *Procolobus badius temminckii*

Colobus temminckii Kuhl, 1820. *Beiträge de Zoologie*, p. 7. Incorrect original spelling.

Procolobus badius temminckii (Kuhl, 1820). Correct original spelling, as *Cercopithecus temminckii* in Ogilby 1838, *Library of Entertaining Knowledge, The Menageries* 1: 345, and most authors.

Mountain gorilla, *Gorilla gorilla beringei*

Gorilla beringeri Matschie, 1903. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1903: 257. Incorrect original spelling.

Gorilla beringei Matschie, 1903. Correct original spelling in Matschie (1903), *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1903: 259, and of most authors.

Matschie (1903) first named this gorilla *Gorilla beringeri* on page 257 but on page 259 called it *Gorilla beringei*. Later he used the spelling *Gorilla beringeri* twice on one page (Matschie 1904: 51) and subsequently called it *Gorilla beringei*, again twice on one page (Matschie 1905: 279). The name

beringeri has page priority but is deemed to be an incorrect original spelling (Article 19.3, ICZN 1999).

Sand fox, *Vulpes rueppellii*

Canis rüppellii Schinz, 1825. *Cuvier's Thierreich* 4: 508. Incorrect original spelling.

Vulpes rueppellii (Schinz, 1825). Correct original spelling in Harrison & Bates (1991), *Mammals of Arabia*, p. 118.

The name of this fox is nearly always misspelt as *rüppelli*, *rüppelli* or *rueppelli*. The umlaut is to be deleted and letter 'e' inserted after the 'u' (Article 32.5.2.1, ICZN 1999); use of the genitive ending *-ii* is to be maintained (Article 33.4, ICZN 1999); and restoration of *ll* in Rüppell's name has long been accepted and is a justified emendation (Article 33.2.3.1, and also Articles 32.2.2 and 33.2.2, ICZN 1999).

Burchell's zebra, *Equus burchellii chapmani*

Equus chapmanni Layard, 1865. *Proceedings of the Zoological Society of London* 1865: 417. Incorrect original spelling.

Equus burchellii chapmani Layard, 1865. Correct original spelling, as *Equus chapmani* in Trouessart (1898), *Catalogus Mammalium tam Viventium quam Fossilium*, p. 798.

This form of Burchell's zebra was named after James Chapman so its name has been regarded as an incorrect original spelling.

Royal antelope, *Neotragus pygmaeus*

Capra pygmaea Linnaeus, 1758. *Systema Naturae* 10th edn, 1: 67. Incorrect original spelling. Wrongly cited as *Capra pygmaea* by G.M. Allen (1939), *Bulletin of the Museum of Comparative Zoology, Harvard* 83: 498.

Neotragus pygmaeus (Linnaeus, 1758). Correct original spelling, as *Moschus pygmaeus*, in Linnaeus (1766), *Systema Naturae* 12th edn, 1: 92.

Authors have adopted the spelling *pygmaeus*, in accord with the masculine generic name *Neotragus*. The original spelling modified to *pygmaeus* has been ignored but was cited by Grubb (1993, i.e. 1995 reprinting) and Grubb *et al.* (1998). Under the new Code, it should be disregarded.

Klipspringer, *Oreotragus oreotragus porteousi*

Oreotragus saltator porteusi Lydekker, 1911. *Abstract. Proceedings of the Zoological Society of*

London 98: 38. Incorrect original spelling
Oreotragus oreotragus porteousi Lydekker, 1911. Correct original spelling in Lydekker & Blaine (1914), *Catalogue of the Ungulate Mammals in the British Museum (Natural History)* 2: 130.

Red-footed striped squirrel, *Funisciurus pyrrhopus*

Sciurus pyrropus [sic] F. Cuvier, 1842, *Histoire Naturelle des Mammifères* 4: part 66, pl. 240 and text. Incorrect original spelling, which was not authentically cited by G.M. Allen (1939: 292).

Funisciurus pyrrhopus (F. Cuvier, 1842). Correct original spelling, as *Sciurus pyrrhopus* in Schinz (1845), *Systematisches Verzeichniss aller bis jetzt Bekannten Säugetiere* 2: 24.

The original spelling was reintroduced by Hoffman *et al.* (1993) although it had not been used in recent years.

Naked-footed gerbils, *Gerbillus (Hendecapleura)*

Endeapleura Lataste, 1882. *Le Naturaliste, Paris* 4: 127. Incorrect original spelling. Based on the Ancient Greek *hendeca* (eleven) and *pleuron* (rib). Lataste had omitted the initial 'h' in Roman transcription, represented by the diacritic (rough breathing or aspiration) above the initial 'e' (epsilon) in Greek script.
Hendecapleura Lataste, 1882. Correct original spelling in Lataste in Poliakoff (1884), *Annales Museum Civico di Storia Naturale, Genova* 20: 258, footnote, and of most authors.

Verreaux's rat, *Myomyscus verreauxi*

Mus verroxii A. Smith, 1834. *South African Quarterly Journal* 2: 156. Incorrect original spelling

Myomyscus verreauxi (A. Smith, 1834). Correct original spelling, as *Mus verreauxi* in W.L. Sclater (1901), *Mammals South Africa* 2: 45, and of most authors.

The name is cited as *Myomys verroxii* by G.M. Allen (1939) or *Myomys colonus verroxii* by Roberts (1951). The subsequent spelling has since become preferred as *Rattus (Praomys) verreauxi* in Ellerman *et al.* (1953), *Praomys verreauxi* in Davis (1974), *Praomys (Myomyscus) verreauxi* in Misonne (1974) and Honacki *et al.* (1982), *Myomyscus verreauxi* in Meester *et al.* (1986) and Musser & Carleton (1993),

and *Mastomys verreauxii* [sic] in Stuart & Stuart (1988).

NAMES ALTERED TO GIVE 'INCORRECT SUBSEQUENT SPELLINGS'

Names in which the terminal 'i' has been removed (e.g. *selousi* in *Equus burchellii selousii*) are not cited here. Use of the genitive ending -ii is to be maintained (Article 33.4, ICZN 1999).

Northern talapoin, *Miopithecus ogouensis*

Miopithecus ogouensis Kingdon, 1997. *The Kingdon Field Guide to African Mammals*, p. 55.

Miopithecus ogouensis Gautier-Hion, Colyn & Gautier, 1999. *Histoire Naturelle des Primates d'Afrique Centrale*, p. 57. Incorrect subsequent spelling.

Kingdon (1997) accepted that this was a distinct species, as yet undescribed, and gave it a name together with a description and two illustrations. He then stated that 'A nomen nudum, 'Miopithecus ogouensis' is used here in anticipation of a formal description'. This is taken to be an incorrect interpretation of the nature of the name he had just proposed, not a conditional naming – one made with stated reservations (Article 15.1, ICZN 1999) – so the name is considered to be available. The specific name alludes to the Ogôoué River and has been changed by Gautier-Hion *et al.* (1999) but this is an incorrect subsequent spelling. The appropriate construction of the name would have been 'ogouensis' not 'ogouensis' but the spelling used by the author of the name remains the correct original spelling.

Miss Waldron's bay colobus monkey, *Procolobus badius waldroni*

Colobus badius waldroni Hayman, 1936. *Proceedings of the Zoological Society of London* 1936: 915. 'I have much pleasure in connecting with this remarkably handsome discovery the name of Miss [F.] Waldron, who contributed much to the success of the expedition.'

Piliocolobus badius waldronae Kingdon, 1997. *The Kingdon Field Guide to African Mammals*, p. 26. Incorrect subsequent spelling.

Although this monkey was named after a woman, it could be inferred that her name was latinized to 'Waldronus', which would give the genitive form 'Waldroni'. All editions of the Code indicate that the sex of the person acknowledged in a species-group name does not determine

whether the latinized form should be in the first or second declension. There is no call for an emendation of the name.

Kisangani red colobus monkey, *Procolobus badius parmentieri*

Colobus rufomitratus parmentieri Colyn & Verheyen, 1987. *Revue de Zoologie Africaine* 101: 126.

Colobus rufomitratus parmentierorum Colyn 1993. *Revue de Zoologie Africaine* 107: 319, footnote. Incorrect subsequent spelling.

The authors of this new 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 & 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 it is named after M. and Mme. Parmentier, and therefore should take the plural genitive form 'parmentierorum' (Colyn 1993). However, the rules concerning interpretations of the intentions of authors are not explicit, especially when one is inferring whether or not an author intended a name to take a form requiring the genitive plural when he or she nevertheless used the singular. This monkey is 'dédie à' not 'nommé d'après' M. and Mme. Parmentier. The authors have commemorated the family name rather than naming the monkey after the two persons. The distinction may seem pedantic but it could save us from changing the spelling to *parmentierorum*.

African wild-cat, *Felis silvestris lybica*

Felis lybica Forster, 1780. *Buffon's Naturgeschichte der vierfüßigen Thiere* 6: 313.

Felis libyca Ellerman & Morrison-Scott 1951. *Checklist of Palearctic and Indian Mammals*, p. 304. Incorrect subsequent spelling.

Burchell's zebra, *Equus burchelli crawshaii*

Equus burchelli crawshaii de Winton, 1896. *Annals and Magazine of Natural History* 17: 319.

E. b. crawshayi Pocock 1897. *Annals and Magazine of Natural History* 20: 46. Incorrect subsequent spelling.

Pocock's emendation was accepted by some authors but the name is not often cited. Recently Smithers & Lobão Tello (1976), Ansell (1978), and Ansell & Dowsett (1988) have treated *crawshaii* as the correct spelling for the name of the narrow-

striped zebras of northern Mozambique, Malawi and Zambia. The name is correctly formed (cf. *spekii*, *cokii*) and it may be proper to use this original spelling especially as use of the genitive ending -*ii* is to be maintained (Article 33.4, ICZN 1999).

Bongo, *Tragelaphus eurycerus*

Antilope eurycerus Ogilby, 1837. *Proceedings of the Zoological Society of London* 1836: 120.

Tragelaphus euryceros Gray, 1850. *Gleanings from the Menagerie and Aviary at Knowsley Hall*, p. 27. Incorrect subsequent spelling; a common error.

Bushbuck, *Tragelaphus scriptus roualeyni*

Antelopus roualeyni Gordon Cumming, 1850. *A Hunter's Life in South Africa* 2: 165, 168.

Tragelaphus scriptus roualeyni Thomas 1891. *Proceedings of the Zoological Society of London* 1891: 389. Incorrect subsequent spelling (Grubb 1999).

Yellow-backed duiker, *Cephalophus silvicultor*

Antilope silvicultrix Afzelius, 1815. *Nova Acta Regiae Societatis Scientiarum Upsaliensis* 7: 265.

Cephalophus silvicultor Thomas, 1892. *Proceedings of the Zoological Society of London* 1892: 416. Incorrect subsequent spelling and a very common error.

The feminine *silvicultrix* changes to the masculine *silvicultor* when allocated to *Cephalophus*. The Latin word 'silva' is often treated as 'sylva', in parallel with the Greek 'hyla' according to the Oxford English Dictionary. Hence, spellings of the stem can be *syly-* or *silv-*. Mammalian specific names such as *sylvanus*, *sylvatica*, *sylvestris* and *sylvia* are quite common, but there are also *silvicola*, *silvatica* or *silvestris*. The original spelling of the stem, in this case *silv-*, should be followed.

Kongoni or Coke's hartebeest, *Alcelaphus buselaphus cokii*

Alcelaphus cokii Günther, 1884. *Annals and Magazine of Natural History* (5)14: 426.

Alcelaphus cokei Johnston, 1886. *Kilima-Njaro Expedition*, p. 65. Incorrect subsequent spelling. Use of the genitive ending -*ii* is to be maintained (Article 33.4, ICZN 1999).

Welman's gerbil, *Tatera (kempi) welmanni*

Taterona welmanni [sic] St Leger, 1929. *Annals and Magazine of Natural History* (10)3: 387.

Tatera welmanni Rosevear, 1969. *The Rodents of West Africa*. Incorrect subsequent spelling even though it is named after J. B. Welman, not Welmann.

CONCLUSIONS

The new Code (ICZN 1999) came into effect from January 2000. It offers more opportunities to maintain nomenclatural stability without having to appeal to the ICZN. Unused senior family-group names and forgotten original spellings or neglected senior synonyms of species-group names can now become invalid without a ruling from the ICZN. The most contentious cases involving nomenclature (e.g. *Genetta maculata*) do not necessarily require intervention by the ICZN. The ICZN has recently published rulings concerning the conservation of *Hippotragus* Sundevall, 1845, and the availability of É. Geoffroy Saint-Hilaire (1803). The last ruling affects the dating (and authorship) of *Hemicheinus auritus aegyptius*, *Hippotragus equinus*, *Alcelaphus caama*, *Gerbillus pyramidum*, *Acomys cahirinus*, *Rattus rattus alexandrinus*, *Arvicantis*, *A. niloticus* and perhaps *Mystromys albicaudatus*, as well as the validity of *Vulpes vulpes niloticus*. The conservation of *Tragelaphini* Blyth and *Reduncinae* Knottnerus-Meyer will have to be addressed, while authors may see a need to consider the availability of *Galagooides demidoff*, the authorship of *G. rondoensis* and *G. udzungwensis*, and the validity of *Damaliscus pygargus* and *Cricetomys dissimilis*. The stability of a name for the rusty-spotted genet (commonly known as *Genetta rubiginosa*) is threatened and is being discussed at the moment.

ACKNOWLEDGEMENTS

I am grateful to Anthea Gentry for elucidating the complex history of *Hippotragus*, to Douglas Brandon-Jones for clarifying Articles 50 and 75 of the Code, and to Paul Honess for a copy of his Ph.D. dissertation.

REFERENCES

- AELLEN, V. & BROSSETT, A. 1968. Chiroptères du sud du Congo. *Revue Suisse de Zoologie* 75: 435-458.
- ALLEN, G.M. 1939. A checklist of African mammals. *Bulletin of the Museum of Comparative Zoology at Harvard College* 83: 1-763.
- ALLEN, J.A. 1925. Primates collected by the American Museum Congo Expedition. *Bulletin of the American Museum of Natural History* 47: 283-499.
- ANDERSON, K. & WROUGHTON, R.C. 1907. On the bats of the family Megadermatidae. *Annals and Magazine of Natural History* (7) 19: 129-145.
- ANGAS, G.F. 1849. Description of *Tragelaphus Angasii*, Gray, with some accounts of its habits. *Proceedings of*

- the Zoological Society of London* 1848: 89–90.
- ANSELL, W.F.H. 1972. Order Artiodactyla. In: *The Mammals of Africa: An Identification Manual*, (eds) J. Meester & H.W. Setzer. Part 15. Smithsonian Institution Press, Washington, D.C.
- ANSELL, W.F.H. 1978. *The Mammals of Zambia*. The National Parks and Wildlife Service, Chilanga, Zambia.
- ANSELL, W.F.H. 1980. *Antelope zebra* Gray, 1838 (Mammalia): revised proposals for conservation. *Bulletin of Zoological Nomenclature* 37: 152–153.
- ANSELL, W.F.H. 1989. *African Mammals 1938–1988*. Trendrime Press, Zennor, Cornwall, United Kingdom.
- ANSELL, W.F.H. & DOWSETT, R.J. 1988. *Mammals of Malawi. An Annotated Check List and Atlas*. The Trendrime Press, Zennor, Cornwall, United Kingdom.
- BEARDER, S.K. 1999. Physical and social diversity among nocturnal primates: a new view based on long term research. *Primates* 40: 267–282.
- BENNETT, E.T. 1832. On several skins of Mammalia from Algoa Bay. *Proceedings of the Committee of Science and Correspondence of the Zoological Society of London* 2: 122–123.
- BLANFORD, W.T. 1891. *Fauna of British India. Mammalia*. Part 2. Taylor & Francis, London.
- COETZEE, C.G. 1977. Order Carnivora. In: *The Mammals of Africa: An Identification Manual*, (eds) J. Meester & H.W. Setzer. Part 8. Smithsonian Institution Press, Washington, D.C.
- COLYN, M.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.M. & VERHEYEN, W.N. 1987. *Colobus rufomitratus parmentieri*, une nouvelle sous-espèce du Zaire (Primates, Cercopithecidae). *Revue de Zoologie Africaine* 101: 125–132.
- CORBET, G.B. 1978. *The Mammals of the Palaearctic Region*. British Museum (Natural History), London.
- CORBET, G.B. & HILL, J.E. 1992. *The Mammals of the Indomalayan Region*. Oxford University Press, Oxford.
- CRAWFORD-CABRAL, J. 1981. The classification of the genets (Carnivora, Viverridae, genus *Genetta*). *Boletim da Sociedade Portuguesa de Ciências Naturais, Lisboa* 20: 97–114.
- DAVIS, D.H.S. 1974. The distribution of some small southern African mammals (Mammalia: Insectivora, Rodentia). *Annals of the Transvaal Museum* 29: 135–184.
- DESMAREST, A. 1804. Tableau méthodique des mammifères. *Nouveau Dictionnaire d'Histoire Naturelle* 24(4): 5–38. Deterville, Paris.
- DESMAREST, A. 1817. Ecureuil. *Nouveau Dictionnaire d'Histoire Naturelle*. Nouvelle Edition 10: 102–111. Deterville, Paris.
- DESMAREST, A. 1820, 1822. *Encyclopédie Méthodique. Mammalogie ou Description des Espèces de Mammifères*. Mme. Veuve Agasse, Paris.
- DOBSON, G.E. 1878. *Catalogue of the Chiroptera in the British Museum*. British Museum, London.
- ELLERMAN, J.R. & MORRISON-SCOTT, T.C.S. 1951. *Checklist of Palaearctic and Indian Mammals 1758 to 1946*. Trustees of the British Museum, London.
- ELLERMAN, J.R., MORRISON-SCOTT, T.C.S. & HAYMAN, R.W. 1953. *Southern African Mammals 1758–1951: A Reclassification*. Trustees of the British Museum, London.
- ELLIOT, D.G. 1913. *A Review of the Primates*. American Museum of Natural History, New York.
- FISCHER [VON WALDHEIM], G. 1806. Zoognosie. Nouvelles espèces d'animaux qui se trouvent au Muséum Impérial d'Histoire Naturelle. *Mémoires de la Société des Naturalistes de l'Université Impériale de Moscou* 1: 23–26.
- FISCHER [VON WALDHEIM], G. 1808. *Galago demidovii*, nova species quadromanorum, observatis anatomicus illustratis. *Commentationes Societatis Physico-Medicae, apud Universitatem Literarum Caesaream Mosquensis Instituta* 1(1): 57–79.
- GATESY, J., AMATO, G., VRBA, E., SCHALLER, G. & DE SALLE, R. 1997. A cladistic analysis of mitochondrial DNA from the Bovidae. *Molecular Phylogenetics and Evolution*, 7: 303–319.
- GAUBERT, P., TRANIER, M., VERON, G., KOCK, D., DUNHAM, A.E., TAYLOR, P.J., STUART, C., STUART, T. & WOZENCRAFT, W.C. 2003. *Viverra maculata* Gray, 1830 (currently *Genetta maculata*; Mammalia, Carnivora): proposed conservation of the specific name. *Bulletin of Zoological Nomenclature* 60: 45–47.
- GAUTIER-HION, A., COLYN, M. & GAUTIER, J.-P. 1999. *Histoire Naturelle des Primates d'Afrique Centrale*. ECOFAC, Libreville, Gabon.
- GENEST-VILLARD, H. 1967. Revision du genre *Cricetomys* (Rongeurs, Cricetidae). *Mammalia* 31: 390–455.
- GEOFFROY SAINT-HILAIRE, É. 1803. *Catalogue des Mammifères du Muséum National d'Histoire Naturelle*. Paris.
- GEOFFROY SAINT-HILAIRE, É. & CUVIER, F. 1842. Écureuil fossoyeur. Livraison 62 [unpaginated] in *Histoire Naturelle du Mammifère, avec Figures Originales, Colonées, Dessinées d'après des Animaux Vivants*. Blaise, Paris.
- GRAY, J.E. 1828, 1830. *Spicilegia Zoologica or Original Figures and Short Systematic Descriptions of New and Unfigured Animals*. Treuttel, Würz & Co., London.
- GRAY, J.E. 1864. A revision of the genera and species of viverrine animals (Viverridae), founded on the collection in the British Museum. *Proceedings of the Zoological Society of London* 1864: 502–579.
- GRUBB, P. 1993. Order Artiodactyla. In: *Mammal Species of the World*, (eds) D.E. Wilson & D.M. Reeder, 2nd edn, pp. 377–414. Smithsonian Institution Press, Washington, D.C.
- GRUBB, P. 1999. Types and type localities of ungulates named from southern Africa. *Koedoe* 42: 13–45.
- GRUBB, P. 2001a. Catalogue des mammifères du Muséum National d'Histoire Naturelle by Étienne Geoffroy Saint-Hilaire (1803): proposed placement on the Official List of Works Approved as Available for Zoological Nomenclature. *Bulletin of Zoological Nomenclature* 58: 41–52.
- GRUBB, P. 2001b. Review of family-group names of living bovids. *Journal of Mammalogy* 82: 374–388.
- GRUBB, P. 2001c. *Hippotragus Sundevall*, 1845 (Mammalia, Artiodactyla): proposed conservation. *Bulletin of Zoological Nomenclature* 58: 126–132.
- GRUBB, P. & ANSELL, W.F.H. 1996. The name *Graphiurus hueti* de Rochebrune, 1883 and a critique of de Rochebrune's 'Fauna de la Senegambie, Mammifères'. *Nigerian Field* 61: 164–171.
- GRUBB, P., JONES, T.S., DAVIES, A.G., EDBERG, E., STARIN, E.D. & HILL, J.E. 1998. *Mammals of Ghana, Sierra Leone and The Gambia*. Trendrime Press, Zennor, United Kingdom.
- 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.
- HARPER, F. 1939. The name of the blesbok. *Proceedings of*

- the Biological Society of Washington* 52: 89–92.
- HASSANIN, A. & DOUZERY, E.J.P. 1999. The tribal radiation of the family Bovidae (Artiodactyla) and the evolution of the mitochondrial cytochrome b gene. *Molecular Phylogenetics and Evolution* 7: 303–319.
- HATT, R.T. 1940. Lagomorpha and Rodentia other than Sciuridae, Anomaluridae and Iduiridae, collected by the American Museum Congo Expedition. *Bulletin of the American Museum of Natural History* 76: 457–604.
- HAYMAN, R.W. 1967. Chiroptera. In *Preliminary Identification Manual for African Mammals*, (ed.) J. Meester, Part 2. Smithsonian Institution, Washington, D.C.
- HAYMAN, R.W. & HILL, J.E. 1971. Order Chiroptera. In: *The Mammals of Africa: An Identification Manual*, (eds) J. Meester & H.W. Setzer, Part 2. Smithsonian Institution Press, Washington, D.C.
- HILL, W.C.O. 1952. *Primates: Comparative Anatomy and Taxonomy. I. Strepsirrhini*. Edinburgh University Press, Edinburgh.
- HINTON, M.A.C. 1919. Notes on the genus *Cricetomys*, with descriptions of four new forms. *Annals and Magazine of Natural History* (9)4: 282–289.
- HOFFMANN, R.S., ANDERSON, C.G., THORINGTON, R.W. & HEANEY, L.R. 1993. Family Sciuridae. In: *Mammal Species of the World*, (eds) D.E. Wilson & D.M. Reeder, 2nd edn, pp. 419–465. Smithsonian Institution Press, Washington, D.C.
- HONACKI, J.H., KINMAN, K.E. & KOEPPPL, J.W. 1982. *Mammal Species of the World*. Allen Press and The Association of Systematics Collections, Lawrence, Kansas.
- HUSSON, A.M. & HOLTHIUS, L.B. 1968. *Sciurus ebii* Pel, 1851 (Mammalia): request for suppression under the plenary powers. *Z.N.*(3)1846. *Bulletin of Zoological Nomenclature* 25: 125–127.
- IBÁÑES, C. & VALVERDE, J. A. 1985. Taxonomic status of *Epitesicus platyops* (Thomas 1901) (Chiroptera Vespertilionidae). *Zeitschrift für Säugetierkunde* 50: 241–242.
- ICZN 1929. Opinion 109. Suspension of rules for *Hippotragus* 1846. *Smithsonian Miscellaneous Collections* 73: 414.
- ICZN 1955. Direction 23. Action taken in completion of the rulings given under the plenary powers in Opinion 108 and Opinion 109 validating the generic names *Gazella* Blainville, 1816, and *Hippotragus* Sundevall, 1846, respectively (Class Mammalia). *Opinions and Declarations Rendered by the International Commission on Zoological Nomenclature* 1C: 203–218.
- ICZN 1958. *Official List of Generic Names in Zoology*. The International Trust for Zoological Nomenclature, London.
- ICZN 1964. *International Code of Zoological Nomenclature*, 2nd edn. The International Trust for Zoological Nomenclature, London.
- ICZN 1971. *Sciurus ebii* Pel, 1851 (Mammalia): suppressed under the plenary powers. *Bulletin of Zoological Nomenclature* 27: 224–225.
- ICZN 1985a. Opinion 1291. *Antilope zebra* Gray, 1838 (Mammalia): conserved. *Bulletin of Zoological Nomenclature* 42: 24–26.
- ICZN 1985b. *International Code of Zoological Nomenclature*, 3rd edn. The International Trust for Zoological Nomenclature, London.
- ICZN 1999. *International Code of Zoological Nomenclature*, 4th edn. The International Trust for Zoological Nomenclature, London.
- ICZN 2002a. Opinion 1995 (Case 3004). *Lorisidae* Gray, 1821, *Galagidae* Gray, 1825 and *Indridae* Burnett, 1828 (Mammalia, Primates): conserved as the correct original spellings. *Bulletin of Zoological Nomenclature* 59: 65–67.
- ICZN 2002b. Opinion 2005 (Case 3022). *Catalogue des mammifères du Muséum National d'Histoire Naturelle* by Étienne Geoffroy Saint-Hilaire (1803): placed on the Official List of Works Approved as Available for Zoological Nomenclature. *Bulletin of Zoological Nomenclature* 59: 153–154.
- ICZN 2003. *Hippotragus Sundevall, 1845* (Mammalia, Artiodactyla): conserved. *Bulletin of Zoological Nomenclature* 60: 90–92.
- JENKINS, P.D. 1987. *Catalogue of Primates in the British Museum (Natural History) and Elsewhere in the British Isles. Part IV: Suborder Strepsirrhini, Including the Subfossil Madagascan Lemurs and Family Tarsiidae*. British Museum (Natural History), London.
- KINGDON, J.S. 1997. *The Kingdon Field Guide to African Mammals*. Academic Press, London.
- KNOTTNERUS-MEYER, T. 1907. Über Tränenbein der Huftiere. *Vergleichend-anatomischer Beitrag zur Systematik der rezenten Ungulata*. *Archiv für Naturgeschichte* 73: 1–152.
- KOCK, D. 1969. Die Fledermaus-Fauna des Sudan. *Ablhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 521: 1–238.
- KOCK, D. 2001. *Rousettus aegyptiacus* (É. Geoffroy St. Hilaire, 1810) and *Pipistrellus anchietae* (Seabra, 1900), justified emendations of original spellings. *Acta Chiropterologica* 3: 245–248.
- KUHN, H.-J. 1966. Der Zebraducker, *Cephalophus doria* (Ogilby, 1837). *Zeitschrift für Säugetierkunde* 31: 282–293.
- LYDEKKER, R. & BLAINE, G. 1914. *Catalogue of the Ungulate Mammals in the British Museum (Natural History)*, Vol. 2. Trustees of the British Museum, London.
- MATSCHIE, P. 1903. Einen Gorilla aus Deutsch-Ostafrika. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1903: 253–259.
- MATSCHIE, P. 1904. Bemerkungen über die Gattung *Gorilla*. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1904: 45–53.
- MATSCHIE, P. 1905. Merkwürdige Gorilla-Schädel aus Kamerun. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1905: 279–283.
- MEESTER, J.A.J. 1973. Le Vaillant's mammal paintings. In: *François Le Vaillant: Traveller in South Africa and his Collection of 165 Water-colour Paintings*, (eds) J.C. Quinton, A.M. Lewin & P.W.M. Sellicks, Vol. 2., pp. 1–24. Library of Parliament, Cape Town.
- MEESTER, J.A.J., RÄUTENBACH, I.L., DIPPENAAR, N.J. & BAKER, C.M. 1986. *Classification of Southern African Mammals*. Transvaal Museum Monograph No. 5, Transvaal Museum, Pretoria.
- MISONNE, X. 1974. Order Rodentia, main text. In: *The Mammals of Africa: An Identification Manual*, (eds) J. Meester & H.W. Setzer, Part 6. Smithsonian Institution Press, Washington, D.C.
- MOREAU, R.E., HOPKINS, G.H.E. & HAYMAN, R.W. 1946. The type localities of some African mammals. *Proceedings of the Zoological Society of London* 1946: 387–447.
- MUSSER, G.G. & CARLETON, M.D. 1993. Family Muridae. In: *Mammal Species of the World*, (eds) D.E. Wilson & D.M. Reeder, 2nd edn, pp. 501–755. Smithsonian Institution Press, Washington, D.C.
- NASH, L.T., BEARDER, S.K. & OLSON, T.R. 1989. Synopsis of *Galago* species characteristics. *International Journal of Primatology* 10: 57–80.
- OGILBY, W. 1837. Remarks upon some rare or undes-

- cribed ruminants in the Society's Collection. *Proceedings of the Zoological Society of London* 4(1836): 119–121.
- OLSON, T.R. 1986. Species diversity and zoogeography in the Galagidae. *Primate Report* 14: 213.
- RAND, A.L., FRIEDMANN, H. & TRAYLOR, M.A. 1959. Birds from Gabon and Moyen Congo. *Fieldiana: Zoology* 41: 223–411.
- RETIUS [A.] & LOVÉN, [P.S.N.] 1845. Bericht von Retzius und Lovén über Sundevall's Abhandlung, betitelt: Methodische Uebersicht der wieder-käuenden Thiere. *Archiv Skandinavischer Beiträge zur Naturgeschichte, Greifswald*, 1: 440–446.
- ROBERTS, A. 1951. *The Mammals of South Africa*. 'The mammals of South Africa' book fund, Johannesburg.
- ROCHEBRUNE, A.T. DE 1885. Vertebratorum novorum vel minus cognitorum orae Africæ occidentalis incolarum. Diagnoses. *Bulletin de la Société Philomathique de Paris* (7)9: 87–99.
- RODE, P. 1943. Catalogue des types de mammifères du Muséum National d'Histoire Naturelle. *Bulletin du Muséum National d'Histoire Naturelle* (2)15: 383–385.
- ROOKMAAKER, L.C. 1989. *The Zoological Exploration of Southern Africa 1650–1790*. A.A. Balkema, Rotterdam.
- ROOKMAAKER, L.C. 1991. The scientific name of the bontebok. *Zeitschrift für Säugetierkunde* 66: 190–191.
- ROSEVEAR, D.R. 1965. *The Bats of West Africa*. British Museum (Natural History), London.
- ROSEVEAR, D.R. 1969. *The Rodents of West Africa*. British Museum (Natural History), London.
- ROSEVEAR, D.R. 1974. *The Carnivores of West Africa*. British Museum (Natural History), London.
- RYLANDS, A.B., MITTERMEIER, R.A. & KONSTANT, W.R. 2001. Species and subspecies of primates described since 1990. *Neotropical Primates* 9: 75–78.
- SCHLAWE, L. 1980. Zur geographischen Verbreitung der Ginsterkatzen, Gattung *Genetta* G. Cuvier, 1816. *Faunistische Abhandlungen Staatliches Museum für Tierkunde in Dresden* 7: 147–161.
- SCHLAWE, L. 1981. Material, Fundorte, Text- und Bildquellen als Grundlagen für eine Artenliste zur Revision der Gattung *Genetta* G. Cuvier, 1816 (Mammalia, Carnivora, Viverridae). *Zoologische Abhandlungen Staatliches Museum für Tierkunde in Dresden* 37: 85–182.
- SCHWARTZ, J.H., SHOSHANI, J., TATTERSALL, I., SIMONS, E.L., GUNNELL, G. & ANKEL-SIMONS, F. 1998. Lorisidae Gray, 1821, and Galagidae Gray 1825 (Mammalia, Primates): proposed conservation as the correct original spellings. *Bulletin of Zoological Nomenclature* 55: 165–168.
- SCHWARZ, E. 1931. On the African long-tailed lemurs or galagos. *Annals and Magazine of Natural History* (10) 7: 41–66.
- SCLATER, P.L. 1864. On the mammals collected and observed by Capt. J.H. Speke during the East African expedition. With notes by Capt. J.H. Speke. *Proceedings of the Zoological Society of London* 1864: 98–106.
- SCLATER, P.L. & THOMAS, O. 1895. *The Book of Antelopes*. Vol. 1, parts 3 and 4, pp. 119–220. Porter, London.
- SCLATER, P.L. & THOMAS, O. 1900. *The Book of Antelopes*. Vol. 4, part 16 and 17, pp. 149–242. Porter, London.
- SIMPSON, G.G. 1945. The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History* 85: 1–350.
- SMITHERS, R.H.N. & LOBÃO TELLO, J.L.P. 1976. *Check List and Atlas of the Mammals of Moçambique*. Museum Memoir No. 8. Trustees of the National Museums and Monuments of Rhodesia, Salisbury, Rhodesia.
- SPEKE, J.H. 1863. *Journal of the Discovery of the Source of the Nile*. William Blackwood & Sons, Edinburgh.
- STUART, C. & STUART, T. 1988. *Field Guide to the Mammals of Southern Africa*. New Holland, London.
- SUNDEVALL, C.J. 1845. Översigt af däggdjurs-ordningen Pecora. Översigt af Kongl. Vetenskaps-Akademien's Förhandlingar, Andra Årgången 1845, 2(3): 26–32.
- THOMAS, O. 1915. Scientific results from the Mammal Survey. No. X. A. The Indian bats assigned to the genus *Muothis*. *Journal of the Bombay Natural History Society* 23: 607–613.
- VAN DER STRAETEN, E. & ROBBINS, C.B. 1997. Further studies on *Mastomys* (Rodentia: Muridae). Types and generic distinctions among African Muridae. *Mitteilungen der Zoologische Museum Berlin* 73: 153–163.
- VRBA, E. S. & SCHALLER, G. B. 2000. Phylogeny of Bovidae based on behavior, glands, skulls, and postcrania. In: *Antelopes, Deer, and Relatives. Fossil Record, Behavioral Ecology, Systematics, and Conservation*, (eds) E.S. Vrba & G.B. Schaller, pp. 203–222. Yale University Press, New Haven.
- WILSON, D.E. & REEDER, D.M. 1993. *Mammal Species of the World*, 2nd edn. Smithsonian Institution Press, Washington, D.C.
- WOZENCRAFT, W.C. 1993. Order Carnivora. In: *Mammal Species of the World*, (eds) D.E. Wilson & D.M. Reeder, 2nd edn, pp. 279–348. Smithsonian Institution Press, Washington, D.C.