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# Type-specimens of recent mammals in Naturalis Biodiversity Center PART 1. Monotremata, Didelphimorphia, Dasyuromorphia, Peramelemorphia, Diprotodontia, Afrosoricida, Macroscelidea, Hyracoidea, Proboscidea, Scandentia, Primates, Rodentia (Mammalia)

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**Type-specimens of recent mammals  
in Naturalis Biodiversity Center**

**PART 1**

**Monotremata, Didelphimorphia, Dasyuromorphia, Peramelemorphia,  
Diprotodontia, Afrosoricida, Macroscelidea, Hyracoidea, Proboscidea,  
Scandentia, Primates, Rodentia (Mammalia)**

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## keywords

Naturalis Biodiversity Center, Rijksmuseum van Natuurlijke Historie, Zoölogisch Museum Amsterdam, types, Jentink, nomenclature

## abstract

This is the first part of a catalogue containing all known types in the mammal collection of Naturalis Biodiversity Center, Leiden, The Netherlands, covering the orders Monotremata to Rodentia in the sequence according to Wilson and Reeder (2005). The remaining orders will be treated in the second part following later.

The catalogue started in the early 1990s as a basic inventory using historic catalogues. Chris Smeeke, then curator of the mammal collection, researched the types until his death in 2017. The current authors continued with his work, resulting in the present publication.

We discuss in this first part 441 names and for 405 of these Naturalis holds type material. Of these names 184 are still in use (following Wilson and Reeder 2005) and of these we hold primary types for 157 names.

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## Introduction

This is the first part of a series of publications presenting the type specimens in the mammal collection of Naturalis Biodiversity Center, Leiden, The Netherlands. We expect to publish the catalogue of mammalian types in two parts, starting in this part with the Monotremata to Rodentia and publishing the Lagomorpha to Cetacea in the second part (following Wilson and Reeder 2005).

These catalogues are based on an inventory assembled in the 1990s. Dr. Chris Smeenk, continued researching the mammal types until his death in 2017 and left his manuscripts unfinished. Until 2014 Smeenk actively worked on the research of the type specimens after his retirement as mammalogist. Especially the chapters on primates and bats were extensively researched by him. Kamminga and Van der Mije continued his work, adding newly discovered taxa and specimens, removing some names or specimens, and completing the parts not elaborated on by Smeenk. The reader will notice that the parts written by Smeenk are usually more elaborate.

Naturalis Biodiversity Center holds the collections of the former 's Rijks Museum van Natuurlijke Historie (RMNH) and the Zoölogisch Museum Amsterdam (ZMA) after the merger of these two institutions in 2010. The types of the ZMA collection have been published before by Bergmans (2011), we include them in the current publications as well. Thus we are presenting an overview of the complete Naturalis type collection, which is especially rewarding in the cases where the original type series have been split up between the institutions and are now reunited. Furthermore, we have found a few more taxa and type specimens from the former ZMA collection not included in Bergmans (2011).

## Method and instructions for the reader

The move and reorganisation of the combined mammal collections of ZMA and RMNH have enabled us to reexamine the specimens and discover new types. We have reviewed all type specimens (primary and secondary) for their presence, completeness, the associated information and they are separately stored from the main collection. We digitised the specimens and the dataset, with images of most specimens, is available on GBIF and on the collection portal of Naturalis (<http://bioportal.naturalis.nl>).

Each entry starts with the centred current species names according to Wilson and Reeder (2005), followed by the names for which we hold types in the original spelling with the complete reference to the original description. In the remarks we specify the differences in taxonomy compared with the *Handbook of the Mammals of the World* (Wilson and Mittermeier Eds). Primary types are given with full data, secondary types are in general listed only with their registration number, except in those cases where no primary type is present in the Naturalis collection.

The label information is given with the listed specimen and interpretations and additions by us are given between square brackets. General structure of the listed specimen information is: tpestatus, registration number, Jentink catalogue entries, sex and stage, preservation type, gathering location, collector and date of collection, donator and date of accession. Not all of this information is present in all cases, missing information is not indicated. More detailed information on collectors and surveys or expeditions is added where relevant or available. A great help in the recovery of this information was the extensive work of Van Steenis-Kruseman (1950 and online database:

<https://www.nationaalherbarium.nl/FMCollectors>), who brought together information on the itineraries of many collectors in Indonesia and surrounding areas.

There have been several attempts to catalogue the Naturalis mammal collections. A first attempt was made by Schlegel (1876), who catalogued the primates. Schlegel used a numbering system per species and parts of a specimen were given separate numbers, cross referencing them in the specimen description. Jentink catalogued the Manidae (Jentink 1882) and Sciuridae (Jentink 1883a) using a similar method of numbering. Cataloguing the whole mammal collection commenced in 1887 with the publication of the first of three catalogues by Jentink in the *Revue méthodique et critique*, containing two so called systematic catalogues (1888; 1892) covering the skins and one osteological catalogue (1887). In these catalogues the specimens are arranged per species and alphabetically numbered. Cross referencing to the several parts of a specimen listed in the other catalogues (Schlegel 1876; Jentink 1882; 1883a) is given. However, due to the differences in publication dates of these catalogues and the long time between accession of the specimens and the publication of the catalogues, in some cases the given relation between the different parts is erroneous or questionable.

In 1904 Jentink introduced a numeric system to register new accessions in accession books and to retrospectively register the existing collection. This formed the basis of our current numbering system and many of the numbers from the accession registers are still in use. With the introduction of a central registration database (2012) these numbers are made unique for the whole Naturalis collection by adding two prefixes separated by a dot: RMNH or ZMA denoting the original collection and MAM indicating the mammal collection. To indicate the several parts of a specimen a suffix in the form of a letter is added separated by a dot, for example "RMNH.MAM.17301.a". However we do not give the individual numbers for the different parts in this catalogue, since all parts belong to the type specimen.

We have not actively pursued specimens from type series in other collections, however we occasionally refer to specimens when encountered in literature. Being a mere catalogue of the Naturalis collection and not a taxonomic review we hope the mention of these specimens helps the reader. We apologise in advance for the omission of many more to the curators who take care of them. We do encourage these curators to also publish the types in their collections for the benefit of taxonomists around the world.

We follow Dickinson and Lebossé (2018) and Dickinson et al. (2022), who discuss the priority of names published in captions or on wrappers of plates issued before the textual description. These plates should be considered the first valid publication of the name and the depicted specimen(s) constitute the type. Generally a single specimen is depicted, which is therefore a holotype by monotypy. Even if in the later description more specimens are mentioned, they are not part of the type series. If there is more than one specimen depicted, or it is undecidable which is the depicted specimen, all possible specimens are treated as syntypes (e.g. *Callithrix entomophagus*, *Callithrix donacophilus*).

## History of the mammal collection

The collections of Naturalis Biodiversity Center have undergone several name changes in the past (see overview below), but for reasons of consistency we will use Naturalis throughout this publication, also in historical situations when the institutions had different names.

1820	's Rijks Museum van Natuurlijke Historie (RMNH)	Leiden	foundation
1838	Genootschap 'Natura Artis Magistra' (NAM)	Amsterdam	foundation
1892	Zoölogisch Museum Amsterdam (ZMA)	Amsterdam	merger of the collections of NAM and the City of Amsterdam
1989	Nationaal Natuurhistorisch Museum Naturalis (NNM)	Leiden	new name for merger RMNH and RGM (National Geological Museum)
2010	Nederlands Centrum voor Biodiversiteit Naturalis (NCB)	Leiden	new name for NNM, foundation of renewed research institute
2013	Naturalis Biodiversity Center	Leiden	merger of NCB, ZMA and National Dutch Herbaria

Naturalis Biodiversity Center has a long history through its oldest constituent, 's Rijks Museum van Natuurlijke Historie. This institution was founded in 1820 as the Dutch national museum for natural history, following the example of the other 'great nations'. It was based on the collections of Coenraad Jacob Temminck, 's Lands Kabinet, the zoological collection of the Leiden University, and what remained of the Kabinet des Stadhouders. Unfortunately, we have no clear picture of the specimens that formed the beginning of the Rijks Museum.

Temminck was the great promoter of a national museum for natural history and became its first director based on his international scientific stature. But the fact that he donated his world famous collection to the state certainly played an important role. The actual move of this collection from his home in Amsterdam to Leiden lasted until 1830 and in the meantime Temminck kept exchanging specimens from this collection. There are however two catalogues of the Temminck collection, the published catalogue from 1807 (Temminck 1807) and an unpublished catalogue in Temminck's hand dating from around 1803 housed in the archives of Naturalis. The catalogue of 1807 describes his world famous collection, the 1803 catalogue is clearly its forerunner. Comparing the two catalogues gives an insight in the way Temminck collected (see Jansen 2017), but both catalogues are a list of the species present in the collection, not specific specimens. And if the mutations between 1803 and 1807 are indicative we must assume that until 1820 the composition of this collection continued to be very dynamic.

The 1807 catalogue lists 1072 entries of which the majority are birds. But Temminck's collection also contained mammals. In fact, his catalogue starts with *Simia* and *Lemur* of which he lists 38 species. In the exchange list we can find monkeys but also marsupials, squirrels and a *Viverra*. This might indicate that the catalogue is foremost intended to describe his collection of birds, the mammals are not treated extensively.

The other founding collection of the Rijks Museum was the zoological cabinet of the Leiden University. Mainly an anatomical collection, but under the care of J.N.S Allamand (1749) and later S.J. Brugmans (1787) and with the additions of their private collections, it also became a noteworthy natural history collection. The most important addition to the Leiden Cabinet was the so-called Kabinet des Stadhouders, donated by king Willem I in 1813 to the Leiden University. This collection goes back to 1751 and contained specimens from the collections of Boddaert, Allemand, Camper, Seba, Vosmaer and Gordon. In 1795 this

collection was confiscated by the French occupying forces and shipped to Paris. After the defeat of Napoleon at Waterloo and the return of the Princes of Orange, Brugmans was sent to Paris to retrieve the collection. Lamarck, who was working on the material in this collection, resisted vehemently. Helped by Cuvier and Von Humboldt he convinced Brugmans to accept 10.000 specimens from the so-called *doubles* (exchange) collection of the Paris Museum. Temminck, although critical at first, later admitted that this was the best deal possible. He couldn't say otherwise, as he was witness to the deal as a cavalry officer in the occupation of Paris (Temminck 1825, Annual Report in Naturalis archives). In 1815 the acquired specimens were shipped to the Netherlands, leaving a large part of the original Kabinet des Stadhouders in the museum in Paris, where it still is (see also Pieters 1980).

From its beginning the Leiden museum played a major role in the research of the natural riches of our colonies, especially in the Dutch East Indies (Indonesia). This effort was boosted by the formation of the Natuurkundige Commissie voor Nederlandsch-Indië on instigation of Temminck and operating from 1820 until 1850. Several young scientists were sent to the East, and only a few returned, but in the meantime large collections were gathered all over the colonies and shipped to Leiden. The processing of this material, containing many new species, fell to Temminck and a few of his colleagues and associates. Until now we have listed 190 names for mammals published by Temminck. Müller (who was a prominent member of the Natuurkundige Commissie) and Schlegel, who succeeded Temminck as director, together described 104 new mammal taxa.

Another major contribution to the collection was made by Von Siebold who worked in Japan from August 1823 to December 1829 in the service of the VOC (Dutch East India Company). He was based in the Dutch trading post on the artificial island of Deshima in Nagasaki harbour (Kyūshū). Bürger arrived in Japan in 1825 as Von Siebold's assistant, he continued collecting, while Von Siebold departed from Japan in December in 1829. Bürger left for Java in 1832, returned to Deshima in 1834, and finally left Japan in 1835 (Holthuis and Sakai, 1970: 25-39). Apart from the journey to Edo in 1826, during which they obtained specimens in various places, Von Siebold and Bürger were restricted to Deshima and Nagasaki. Thus, most of the material they acquired would have come from that area, though Von Siebold in particular received many specimens from other parts of Japan, and even from Korea. There are hardly any specifications of Von Siebold's shipments of mammals, but Bürger's inventories, preserved in the archives of Naturalis, are very specific (see also Von Siebold 1897; Holthuis and Sakai 1970).

Efforts were made by Temminck to promote the study of the natural world in the Gold Coast (modern day Ghana) and the Cape (South Africa) where the Dutch conveniently held trading posts. In these regions Temminck relied on interested individuals, an apothecary named Van Horstok in South Africa and a government official named H.S. Pel in Ghana. Pel's activities in the Gold Coast (coastal Ghana) are extensively described by Holthuis (1968), who also specifies his collecting localities. Most inventories of Pel's shipments are preserved in the archives of Naturalis. Temminck's (1853) account of the mammals of the Guinea coast is based on the collections that Pel brought together.

Starting in 1875, Jentink was the first dedicated mammalogist in the Leiden museum, where until then the study of mammals was conducted by Temminck and Schlegel, who were primarily ornithologists. Jentink modernised the vertebrate collections, he introduced the practise of preparing specimens as study skins and the old fashioned idea of the collection as a cabinet of curiosities was abandoned in favour of the collection as a basis for scientific research. In his time as a curator and later director until his death in 1913 he described several new mammal species, until we found 91 names introduced by Jentink. Jentink was also one

of the founders of the ICZN in 1895 and remained an active member of this committee until his death

After the death of Jentink his position as director, and with it the care of the mammal collection, was taken over by the ornithologist E.D. Van Oort. Van Oort made no significant contributions to mammalogy, nor did his successor G.C.A. Junge, also an ornithologist. It took until 1950 for the museum to hire its first dedicated mammalogist, A.M. Husson, since the death of Jentink. Pater (father) Husson, as he was known because of his priesthood, published on Chiroptera, the mammals of Suriname and the Dutch Antilles. He retired in 1978.

With the death of Chris Smeenk on 23 March 2017 Naturalis lost its last scientific curator for the mammal collection. Smeenk started his work in Naturalis in 1976, where he succeeded A.M. Husson, after a PhD based on the ecology of birds of prey in Tsavo National Park, Kenya (1970-1973) and managing Pandam Wildlife Park in Nigeria (1974-1976). Being more an ecologist than a taxonomist, Smeenk introduced nature conservation as a topic in the museum. He worked on the protection of whales and bats, in the Netherlands, but also abroad (see for an account of his life and work Broekhuizen et al. 2017).

### Zoological Museum of Amsterdam (ZMA)

The origin of the Zoological Museum Amsterdam (ZMA) can be mainly attributed to the work of Max Weber, the first zoological professor at the Amsterdam University. He renovated and combined the collections of the Amsterdam city council and Artis into a modern scientific zoological collection. Due to his own expeditions to Spitbergen, Indonesia and South Africa together with his wife A. Weber-Van Bosse (a renowned algologist), he enriched the collection with new species for science, among which several mammals. In 2011 the ZMA was incorporated into Naturalis Biodiversity Center. See Reitsma 2012 for a full account of the history of the ZMA.

Two mammalogists have greatly contributed to physical and scientific enrichment of the mammal collection of the ZMA. P.J.H. Van Bree (1927-2011) became curator of the mammal collection of the ZMA in 1960, a post he held until his retirement in 1992. He was the first mammal curator who worked on recent mammals, as his predecessor P.J. van der Feen mainly worked on fossil mammals. Van Bree's scientific work mainly focused on sea mammals and he described *Delphinus capensis tropicalis* Van Bree, 1971.

After the retirement of Van Bree the position of mammal curator remained unoccupied. W. Bergmans (1940-2018) however took over the care of the mammal collection. Working on *Chiroptera*, he enlarged this part of the collection with his many field trips to Africa and Asia. He described several new species and with his revisions contributed to our knowledge of this group.

## Taxonomic issues

During the research of the type collection we have identified several taxonomic issues. However, as this work is meant to be a catalogue and not a revision, we have indicated the issue at hand, gave our opinion, but merely as a suggestion or recommendation.

- *Didelphis aurita* Wied, 1826 vs. *Didelphis azaræ* Temminck, 1824.
- *Macropus (Petrogale) robustus* Gould, 1841 not Gould 1840.
- *Hyrax sylvestris* Temminck, 1853 priority over *Dendrohyrax dorsalis* (Fraser, 1854).
- *Tarsius sangirensis* Meyer, published in October 1896 not 1897.
- *Callithrix donacophilus* D'Orbigny, 1835 not 1836 as in Wilson and Reeder 2005.

- *Ateles geoffroyi* Kuhl, 1820 spelling should be *geoffroy*.
- *Inuus fuscatus* Gray, 1870 vs Blyth, 1875.
- *Macacus brachyurus* Kuhl, 1820 (= *Macaca maura*) priority over *Macaca maura* (Schinz, 1825).
- *Sciuropterus kaleënsis* Swinhoe 1863 = *Hylopetes phayrei* (Blyth, 1859) vs. *Belomys pearsonii* (Gray, 1842)
- *Petaurista elegans* (Temminck, 1836) and not Müller, 1840.
- *Petinomys hageni* (Jentink), publication date 1889 not 1888.
- *Sciurus rafflesii borneoensis* Müller & Schlegel (= *Callosciurus prevostii*), publication date 1844 not 1842.
- *Sciurus rafflesii indica* Müller & Schlegel (= *Callosciurus prevostii*), publication date 1844 not 1842.
- *Nannosciurus melanotis* (Müller), publication date 1841 not 1840 and name needs to be fixed to the Javan race.
- *Sciurus modestus* Müller, 1840 (= *Sundasciurus tenuis modestus*) represents two taxa, to fix the name *modestus* to the Sumatran form a lectotype should be designated.
- *Heliosciurus rufobrachium* (Waterhouse), published in 1843 not 1842.
- *Tachyoryctes splendens* (Rüppell) published in 1836 not 1835.
- *Melomys leucogaster* (Jentink) published in 1909 not 1908.
- *Paramelomys lorentzii* (Jentink) published in 1909 not in 1908.
- *Mus ratticolor* Jentink (= *Rattus leucopus*) published in 1909 not in 1908.
- *Hystrix brandtii* Jentink, 1879, type locality restricted to Suriname.
- *Chinchilla brevicaudata* Waterhouse, 1848 not *brevicauda*.

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## Abbreviations

AMNH: American Museum of Natural History, New York, USA.

ICZN: International Commission on Zoological Nomenclature.

KBIN: Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium.

KNAG: Koninklijk Nederlands Aardrijkskundig Genootschap

MfN: Museum für Naturkunde, Berlin (with ZMB as registration number acronym).

MNHN: Muséum national d'Histoire naturelle, Paris, France.

MTKD: Museum für Tierkunde, Dresden.

MZB: Museum Zoologicum Bogoriense, Bogor, Indonesia.

NAM: Genootschap Natura Artis Magistra (Amsterdam Zoo), Amsterdam, The Netherlands.

NHM/NHMUK: Natural History Museum, London, United Kingdom.

NMNH: Smithsonian, National Museum of Natural History, Washington, USA.

NMW: Naturhistorisches Museum Wien, Vienna, Austria.

NRM: Naturhistoriska Riksmuseet, Stockholm, Sweden.

RMCA: Royal Museum for Central Africa, Tervuren, Belgium.

RMNH: Naturalis Biodiversity Center, Leiden, The Netherlands.

SMF: Senckenberg Museum Frankfurt, Frankfurt, Germany.

ZMA: Zoölogisch Museum Amsterdam, The Netherlands (this collection is part of Naturalis since 2010)

ZSM: Zoologische Staatssammlung München, Munich, Germany.

## List of type specimens

### MONOTREMATA Bonaparte, 1837

#### Tachyglossidae Gill, 1872

##### *Zaglossus attenboroughi* Flannery & Groves, 1998: 367.

Holotype, RMNH.MAM.17301, sex unknown, skin and fragments of skull. Loc.: eastern top of Mt. Rara at 1600 m, Cyclops Mts., New Guinea, Indonesia. Leg.: P. van Royen, 4 July 1961. Received 6 March 1962.

The skin has been seriously damaged by staff of the Sydney Museum, in an attempt at extracting osteological material.

##### *Zaglossus bartoni smeenki* Flannery & Groves, 1998: 367.

Paratype, RMNH.MAM.23319, adult male, skull. Loc.: Mai'iu II, Mount Suckling, Papua New Guinea. Leg.: J.F. Veldkamp, Lae-Leiden Mt. Suckling expedition, 15 July 1972.

This taxon was named after the late Dr. Chris Smeenck, conservator of the mammal collection in Naturalis. Flannery and Groves nominated a specimen in the AMNH (M96822) as the holotype.

##### *Zaglossus bruijni* Peters & Doria, 1876

Weber (1888) extensively describes an Echidna from New Guinea in the collection of the ZMA, which according to him constitutes a new species and probably even a new genus. He fails, however, to properly name this species, therefore ZMA.MAM.26369 (formerly ZMA.MAM.197) is not a type.

### DIDELPHIMORPHIA Gill, 1872

#### Didelphidae Gray, 1821

##### *Didelphis aurita* Wied, 1826

##### *Didelphis azaræ* Temminck, 1824b: 30.

Syntype, RMNH.MAM.24239 (Jentink 1888: 219 a), male, mounted skin, skull in situ. Loc.: Brazil. Leg.: 1823.

Temminck's description is based on several specimens (p. 32), only one of those is still present in *Naturalis*.

Herskovitz (1969: 54) points out that *D. azarae*, "currently used for white-eared opossums [= *Didelphis albiventris* Lund, 1840] is based on several black-eared opossums". This is in agreement with Temminck's description, which says (p. 31): "Les oreilles, grandes et nues, sont le plus souvent jaunâtres à la base seulement, et noires sur tout le reste". Our syntype too, has largely dark ears (one ear is missing).

Gardner (1993: 16; 2005: 5) synonymizes *Didelphis aurita* Wied, 1826 with *Didelphis azarae* Temminck, 1824. Although he recognizes that Temminck's name takes priority, he opted for the name *D. aurita*, since *D. azarae* "had been misapplied to *D. albiventris* for over 160 years". This is followed by Cerqueira and Tribe (2007: 18-21) who conclude (p. 21) that "adoption of *D. azarae* as the valid name for the gambá would bring unnecessary instability and confusion". The name *Didelphis aurita* Wied, 1826 is thus treated as a nomen protectum, although no official application to the ICZN to that effect has been made.

### ***Metachirus nudicaudatus myosuros* (Temminck, 1824)**

***Didelphis myosuros* Temminck, 1824b: 38.**

Paralectotype, RMNH.MAM.26072 (Jentink 1888: 220 a), female, mounted skin and incomplete skull. Loc.: Brazil.

Paralectotype: RMNH.MAM.26073.

Temminck (1824b: 40) distinguishes this new species from *Didelphis nudicaudatus* E. Geoffroy. His description is based on material in various collections, with several specimens of both sexes in *Naturalis*. The two specimens in *Naturalis* catalogued as types by Jentink (1888: 220) are both from Brazil, but Temminck had also seen animals from Suriname.

The status and specific identity of the *Naturalis* animals are discussed by Herskovitz (1959: 343; 1976: 301-302 and, more extensively, 1997: 45-49). He misinterpreted some of Temminck's statements, doubted the identity and type status of the *Naturalis* and other specimens, and finally (1997: 49) arranged *D. myosuros* with *Didelphis opossum quica* Temminck, 1824. Husson (1978: 29) and more particularly Gardner and Dagosto (2007: 38) have corrected his erroneous conclusions. Herskovitz also overlooked that Pohle (1927: 242) already designated a lectotype of *Metachirus nudicaudatus myosurus* [sic] (Temminck, 1824) in the NMW (NMW B 2589).

### ***Micoureus paraguayanus* (Tate, 1931)**

***Didelphis cinerea* Temminck, 1824b: 46.**

Paralectotype, RMNH.MAM.17924 (Jentink 1888: 221 a), female, mounted skin, skull in situ. Loc.: Brazil.

The state and provenance of this specimen are unclear. Temminck's description (Temminck 1824b: 46) is based on animals sent to him by Wied and by the NMW. There is no record whether all this material was returned, or whether Temminck may have retained one specimen for *Naturalis*, as a gift or in exchange.

Zu Wied (1826: 406-411) describes one male from his own collection, stating (p. 411) that he himself had not seen any female from this species, for which he refers to Temminck's description regarding the absence of a pouch. He confirms (p. 409) that

he had put his animal at Temminck's disposal under the (manuscript) name *D. cinerea*, but adds (p. 411) that Temminck had studied several specimens since, obviously including one or more females. The inscription on the pedestal of the Naturalis specimen, in Temminck's handwriting, does not record its provenance. However, Jentink (1888: 221) states somewhat enigmatically: "un des types du Musée de Vienne. Brésil. Des collections du Prince von Wied", thus misinterpreting Temminck's (1824b) specification of provenances, as those two sources are mutually exclusive. If Jentink is correct in assuming that it is one of the types, then the animal, being a female, cannot have come from the Prince of Wied, so would have been received from Vienna and, given Temminck's remark, would have been collected by Natterer. However, Engelberger writes (in litt., 21 July 2010) that the card-file of Natterer's collection in Vienna gives only one specimen of *D. cinerea*: the one mentioned by Von Pelzeln (1883: 114), which was not collected by Natterer himself, but by H. Sellow; there is no record of an animal that was sent to Temminck, neither in the Vienna, nor in the Naturalis archives. Moreover, Von Pelzeln does not refer to Temminck's description, attributing the name *D. cinerea* to Wied. Pending further evidence, however, we follow Jentink.

Natterer travelled in Brazil between 1817 and 1835 (Von Pelzeln 1871, 1883; Vanzolini 1993). If indeed collected by Natterer, RMNH.MAM.17924 must have come into Temminck's possession not later than 1824, so must have been obtained during one of Natterer's first four journeys in southeastern Brazil, undertaken between October 1817 and September 1822, in the area between Rio de Janeiro and Paranaguá (Vanzolini 1993: 19-27). If Pelzeln is correct and Kammerlacher is the collector, the specimen has been collected between 1817 and April 1819.

Allen (1900: 190), in discussing the type material of this species, writes that "the mounted specimen sent to Temminck by Wied...for description", which is now in the New York Museum (AMNH 845), "may be fairly considered as the type of *Didelphis cinerea* Temminck", though further on he says: "It is without doubt the type of Wied's description of the species..., and certainly a cotype of Temminck's original description". It seems doubtful whether this somewhat contradictory statement may be regarded as a valid lectotype selection. Contrary to and apparently unaware of this, Pohle (1927: 241) compared his material with "dem Typus der Art..., der von Bahia stammt und sich in der Wiener Sammlung befindet,...", which must be the animal listed by Von Pelzeln (1883: 114). Tate (1933: 57) follows Allen, but is also unprecise: "A.M.N.H. 845 appears to be the actual type which Wied collected and from which Temminck drew up his description of the male of *cinerea*." Finally, De Avila-Pires (1965: 4), also citing Allen's paper, refers to Wied's specimen as "Type", and it seems best to regard this as the valid lectotype designation. The animal was collected by the Prince of Wied, probably at Morro d'Arará, Bahia, Brazil.

The name *Didelphis cinerea* Temminck, 1824 is preoccupied by *Didelphis cinerea* Goldfuss, 1812.

### ***Philander frenatus* (Olfers, 1828)**

***Didelphis quica*** Temminck, 1824b: 36.

***Didelphis larvata*** Jentink, 1888: 220 (nomen nudum).

Syntype, RMNH.MAM.12839 (Jentink 1887: 301 a), sex unknown, incomplete skeleton. Loc.: Brazil.

Syntype, RMNH.MAM.12840 (Jentink 1887: 301 b), subadult, sex unknown, skeleton. Loc.: Brazil.

Syntype, RMNH.MAM.12848 (Jentink 1888: 220 d), subadult male, mounted skin, skull in situ. Loc.: [Southeastern] Brazil. Leg.: J. Natterer, [1817-1821]. Ex: NMW, 1821.

Syntype, RMNH.MAM.24304 (Jentink 1887: 301 c), sex unknown, skull. Loc.: Brazil. Ex: Cabinet Temminck.

Temminck (1824b: 37) writes that he had received a considerable number of animals of this species. Jentink (1888) only lists two mounted skins as types, but there is considerable confusion regarding these. Jentink specifies skin *a* (RMNH.MAM.12846) as: “Femelle adulte montée, un des types de l’espèce. Brésil. Des collections de M[onsieur] Natterer. *Didelphis larvata*”. Skin *d* (RMNH.MAM.12848) is described as: “Mâle à-peu-près adulte monté, un des types de l’espèce. Brésil. Du Cabinet de M[onsieur] Temminck. *Didelphis crassicaudata* Desmarest”. The labels (not original) are in agreement, giving the provenance of skin *a* as “Voy[age] de Natterer. Brésil”, of skin *d* as “Brésil” only. The pedestals, however, bear original inscriptions in Temminck’s handwriting, very faded and difficult to read. The one with skin *a* reads: “Did. larvata Surynam”; the one with skin *d*: “Did. Crassicaudata et Cayapollin Brésil”. Obviously, the locality Suriname was overlooked by subsequent workers and, to make matters worse, the labels, and consequently the entries in Jentink’s catalogue, have become mixed up. Thus, the female skin *a* (RMNH.MAM.12846) is from Suriname, the male skin *d* (RMNH.MAM.12848) from Brazil, collected by Natterer.

Further in the paragraph cited above, Temminck (1824b: 37) discusses the various names then in use for these opossums, among which “Cayapollin”, which he regards as unidentifiable (see also pp. 45-46). He explicitly states that the animals called “Quica” are from Brazil. Nowhere in these paragraphs is there any reference to specimens from Suriname. This can only mean that Jentink’s skin *a* (RMNH.MAM.12846) has become mislabelled (apart from the subsequent confounding of labels) as being from Brazil, and is not a type of *Didelphis quica* Temminck, 1824. Of Temminck’s “plusieurs individus montés” in *Naturalis*, apparently only one is left.

Gardner (2005: 17), who studied the *Naturalis* specimens, identified Jentink’s name *D. larvata*, applied to skin *a*, with *Didelphis opossum* (Linnaeus, 1758), a species of which Temminck (1824b: 43) already said that it was common in Suriname. This is a nomen nudum based on Temminck’s manuscript name, not Natterer’s as supposed by Hershkovitz (1959: 343).

Although Temminck’s note on the pedestal of the male skin *d* does not give Natterer as its collector, it is beyond doubt from that source, since Temminck (1824b: 37) writes: “Nous devons à M. Natterer la connaissance plus exacte de cette espèce qu’il a envoyé au musée impérial de Vienne, sous le nom de *Quica*, dénomination qui sera sans doute conservée”. According to Engelberger of the Vienna Museum (in litt. 2010) the card-file of Natterer’s collection in Vienna confirms that one animal, a male, was sent to Temminck. In the archives of *Naturalis* there is a list of exchanges between Vienna and Leiden in August 1821. One of the entries in this is “*Didelphis crassicaudata*. Desm.”, which can only be RMNH.MAM.12848, given Temminck’s inscription. Jentink’s specification “Du Cabinet de M. Temminck” can be explained by the fact that in 1821 Temminck’s private collection, though already state-owned at the time, had not yet been transferred to the newly founded museum (Gijzen 1938: 33-34; Holthuis 1995: 17-18).

Natterer collected in Brazil between 1817 and 1835 (Von Pelzeln 1871; 1883; Vanzolini 1993). Von Pelzeln (1883: 110) specifies the localities and months where Natterer collected this species, stating that 15 animals (one of them alive) were sent to Vienna. Given the date of the exchange in 1821, the *Naturalis* specimen must have been collected during one of Natterer’s first three journeys in Brazil, between October

1817 and February 1821, in the area between Rio de Janeiro and Paranaguá (Vanzolini 1993: 19-26).

Herskovitz (1959: 342) designated a lectotype for *Didelphis quica* Temminck, 1825 [= 1824]: an animal collected on 3 March 1818 by Natterer at Sapitiba (Sepetiba), Rio de Janeiro, Brazil. This lectotype selection was in all likelihood based on Von Pelzeln (1883: 110), without seeing the actual specimen. He fails to specify in which collection it is housed; it cannot be found in the Vienna Museum and its whereabouts are unknown (Engelberger 2010). Therefore we don't accept this as a valid lectotype designation and we list these specimens as syntypes.

This is also the type species for the genus name *Metachirus* Matschie, 1916. Voss et al. (2018: 28) in a revision of the genus *Philander* based on morphological and molecular data, consider *Philander quica* (Temminck, 1824) a valid species.

### ***Philander opossum*** (Linnæus, 1758)

***Didelphis Opossum*** Linnaeus, 1758: 55.

Lectotype, RMNH.MAM.25421.a (Jentink 1888: 220 *Didelphis quica* ), adult female, alcohol, skull in situ. Loc.: Suriname. Ex: T.G. van Lidth de Jeude, 1866.  
Paralectotypes: RMNH.MAM.25421.b–25421.d.

The description of *Didelphis Opossum* Linnæus, 1758 is exclusively based on Seba (1734: 56-57, pl. XXXVI figs 1, 2), who depicted a male and a female with three pouch young. The male was reported to be from Brazil, the female with young from Suriname. Herskovitz (1976: 297) designated the adult female figured in fig. 2 of Seba's plate the lectotype of the species, but apparently did not realise at the time that the animal still existed. They were also overlooked by Jentink (1888: 220) and Husson (1978: 24). Herskovitz (1997: 38) was the first to recognise these specimens as the Seba specimens. One of the young, hidden in the pouch, was overlooked by Jentink.

The history of Seba's collection, part of which was eventually acquired by the Utrecht zoologist T.G. van Lidth de Jeude, is discussed by Thomas (1892) and Boeseman (1970). After Van Lidt de Jeude's death, a selection from his collection was purchased by Naturalis in January 1866, before the remaining part was auctioned in 1867. These specimens are among the very few Linnaean types preserved in Naturalis.

Recently a specimen in the Zoological Museum in St.Petersburg, Russia was attributed to the Seba collection (Hendriks, pers.com. 11-06-2020). This is a mounted skin, with what looks like young in the pouch. This could also be a paralectotype, but information is lacking.

*Didelphis opossum* Linnaeus 1758 is also the type species for the genus *Philander* Brisson, 1762, by plenary action of the ICZN (ICZN 1998).

## DASYUROMORPHIA Gill, 1872

### Thylacinidae Bonaparte, 1838

#### *Thylacinus cynocephalus* (Harris, 1808)

***Thylacinus harrisii*** Temminck, 1824c: 63, pl. VII figs 1-4 (nomen novum).

***Thylacinus Temminckii*** Brookes, 1828: 30 (nomen nudum).

*Thylacinus harrisii* Temminck, 1824 is a nomen novum for *Didelphis cynocephala* Harris, 1808 (see Temminck, 1824c: 65), so the specimen described by Harris and referred to by Temminck is the holotype of the species.

Temminck writes (p. 65) having two specimens. On p. 63 Temminck emphasises that he had only seen males and therefore had been unable to verify whether the female of this species had a pouch. However, only Jentink's skin *a* (1888: 226) RMNH.MAM.39000) is a male, skin *b* (RMNH.MAM.39001) is of a much smaller female. The incomplete skull *b* (RMNH.MAM.63835) figured in Temminck's pl. VII (Jentink 1887: 305) is undoubtedly of a male. It has been catalogued with RMNH.MAM.39001, though it is obvious that it cannot have been extracted from the latter. The label (not original) of this skull reads "1828, Londres", which cannot be correct, since it was figured by Temminck in 1824. The second male skin mentioned by Temminck, probably the one corresponding with this skull, is no longer present in Naturalis. The female must have been acquired at a later date (perhaps in 1828) and become misconnected with the male skull figured by Temminck.

A fragmented skull of a female, also catalogued by Jentink (RMNH.MAM.63838), probably is the one really belonging with skin RMNH.MAM.39001, so this may be the specimen obtained from London in 1828. This could be one of the specimens bought at the auction of the Brookesian Museum of Comparative Anatomy, London. Temminck visited this collection during his stay in London and we know from the Annual Report (Jaarverslag 1828) that several specimens were bought at this auction. In his description of *Harrisii* Temminck mentions a specimen in the museum of Brooks [sic] (1824c: 65), this could have been the female acquired in 1828. In the catalogue of the sale of 1828 (Brookes 1828: 30, Fifth Day's Sale. Mammalia, lot 16-18) three specimens of *Thylacinus* are offered for sale: 16 - stuffed specimen, 17 - Foetus, stuffed, 18 - Cranium. Remarkably in the catalogue this species is mentioned as *Peracyon Harrisii* and *Thylacinus Temminckii* so with the name given by Temminck and naming it after Temminck (nomen nudum).

In the catalogue of the sale of 1830 (Twentieth Day, page 106, Comp. E.I. Comparative Crania, chiefly exotic, in Bottles, lot 13) "the cranium of a young Dog-headed Dasyurus (*Peracyon Harrissi*, Brookes)" is offered. Whether this is a remainder of the 1828 sale, or a specimen acquired by Joshua Brookes after 1828 is unclear.

### Dasyuridae Goldfuss, 1820

#### ***Dasyurus albopunctatus*** Schlegel, 1880: 51

Holotype by monotypy, RMNH.MAM.37157 (Jentink 1887: 304 *a*; 1888: 225 *a*), female, mounted skin and skull. Loc.: Sapua, [at the foot of the] Arfak Mts., New Guinea, Indonesia. [Leg. W.H. Woelders]. Received from G.A. Frank, Sr., 1879.

The collector of this specimen is not recorded. According to Schlegel (1880: 53), it was "due to a Dutch missionary collecting in the range of the Arfak-mountains". This can only have been W.H. Woelders, at the time living near Andai at the foot of the Arfak Mts. Around 1879, Woelders was on leave in The Netherlands, bringing his collections with him (see Adriani, 1895).

### ***Myoictis melas*** (Müller, 1840)

***Phascogale melas*** Müller, 1840b: 20.

***Phascogale melas*** Macklot, 1830: 174 (nomen nudum).

Lectotype, RMNH.MAM.25750 (Jentink 1887: 304 a; 1888: 223 a), male, mounted skin and incomplete skull. Loc.: Lobo, Triton Bay, New Guinea, Indonesia. Leg.: S. Müller [and H.C. Macklot], August 1828.

Müller's brief description precedes the more extensive treatise (as *Phascogalea melas*) by Müller and Schlegel (1843: pl. 25 figs 1-3; 1845: 149); see for the dates of publication Husson and Holthuis (1955). Müller gives no indication of the number of specimens available to him. Jentink (1887: 304) designates the lectotype.

The material collected around Triton Bay is usually attributed to S. Müller and H.C. Macklot, without distinction. The expedition of the Dutch navy vessel "Triton" was stationed in this bay between 4 July and 29 August 1828 (Macklot 1829: 306). The animal was brought on board by a local hunter (Müller and Schlegel 1845: 152). See for the locality Müller (1840b: 14, map).

***Phascogalea thorbeckiana*** Schlegel, 1866b: 257.

Lectotype, RMNH.MAM.25749 (Jentink 1887: 304 c; 1888: 224 c), male, mounted skin and skull. Loc.: Sailolof, Salawati, Indonesia. Leg.: H.A. Bernstein, [February 1865]. Paralectotype: RMNH.MAM.36166.

Schlegel (1866b: 257) based his description on two specimens of *Phascogale[a]* collected by Bernstein in February 1865. However, there is no *Phascogalea* mentioned in Bernstein's field notes (see Van Musschenbroek (1883), nor in his notebook of collected specimens, preserved in the archives of Naturalis. Only a "*Perameles*" obtained by his hunters near Sailolof is listed in the entry for 22 February 1865 (Van Musschenbroek 1883: 152), which caused Tate (1940: 2) to erroneously suggest this date as the date of collection. However, there is no *Perameles* collected by Bernstein in the Naturalis collection, nor is any such specimen mentioned by Schlegel (1866c: 353-354) in his notes on *P. doreyanus*. Probably Bernstein had misidentified the animal(s). He died on 19 April 1865 on the neighbouring island of Batanta (Van Musschenbroek 1883: 104) where he had received some additional material from Salawati shortly before his death: see his notebook and Schlegel (1866c: 358), further discussed under *Pseudochirulus canescens* below. See also Bernstein's incomplete and confusing records of kangaroos, discussed under *Dorcopsis muelleri* below.

Tate (1940: 2; 1947: 140) erroneously included Jentink's (1888: 223) specimens *a* and *b* in the type series; however, these were collected in 1867 by Hoedt. Jentink (1887: 304) designates the lectotype, unnecessarily repeated by Woolley (2005: 333), who mistakenly records it under RMNH 25749c, the paralectotype under RMNH 25749d.

### ***Neophascogale lorentzii*** (Jentink, 1911)

***Phascogale Lorentzii*** Jentink, 1911a: 234.

Holotype by monotypy, RMNH.MAM.36163, female, skin and skeleton, 4 pouch young on alcohol. Loc.: Hellwig Mts at 2600 m (bivouac 8), south of Wilhelmina (Trihora) Peak, New Guinea, Indonesia. Leg.: H.A. Lorentz, Dutch New Guinea Expedition 1909/1910 (329), 24 October 1909.

For the locality, see Lorentz (1913: map).

### ***Phascolosorex doriae*** (Thomas, 1886)

***Phascogale Nouhuysii*** Jentink, 1911a: 235.

Holotype by monotypy, RMNH.MAM.36174, female, skin and skeleton. Loc.: Went Mts at c. 1050 m (bivouac 4), south of Wilhelmina (Trihora) Peak, New Guinea, Indonesia. Leg.: H.A. Lorentz, Dutch New Guinea Expedition 1909/1910, 12 October 1909.

In the original description Jentink (1911a) gives as collecting locality "Bivak Island" and not "Bivak 4". This was a mistake he clarifies in a later publication (Jentink 1911b: 181). For the locality see Lorentz (1913: 92, map).

### ***Murexia longicaudata*** (Schlegel, 1866)

***Phascogale longicaudata*** Schlegel, 1866c: 356.

Holotype by monotypy, RMNH.MAM.35135 (Jentink 1887: 303 a; 1888: 223 a), subadult male, relaxed mount and incomplete skull. Loc.: Wonumbai, Koboör Island, Aru Islands, Indonesia. Leg.: C.B.H. von Rosenberg, [4 June] 1865.

This specimen almost certainly is no. 81 in Von Rosenberg's field catalogue, preserved in the archives of Naturalis. It was collected on 4 June 1865 and entered as *Mijioictis wallaceë*.

### ***Phascomurexia naso*** (Jentink, 1911)

***Phascogale naso*** Jentink, 1911a: 236.

Holotype by monotypy, RMNH.MAM.35134, male, skin and skeleton. Loc.: Hellwig Mts at c. 2000 m. (bivouac 7), south of Wilhelmina (Trihora) Peak, New Guinea, Indonesia. Leg.: H.A. Lorentz, Dutch New Guinea Expedition 1909/1910 (326), 16 October 1909.

For the locality, see Lorentz (1913: map).

## **PERAMELEMORPHIA** Ameghino, 1889

### **Peramelidae** Gray, 1825

#### ***Peroryctes raffrayana rothschildi*** (Förster, 1913)

***Perameles rothschildi*** Förster, 1913: 177.

Holotype by monotypy, RMNH.MAM.553, female, skin, skull and vertebrae. Loc.: Mt. Bolan (Bangeta) at 3600 m, Saraweget Range, Papua New Guinea. Leg.: 1912. Ex: F. Förster, 8 November 1915.

Förster himself did not collect in New Guinea. He received his material from local collectors and sent it to various museums in Europe. The present specimen was

among the mammals obtained by Förster in 1912 and was offered to Jentink in a letter dated 29 January 1913 (Naturalis archives). After some disagreement about the price, Naturalis finally received it on 8 November 1915.

***Perameles mainois*** Förster, 1913: 178.

Syntype, RMNH.MAM.291, female, skin and skull. Source area of Bulung River at 1800-2000 m, Huon Peninsula, Papua New Guinea. Leg.: [1912]. Ex: F. Förster, 22 February 1913.

This specimen was among the material obtained in 1912. Förster offered it to Jentink in letters dated 11 and 29 January 1913; Naturalis received it on 22 February 1913. The skeleton accompanying the skin as specified by Förster turned out to be incomplete and only the skull has been preserved.

## DIPROTODONTIA Owen, 1866

### Phalangeridae Thomas, 1888

#### *Ailurops ursinus* (Temminck, 1824)

***Phalangista ursina*** Temminck, 1824a: 10, pl. I figs 1-3, pl. II figs 1-5, pl. IV.

Syntype, RMNH.MAM.39005 (Jentink 1888: 236 a), male, mounted skin, skull extracted but not in collection. Loc.: [Gorontalo], Sulawesi, Indonesia. Leg.: C.G.C. Reinwardt, [17-23 September 1821].

Syntype, RMNH.MAM.39006 (Jentink 1888: 236 b), female, mounted skin, skull in situ. Loc.: [Gorontalo], Sulawesi, Indonesia. Leg.: C.G.C. Reinwardt, [17-23 September 1821].

Syntype, RMNH.MAM.39007 (Jentink 1888: 236 c), female, mounted skin, skull extracted but not in collection. Loc.: [Gorontalo], Sulawesi, Indonesia. Leg.: C.G.C. Reinwardt, [17-23 September 1821].

Syntype, RMNH.MAM.39008 (Jentink 1887: 313 a), sex unknown, skeleton with incomplete skull. Loc.: [Gorontalo], Sulawesi, Indonesia. . Leg.: C.G.C. Reinwardt, [17-23 September 1821]. Figured in Temminck (1824a: pl. I figs 1-3, pl. IV).

Syntype, RMNH.MAM.39009 (Jentink 1887: 314 c), juvenile, sex unknown, incomplete skull. Loc.: [Gorontalo], Sulawesi, Indonesia. Leg.: C.G.C. Reinwardt, [17-23 September 1821].

Temminck (1824a: 12) attributes the specimens he has before him to Reinwardt, specifying them as two large individuals, two adult skeletons and several juveniles both as skins and skeletons, another specimen from the same origin is in the MNHN. However, Naturalis has three adult skins from Sulawesi that give Reinwardt as the collector, written on the pedestals in Temminck's handwriting. Reinwardt's inventory of the collection that he brought with him to Leiden in 1822, preserved in the archives of Naturalis, enumerates, for crate no. 4, two skeletons of the "koeskoes van de Celebes" [Cuscus from Sulawesi] and for crate no. 11, two "Koeskoes vellen van Celebes" [Cuscus skins Sulawesi]. These must relate to this species, as Temminck had no other cuscus material from Sulawesi. These discrepancies cannot be solved. In crate no. 10, there were two specimens (obviously skins) from the "Celebes-[koeskoes]", but to those Temminck has added in pencil "B[alantia]. chrysorrhos - Cul d'or", so they must have been included in that form and cannot have come from Sulawesi (see below).

Skull a (RMNH.MAM.39008), figured by Temminck (1824a) in pls I and IV, is now damaged; the skull figured in pl. II is no longer present in the collection. Tate (1940: 4) gives an erroneous list of "Co-types" and wrongly records Müller and Macklot as the collectors.

Reinwardt visited northern Sulawesi between 17 September and 14 November 1821 (Reinwardt 1858: 505, 604). He writes that he found the species near Gorontalo (p. 515), where he stayed between 17 and 23 September (pp. 505, 522). He does not record it from other localities, which renders Gorontalo the most likely provenance of this series.

### ***Phalanger orientalis*** (Pallas, 1766)

***Phalangista cavifrons*** Temminck, 1824a: 17, pl. I figs 7-9, pl. II figs 7-10.

Lectotype, RMNH.MAM.59143 (formerly 39002a) (Jentink 1887: 310 *m*<sup>3</sup>), juvenile, sex unknown, cranium. Loc.: [Banda or Ambon Island], Moluccas, Indonesia. Leg.: [C.G.C. Reinwardt, May-August 1821].

Paralectotypes: RMNH.MAM.16433, 39371, 59144, 59660.

Temminck (1824a: 19) originates this species in the islands of Banda and Ambon, and records a series of skins and skeletons for the Naturalis collection of all ages; the collector is not recorded. On the same page, Temminck refers to Reinwardt's activities in the Malay Archipelago, but in a general way only, not specifically in connection with this material. Our specimens are badly documented and lack original labels. We assume that all these specimens were collected by Reinwardt and that they all belong in the type series of *Phalangista cavifrons* Temminck, 1824.

Reinwardt visited the Banda Islands between 18 May and 26 June, Ambon and surrounding islands between 27 June and 12 August 1821 (Reinwardt, 1858: 374, 424, 476). In this travel account, he records "*Didelphis orientalis*" for Ambon only (p. 435, see also below), so at first sight it would seem likely that he had obtained the species on that island. However, the inventory of the collection that he brought with him to Leiden in 1822 gives the following entries apparently relating to this species: in crate no. 4, two skeletons of the "koeskoes van Banda" [cuscus from Banda]; in crate no. 10, seven "witte koeskoes" [white cuscus], to which Temminck has added in pencil "Balantia naevia" (obviously males) and three "Graauwe koeskoes" [Grey cuscus], to which Temminck has added "B[alantia]. fasciata" (probably females), both unpublished manuscript names. In crate no. 11, there were five "Koeskoes vellen van Banda" [Cuscus skins from Banda], to which has been added in pencil: "verteerd" [decayed], so these have not been preserved. Finally, for the same crate Temminck has added in pencil: "2 Balantia Cavifrons". The loss of several specimens, however, does not explain the discrepancy between Temminck's reported "série d'individus" and the present lack of skins among the types. Further in his travel account, Reinwardt (1858: 515) again briefly refers to the occurrence of cuscuses on Ambon, and in a footnote gives a description that includes two species: "De Ambonsche soorten zijn wit en rosachtig of wit met zwarte vlekken" [The Ambon species are white and reddish or white with black spots]. The former must refer to *Ph. orientalis* (= Temminck's *cavifrons*), the latter to *Spilocuscus* (= *Phalangista*) *maculatus*, which Temminck specifically distinguished from his *Ph. chrysorrhos* (see below).

Probably following Jentink (1887: 310), Tate (1940: 3) wrongly regarded the juvenile skull *m*<sup>3</sup> (RMNH.MAM.59143) as "the type", thereby inadvertently designating it the lectotype of *Phalangista cavifrons* Temminck, 1824. This is very unfortunate, particularly since Tate correctly observed that "The mandible associated with the skull does not belong to it". The lectotype therefore comprises the cranium only, the mandibles are here listed as paratypes (RMNH.MAM.59144).

## ***Spilocuscus maculatus chrysorrhos*** (Temminck, 1824)

### ***Phalangista chrysorrhos*** Temminck, 1824a: 12.

Lectotype, RMNH.MAM.13484 (Jentink 1887: 312 *r*; 1888: 234 *l*), female, mounted skin and skull. Loc.: Ambon, Moluccas, Indonesia. Leg.: C.G.C. Reinwardt, [27 June-12 August 1821]. Skull figured in Temminck (1824a: pl. I figs 4-6).  
Paralectotypes: RMNH.MAM.13485, 39391.

Temminck (1824a: 13) attributes the two specimens and unspecified number of skulls he has before him to Reinwardt. Since the skull of skin *m* (RMNH.MAM.13485) has not been extracted, there must have been at least one more, separate, skull collected by Reinwardt. The only such skull now present in Naturalis is skull *r* (RMNH.MAM.39391), which therefore should be included in the type series, a fact overlooked by Jentink (1887) and Tate (1940: 3).

As to the provenance of Reinwardt's material, Temminck (1824a: 14) gives as origin the Moluccas, the exact island unknown. The pedestals, however, give Ambon as the locality, in Temminck's own handwriting. The inventory of the collection that Reinwardt brought to Leiden in 1822 contains for crate no. 10 an entry of two specimens (obviously skins) of the "Celebes-[koeskoes]", to which Temminck has added in pencil: "B[alantia]. chrysorrhos - Cul d'or". This vernacular designation agrees perfectly with the colouration of the skins and with Temminck's description on p. 13. They must be the two types mentioned by Temminck and so cannot have come from Sulawesi (see under *Ailurops ursinus*). Reinwardt worked on Ambon between 27 June and 12 August 1821 (see under *Phalanger orientalis*).

The lectotype was designated by Husson (1955: 294). Helgen and Jackson (2015: 496) treat *S. maculatus* as monotypic.

### ***Spilocuscus tardus*** Helgen, 2007: 262.

Paratype, RMNH.MAM.25403 (Jentink 1887: *rr*, 1892: 236 *rr*), adult male, mounted skin and skull. Loc.: Hattam, New Guinea, Indonesia. Leg.: W.L. Jens, 1887.  
Paratypes: RMNH.MAM.25398–25399.

Helgen (2007) designates a holotype in the AMNH (AMNH 109453). In his description he also refers to specimens from Fakfak, Warbusi Bay and Salawati in the Naturalis collection and specifically mentions RMNH.MAM.25403. No specimens from Salawatti or Warbusi Bay could be found.

### ***Spilocuscus wilsoni*** Helgen & Flannery, 2004: 826

Holotype, RMNH.MAM.12727, juvenile male, skin and skeleton. Loc.: Biak Island, New Guinea, Indonesia. Leg.: L.D. Brongersma, April 1955.  
Paratype: RMNH.MAM.64.

RMNH.MAM.64 bears a note written by Ruys, stating that the animal had been brought alive from the Schouten Islands by inhabitants of Biak; it had died after a few months. The provenance must have been the main islands of Biak-Supiori. Naturalis received the specimen on 17 April 1906.

## Pseudocheiridae Winge, 1893

### ***Petauroides volans incanus*** Thomas, 1923a: 247.

Paratype, ZMA.MAM.5380, male, skin and skull. Loc.: Eidsvold, Australia. Leg.: T.V. Sherrin, 18 January 1922. Ex: NHM, 1923.

Thomas selects a specimen in the NHM as holotype (NHMUK 22.12.29.19). See also Bergmans (2011: 836).

### ***Petropseudes dahli*** (Collett, 1895)

#### ***Pseudochirus dahli*** Collett, 1895: 464.

Syntype, RMNH.MAM.13392, female, skin and skull with incomplete left mandible. Loc.: Mary River (13°30' S 131°30' E), Northern Territory, Australia. Leg.: K. Dahl, 7 May 1895. Ex: Christiania (Oslo) Museum, R. Collett, 1897.

In Wilson and Reeder (2005: 51) the specific epithet used is *dahli*, Collett however, names this species *dahlii* in the original description.

### ***Pseudocheirus peregrinus*** (Boddaert, 1785)

#### ***Didelphis Peregrinus*** Boddaert, 1785: 78.

#### ***Didelphis caudivolvula*** Kerr, 1792: 196.

#### ***Didelphis Novae Hollandiae*** Bechstein, 1800: 348, 685.

#### ***Phalangista Banksii*** Gray, 1838: 107.

Holotype for *Peregrinus* and *Novae Hollandiae*, syntype for *caudivolvula* and *Banksii*, RMNH.MAM.33660 (Jentink 1888: 239 *?*), female, mounted skin, skull in situ. [Loc.: Endeavour River, Queensland, Australia. Leg.: J. Banks, 26 July 1770, the first expedition by J. Cook. Received from Bullock's Museum, London, 1819].

Smeenck (2009) has extensively discussed this specimen and tried to reconstruct its history which, however, cannot be traced with certainty. It was probably acquired from Bullock's Museum, which contained many objects that originated from Cook's expeditions. In April-June 1819 this entire collection was publicly sold. C.J. Temminck and H. Kuhl attended part of the auction. Kuhl (1820b: p. 63) described some mammals which he studied during the view. One of these he gives as "*Balantia Cookii* Geoff. Cook dern voy tab. VIII.", followed by a Latin description that very well matches our skin. In his copy of the sales catalogue (Bullock, 1819), preserved in the archives of Naturalis, Temminck marked the items he bought with a thick line and a T, and noted the price he paid. One of the entries thus marked is no. 134 on p. 71, auctioned on 14 May and consisting of a "Murine Opossum, the Brush-tailed ditto, and another"; in the margin Temminck has added "*Balantia*". The third item of this lot may be the specimen so accurately described by Kuhl.

In his monograph on the genus *Phalangista*, Temminck (1824a: 7-8) discusses *Ph. cookii*. This name was given by Desmarest (1818: 476) to the possums from Van Diemen's Land (Tasmania). Desmarest refers to the specimen collected during Cook's third expedition in 1777, which was described and figured in the account of that voyage. Temminck assumed that RMNH.MAM.33660 came from Van Diemen's Land, which was then thought to be the southernmost tip of the Australian mainland, and had been collected during one of Cook's expeditions. Jentink (1885: 23) points out that Cook had obtained possums on two occasions only: a female in 1770 and a male in 1777. The female (with two young) was collected by Joseph Banks on 26 July 1770

near Endeavour River in the present Queensland (Hawkesworth, 1773: 182), the male was caught by W. Anderson at Adventure Bay, Van Diemen's Land, in January 1777 (Anderson in Cook, 1784: 109). Since our specimen is a female, it cannot be the one from Tasmania. Jentink concludes therefore that Temminck's specimen either is from Endeavour river or is not one of the two specimens of Cook's voyage. In his 1888 catalogue, however, Jentink gives this provenance as reconstructed by him without any expression of doubt. He overlooked Boddaert's name and so did not recognize the specimen as a type.

The skin must have been (re)mounted in Leiden, as its pedestal is of the same make as those used for many 19th-century mammals in *Naturalis*. On it is written, in Temminck's handwriting: "Phalangista Cookii femelle Cuvier. Temm Monog p 7 individu type. Le Banksii d'Ogilby et le Cookii de Gray. Australie méridionale". This inscription cannot have been written before 1838, when Gray's and Ogilby's names were published. With this, Temminck has added to the confusion by confounding the two authors to whom he referred: the name *Phalangista Banksii* was given by Gray to the animal collected by Banks near Endeavour River in NE Australia, whereas Ogilby maintained that the northern form should be called *Ph. Cookii*; see below.

The description by Boddaert (1785) is entirely based on Pennant (1781: 310-311), who does not use scientific names and who says of his New Holland opossum (no. 188): "The skin I examined had lost part of the face:... This was found near *Endeavour* river, on the eastern coast of *New Holland*, with two young ones", with a footnote reference to "Cook's voy. iii. 586", meaning the third volume of the account of Cook's first voyage (probably another edition of Hawkesworth's book, with different pagination), not to Cook's third expedition, during which the male in Van Diemen's Land was collected. Pennant's description is very brief and unspecific, and apparently, the two young were not preserved. However, his observation that the skin had lost part of its face agrees with the condition of the *Naturalis* specimen, which has its facial skin repaired by sewing together parts of the right cheek, so that the white spot in that place (well visible in the left cheek) and the vibrissae above the eye have all but disappeared. At close inspection, the scar is clearly visible. The lower lips appear as if drawn back in preparation and are considerably shrunken, exposing the lower incisors to the gums; see Smeenk (2009: 725, 736). Pennant does not record where he saw the skin.

McKay (1988: 95) could not locate the type of *D. peregrinus* and in a following publication, McKay (1989: 666) even expresses his doubts about the origin of Pennant's specimen which, judging from Pennant's colour description, he believes had probably been collected in the surroundings of Sydney. However, it is virtually impossible that in 1781 Pennant could have had a specimen from another source. Similarly, McKay (1989) says of our specimen that it "is almost certainly from the Sydney area", without further argumentation.

Although it cannot be proven and Temminck (1824a: 8) is clearly mistaken in recording the *Naturalis* female as originating from Van Diemen's Land, it may indeed be the specimen collected by Banks near Endeavour River in July 1770, and hence the holotype of *Didelphis peregrinus* Boddaert, 1785 and later synonyms. Therefore, it is provisionally included in this type catalogue; see Smeenk (2009) for further details.

*Didelphis caudivolvula* Kerr, 1792 is also based on the specimen from Endeavour River. Kerr's description closely resembles that of Pennant but is more detailed, so Kerr must have seen the animal himself. It is noteworthy that he does not mention that the skin had a damaged face; it may have been repaired by then. Although Jentink (1885: 22-23; 1888: 238-239) applies the name "*Pseudochirus caudivolvulus* Kerr" to the present species and identifies the *Naturalis* specimen with

the one from Endeavour River, he has not catalogued it as the type (see Smeenk 2009).

*Didelphis novaehollandiae* Bechstein, 1800 is also based on the specimen from Endeavour River, which Bechstein erroneously situates on the west coast of Australia. Bechstein's work is basically a translation of Pennant's (1781) treatise, with scientific names added.

Gray (1838) specifically differentiates the animals from Tasmania and Endeavour River. Following Temminck (1824a), he correctly points out that the name *Phalangista cookii* is based on the Tasmanian form as collected during Cook's third voyage in 1777, though he does not refer to Desmarest (1818), the author of that name. Overlooking the names given by Boddaert (1785), Kerr (1792) and Bechstein (1800), Gray proposes that "The other, which was found near the Endeavour River, New Holland, may be called *Phalangista Banksii*; it is the New Holland opossum of Pennant (Quad., ii. 25. [obviously referring to another edition with different pagination]), the Opossum of Hawkesby, [sic] Voy., ii. [sic] 586, and probably the *Balantia Cookii* of Kuhl. (Beitr. 63)". He did not realise that all these names refer to the specimen discussed above, which he had not seen. He only remarks: "... and Temminck says that he described a specimen brought home in Capt. Cook's expedition which is now in the Leyden Museum."

#### ***Pseudocheirus peregrinus convolutor* (Schinz, 1821)**

***Phalanger Viverrina* Ogilby, 1838a: 131.**

Paralectotype, RMNH.MAM.39011 (Jentink 1887: 315 c; 1888: 239 j), female, mounted skin and skull. Loc.: Van Diemen's Land (Tasmania), Australia, 1837, no further documentation; acquired in or from London, 1838.

The pedestal of RMNH.MAM.39011 bears the inscription, in Temminck's handwriting: "Phalangista indiv. décrit par Ogilby". Jentink (1885: 23) gives it as "One of the specimens described by Ogilby in 1837 s.n. *Phalangista viverrina*". Ogilby's description, read for the Zoological Society on 28 November 1837, appeared in the following year (Ogilby, 1838a).

Tate (1945: 26) referred to a specimen in the NHM (NHMUK 55.12.24.213) as "Type", thereby formally designating it the lectotype of this name.

#### ***Pseudochirulus canescens bernsteinii* (Schlegel, 1866)**

***Phalangista bernsteinii* Schlegel, 1866c: 357.**

Lectotype, RMNH.MAM.13389 (Jentink 1887: 315 a; 1888: 238 a), female, mounted skin and incomplete skull. Loc.: Salawati Island, Indonesia. Leg.: H.A. Bernstein, [April 1865]. Received 20 January 1866.

Paralectotype: RMNH.MAM.13390.

Bernstein collected on Salawati between 21 February and 31 March 1865 (see Van Musschenbroek 1883), and his notebook of collected specimens, preserved in the archives of Naturalis. In these, however, there is no record of this species (Van Musschenbroek 1883: 152 and under *Phascogalea thorbeckiana* above and *Dorcopsis muelleri* below). Schlegel (1866c: 358) therefore supposed that Bernstein had received the specimens shortly before his death; he died on 19 April 1865 on the neighbouring island of Batanta. His diary from the final weeks of his life is very brief (Van Musschenbroek 1883: 102-105), but during his stay on Batanta he did receive additional material from Salawati. The last entry in his notebook is of 14 April, recording

three birds from Salawati, but this is his only record from the period of 9 April until his death. The year 1866 mentioned by Jentink (1888) refers to the date when the collection was received in Leiden.

The lectotype was designated by Husson (1955: 296).

Jackson (2015: 523) treats *P. canescens* as monotypic, pending further research.

### ***Pseudochirulus schlegelii*** (Jentink, 1884)

***Pseudochirus schlegelii*** Jentink, 1884: 110.

Holotype, RMNH.MAM.13388 (Jentink 1887: 315 a; 1888: 238 a), male, mounted skin and skull. Loc.: Arfak Mts, New Guinea, Indonesia. [Leg. W.H. Woelders]. Ex: G.A. Frank, Sr., 1879.

The collector of this specimen is not recorded. Almost certainly this was the Dutch missionary W.H. Woelders, who lived near Andai at the foot of the Arfak Mts and was around 1879 back on leave in The Netherlands. The animal was acquired in April 1879 through the dealer G.A. Frank, Sr. in Amsterdam.

## **Potoroidae** Gray, 1821

### ***Bettongia lesueur*** (Quoy & Gaimard, 1824)

***Hypsiprymnus Graii*** Gould, 1840a: 178.

Syntype, RMNH.MAM.63735 (Jentink 1888 253: d), juvenile female, mounted skin, skull in situ. Loc.: Swan river, Australia. Ex: J. Gould.

As Gould never visited Western Australia, he cannot be the collector. The population or form described as *graii* by Gould (1840a) is extinct.

### ***Potorous tridactylus tridactylus*** (Kerr, 1792)

***Hypsiprymnus myosurus*** Ogilby, 1838e: 62.

Syntype, RMNH.MAM.63737 (Jentink 1888: 252 d), adult, sex unknown, mounted skin, skull in situ. Loc.: Australia. Ex: W. Ogilby.

On the stand of RMNH.MAM.63737 is written in Temminck's hand: "decri individu par Ogilby" [Described specimen by Ogilby]. We therefore list this specimen as a syntype. We don't include another specimen (RMNH.MAM.64141, with same data) in the type series, as it lacks this information.

On the online database of the NHM a specimen (NHMUK 1855.12.24.66) is listed as holotype. Ogilby does not mention how many specimens he has before him, nor where they are kept, therefore types should be listed as syntypes.

## Macropodidae Gray, 1821

### *Dendrolagus inustus* Müller, 1840.

*Dendrolagus inustus* Müller, 1840b: 20.

*Hypsiprymnus artus* Macklot, 1830: 174 (nomen nudum).

Lectotype, RMNH.MAM.13483 (Jentink 1887: 324 a; 1888: 250 d), female, mounted skin and skeleton. Loc.: Mt Lamantsjieri [Lamanciri], Triton [Lobo] Bay, New Guinea, Indonesia. Leg.: S. Müller and H.C. Macklot, August 1828.

Müller (1840b) precedes the more extensive description by Schlegel and Müller (1841: pls 20, 22-24; 1845c: 143). Müller (1840b) gives no indication of the number of specimens available to him. Jentink (1887: 324) designates the lectotype.

The animal was caught by a local hunter in the forest of Mt Lamanciri and kept alive for some time on board the Dutch naval vessel "Triton" (Schlegel and Müller 1845c: 145-146). In the archives of Naturalis there is a drawing of its head by P. van Oort. The expedition stayed in Triton Bay between 4 July and 29 August 1828 (Macklot 1829: 306). See for the locality Müller (1840b: 14, pl. 3, map).

### *Dendrolagus ursinus* (Temminck, 1836)

*Hypsiprimnus ursinus* Temminck, 1836: vi.

*Hypsiprymnus ursinus* Macklot, 1830: 174 (nomen nudum).

Lectotype, RMNH.MAM.13507 (Jentink 1887: 323 a; 1888: 249 b), female, mounted skin and skeleton. Loc.: Lobo (Triton) Bay near Mt Lamantsjieri [Lamanciri], New Guinea, Indonesia. Leg.: S. Müller and H.C. Macklot, July 1828.  
Paralectotypes: RMNH.MAM.16450, 39012–39013.

Temminck's name was published in 1836 (Husson 1955: 302; Mees, 1957), so well before Müller (1840b: 20) and the more extensive description by Schlegel and Müller (1841: pls 19, 22-24; 1845b: 141).

The four animals were caught by local hunters and kept alive on board the Dutch naval vessel "Triton". Three of them were slaughtered and eaten by the crew in relief of the many sick members of the expedition. One adult female was taken as a pet to Ambon and from there to Timor, where it lived for some time (Schlegel and Müller 1845b: 142-143); this must have been RMNH.MAM.39012. In the archives of Naturalis there are two drawings of this tree-kangaroo by P. van Oort: one showing the entire animal, dated 6 August 1828, the other a detailed portrait of the head, dated August 1828. These were copied in Schlegel and Müller's pls 19 and 22 fig. 1, respectively. Jentink (1888: 249) refers in these plates to skin *b* (RMNH.MAM.13507), but that specimen has a whitish tip to the tail (now damaged), which is lacking in the drawing and plate. The expedition was in Triton Bay between 4 July and 29 August 1828 (Macklot 1829: 306). See for the locality Müller (1840b: 14, pl. 3, map).

The lectotype was designated by Mees (1957: 209); see also Husson and Rappard (1958: 10).

### *Dorcopsis luctuosa phyllis* Groves & Flannery, 1989: 125.

Holotype, ZMA.MAM.5243, female, skin and incomplete skeleton. Loc.: Near Merauke, New Guinea, Indonesia. Leg.: A.J.N. Monsanto, end of 1959 - early 1960 (live-captured) died in NAM, 31 December 1962.

The animal was sold to NAM in 1959-1960, where it died after about two years. See Bergmans (2011: 836-837) for further details.

### ***Dorcopsis muelleri*** (Schlegel, 1866)

***Macropus Mülleri*** Schlegel, 1866c: 353.

***Hypsiprymnus doreo*** Macklot, 1830: 174 (nomen nudum).

Lectotype, RMNH.MAM.13473 (Jentink 1887: 322 a; 1888: 250 b), female, mounted skin and skeleton. Loc.: [Southern foot of Mt Lamantsjieri (Lamanciri)], Lobo (Triton) Bay, New Guinea, Indonesia. Leg.: S. Müller and H.C. Macklot, July 1828. Figured in Schlegel and Müller (1841: pl. 21, pl. 23 figs 7-8, pl. 24 figs 7-9).

Paralectotypes: RMNH.MAM.13474–13482.

Schlegel and Müller (1841: pls 21-24) figured this small kangaroo from New Guinea under the name *Hypsiprymnus brunii*, later (Schlegel and Müller 1845b: 131) followed the text. In this species, the authors included the animals from New Guinea and the Aru Islands, though leaving open the possibility that these might eventually prove distinct species (p. 133). Schlegel (1866c: 350-353) demonstrated that the two forms are very different indeed and showed that Schreber's *Didelphis brunii* applies to the species occurring in the Aru Islands. He abandoned the generic name *Dorcopsis* and named the animals from New Guinea and Salawati *Macropus Mülleri*. Husson (1955: 296) used the name *Dorcopsis veterum* (Lesson, 1827) for the New Guinea species, but Groves and Flannery (1989: 117) regard this as a nomen dubium.

The lectotype of *Macropus Mülleri* Schlegel, 1866 was designated by Husson (1955: 300), following the suggestion by Tate (1940: 4). There can be no doubt that this is the female carrying a young in her pouch, which Müller and Macklot shot at the southern foot of Mt. Lamanciri, as recorded in Schlegel and Müller (1845b: 138); see for the locality Müller (1840b: 14, pl. 3, map). The juvenile in alcohol (RMNH.MAM.13476) is her young. The other animals were caught alive by local hunters and brought on board the Dutch naval vessel "Triton". Jentink (1888) also attributed the head, figured in Schlegel and Müller (1841b: pl. 22 fig. 3), to the female with young. This is probably incorrect: the figure is based on a drawing by G. van Raalten (not P. van Oort as stated by Schlegel and Müller 1845b: 147) of a live animal dated Lobo, August 1828, so probably represents one of the other individuals, which were not all captured in July as stated by Jentink. In his field notes from Lobo, preserved in the archives of Naturalis, Müller recorded this species for "Julij-August". The expedition was in Triton Bay between 4 July and 29 August 1828 (Macklot 1829: 306).

Jentink (1887, 1888) does not mention the specimens collected by Bernstein as types, though Schlegel (1866c: 351) stated of his new species: "...dont nous possédons également une fort belle série d'individus recueillis, par nos voyageurs, à Salawatti et sur différents points de la côte occidentale de la Nouvelle-Guinée". At the time, Naturalis had just received Bernstein's collection, which had arrived on 20 January 1866. Bernstein collected in New Guinea in the surroundings of Sorong and outlying islets between 22 November 1864 and 19 February 1865, and on Salawati from 21 February to 31 March 1865 (apart from a brief visit on 19-20 November 1864); see Van Musschenbroek (1883), and his notebook of collected specimens, preserved in the archives of Naturalis. One of the Sorong kangaroos was obtained by Bernstein's hunters on 27 December 1864; the other, a larger male, on 2 January 1865, some distance up Ramui River above Sorong (see Bernstein's notebook and Van Musschenbroek 1883: 69, 71, 137, 139). Strangely, Bernstein recorded both

kangaroos as *Dendrolagus*, but there are no tree kangaroos collected by him in *Naturalis*, only *Dorcopsis*. This enigma cannot be solved. It seems hard to believe that Bernstein would have confused the two genera, since for Salawati, he does mention two *Dorcopsis*, collected at Kalwal on 17 March 1865 (see his notebook and Van Musschenbroek 1883: 159). There is another discrepancy here: Bernstein's notes record two fairly small animals from Salawati (probably RMNH.MAM.13478–13479), however there are four in *Naturalis*. Probably, he had received additional specimens from Salawati during his stay on the neighbouring island of Batanta, where he died on 19 April 1865 (Van Musschenbroek 1883: 104). To make matters worse, Jentink (1887; 1888) has interchanged the two animals from Sorong. The smaller juvenile (skull *p*, RMNH.MAM.13482) is the one collected on 27 December 1864; the adult male (skin *q*, skull *o*, RMNH.MAM.13481), dated by Jentink 17 December 1865 (a lapsus for 27 December 1864), is the one obtained on 2 January 1865. The year 1866 given by Jentink for the remaining specimens refers to the date when the collection was received in Leiden (20 January 1866).

Groves (2005a: 62) erroneously lists this species as *Dorcopsis muelleri* (Lesson, 1827), confounding the authors Schlegel and Lesson.

### ***Dorcopsis muelleri lorentzii* Jentink, 1908**

***Dorcopsis Lorentzii* Jentink, 1909a: 10, pl. I figs a-d.**

Lectotype, RMNH.MAM.24254, male, flat skin and skull. Loc.: ["Geluksheuvel" near] Alkmaar, New Guinea, Indonesia. Leg.: Dutch New Guinea Expedition 1907, H.A. Lorentz, 13 August 1907. Figured in Jentink (1909: pl. I figs a-d).

Paralectotypes: RMNH.MAM.24253, 24255, 24264.

Some sources (Wilson and Reeder 2005: 62; Eldridge and Coulson 2015: 694) date the publication of this name in 1908, based on the date October 1908 in the header of the article. However the first issue of *Nova Guinea* 9 was published in 1909.

The lectotype was designated by Groves and Flannery (1989: 122), following an unpublished note on the label by A.M. Husson. See Van Nouhuys (1910: map, "Geluksheuvel") and Lorentz (1913: map, "Glückshügel") for maps of the exact locality of the lectotype.

### ***Macropus eugenii* (Desmarest, 1817)**

***Kangurus Eugenii* Desmarest, 1817b: 38.**

Syntype, RMNH.MAM.59662 (Jentink 1888: 246 *d*), subadult male, mounted skin, skull in situ. Loc.: Ile Eugene [Iles of St. Peter], Australia. Leg.: F. Péron, Baudin expedition, [1802-1803]. Ex: MNHN.

Desmarest (1817b) bases his description on specimens collected by C.A. Lesueur on Ile Eugène (Péron 1816: 117). This was probably during the visit of St. Peter Island by the ship *Le Géographe* in May 1802 or 10-11 February 1803 (Jansen 2018: 26-39).

***Halmaturus Houtmannii* Gould, 1844: 31.**

Paralectotype, RMNH.MAM.63740 (Jentink 1887: 320 *a*; 1888: 246 *a*), subadult male, mounted skin and skull. Loc.: Houtman Abrolhos, E. Wallabi Island. Ex: J. Gould. Received 18 January 1843.

Paralectotype: RMNH.MAM.63741.

The information on the labels with these specimens is confusing: the date of collecting, January 18th 1843, is in conflict with the listing of Gould as the collector,

“Voyage Gould”, as Gould returned from Australia in 1840 and never visited Western Australia. This is presumably the date of arrival of the specimens in Naturalis.

It is possible that these specimens were collected by Benjamin Bynoe, surgeon on board of the *Beagle*, which visited these islands in May 1840 during its third voyage. Bynoe (in Stokes 1846: 156-161) describes how he found and collected specimens of this species.

A specimen in the NHM (NHMUK 144.2.15.10) was designated the lectotype by Thomas (1922: 128).

### ***Macropus fuliginosus*** (Desmarest, 1817)

***Kangurus fuliginosus*** “Péron et Lesueur” Desmarest, 1817b: 35.

Syntype, RMNH.MAM.19689 (Jentink 1887: 318 *j*; 1888: 243 *g*), subadult female, mounted skin and skull. Loc.: Ile Decrès [Kangaroo Island], Australia. Leg.: C.-A. Lesueur, [2 January - 1 February 1803], Baudin Expedition. Ex: MNHN.

We follow Jackson et al. (2021) by listing Lesueur as collector and not Péron and Lesueur. However, they are in error by listing a specimen in the MNHN as holotype (MNHN-ZM-MO-1990-396) and another as paratype (MNHN-ZM-MO-2014-17). Desmarest (1817b) does not mention any types and has at least a male and female of the species, so all material available to him should be considered syntypes. De Beaufort (1966: 549) lists a male and mentions another possible type, but does not designate a lectotype. Therefore we consider these and RMNH.MAM.19689 as syntypes.

### ***Macropus robustus*** Gould, 1841

***Macropus (Petrogale) robustus*** Gould, 1841: 92.

Paralectotype, RMNH.MAM.63733 (Jentink 1887: 318 *a*; 1888: 244 *a*), adult female, mounted skin and skull. Loc.: Liverpool Range, Australia. Leg.: J. Gould, [September 1838 - April 1840]. Paralectotype: RMNH.MAM.63734.

A specimen in the NHM (NHMUK 1841.1099) was designated the lectotype by Thomas (1922: 128). According to Duncan (1937: 81) these pages of part VIII of the Proceedings were delivered in April 1841, not in 1840 (as in Wilson and Reeder: 65)

### ***Macropus rufus*** (Desmarest, 1822)

***Kangurus laniger*** Gaimard, 1823: 481.

Holotype by monotypy, RMNH.MAM.63732 (Jentink 1887: 318 *a*; 1888: 243 *a*), subadult male, mounted skin and skull. Loc.: Port Macquarie, Australia. Leg.: C. Fraser, [1819]. Received by J.P. Gaimard, Uranie expedition. Ex: MNHN.

Desmarest (1822) gives Gaimard as the collector of the material he bases this new species on. Gaimard received this specimen from Fraser during the stay of the expedition of the *Uranie* at Port Jackson (13 November - 25 December 1819), the animal was shot by Fraser near Port Macquarie (Gaimard 1823: 481), probably during the Oxley Expedition to Port Macquarie in 1819. Gaimard (1823) names this species later *Kangaroos laniger*, without any reference to the name introduced by Desmarest.

### ***Onychogalea fraenata*** (Gould, 1841)

***Macropus fraenatus*** Gould, 1841: 92.

Paralectotype, RMNH.MAM.63738 (Jentink 1887: 321 a; 1888: 249 a), adult male, mounted skin and skull. Loc.: Liverpool Plains, Australia. Leg.: J. Gould, [September 1838 - April 1840].

The lectotype, a specimen in the NMH (NHMUK 1841.1130) was designated by Thomas (1888: 77).

### ***Petrogale lateralis lateralis*** (Gould, 1842)

***Macropus lateralis*** Gould, 1842: [no pagination].

Paralectotype, RMNH.MAM.64134 (Jentink 1887: 322 a; 1888: 248 a), adult female, mounted skin and skull. Loc.: York, Western Australia, Australia. Ex: J. Gould.  
Paralectotype, RMNH.MAM.64135.

Thomas (1922: 128) designates a lectotype in the NHM (NHMUK 1842.5.26.3).

### ***Thylogale billardierii*** (Desmarest, 1822)

***Macropus (Halmaturus) rufiventer*** Ogilby, 1838d: 23.

Syntype, RMNH.MAM.63742 (Jentink 1887: 320 a; 1888: 245 c), subadult female, mounted skin and skeleton. Loc.: Tasmania, Australia. Leg.: J. Gould, [September 1838 - April 1840].

Ogilby (1838d) bases his description of this new species on material in the collection of Gould. Thomas (1888: 60) lists a specimen in the NHM as the type for *rufiventer*. This is followed in the online collection database of the NHM, where this specimen (NMHUK 1853.8.29.58) is listed as holotype. However, from the data it is not clear this specimen came from Gould, its provenance only lists the Zoological Society. As Ogilby does not indicate that the specimen was in the collection of the Zoological Society, nor specifies the number of specimens available to him, there is no certainty this is the only type. Therefore we treat this specimen as a (possible) syntype, as we do with RMNH.MAM.63742 in Naturalis.

Two other specimens in Naturalis (RMNH.MAM.63743 and 63744, also collected by Gould in Tasmania) we don't include in the type series. Only the stand of RMNH.MAM.63742 bears a reference to the name *rufiventer*.

### **Incertae Sedis**

***Macropus (Halmaturus) psilopus*** Gould, 1840b: 685.

In a list of specimens sent by Gould to Naturalis preserved in the archives a specimen with the name *M. (Halmaturus) psilopus* is mentioned. This name was published by Gould in 1840, but has never been accurately ascribed to any valid species. Finding the specimen exchanged with Naturalis under that name could resolve this issue. We have however not been able to locate this particular specimen in the Naturalis collection.

## AFROSORICIDA Stanhope et al., 1998

### Tenrecidae Gray, 1821

#### *Potamogale velox* Du Chaillu, 1860

*Potamogale Allmani* Jentink, 1895: 236.

Jentink's new species is based on a specimen described by Allman (1866). The holotype (NMS Z.1864.23) is at the National Museums Scotland.

#### *Hemicentetes nigriceps* Günther, 1875

*Hemicentetes variegatus*, var. *buffoni* Jentink, 1879f: 150.

Holotype by monotypy, RMNH.MAM.39003 (Jentink 1887: 246 a; 1888: 124 a), sex unknown, subadult, mounted skin and incomplete skull. Loc.: Madagascar. Leg.: A. Crossley, [1872-1875]. Ex: G.A. Frank, Sr., 1875.

According to Dorr (1997: 104-105), Crossley collected in Madagascar in 1860, again in 1869 and finally from 1872 until early 1875; apparently, a considerable part of his material is from the eastern forests. Many of his specimens were sold through natural history dealers. RMNH.MAM.39003 was acquired in August 1875 from the dealer G.A. Frank, Sr. in Amsterdam. It is thus likely that it was collected during the 1870s.

### Chrysochloridae Gray, 1825

#### *Calcochloris obtusirostris* (Peters, 1851)

*Chrysochloris obtusirostris* Peters, 1851: 467.

Syntype, RMNH.MAM.39015 (Jentink 1887: 248 a; 1888: 128 b), subadult, sex unknown, relaxed mount and skull. Loc.: Inhambane, Mozambique. Leg.: W.C.H. Peters, [1843-1847]. Ex: MfN, 25 May 1851.

This new species is published in a preliminary communication by Peters (1851) that precedes the extensive description published in his definitive work in the following year (Peters 1852: 70-75, pls XVIII, XXII). Although in both publications he gives the measurements of one animal only, he mentions five additional specimens (p. 74), which he had all available in the previous year and so they all belong in the type series. An undated note preserved in the archives of Naturalis, listing species to be received from Peters includes "Chrysochloris n. sp.", to which is added "mosambicensis" in C.J. Temminck's handwriting. The expected shipment of "Objets d'Histoire Naturelle reçu de Monsieur Peters à Berlin" was received in Leiden on 25 May 1851 and includes "1 Chrysochloris mosambicensis Jeune indiv". There can be no doubt that our specimen is one of the five mentioned by Peters. The label by Jentink reads "1842-1847", but Peters arrived in Mozambique in 1843; he returned to Germany in 1848 (Peters 1852: viii-ix).

## MACROSCELIDEA Butler, 1956

### Macroscelididae Bonaparte, 1838

#### *Petrodromus tetradactylus* Peters, 1846: 258.

Syntype, RMNH.MAM.39312 (Jentink 1887: 243 a; 1888: 119 a), subadult, sex unknown, mounted skin and skull. Loc.: Tete, Mozambique. Leg.: W.C.H. Peters, [1843-1846]. Ex: MfN, 25 May 1851.

The species was first described in a preliminary communication, which precedes the extensive description in his definitive work (Peters 1852: 92-100, pl. XX). Although in his first note Peters gives the measurements of one animal only, he clearly had more (see p. 259). In his later work, Peters (1852: 100) does not specify numbers either, but writes that he found this species in several places; on p. 98-99, however, he gives the measurements of only three animals: two females and one male. RMNH.MAM.39312 is from Tete and, giving the date of Peters' first communication, cannot have been collected later than in 1846. It is mentioned in a list preserved in the archives of Naturalis, specifying animals from Mozambique given in exchange by the MfN in June 1850; the specimen was then in alcohol. It was probably received in the following year, since the animal (there is only one in Naturalis) also occurs in a list of mammals received from Peters on 25 May 1851. Peters arrived in Mozambique in 1843 and returned to Germany in 1848 (Peters 1852: viii-ix).

#### *Rhynchocyon cirnei* Peters, 1847

##### *Rhynchocyon Cirnei* Peters, 1847: 37.

Syntype, RMNH.MAM.39313 (Jentink 1888: 120 a), male, relaxed mount, skull extracted but not in collection. Loc.: [near Quelimane], Bororo district, Mozambique. Leg.: W.C.H. Peters, [1843-1846]. Ex: MfN, 1851.

This species too, was first described in a preliminary communication preceding the extensive description published in his definitive work (Peters 1852: 106-110, pls XXI-XXIV). There can be no doubt that RMNH.MAM.39313 is one of the types. From the description from 1847 and in 1852 (p. 110) it is clear Peters had collected two specimens, a male and a female and Peters (1852) adds that the male was sent in exchange to Leiden. It is included in the list of specimens received in Leiden on 25 May 1851, as "1 Rhynchorgos [lapsus for Rhynchocyon] Cirnei en peau".

Peters (1847) states that he spent two months on Mr. Cirne's family estate "im Distrikt Bororo (Quellimane)", but does not specify the period. This could well have been in 1846, as Peters (1852: 47) records that he collected bats in his house "im März 1846, in Boror, etwa 12 Meilen nordwestlich von Quellimane".

#### *Rhynchocyon cirnei reichardi* Reichenow, 1886

##### *Rhynchocyon Reichardi* Reichenow, 1886: 316.

Syntype, RMNH.MAM.39314 (Jentink 1887: 243 a; 1888: 120 b), female, mounted skin and skull. Loc.: Kwa Mpesa, Marungu, Congo. Leg.: R. Böhm [and P. Reichard], 4 August 1883. Ex: Reichenow, 1886.

Reichenow (1886) gives the measurements of two specimens, a male and a female collected by Böhm and Reichard.

## HYRACOIDEA Huxley, 1869

### Procaviidae Thomas, 1892

#### *Dendrohyrax dorsalis sylvestris* (Temminck, 1853)

##### *Hyrax sylvestris* Temminck, 1853: 182.

Syntype, RMNH.MAM.39236 (Jentink 1887: 160 a; 1892: 189 b), female, mounted skin and skull. Loc: Gold Coast (coastal Ghana). Leg.: H.S. Pel, [1841-1849].

Syntype, RMNH.MAM.39237 (Jentink 1887: 160 b, pl. 4 figs 5-6; 1892: 189 c), female, mounted skin and skull. Loc: Coastal Ghana. Leg.: H.S. Pel, [1841-1849].

Syntype, RMNH.MAM.39238 (Jentink 1892: 189 d), juvenile male, mounted skin, skull in situ. Loc: Dabocrom (Dabo Krom), coastal Ghana. Leg.: H.S. Pel, [February 1843].

Syntype, RMNH.MAM.39239 (Jentink 1892: 189 e), juvenile female, mounted skin, skull in situ. Loc: Dabo Krom, coastal Ghana. Leg.: H.S. Pel, [1841-1849].

Although Temminck (1853) does not specify how many specimens he has before him, from his description (p. 184) it is clear that there are at least one adult and one or more juveniles. Most inventories of Pel's shipments are preserved in the archives of Naturalis. In these, the following specimens of *Hyrax arboreus* are mentioned: a male from Sekondi dated November 1841; a male from Dabo Krom dated February 1843; a female from Apam sent in October 1844; an unspecified animal from Dabo Krom sent on 6 March 1849. The only Naturalis specimen that bears a date is RMNH.MAM.39238. Its pedestal reads, in Temminck's handwriting: "voy Pel Dabocrom feb 1841". The village of Dabocrom (Dabo Krom) is situated between Butri and Sekondi and was one of Pel's favourite collecting localities (Holthuis 1968: 9, 22-23). However, in February 1841 Pel was at Elmina (letter from Pel of 5 April 1841 in Holthuis 1968: 10); the collection date of this specimen must be February 1843 when Pel did visit Dabo Krom (Holthuis 1968: 10) and which would agree with Pel's shipping inventory of October 1844, where he mentions a "*Hyrax arboreus*. Mas. feb 1843". It is also possible that one or more of Pel's specimens listed above were collected during his second sojourn, so were not included in Temminck's treatise and therefore are not types, but this cannot be traced.

The species is usually referred to as *Dendrohyrax dorsalis* (Fraser, 1854). Fraser's *Hyrax dorsalis* was described in the Proceedings of the Zoological Society of London for 1852, but that volume appeared on 23 May 1854 (Allen 1939: 443) contra Sclater (1893: 439) who dates the publication on 7 December 1852; Shoshani (2005: 87) and Shultz and Roberts (2013: 155) date it from 1855. If Allen is correct Temminck's name *Hyrax sylvestris* should have priority.

##### *Hyrax stampflii* Jentink, 1886b: 209.

Holotype by monotypy, RMNH.MAM.39240 (Jentink 1887: 160 a, pl. 4 figs 1-4; 1892: 190 a), female, mounted skin and skeleton. Loc: Chap hill, Schieffelinville on Junk River, Liberia. Leg.: F.X. Stampfli, 3 February 1886.

For the locality, see Büttikofer (1888: 60, pl. 5; 1890a: map). The animal was obtained by a local hunter (Büttikofer 1890b: 390).

## PROBOSCIDEA Illiger, 1811

### Elephantidae Gray, 1821

#### *Elephas maximus sumatranus* (Temminck, 1847)

*Elephas Sumatranus* Temminck, 1847: 90.

*Elephas Sumatranus* Temminck, 1846: 328 (nomen nudum).

Syntype, RMNH.MAM.39234 (Jentink 1887: 169 a), male, skeleton. Loc: Palembang, Sumatra, Indonesia. Received from J.C. Baud, 1845.

Syntype, RMNH.MAM.39235 (Jentink 1887: 169 b), female, skeleton. Loc: Palembang, Sumatra, Indonesia. Received from J.C. Baud, 1845.

Temminck, trying to settle the debate about the taxonomic status of the Sumatran elephant, sent a request for specimens to Baud, the Dutch Minister for the Colonies at the time (Van Wingerden 2023: 104). Three specimens (two from Lampong, one from Palembang) were sent to Temminck, however according to Temminck all of them incomplete, so a second request followed. It is unknown if this second request resulted in more specimens and to what shipment the two remaining types in the Naturalis collection belong.

Jentink (1887: 169) catalogues the Sumatran elephants under *Elephas sumatranus* Temminck, but does not list the above two skeletons as types. Temminck (1846) introduces this name without an accompanying description, the formal description appeared one year later (Temminck 1847), without a specification of the type series.

Although listed by Jentink (1887: 169) as female, RMNH.MAM.39235 is likely a male (Pers. comm. H. van Essen and A. Lister, 2023)..

## SCANDENTIA Wagner, 1855

### Tupaiaidae Gray, 1825

#### *Dendrogale murina* (Müller, 1840)

*Hylogale murina* Müller, 1840a: 25, 50.

Lectotype, RMNH.MAM.36120 (Jentink 1887: 241 a; 1888: 118 a), male, relaxed mount and incomplete skull. Loc: [Cochin, Vietnam]. Leg.: P.-M. Diard, [c. 1824].

Müller's description (1840a) precedes the more extensive account (as *Hylogalea murina*) by Schlegel and Müller (1843: pls 26-27; 1845c: 160, 167); see Husson and Holthuis (1955) for the dates of publication. Müller gives no indication of the number of specimens available to him. The lectotype was designated by Jentink (1887: 241).

Schlegel and Müller (1845c: 167) give the type locality as Pontianak, Borneo. Lyon (1913: 130-131) is the first author to cast doubt upon this provenance. He pointed out that the species has never been found in Borneo again and that the type specimen is very similar to *Dendrogale frenata* (Gray, 1860) from Cambodia and Annam. He therefore suspected that the type is wrongly labelled. This is very likely, as Diard collected in Cochin China (nowadays Cochin in southern Vietnam) for the MNHN

before he came to Java in 1824 (Veth 1879: 58; Fransen et al. 1992: 228). The present specimen apparently became mixed up with the material that Diard collected in Borneo in 1826.

### ***Tupaia dorsalis*** Schlegel, 1857

***Tupaja dorsalis*** Schlegel, 1857: 59, pl. III fig. 31.

Syntype, RMNH.MAM.35995 (Jentink 1887: 240 f, 1888: 116 b), subadult, sex unknown, relaxed mount and skull. Loc: [Lower] Kapuas [Bohang] River, Borneo, Indonesia. Leg.: C.A.L.M. Schwaner, [28 January - 2 February 1848].

Syntype, RMNH.MAM.35996 (Jentink 1888: 116 g), subadult, sex unknown, relaxed mount, skull in situ. Loc: [Lower] Kapuas [Bohang] River, Borneo, Indonesia. Leg.: C.A.L.M. Schwaner, [28 January - 2 February 1848].

There are two rivers in Borneo named Kapuas: the Kapuas Bohang in western Borneo, and the Kapuas Murung in the southeast. Schwaner visited both rivers, the latter on 21-22 November 1847. Between 28 January and 2 February 1848 he travelled down the Kapuas Bohang, from Sintang to Pontianak (Schwaner 1854: 39-44, 188-200). Since Schlegel (1857) describes this species only briefly, Jentink (1890b: 228-230) redescribed the species extensively, giving the locality as "North Western Borneo, in the neighbourhood of the Kapoeas-river."

### ***Tupaia glis*** (Diard, 1820)

***Tupaia glis phoeniura*** Thomas, 1923b: 255.

Paratype, ZMA.MAM.11310, juvenile female, alcohol. Loc: Deli Estate near Medan, Sumatra, Indonesia. Leg.: L.P. Cosquino de Bussy, [1905-1917]. Ex: NHM, 1923.

The holotype is in the NHM (NHMUK 23.1.2.30). See also Bergmans (2011: 837).

### ***Tupaia javanica*** Horsfield, 1822

***Tupaia javanica bogoriensis*** Sody, 1937: 213.

Holotype, RMNH.MAM.34090, female, skin and skull. Loc: Kota Batu, Bogor, Java, Indonesia, at 300 m. Leg.: H.J.V. Sody, 3 June 1924.

Paratypes: RMNH.MAM.34091–34093, 34096–34097.

Sody examines a large series of specimens for his description. See Becking (1989: 47, 80-81) for details on the locality and collector.

***Tupaia javanica tjibuniensis*** Sody, 1937: 213.

Holotype, RMNH.MAM.34207, male, skin and skull. Loc: Tjiboeni (Cibuni) Estate, Mt Patuha, 1350 m, Java, Indonesia. Leg.: M. Bartels, Jr., 15 August 1932 (Tjib. 68).

Paratypes: RMNH.MAM.34205–34206, 34208–34219

Sody examines a large series of specimens for his description. See Becking (1989: 47, 80-81) for details on the locality and collector.

### ***Tupaia minor humeralis*** Robinson & Kloss, 1919: 257.

Holotype, RMNH.MAM.12654, female, skin and skull. Loc.: Rimbupengadang (Lebong), Barisan Mts at c. 1000 m, Bengkulu (Bengkulu) District, Sumatra, Indonesia. Leg.: E. Jacobson, 26 June 1916 (72).

Paratypes: RMNH.MAM.12652–12653.

Robinson and Kloss (1919: 266, 282) study four animals, though in their table on p. 282 one additional specimen is listed. Three of these are present in Naturalis.

### ***Tupaia tana tana* Raffles, 1821**

***Tupaia tana nainggolani* Sody, 1936a: 54.**

Holotype, RMNH.MAM.34120, male, skin and skull. Loc.: Perlak [Peureulak], Sumatra, Indonesia.

Leg.: F.J. Nainggolan, 16 October 1930. Ex: H.J.V. Sody (F.109).

Paratypes: RMNH.MAM.34119, 34121.

The holotype was obtained by a native collector through F.J. Nainggolan, who collected for Sody. See Becking (1989: 46, 87, 229) for details on the locality and collector.

## **PRIMATES Linnaeus, 1758**

### **Cheirogaleidae Gray, 1873**

#### ***Microcebus murinus* (J.F. Miller, 1777)**

***Lemur pusillus* E. Geoffroy, 1791: 89.**

This name was published by Geoffroy (1791) in a description based on three animals in the MNHN collected by Poivre and Sonnerat and further refers to a drawing in Commerson's manuscripts and to a live animal in Paris, seen by Buffon.

A specimen in Naturalis (RMNH.MAM.39050) is listed by Schlegel (1876: 326) and Jentink (1887: 67; 1892: 78) as belonging to the type series. The label (not original) of our specimen does not mention the locality or collector, but says: "obt: en 1815. du Musée de Paris". The pedestal of the mounted skin bears an inscription in C.J. Temminck's handwriting, most of which has become illegible. Over this is written, in another hand: "1815. Sganzin O Madagascar"; probably, the year 1815 has been added later as the pedestal of the skull reads only "Sganzin. Madagascar". Year and collector are mutually exclusive. Sganzin worked in Madagascar during 1831 and 1832; he was the military commander based on Sainte Marie Island off NE Madagascar (Sganzin 1840: 2-3; Pollen 1863), from where he made expeditions through the adjacent mainland. Specimens were brought to him by local hunters. He donated most of his collections to the MNHN.

In his catalogue of the primates in Naturalis, Schlegel (1876: 326) writes of *Cheirogaleus pusillus*: "Les individus que j'ai vus de cette espèce ont été [sic] recueillis dans la partie N. E. de Madagascar, en face de l'île de St. Marie", which is the area covered by Sganzin, so the inscription on the pedestal "O" (= Ouest, possibly added later) to "Madagascar" must be erroneous. The MNHN did indeed send a large collection to Leiden in 1815, in compensation for the Kabinet des Stadhouders that had been taken by Napoleon in 1795 (Gijzen 1938: 23-28; Holthuis 1995: 11-14). Sganzin's animal, of much later date, must inadvertently have become catalogued with this 1815 consignment. Jentink copied Schlegel's data, but it is clear that the Naturalis specimen cannot be one of Geoffroy's types.

***Mirza coquereli*** (A. Grandidier, 1867)

***Microcebus coquereli*** Schlegel, 1867: 419 (nomen nudum).

***Microcebus Coquereli*** Schlegel & Pollen, 1868: 12, pls 6-7 (nec Grandidier 1867).

***Mirza zaza*** Kappeler & Roos, 2005 (in Kappeler et al. 2005): 18.

Holotype for *coquereli* and *zaza*, RMNH.MAM.39377 (Jentink 1887: 66 *d*; 1892: 77 *c*), male, mounted skin and skull. Loc.: Kongony, Madagascar. Leg.: F.P.L. Pollen and D.C. van Dam, 25 September 1865.

Paratypes for *zaza* only, RMNH.MAM.39376, 54999.

Jentink (1887; 1892) does not list this specimen as a type. Schlegel (1867) introduces this new name, without description, in an account on mammals and birds of Madagascar collected by Pollen and Van Dam, which were to be fully described in a forthcoming publication (Schlegel and Pollen 1868). At the time of description only the holotype was available; the two specimens collected later by Van Dam were not yet available, though they are mentioned in an appendix to this work (p. 172). In the meantime, however, Grandidier (1867: 85) had described a lemur from Morondava, western Madagascar, as *Cheirogalus Coquereli*; his description appeared in March 1867. The authors clearly were not aware of each other's actions and their publications appeared independently (see Schlegel and Pollen 1868: ix). The animals from W and NW Madagascar have since been regarded as conspecific, with Grandidier's name taking priority, until Kappeler and Roos (2005) recognized the population of NW Madagascar as a separate species, *Mirza zaza*. Kappeler and Roos were unaware of the fact that RMNH.MAM.39377 is also the holotype of *Microcebus coquereli* Schlegel and Pollen, 1868.

Jentink (1887; 1892) attributes the other two specimens to Pollen et Van Dam, 1868. However, their joint expedition to Madagascar lasted from November 1863 to July 1866. Van Dam returned later to Madagascar alone and collected there between 1867 and 1873. The specimens collected jointly by Pollen and Van Dam are carefully documented, whereas many of those obtained by Van Dam alone bear less exact labels. In the appendices to their work, Schlegel and Pollen (1868: 172) already refer to the animals collected by Van Dam in 1867, recording the total number of *M. Coquereli* then in *Naturalis* as three (p. 164). The year 1868 given by Jentink therefore must refer to the year when this material arrived in Leiden (erroneously used as the year of collection by Fransen et al. 1997: 281).

Schwitzer et al. (2013: 59) list this species as *Mirza zaza* Kappeler & Roos, 2005.

***Phaner pallescens*** Groves & Tattersall, 1991

***Phaner furcifer pallescens*** Groves & Tattersall, 1991: 40.

Paratype, RMNH.MAM.36343 (Jentink 1887: 65 *h*; 1892: 77 *i*), male, mounted skin and skull. Loc.: Morondava River, Madagascar. Leg.: D.C. van Dam, August 1870.

Paratypes: RMNH.MAM.36344–36348.

Groves and Tattersall (1991) describe this form from SW Madagascar, based on 18 skins and 15 skulls. In their table of skull measurements (p. 40), the authors specify 13 skulls, including six in *Naturalis*.

## ***Phaner parienti*** Groves & Tattersall, 1991

***Phaner furcifer parienti*** Groves & Tattersall, 1991: 40.

Holotype, RMNH.MAM.36338 (Jentink 1887: 65 c; 1892: 77 d), male, mounted skin and skull with damaged mandible. Loc.: Sjangoi [Djangoa], Madagascar. Leg.: F.P.L. Pollen and D.C. van Dam, 5 September 1865.

Paratypes: RMNH.MAM.36335–36337, 36339–36341.

Groves and Tattersall (1991) describe this form from NW Madagascar, based on a study of eight skins and six skulls, which are not all specified. In their table of skull measurements (1991: 40), the authors strangely do not include the holotype though its skull is undamaged, but do record five other specimens in Naturalis. These are however not included in the type series.

## **Lemuridae** Gray, 1821

***Eulemur collaris*** (E. Geoffroy, 1812)

***Prosimia melanocephala*** Gray, 1863: 137, pl. XVIII.

Gray (1863) describes *P. melanocephala* without indicating the number and exact provenance of the specimens he had before him, but refers to specimens in the NHM. Since he describes both the adult and juvenile pelage, he must have had at least one animal of either category. Jenkins (1987: 11), however, gives an adult female in the NHM (NHMUK 1855.12.24.55) as the holotype of this form. This constitutes a lectotype designation.

A specimen in Naturalis (RMNH.MAM.39066, collected by Crossley, Tannanariva, Madagascar, received through Frank Sr., 1875) has a remark on the label: “un des types de *Pr. melanocephalus*, Gray”, a statement also given by Schlegel (1876: 307-308) and Jentink (1887: 60; 1892: 70). This is almost certainly incorrect.

According to Dorr (1997: 104-105), in 1860 Crossley collected in the southernmost tip of Madagascar, between Cape Sainte Marie (Vohimena) and Fort-Dauphin (Tôlanaro), which is within or adjacent to the distribution area of *Eulemur collaris*. He travelled in Madagascar again in 1869, and then from 1872 until his death, probably in 1875. According to Dorr, most material from these later expeditions was collected in NE Madagascar, where this species does not occur. The collecting year 1860 therefore seems likely, unless it would have been a captive animal obtained near Antananarivo. Many of Crossley's specimens were sold through dealers to various museums. An animal collected during his first journey in 1860 might have been available to Gray in 1863, though our specimen was not directly received through the NHM.

***Eulemur fulvus*** (E. Geoffroy, 1796)

***Lemur bruneus*** Van der Hoeven, 1844: 35.

Syntype, RMNH.MAM.39051 (Jentink 1892: 70 v<sup>2</sup>), adult female, mounted skin, skull in situ. Loc.: Madagascar.

Syntype, RMNH.MAM.39052 (Jentink 1892: 70 w<sup>2</sup>), adult male, mounted skin, skull extracted but not in collection. Loc.: Madagascar.

***Lemur mayottensis*** Schlegel, 1866a: 76.

Syntype, RMNH.MAM.39054 (Jentink 1887: 60 *bb*), sex unknown, skull, skin probably RMNH.MAM.39063. Loc.: Jongoni [Longoni] Bay, Mayotte, Comoro Archipelago. Leg.: F.P.L. Pollen and D.C. van Dam, 8 May 1864.

Syntype, RMNH.MAM.39055 (Jentink 1887: 60 *s*; 1892: 70 *b*<sup>3</sup>), male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 19 May 1864.

Syntype, RMNH.MAM.39056 (Jentink 1887: 60 *t*; 1892: 70 *c*<sup>3</sup>), subadult male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 9 June 1864.

Syntype, RMNH.MAM.39057 (Jentink 1887: 60 *u*; 1892: 70 *d*<sup>6</sup>), male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 7 June 1864.

Syntype, RMNH.MAM.39058 (Jentink 1887: 60 *v*; 1892: 70 *e*<sup>3</sup>), male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 8 May 1864.

Syntype, RMNH.MAM.39059 (Jentink 1887: 60 *w*; 1892: 70 *f*<sup>3</sup>), male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 8 May 1864.

Syntype, RMNH.MAM.39060 (Jentink 1887: 60 *x*; 1892: 70 *g*<sup>3</sup>), male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 8 May 1864.

Syntype, RMNH.MAM.39061 (Jentink 1887: 60 *y*; 1892: 70 *h*<sup>3</sup>), subadult male, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 8 May 1864.

Syntype, RMNH.MAM.39062 (Jentink 1887: 60 *z*; 1892: 70 *i*<sup>3</sup>), adult female, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 19 May 1864.

Syntype, RMNH.MAM.39063 (Jentink 1892: 70 *j*<sup>3</sup>), female, mounted skin, skull probably RMNH.MAM.39054. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 10 May 1864.

Syntype, RMNH.MAM.39064 (Jentink 1887: 60 *aa*; 1892: 70 *k*<sup>3</sup>), adult female, mounted skin and skull. Loc.: Jongoni Bay, Mayotte. Leg.: F.P.L. Pollen and D.C. van Dam, 8 May 1864.

Schlegel (1866a) and Schlegel and Pollen (1868: 5) mention a series of ten specimens collected on Mayotte in May and June 1864: seven males and three females, which agrees with the material listed above except for the skull RMNH.MAM.39054, without an associated skin. Since this skull must have been seen by Schlegel, we include it in the type series. It probably belongs to RMNH.MAM.39063, which lacks an accompanying skull.

The dates given on the labels do not agree in all respects with Pollen's account of his voyage in Mayotte (Pollen 1868: 110, 133-135), where he describes having collected three specimens on a hunting trip on 8 May 1864. In *Naturalis* we have five specimens bearing that date and furthermore two specimens labelled 19 May. On that day no mention is made of any lemurs being collected. It is impossible to correct these inconsistencies.

***Eulemur rubriventer*** (I. Geoffroy, 1851)

***Lemur flaviventer*** I. Geoffroy, 1851a: 876.

Schlegel (1876: 311) lists RMNH.MAM.39053 (a female collected by Bernier in Northeast Madagascar, received from the MNHN in 1835) under *Lemur rubriventer* I. Geoffroy, as one of the type specimens. However, Geoffroy (1851a) describes *L. flaviventer* from material in the MNHN hitherto overlooked by him, in order to have the names available for his forthcoming catalogue of the Paris mammalian collection (p. 873). He only gives "Madagascar" without further specification and without mentioning the collector or the number of specimens he had before him. As RMNH.MAM.39053 already left the MNHN in 1835 we don't consider it part of the type series. It is specified in a list of mammals received in exchange in June 1835, as "Maki roux à gorge blanche". Its pedestal reads "Espèce nouvelle, voyage Bernier", in C.J. Temminck's handwriting.

***Prosimia rufipes*** Gray, 1871: 339.

Gray (1871) describes this species based on material collected by Crossley; he does not mention the collecting date nor the exact locality, and does not specify the number of specimens he had before him. In a later publication Gray (1873: 853) writes that “the specimens of the two sexes are said to have been collected in a wild state”, inferring that he had at least two animals. This agrees with Jenkins (1987: 20), who mentions two type specimens in the NHM (NHMUK 1870.5.5.35 and 1870.5.5.36). Schwarz (1931: 417) designates NHMUK 1870.5.5.35 the lectotype of *Prosimia rufipes* Gray, 1871.

Crossley collected in southern Madagascar in 1860 and in various other places in 1869 and again from 1872 until his death, probably in 1875 (Dorr 1997: 104-105). According to Schwarz (1931) and Jenkins (1987), the NHM types were obtained in 1869 west of Tamatave (Tomasina). A considerable part of Crossley’s material was sold through natural history dealers to various museums.

Schlegel (1876: 311), under *Lemur rubriventer*, records RMNH.MAM.39067 and 39068 as types of *Prosimia rufipes*. The pedestal of RMNH.MAM.39067 reads: “Voyage de Crossley. G.A. Frank. Aug 1875”; the label, perhaps of later date, gives “Voy: Crossley. 1873”, with the pedestal of the accompanying skull saying again “Crossley Frank 1875”. This must be the animal mentioned in a list of specimens bought on 28 August 1875 from the dealer G.A. Frank, Sr in Amsterdam, which is preserved in the archives of Naturalis; the year of acquisition given by Schlegel therefore is incorrect. The pedestal of RMNH.MAM.39068 reads “Crossley. Frank 1873”, the label “Voy: de Crossley. 1873”, whereas the pedestal of the skull gives “Frank 1872”. This animal may be the unidentified lemur bought from Frank on 24 May 1873, also specified in our archives. In any case, RMNH.MAM.39067 and 39068 were probably collected by Crossley in 1872 or 1873 and therefore cannot have been among Gray’s types, apart from the fact that they did not come from the NHM. The locality of our animals is not recorded; the specification “Northeast” may have been inferred by Jentink, though it would agree with Dorr’s (1997: 105) statement that the majority of Crossley’s material is from NE Madagascar.

***Eulemur rufus*** (Audebert, 1799)

***Lemur rufus*** Audebert, 1799: 12, pl. II.

Paralectotype, RMNH.MAM.39065 (Jentink 1892: 72 d<sup>5</sup>), female, mounted skin, skull in situ. Loc.: Madagascar. Ex: MNHN, 1815.

Rode (1939: 437), probably unaware of the specimen in Naturalis, lists a specimen in the MNHN (MNHN-ZM-MO-1993-4247) as holotype, thereby designating it the lectotype.

**Indriidae** Burnett, 1828

***Avahi laniger*** Gmelin, 1788

***Lichanotus Avahi*** Van der Hoeven, 1844: 44, pl. I, fig. 6, pl. III.

Syntype, RMNH.MAM.63664 (Jentink 1887: 57 e; 1892: 64 a), adult male, mounted skin and skull. Loc.: Northeast Madagascar. Leg.: A.C.J. Bernier, [1831]. Ex: MNHN, 1838.

After the introduction of *Avahi* as name for this genus by Jourdan (1834), Van der Hoeven applies it as a specific epithet, with the remark that the use of a vernacular, ('barbaric' in his words) name should be avoided. According to Schlegel's catalogue (Schlegel 1876: 299-300) No. 1 is the specimen depicted by Van der Hoeven with skull No. 7. This was the only specimen in Naturalis at the time of description (Van der Hoeven 1844: 28) and the only specimen seen by him. He also refers to the description of a specimen by Jourdan (1834: 232), the whereabouts of this specimen are unknown. However we consider these two specimens the syntypes for *L. Avahi* van der Hoeven, 1844.

***Avahi unicolor*** Thalmann & Geissman, 2000: 915.

Holotype, RMNH.MAM.40031 (Jentink 1887: 57 *h*; 1892: 64 *d*), female, mounted skin and skull. Loc.: Kakamba, Madagascar. Leg.: D.C. van Dam, 1868.  
Paratypes: RMNH.MAM.40032–40034, 23118.

During 1863–1866, F.P.L. Pollen and D.C. van Dam made a joint expedition to Madagascar. In 1867 Van Dam returned to Madagascar alone, where he collected until 1873 (see under *Mirza zaza*). Many of his specimens are not precisely documented, and the year 1868 may also refer to the time when the material arrived in Leiden. The juvenile RMNH.MAM.23118 had been identified and catalogued with *Lepilemur mustelinus*, but was recognized as a specimen of *Avahi* by Thalmann and Geissman (2000). Its label records Pollen and Van Dam as the collectors. However, Pollen had returned to the Netherlands in 1866 and his itinerary does not mention Mourountsang as a collecting locality (Pollen 1868). This specimen therefore must have been obtained by Van Dam during his later sojourn in Madagascar.

***Indri indri*** (Gmelin, 1788)

***Lichanotus mitratus*** Peters, 1872: 360.

Schlegel (1876) and Jentink (1887: 53; 1892: 61) record RMNH.MAM.39069 (a female from Seralalan [Saralalano], Madagascar, collected by A. Crossley and purchased from G.A. Frank, Sr in 1875) as a type. However Peters (1872) describes this form based on a single male specimen in the MfN, which is therefore the holotype by monotypy for this name.

***Propithecus deckenii*** Peters, 1870

***Propithecus Damanus*** Sclater 1870: 112 (nomen nudum).

***Propithecus Damonis*** Gray, 1870: 137, lapsus for *damanus* Pollen

***Propithecus Damanus*** "Pollen" Schlegel, 1876: 293.

Syntype, RMNH.MAM.39070 (Jentink 1887: 54 *a*; 1892: 64 *a*), adult male, mounted skin and skull. Loc.: southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Syntype, RMNH.MAM.39071 (Jentink 1887: 54 *b*; 1892: 64 *b*), adult male, mounted skin and skull. Loc.: Southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Syntype, RMNH.MAM.39072 (Jentink 1887: 54 *f*; 1892: 64 *c*), adult male, mounted skin and skull. Loc.: Southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Syntype, RMNH.MAM.39073 (Jentink 1887: 54 *c*; 1892: 64 *d*), adult female, mounted skin and skull. Loc.: Southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Syntype, RMNH.MAM.39074 (Jentink 1887: 54 *e*; 1892: 64 *e*), adult female, mounted skin and skull. Loc.: Southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Syntype, RMNH.MAM.39075 (Jentink 1887: 54 *d*; 1892: 64 *f*), adult female, mounted skin and skull. Loc.: Southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Syntype, RMNH.MAM.39076 (Jentink 1892: 64 g), juvenile female, mounted skin, skull extracted but not in collection. Loc.: Southern shore of Bombetoka Bay, Madagascar. Leg.: D.C. van Dam, 1869.

Van Dam collected in Madagascar between 1867 and 1873, see under *Mirza zaza*. He did not document his specimens very accurately, so the date of collection cannot be traced.

Schlegel (1876) refers to Pollen as the author of *Propithecus Damanus*, but as far as we could determine Pollen never formally published this name. Sclater (1870: 112) showed a specimen of this new Lemur from Pollen to the Zoological Society of London in 1870. He received this specimen through the dealer G.A. Frank Jr, but does not give a description, therefore this is a nomen nudum. Where this specimen went afterwards is not known. Gray in his catalogue of lemurs in the British Museum misinterpreted this name as *P. damonis* (1870: 846) and attributes it to Pollen. Gray publishes this name for the first time validly, so the specimens he mentions in the collection of the NHM are also part of the type series, but as he also refers to Pollen we consider the material mentioned above also as part of the typeseries.

### ***Propithecus verreauxi* Grandidier, 1867**

***Propithecus Verreauxi* Grandidier, 1867: 84.**

Paralectotype, RMNH.MAM.39077 (Jentink 1887: 55 b; 1892: 63 e), female, mounted skin and skull. Loc.: Cape Sainte Marie [Cape Vohimena], Madagascar. Leg.: A. Grandidier, [June-November 1866]. Ex: Grandidier, 1867.

Paralectotype: RMNH.MAM.39078.

Grandidier (1867) describes this species based on a series of eleven adults and seven juveniles collected during his first expedition to western and southern Madagascar, which lasted from June to November 1866 (Dorr 1997: 185). The specimens above were presented by Grandidier to Naturalis in 1867 (Schlegel 1876: 296), the year given on the labels and pedestals, and thus belong in the type series; see also Voisin et al. (1999: 536).

Rode (1939: 442), probably unaware of the specimens in Naturalis, listed a specimen in the MNHN as holotype (MNHN-ZM-MO-1867-580), thereby designating it the lectotype. See also Voisin et al. (1999).

## **Lorisidae Gray, 1821**

### ***Nycticebus coucang* (Boddaert, 1785)**

***Nycticebus Sumatrensis* Ludeking, 1862: 42.**

Ludeking (also spelled Lüdeking) describes this species without referring to any collected material. No specimens collected by Ludeking are present in Naturalis.

### ***Perodicticus potto* (Staius Müller, 1776)**

***Lemur Potto* Staius Müller, 1776: 12.**

Neotype, RMNH.MAM.39375 (Jentink 1887: 52 a; 1892: 60 a), female, mounted skin and skeleton. Loc.: Dabocrom, Gold Coast [Ghana]. Leg.: H.S. Pel [March-September 1849].

The author is mostly cited as P.L.S. Müller, which is incorrect: his family name was Staius Müller. His description of this species is based on an 18th-century account

and figure of pottos observed at Elmina and surroundings in the Gold Coast, the present-day coastal Ghana (Bosman 1704: 32-33, pl. facing p. 35 fig. 4); none of those animals has been preserved. Smeenk et al. (2006) discuss the need for a neotype in this species. They extensively document the history of the available material and (p. 154) explain the reasons for designating RMNH.MAM.39375 the neotype of *Lemur potto* Statius Müller, 1776.

The above specimen was dispatched by Pel on 7 December 1849 and had been collected during the preceding months (Smeenk et al. 2006: 150). The village of Dabocrom [Dabo Krom] is situated between Butri (the present Princes' Town) and Sekondi (Holthuis 1968: 9, 22-23); see also under *Dendrohyrax sylvestris*.

## Galagidae Gray, 1825

### *Galago demidoff* G. Fischer, 1806

***Octolicnus* [sic] *peii*** Temminck, 1853: 42.

Syntype, RMNH.MAM.39079 (Jentink 1887: 68 *b*; 1892: 80 *c*), adult male, mounted skin and skull.

Loc.: [Dabo Krom], Gold Coast [Ghana]. Leg.: H.S. Pel, [1843-1850].

Syntype, RMNH.MAM.39080 (Jentink 1887: 68 *c*; 1892: 80 *d*), subadult female, mounted skin and cranium. Loc.: [Dabocrom], Ghana. Leg.: H.S. Pel, [1843-1850].

Syntype, RMNH.MAM.39081 (Jentink 1887: 68 *d*; 1892: 80 *e*), sex unknown, juvenile, mounted skin and skull. Loc.: Dabocrom, Ghana. Leg.: H.S. Pel, [1843-1850].

Syntype, RMNH.MAM.25166 (Jentink 1892: 80 *i*), male, alcohol, skull in situ. Loc.: Coastal Ghana. Leg.: H.S. Pel, [1843-1850].

Schlegel (1876: 331) and Jentink (1887; 1892) overlook these specimens as types, probably because they identified them with Fischer's *Galago demidoff*. Temminck (1853: 42-43) had at first come to the same conclusion by comparing an undocumented juvenile specimen in *Naturalis* with Fischer's description. After having received Pel's material, however, he describes the animals from the Gold Coast as a different species. Temminck's original juvenile specimen is no longer present in *Naturalis*, so the type series only consists of the animals collected by Pel in the Gold Coast, the present-day coastal Ghana

Temminck (1853: 45) gives Dabocrom (Dabo Krom) as the collecting locality. Of the *Naturalis* specimens, only the pedestal of RMNH.MAM.39081 bears this locality, though not in Temminck's handwriting. In Pel's letters and incomplete shipping inventories preserved in the archives of *Naturalis*, the species is mentioned only once: in a letter from Dabocrom dated February 1843 in which he announces that he had received a small specimen which he believed to be *Otolicnus*; this appears in Pel's shipment inventory of 12 March 1843, as "*Otolicnus?* Mas. feb 1843. van Dabocrom. zeer zeldzaam" [Male. February 1843. from Dabocrom. very rare]. It cannot be determined whether this is the adult male RMNH.MAM.39079 (which was sent in alcohol) or the one still in alcohol, RMNH.MAM.25166. Temminck (1853: 43) only states that he had recently received an old male and old female, which does not quite agree with a specimen that arrived as early as 1843. It cannot be excluded either that one or more of the specimens were collected during Pel's second sojourn in the Gold Coast (1852-1855), which were not included in Temminck's treatise and hence are not types, but this cannot be determined.

## Tarsiidae Gray, 1825

### *Tarsius pelengensis* Sody, 1949

***Tarsius fuscus pelengensis*** Sody, 1949b: 143.

Holotype, RMNH.MAM.9851, male, skin and skull. Loc.: Pulau Peleng, Banggai Archipelago, Indonesia. Leg.: J.J. Menden, 17 August 1938. Ex: MZB (MZB 6605), 12 January 1950.

Sody (1949b) uses nine more specimens for his description, these are not in Naturalis.

### *Tarsius sangirensis* Meyer, 1896: v, 9.

Syntype, RMNH.MAM.28641 (Jentink 1892: 81 g), female, mounted skin and skull. Sangihe Island, Indonesia, 6 January 1866. Leg.: D.S. Hoedt.

Meyer (1896) describes this species from specimens in the MTKD and Naturalis. He apparently had not seen the latter himself, but refers to it in the original description.

Feiler (1990: 405) mentions the presence of two syntypes in the MTKD: SNSD B497 (2243) and B321. Feiler's description relates to the former of the two specimens, which has led Groves (1998: 14) to write that "Feiler (1990) briefly described the type of *Tarsius sangirensis* Meyer, 1895 [sic], from the Sangihe Islands north of Sulawesi,..." This could be perceived as a lectotype designation, but Groves clearly has no intention to do so. We therefore list RMNH.MAM.28641 as a syntype.

Meyer's description is often dated 1897 (Wilson and Reeder 2005: 128; Shekelle et al. 2013: 259). However, if the title page and foot text is correct this part was published on 20 October 1896.

## Cebidae Bonaparte, 1831

### *Callithrix chrysoleuca* (Wagner, 1842)

***Hapale chrysoleucos*** Wagner, 1842: 357.

Syntype, RMNH.MAM.39099 (Jentink 1892: 59 a), female, mounted skin, skull in situ. Loc.: [Borba], lower Madeira River, Brazil. Leg.: J. Natterer, [December 1829 - June 1830].

Wagner (1842) does not specify how many animals he has before him when describing this species, though he gives only one set of measurements. Schlegel (1876: 278) records that the species "... a été découverte par I. Natterer près de Borba sur le Rio-Madeira inférieur; il y a recueilli des individus dans les mois de Décembre, Janvier et Mai", which was later corrected by Von Pelzeln (1883: 22) into: "Borba, December, Januar, Juni (nicht Mai, Mus. Pays-bas)". Schlegel specifies our specimen as "1. Femelle adulte, voyage de Natterer, bois des bords du confluent du Madeira et de l'Amazone", which was copied by Jentink (1892). This seems a somewhat free interpretation of the locality as given by Wagner (1848: 467): "*Natterer* entdeckte diese Art bei Borba gegen die Ausmündung des Madeira in den Amazonenstrom,..." Borba, however, is considerably further upstream the Madeira; see also Von Pelzeln (1871: xi-xiii, map; 1883b: 127) and Vanzolini (1993: 42-43).

Von Pelzeln (1883: 22-23) describes two animals in the NMW collected in January 1830, among a series of seven specimens obtained by Natterer near Borba between December 1829 and June 1830. These, as well as the Naturalis animal, may

all have been available to Wagner and would thus belong in the type series. There is no record when our specimen was received. In the archives of Naturalis there is a letter from J. Heckel of the NMW to Schlegel, dated 5 December 1855, which contains a list headed “Zum Auswahl Schöne Säugethier-bälge aus Brasilien jedoch ohne Schädel die Frühling 1848 verbrannt sind”. In this, there is an entry “Hapala chrijsoleuca Natt”. This may refer to our skin, though it still has its skull in situ.

### ***Leontopithecus chrysomelas* (Kuhl, 1820)**

***Midas chrysomelas*** "Wied" Kuhl, 1820a: 51.

Syntype, RMNH.MAM.17691 (Jentink 1892: 55 a), female, mounted skin, skull in situ. Loc.: [Ribeirão das Minhocas], upper Ilhéus [Colônia] River, Brazil. Leg.: M. von Wied zu Neuwied [11-16 January 1817].

Kuhl (1820a) describes this species from specimens in the MfN, Temminck's cabinet and the Wied collection, all collected by Wied.

Wied (1826: 159) found this species near “Sertam von Ilhéos”, where he collected between 12 and 16 January 1817 (Wied in Joost 1987: 181-182). De Avila-Pires (1965: 12) determined the type locality at Ribeirão das Minhocas, a small tributary of the upper Ilhéus River; see for the location Engländer (1995: 256-257). The collecting date is from Moraes (2009: 30). The year 1820 given by Jentink is the year when Temminck received the specimen.

Elliot (1913a: 212) gives a description of this species, “...taken from the male example in Prince Max.'s Collection purchased by the New York Museum and presumably the type, as it is not supposed that the type of Kuhl's description would be permitted to leave the collection.” This assumption does not constitute a valid lectotype designation; moreover, Kuhl does not refer to one particular specimen which could thus be regarded as the type. De Avila-Pires (1965: 11-12) misquotes Geoffroy (1851b: 62) by stating that “the type was a male specimen in the collection of the Museum National d'Histoire Naturelle”. However, Geoffroy (1851b) lists the specimen in the MNHN as “one of the types”. Although Kuhl studied the Paris collection, he does not mention this animal, so it must have been acquired after he had completed his synopsis. Apparently, this specimen has not been found again. De Avila-Pires was unable to locate the New York animal either, and regarded our specimen as the only syntype still in existence (erroneously giving its catalogue number as 17961). Engländer (1995: 252) too, writes: “Typ: verloren; Syntyp: Leiden”.

### ***Leontopithecus chrysopygus* (Mikan, 1823)**

***Jacchus chrysopygus*** Mikan, 1823: 2 pp., pl.

Syntype, RMNH.MAM.39100 (Jentink 1892: 55 a), male, mounted skin, skull in situ. Loc.: Ipanema, São Paulo, Brazil. Leg.: J. Natterer, [1819-1820].

Syntype, RMNH.MAM.39101 (Jentink 1892: 55 b), female, mounted skin, skull in situ. Loc.: Ipanema, São Paulo, Brazil. Leg.: J. Natterer, [5 September 1819]. Ex: NMW, 1821?

Mikan (1823) had a number of specimens before him, though he does not specify how many. Jentink (1892: 55) lists RMNH.MAM.39100 and 39101 as types.

Natterer worked in the surroundings of Ipanema between 2 February 1819 and 20 March 1820, between 22 April and 15 July 1820, and again from 2 September 1821 to 7 October 1822 (Von Pelzeln 1871: iii-vi; 1883: 125-126; Vanzolini 1993: 22-27). Von Pelzeln (1883) mentions eight specimens collected by Natterer still in the NMW, specifying a female obtained on 28 January 1819 at “Varge grande (Prov. S. Paulo)”.

and a male and female collected on 19 March 1822 at Ipanema; the other five specimens are also listed as being from Ipanema, but are not further specified (these must be the ones recorded for June, August and September). All specimens from 1819 are generally assumed to have been available to Mikan and would thus belong in the type series; the ones collected in 1822 arrived in Vienna only in 1836, long after Mikan's description, and hence are not types (Engelberger 2010). In addition to this the female specimen collected at Varge grande also doesn't belong to the type series since Mikan specifically mentions Ypanema as the type locality. Various later authors speak of a series of eight syntypes, which is incorrect. Hershkovitz (1977: 830), however, writes: "At least six cotypes, as follows: 2 males and 2 females, Vienna Museum, collected June 1822 by Johann Natterer; a male and a female both mounted, in Leiden Museum, collected June 1822 by Johann Natterer; animal in the Vienna Museum figured by Mikan is selected as lectotype". Hershkovitz does not specify this further and erroneously assumes that all the specimens he mentions had been collected in June 1822. Moreover, this lectotype selection is invalid, as Mikan's plate seems generalised and bears no specification (Engelberger (2010); it cannot be reliably connected with a particular specimen in the NMW.

Engelberger (2010) has studied the type material in Vienna. He located five syntypes, all collected in 1819. He also specifies the material received from Johann Natterer's expeditions, based on Johann and Joseph Natterer's notes preserved in the Vienna archives; these do not agree in every detail with Von Pelzeln (1883), and not at all with Hershkovitz (1977). Regarding the animals collected in 1819, Engelberger writes that six specimens came to Vienna with Natterer's third shipment from Brazil, which arrived in November 1819. On the accompanying document is written: "[♀] N3 an Temminck gegeben"; this note is not dated, so the date of despatch is unknown. Five of these six animals are still in Vienna; the sixth one, apparently sent to Temminck, is a female collected at Ipanema on 5 September 1819; this must be RMNH.MAM.39101. Temminck's collection was still privately owned at the time; in 1820 it became incorporated into the newly established 's Rijks Museum. Our archives contain a list of material received in exchange from the Vienna Museum in August 1821, which has an entry "Hapale chrysopygos Natt." This might be the female from 1819, but it could also be the other specimen. That animal must have been collected in 1819 or 1820, after Natterer's first shipment had been sent to Vienna. Hence, one cannot be absolutely sure whether one or both of our animals have indeed been seen by Mikan, but there is no proof of the contrary. Therefore, following Jentink (1892), they are both included in the type series here. According to Engelberger, no other material of this species arrived in Vienna before Natterer's twelfth shipment was received in 1836.

See Stearn (1956) and Engelberger (2010) for the dates of publication of Mikan's work.

Garbino et al. (2016: 249) selected a lectotype based on the similarity between the plate and the specimen. Their reason for selecting a lectotype was the fact that "No type was designated by Mikan [1823], and the 8 syntypes were not all from the same type locality" (p. 249). We don't consider this to be a valid lectotypification according to ICZN recommendation 74G. Furthermore, only the specimens collected by Natterer at Ipanema are part of the type series and they are all *Leontopithecus chrysopygus*. Therefore we list the specimens seen and used by Mikan as syntypes.

### ***Saguinus mystax*** (Spix, 1823)

***Midas mystax*** Von Spix, 1823: 29, pl. XXII.

Syntype, RMNH.MAM.39102 (Jentink 1892: 56 a), sex unknown, mounted skin, skull in situ. Loc.: [Parana-Bijuma River near São Paulo de Olivença], between Solimões (Amazonas) and Içá Rivers, Brazil. Leg.: J.B. von Spix, [January 1820].

Von Spix (1823: 29) locates this species near d'Olivença in the neighbourhood of a black water river named Parana-Bijuna, between the Solimões (Amazonas) and Içá, where he was in January 1820 (Von Spix and Von Martius 1823-1831: 1186-1190, map).

A list of animals received from Von Spix in October 1824, preserved in the archives of Naturalis, has an entry: "14) *Midas mystax*."

Kraft (1983: 437) lists another syntype in the ZSM.

### ***Saguinus nigricollis*** (Spix, 1823)

***Midas nigricollis*** Von Spix, 1823: 28, pl. XXI.

Syntype, RMNH.MAM.39103 (Jentink 1892: 57 a), adult, sex unknown, mounted skin, skull in situ. Loc.: Between Solimões (Amazonas) and Içá Rivers, Brazil. Leg.: J.B. von Spix, [January 1820].

Von Spix (1823: 29) locates this species near d'Olivença in the neighbourhood of a black water river named Parana-Bijuna, between the Solimões (Amazonas) and Içá, where he was in January 1820 (Von Spix and von Martius 1823-1831: 1186-1190, map).

A list of animals received from Von Spix in October 1824, preserved in the archives of Naturalis, has two entries: "12) *Mydas nigricollis* ♂", and "13) – ♀". Only one of these specimens is still present in Naturalis, the other had already left the collection in 1876 as Schlegel only lists one specimen in his catalogue (Schlegel 1876: 265).

Kraft (1983: 437) lists two syntypes in the ZSM.

### ***Cebus apella*** (Linnaeus, 1758)

***Cebus fallax*** Schlegel, 1876: 210.

Holotype by monotypy, RMNH.MAM.39091 (Jentink 1887: 42 a; 1892: 48 a), subadult male, mounted skin and skeleton. From Rotterdam Zoo, died 1 May 1875.

The taxonomic identity of this specimen is not clear. A label given by A. Remington Kellogg in 1949 says: "*Cebus apella* subsp. Probably from eastern Colombia". Groves (2005b: 137) has included this name in the *Cebus apella* species group.

***Cebus lunatus*** Kuhl, 1820a: 37.

Lectotype, RMNH.MAM.39092 (Jentink 1892: 47 d), subadult, sex unknown, mounted skin, skull extracted but not present in collection. Ex: Heidelberg Museum.

Kuhl (1820a) describes this species from an undocumented skin in the Heidelberg Museum. In the copy of Kuhl's publication there is an annotation in Temminck's handwriting saying he received the specimen. Schlegel (1876: 207) has catalogued the specimen under *Cebus frontatus* Kuhl, 1820, specifying: "3. Jeune individu, type du *Cebus lunatus* de Kuhl, échangé du Musée de Heidelberg". As Kuhl

gives no indication how many specimens he has seen, we consider this last remark by Schlegel as a lectotype designation.

The taxonomic identity of this specimen is not clear. Like Schlegel (1876), A. Remington Kellogg identified it in 1949 with *C. frontatus*. Groves (2005b: 137) has included the names *lunatus* and *frontatus* in the *Cebus apella* species group.

***Cebus variegatus*** E. Geoffroy, 1812: 111.

Schlegel (1876: 210) and Jentink (1892: 47) have catalogued a specimen in Naturalis (RMNH.MAM.39093, juvenile female, Ex: Heidelberg museum) as one of the types for *Cebus variegatus* Kuhl, 1820. Kuhl (1820a: 32), however, does not describe this form as a new species, but correctly records it as “*Cebus variegatus* Geoff.”, seen in the MNHN.

The taxonomic position of this form is not clear. Groves (2005b: 137) has included it (ascribing the name to Humboldt, 1812) in the *Cebus apella* species group.

***Cebus xanthosternos*** Wied, 1820a: 368.

Lectotype, RMNH.MAM.17689 (Jentink 1892: 47 a), female, relaxed mount, skull in situ. Loc.: [Bôca d'Obú], Belmonte [Jequitinhonha] River, Brazil. Leg.: M. von Wied zu Neuwied, [18 August 1816].

Wied travelled on the Rio Belmonte from 17 August to 28 September 1816 (Joost 1987: 12; Wied in Joost 1987: 125-155). Basing himself on Wied (1820a: 327), De Avila-Pires (1965: 11) writes that the type locality is “not far from Bôca d'Obu”, the mouth of a small tributary of the lower Belmonte River. Wied visited this place on 18 August (Wied in Joost 1987: 126; Wied 1826: 95). The year 1823 given by Jentink is the year when the specimen was received in Naturalis.

A label given by A. Remington Kellogg in 1949 reads: “One of original Co-types - Possibly only one extant. RK”. Apparently, no other syntypes were located by De Avila-Pires (1965: 11), who therefore designated RMNH.MAM.17689 the lectotype of the species. He erroneously attributed the name to Kuhl (1820a: 35, wrongly given as p. 51) who, however, records the species as “*Cebus xantosternos* [sic] Max.”

***Saimiri boliviensis*** I. Geoffroy & de Blainville, 1834

***Callithrix Boliviensis*** "d'Orbigny" I. Geoffroy & de Blainville, 1834: 89.

Paralectotype, RMNH.MAM.63698 (Jentink 1892: 54 a), adult male, mounted skin, skull in situ. Loc.: Guarayas, Bolivia. Leg.: A. d'Orbigny, [Dec. 1831 - 1832]. Received in Paris 1834.

*Saimiri boliviensis* I. Geoffroy & de Blainville, 1834 is based on the specimens D'Orbigny collected in Bolivia. This publication precedes the publication of the plate of *Calitrix* [sic] *entomophagus* by D'Orbigny (1835: pl.4). Only the specimen(s) depicted on this plate, a skin and skull, should be considered the types for *Calitrix entomophagus* d'Orbigny, 1835. RMNH.MAM.63698 does not resemble the depicted specimen on the plate, therefore we don't consider it the type for this name.

According to Jentink (1892: 54) and Hershkovitz (1984: 191) the specimens were collected in 1834, which cannot be true as D'Orbigny embarked on his return voyage to France the 25th of July 1833. D'Orbigny collected in the Santa Cruz area from October 1830 until the end of 1831 (D'Orbigny 1839-1843: 471-659), and visited the area of the Guarayos from December 1831 until January 1832. The year 1834 refers to when the MNHN received the specimens (Rode 1938: 235).

The lectotype was designated by Rode (1938: 235), when he listed one of the specimens in the MNHN (MNHN-ZM-2005-930) as holotype. Rode incorrectly attributed the name *Callithrix Boliviensis* to D'Orbigny, 1834.

## Pitheciidae Mivart, 1865

### *Callicebus cupreus* (Spix, 1823)

***Callithrix cuprea*** Von Spix, 1823: 23, pl. XVII.

Paralectotype, RMNH.MAM.39086 (Jentink 1892: 52 a), adult female, mounted skin, skull in situ.

Loc.: [Tabatinga], Solimões River near the Peruvian border, Brazil. Leg.: J.B. von Spix, [early January 1820].

Schlegel (1876: 237) gives the locality as "sur les bords du Solimoëns au Pérou". Von Spix was in this area early January 1820; he went up the river as far as Tabatinga on the Brazilian/Peruvian border, where he arrived on 9 January, but did not proceed into Peru; he collected there during at least four days (Von Spix and Von Martius 1823-1831: 1187-1189, map). Hershkovitz (1990: 61) restricted the type locality to "Rio Solimões, opposite Tabatinga" as the species does not occur on the north bank of the river.

A list of specimens received from Von Spix in October 1824, preserved in the archives of Naturalis, has the entries: "9) *Callithrix cuprea* ♀" and "16) *Calitrix* [sic] *cuprea* ♂". Only the female is still present in our collection.

Hill (1960: 122) designates a female (no. 10) in München as the lectotype.

Kraft (1983: 432) lists four types in the ZSM.

### *Callicebus discolor* (I. Geoffroy & Deville, 1848)

***Callithrix discolor*** I. Geoffroy & Deville, 1848: 498.

According to Jentink (1892: 52) one of the catalogue entries for *Callithrix ornata* Gray is a type for "*Callithrix discolor* Verreaux" (RMNH.MAM.39087, male from Nouvelle Grnade received from Verreaux in 1873). Jentink's 1887 catalogue of skeletal material does not mention this name and supposed type status, nor does Schlegel (1876: 238-239).

The name *Callithrix discolor* Verreaux cannot be found in the literature. This name was published by I. Geoffroy Saint-Hilaire and Deville in 1848, from the type locality Tabatinga, Brazil. The name does not appear in the lists of material acquired from Verreaux and preserved in the archives of Naturalis. Obviously RMNH.MAM.39087 cannot be a type of *Callithrix discolor* I. Geoffroy Saint-Hilaire and Deville, 1848, of which the holotype is in the MNHN (Rode 1938: 233).

### *Callicebus donacophilus* (d'Orbigny, 1835)

***Callithrix donacophilus*** d'Orbigny, 1835: pl. 5.

Possible paralectotype, RMNH.MAM.39088 (Jentink 1892: 53 c), subadult female, mounted skin, skull in situ. Loc.: Bolivia. Leg.: A. d'Orbigny, [January - September 1832]. Acquired 1834.

This name was first validly published by D'Orbigny (1835) in the caption of plate 5, not 1836 as in most publications (Wilson and Reeder 2005: 142; Ferrari et al. 2013: 459) (for dating of d'Orbigny's work see Sherborn and Griffin 1934: 130). The description followed much later (D'Orbigny 1847: 10). As the plate has precedence

over the text, the depicted specimen is the holotype by monotypy and all other specimens are not part of type series.

Rode (1938: 234) listed one of the MNHN specimens as Holotype. This type designation was followed by Hershkovitz (1990: 49), who reports the specimen missing. In the online database of the MNHN a holotype is listed (MNHN-ZM-2007-1505), alongside three paratypes (MNHN-ZM-2007-1506, 1525, 1527). Based on the online images it is unclear which was the depicted specimen or why Rode (1938) selected the particular specimen as holotype. All specimens are mounted in a different position than the plate. If Rode is correct and his holotype is the depicted specimen, all other specimens have no type status. In case this attribution cannot be proven, we should treat all specimens possibly depicted as syntypes, of which Rode selected one as lectotype.

Another juvenile specimen in Naturalis (RMNH.MAM.39089) clearly does not belong in the type series, as it does not resemble the depicted specimen (an adult).

According to the text (D'Orbigny 1844: 81) this species was found in Moxos district, Bolivia, where he stayed several times from January to September 1832.

### ***Callicebus melanochir*** (Wied, 1820)

***Callithrix melanochir*** Wied, 1820a: 256.

***Callithrix incanescens*** "Lichtenstein" Kuhl, 1820a: 40.

Lectotype, RMNH.MAM.17690 (Jentink 1887: 45 a; 1892: 51 a), sex unknown, mounted skin and skull. Loc.: [Morro d'Arara] Belmonte [Jequitinhonha] River, Brazil. Leg.: Maximilian, Prinz zu Wied, [August-September 1816].

Paralectotype, RMNH.MAM.39090.

Wied travelled on the Rio Belmonte from 17 August to 28 September 1816 (Joost 1987: 12, 125-155), according to Wied they stayed at Morro d'Arara or Fazenda Arara.

De Avila-Pires (1965: 10) erroneously attributes the name to Kuhl (1820a: 40) who, however, records the species as "*Callithrix melanochir* Pr. Max." [=Wied]. On p. 41 he mentions the two Naturalis specimens: "In Museo Temminkiano [sic] 2". Elliot (1913a: 245) too, overlooked the brief description by Wied (1820a). De Avila-Pires misquotes I. Geoffroy Saint-Hilaire (1851b: 40) by stating that he "listed the type (adult male) as being in the collection of the Museum National d'Histoire Naturelle, which is probably the same specimen described as the type by Elliot (1913)". The same applies to De Avila-Pires's citation of Rode (1938: 235), who correctly speaks of a paratype in the MNHN, and of Elliot (1913a: 245), who also regards the Paris male as a "co-type". Apparently, this specimen could not be found at that time. Finally, De Avila-Pires confounds the two Naturalis skins, recording RMNH.MAM.17690 as specimen *c* from Rio Belmonte and marked as "type", the other one (RMNH.MAM.39090) as *a*, without locality and type notation; however, both are labelled Rio Belmonte and both are listed as types by Jentink. Engländer (1995: 252) strangely writes: "Typ oder Syntyp: Leiden". Basing himself on Wied (1820a: 224), De Avila-Pires restricts the type locality to the lower Belmonte River.

Hershkovitz (1990: 70) correctly lists our two specimens and designates RMNH.AVES.17690 the lectotype. According to him the specimen in the MNHN (MNHN-ZM-2007-1504) has been located.

Kuhl (1820a) publishes Lichtenstein's manuscript name *incanescens* in the synonymy of *melanochir*. Therefore this is not an available name.

***Cacajao calvus rubicundus*** (I. Geoffroy Saint-Hilaire & Deville, 1848)

***Brachyurus rubicundus*** I. Geoffroy Saint-Hilaire & Deville, 1848: 498.

Paralectotype, RMNH.MAM.63658 (Jentink 1887: 45 a; 1892: 51 a), adult male, mounted skin and skull. Loc.: "Rive meridionale de l'Iça" Brasil?. Leg.: F. Castelnau, E. Deville, 1847.

Rode (1938: 233) designates a specimen in the MNHN (MNHN-ZM-2005-898) the lectotype by listing it as the holotype.

***Cacajao melanocephalus*** (Humboldt, 1812)

***Brachyurus Ouakary*** Von Spix, 1823: 12, pl. VIII.

Syntype, RMNH.MAM.39085 (Jentink 1887: 44 a; 1892: 50 a), male, mounted skin and skull. Loc.: Between Solimões [Amazonas] and Iça Rivers, Brazil. Leg.: J.B. von Spix, [January 1820].

Von Spix travelled in this area in January 1820 (Von Spix and Von Martius 1823-1831: 1186-1190, map); see under *Saguinus mystax* and *S. nigricollis* above. A list of animals received from Von Spix in October 1824, preserved in the archives of Naturalis, has an entry: "1) *Brachyurus dunkary*" [sic].

Kraft (1983: 434) lists another syntype in the ZSM. Barnett (2005: 1) refers to this specimen as the holotype, we don't consider this a valid lectotype designation.

Ferrari et al. (2013: 482) consider *Cacajao ouakary* (Spix, 1823) a valid species.

***Chiropotes israelita*** Spix, 1823

***Brachyurus Israelita*** Von Spix, 1823: 11.

Syntype, RMNH.MAM.53007 (Jentink 1887: 44 f), skull, sex unknown. Leg.: J.B. von Spix.

See Schlegel (1867: 223) for a discussion on the type locality for this species. A specimen in the ZSM (original number 34) is listed online as holotype (see also Kraft 1983: 434). However there is no indication Von Spix only had one specimen, so these specimens are all syntypes.

***Pithecia monachus*** (E. Geoffroy, 1812)

***Pithecia inusta*** Von Spix, 1823: 15, pl. X.

Syntype, RMNH.MAM.39096 (Jentink 1892: 49 a), male, mounted skin, skull in situ. Loc.: Tabatinga, Brazil. Leg.: J.B. von Spix, [early January 1820]. Ex: J.B. von Spix, October 1824.

Von Spix (1823) lists his Monk Saki's under the names *Pithecia hirsuta* and *P. inusta*. RMNH.MAM.39096 agrees with the entry in the list of animals received from Von Spix in October 1824, which is present in the Naturalis archives. Jentink (1892) erroneously catalogued the animal as "un des types du *Pithecia hirsuta* Spix".

Von Spix arrived on 9 January 1820 at Tabatinga, situated on Solimões (Amazonas) River at the Peruvian border, and collected there during at least four days (Von Spix and Von Martius 1823-1831: 1187-1189, map); see under *Callicebus cupreus*.

## ***Pithecia pithecia chrysocephala*** I. Geoffroy Saint-Hilaire, 1850

***Pithecia chrysocephala*** I. Geoffroy, 1850: 875.

Neotype, RMNH.MAM.63700 (formerly 1845), adult male, mounted skin and skeleton. Loc.: Manacapuru, Amazonas, Brazil. Leg.: 15 August 1924. Ex: Schlüter and Mass, 25 May 1930.

Marsh (2014) designated the neotype.

## ***Pithecia pithecia pithecia*** (Linnaeus, 1766)

***Simia nocturna*** "Illiger" Von Olfers, 1818: 198 (nomen nudum).

***Pithecia ochrocephala*** Kuhl, 1820a: 44.

Syntype, RMNH.MAM.39097 (Jentink 1892: 49 d), subadult male, mounted skin, skull in situ. Loc.: 'Suriname' [error for Cayenne = French Guiana]. Ex: Cabinet Temminck.

The pedestal of the type specimen bears the locality "Surinam", written in an unknown hand; the label too, gives this locality and so does Schlegel (1876: 219, nr 4). The coloration of this animal agrees very well with Kuhl's description, though Schlegel strangely writes that the description does not in all respects match this specimen, attributing it to a mix up of Kuhl's notes. Kuhl gives the provenance of his animal as "In Cajanna", which is Cayenne or French Guiana. There can be no confusion on Kuhl's side, as on the same page he gives the locality of his *Pithecia rufibarbata* (see below) as "In Surinama". It seems likely that the provenance of two specimens has since been mixed up. Schlegel's catalogue nr 3 (Jentink's catalogue c), a very black adult male, bears the locality "Cayenne", on the pedestal (in Schlegel's handwriting) and the label. Its coloration agrees in no respect with Kuhl's description. Since Kuhl is the more original source, it seems best to assume that the type is indeed from French Guiana.

Illiger (1811: 107) introduces the name *Pithecia nocturna* as a nomen nudum. Von Olfers (1818: 198) publishes *Simia nocturna* in synonymy of *P. rufiventris* Geoffroy. We found no subsequent valid use of this name and consider it not available.

***Pithecia rufibarbata*** Kuhl, 1820a: 44.

Lectotype, RMNH.MAM.39098 (Jentink 1892: 49 f), juvenile female, mounted skin, skull in situ. Loc.: Suriname. Ex: Cabinet Temminck.

Kuhl (1820a) gives no indication of the number of specimens available to him. Jentink (1892: 49) designates the lectotype.

## **Atelidae** Gray, 1825

### ***Alouatta belzebul*** (Linnaeus, 1766)

***Mycetes rufimanus*** Kuhl, 1820a: 31.

Syntype, RMNH.MAM.39095 (Jentink 1892: 37 a), female, mounted skin, skull in situ. Ex: Bullock's Museum, 7 May 1819.

Bullock's collection was auctioned in London during a 26-days sale in April-June 1819. Temminck and his assistant Kuhl were present, and Temminck's copy of the catalogue (Bullock 1819) is preserved in the archives of Naturalis. In this, Temminck has marked the specimens that he bought with a "T" and noted the price he paid. On p. 38 of the catalogue, there is an entry: "65 Preacher Monkey, S[im]ia]

Beelzebub". Temminck has marked this item as very good, and bought it for £ 3 –. Although Schlegel (1876: 151) and Jentink (1892: 37) both list this specimen as “one of the types”, there is no indication there might be more specimens in the type series.

### ***Alouatta caraya*** (Humboldt, 1812)

***Mycetes barbatus*** Von Spix, 1823: 46.

Syntype, RMNH.MAM.64136 (Jentink 1892: 37: a), adult male, mounted skin, skull extracted but not in collection. Loc.: interior of Bahia, Brazil. Leg.: J.B. von Spix, [1817-1820].

Syntype, RMNH.MAM.64137 (Jentink 1892: 37: b), adult female, mounted skin, skull extracted but not in collection. Loc.: interior of Minas-Geraës, Brazil. Leg.: J.B. von Spix, [1817-1820].

Another type is in the Bavarian State Collection of Zoology (Kraft 1983: 434).

### ***Ateles belzebuth*** E. Geoffroy, 1806

***Ateles chuva*** Schlegel, 1876: 175.

***Ateles problema*** "Schlegel" Jentink, 1887: 42 (nomen nudum).

Syntype, RMNH.MAM.31771 (Jentink 1887: 37 b, 1892: 42 a), subadult female, mounted skin and skull. Loc.: Peru. Acquired in 1875.

Syntype, RMNH.MAM.59661 (Jentink 1892: 42 i), subadult female, mounted skin, skull extracted but not present in collection. Died in captivity in Europe; acquired in 1875.

Jentink (1887; 1892) does not list these specimens as types, since he attributes the name *Ateles chuva* to Von Humboldt. The latter, however, indicated this species only by its vernacular name “le *chuva* de Bracamorros”, without description (Von Humboldt 1805: 8, cited from second edition, 1812). Later (1812: 340), after having read the description by Geoffroy, he adopted the name *Ateles marginatus* Geoffroy, which had not been published as such, and (p. 341) described the species under Geoffroy’s name. Schlegel (1876: 174-175) treated *Ateles marginatus* and *A. chuva* as distinct species, and thereby has become the author of the name *Ateles chuva*. For the dates of publication of Von Humboldt’s articles, see Sherborn (1899).

On the pedestal of RMNH.MAM.59661 is written "*Ateles problema* Schl. n. sp." and this name is also mentioned in Jentink’s Catalogue (1892: 42). We have not been able to find any valid publication of this name, therefore this name is probably not available.

### ***Ateles geoffroy*** Kuhl, 1820

***Ateles pan*** Schlegel, 1876: 180.

Syntype, RMNH.MAM.39082 (Jentink 1887: 38 c; 1892: 43 a), male, mounted skin and skull. Loc.: Cobán, Guatemala. Leg.: 1874. Ex: G. Schneider, 1875.

Syntype, RMNH.MAM.39083 (Jentink 1887: 38 d; 1892: 43 b), female, mounted skin and skull. Loc.: Cobán, Guatemala. Leg.: 1874. Ex: G. Schneider, 1875.

Syntype, RMNH.MAM.39084 (Jentink 1887: 38 e; 1892: 43 c), female, mounted skin and skull. Loc.: Cobán, Guatemala. Leg.: 1874. Ex: G. Schneider, 1875.

These specimens were obtained from the dealer G. Schneider in Basel (at that time still curator of the museum in Basel), who sent them to Leiden in April 1875. A letter from Schneider to Schlegel dating 8 April 1875 (Naturalis archives) has an entry: “3 *Ateles variegatus* 2♂ 1♀? Vera Paz” (see Schlegel 1876: 180). They had been collected in 1874 near Cobán, Vera Paz, Guatemala, by an unnamed German collector. In the same year also some birds were acquired through Schneider from the

same location collected by F. Sarg. It is likely that these mammals were also from this source.

Some authors (Wilson and Reeder 2005: 150; Rylands and Mittermeier 2013: 537) give the specific name of this species as *Ateles geoffroyi*. However, Kuhl (1820a: 26) described this form as “*Ateles GEOFFROY. mihi* species inedita.”, whereas (p. 25) he named the preceding species “*Ateles fuliginosus mihi*, species inedita.” Probably, he intended to name the following species after Geoffroy, but due to a typographical error of abbreviation the genitive ending *-i* was omitted. Despite this, the name has been validly published and its correct spelling therefore is *Ateles geoffroy*.

### ***Brachyteles hypoxanthus* Wied, 1820**

***Ateles hypoxanthus* Wied, 1820a: 91.**

Lectotype, RMNH.MAM.17688 (Jentink 1892: 44 a), male, mounted skin, skull in situ. Loc.: [As Barreiras, Rio Belmonte] Bahia, Brazil. Leg.: M. von Wied zu Neuwied, [August 1816].

De Ávila-Pires (1965: 9) designates the lectotype and restricts the type locality to “As Barreiras”, based on Wied (1820a: 267). Date and locality are based on Moraes (2009: 29).

### ***Lagothrix lagotricha* (Humboldt, 1812)**

***Gastrimargus infumatus* Von Spix, 1823: 41, pl. XXIX.**

Syntype, RMNH.MAM.39094 (Jentink 1887: 36 a; 1892: 40 a), male, mounted skin and skull. Loc.: Lower Içá River, Brazil. Leg.: J.B. von Spix, [last week of January 1820].

Von Spix travelled on the lower Içá River during the last week of January 1820 (Von Spix and Von Martius 1823-1831: 1190, map). The list of animals received from Von Spix in October 1824 (Naturalis archives) has an entry: “11) *Gastrimarchus mustelinus*”, which must be the present specimen. This name refers to the French and German name Von Spix uses for this species (Von Spix 1823: 41; 1823: pl. XXIX): martin coloured woolly monkey.

Kraft (1983: 435) lists three syntypes in the ZSM.

### **Cercopithecidae Gray, 1821**

#### ***Cercocebus atys lunulatus* (Temminck, 1853)**

***Cercopithecus lunulatus* Temminck, 1853: 37.**

Syntype, RMNH.MAM.39104 (Jentink 1892: 25 a), female, mounted skin, skull in situ. Loc.: [Butri (Ankobra) River or Dabo Krom], Gold Coast [Ghana]. Leg.: H.S. Pel, [February-March 1843 or 1849/50].

Syntype, RMNH.MAM.39105 (Jentink 1887: 22 a; 1892: 25 b), female, mounted skin and skull. Loc.: [Butri River or Dabo Krom], Ghana. Leg.: H.S. Pel, [February-March 1843 or 1849/50].

Syntype, RMNH.MAM.39106 (Jentink 1892: 25 c), female, mounted skin, skull in situ. Loc.: [Elmina], Ghana. Leg.: H.S. Pel, January [1841].

Syntype, RMNH.MAM.39107 (Jentink 1892: 25 d), subadult male, mounted skin, skull in situ. Loc.: Dabocrom (Dabo Krom), Ghana. Leg.: H.S. Pel, [February-March 1843].

Schlegel (1876: 95-96) and Jentink (1887: 22; 1892: 25) do not mention these specimens as types, probably because they synonymized *Cercopithecus lunulatus* Temminck, 1853 with *Cercocebus aethiops* (= *Cercocebus atys*).

Temminck's (1853) account of the mammals of the Guinea coast is based on the collections that Pel brought together during his first period in the Gold Coast (p. viii). All specimens collected by Pel between 1841 and 1850 had arrived in Leiden when Temminck published his description, and therefore belong in the type series.

Temminck (p. 38) gives Butri River as the locality. However, only RMNH.MAM.39107 bears an exact locality, and only RMNH.MAM.39106 is dated. It is not always possible to reconstruct the exact localities and dates of Pel's material. In his correspondence and shipping inventories preserved in the archives of Naturalis, this species is mentioned three times. The first shipment, dispatched in September 1841, gives a "*Cercopithecus lunulatus?* Elmina Bosch. Jan. 1841. Iris bruin Mas" (Elmina Forest. January 1841. Iris brown Male). Pel already used the name *C. lunulatus* here, perhaps coined by himself. However, the label of RMNH.MAM.39106 is dated January 1842, when Pel also was at Elmina (Holthuis 1968: 19). Since there is no record of a *Cercopithecus* from Elmina in Pel's second shipment inventory sent in March 1843, we have to assume that 1842 is an error for 1841. To make things worse, the inscription on the pedestal, of later date, says January 1849, which obviously is a mistake, as Pel was not at Elmina at that time (Holthuis 1986: 19). In a letter sent from Butri dated 10 March 1849, Pel writes that he is now sending three specimens of *Cercopithecus lunulatus*; these appear in his shipment inventory of 16 March: "3 e[xx.] Dabocrom". One more animal is mentioned in the inventory of 7 May 1850, but without locality and date. So at least three specimens were collected at Dabocrom (Dabo Krom), which is situated between Butri town (the present Princes' Town) and Sekondi (Holthuis 1968: 9, 22-23); this is indeed close to Butri (Ankobra) River, a small tidal stream. Dabo Krom was Pel's favourite collection locality and he was here on various occasions during 1843-1850. The three animals sent in March 1843 correspond with his first visits to this place in February and March of that year (Holthuis 1968: 22). The pedestal of RMNH.MAM.39107 bears the inscription "Dabocrom" in Temminck's handwriting, so this must be one of those three. In 1849 and 1850, Pel was intermittently at Butri and Dabo Krom (Holthuis 1968: 22). Although one may suppose that the remaining two specimens too, would have been collected at Dabo Krom in 1843, it cannot be excluded that one of those may be from Butri.

Zinner et al. (2013: 653) treat *Cercocebus lunulatus* (Temminck, 1853) as a valid species.

### ***Cercopithecus albogularis* (Sykes, 1831)**

***Cercopithecus samango*** Sundevall, 1844: 160.

***Cercopithecus chimango*** Temminck, 1853: 32 (lapsus for *samango*).

Syntype, RMNH.MAM.39123 (Jentink 1887: 18 a; 1892: 20 a), female, mounted skin, skull extracted but missing, only pedestal found. Loc.: [Inland of Durban], South Africa. Leg.: J.A. Wahlberg, [May-June 1841]. Ex: NRM, C.J. Sundevall.

From the description by Sundevall (1844: 160-161) it is clear that he had several specimens before him; he writes that Wahlberg had collected this species inland from Port Natal (Durban) in May or June 1841.

### ***Cercopithecus mitis* Wolf, 1822**

***Cercopithecus Dilophos*** Ogilby, 1838c: 343.

Syntype, RMNH.MAM.39119 (Jentink 1892: 21 a), male, mounted skin, skull in situ. Loc.: Coastal Angola.

Syntype, RMNH.MAM.39120 (Jentink 1892: 21 *b*), female, mounted skin with false tail, skull extracted but not in collection. Loc.: Angola.

Ogilby bases his description of *Cercopithecus Dilophos* on two specimens in *Naturalis*. Schlegel (1876: 83) and Jentink (1892: 21) apparently overlooked Ogilby's publication and have not catalogued these skins as types. A skeleton of the same provenance (RMNH.MAM.63701, Jentink, 1887: 19 *a*) is not mentioned by Ogilby and therefore does not belong in the type series.

The pedestal of RMNH.MAM.39119 bears an inscription in Temminck's handwriting, identifying the animal as "fem ad" and "femelle", and giving its locality as "Cote d'Angola". Although the genitals are lost, it is clearly a male. The tail of RMNH.MAM.39120 has been replaced during preparation.

### ***Cercopithecus Temminckii*** Ogilby, 1838c: 343.

According to Ogilby there was a single specimen in *Naturalis*, acquired in Amsterdam in 1824 from Guinea, on which he based this new name. Both Schlegel (1876) and Jentink (1887) missed this name and don't list any specimen in their catalogue with the data mentioned in the description. This specimen seems to be lost, since it wasn't recently found in the collection.

According to Schwarz (1928: 96) Ogilby's name is based on *Colobus temminckii* Kuhl. However the description by Ogilby differs in many aspects with this species (e.g. black arms and legs).

### ***Cercopithecus neglectus*** Schlegel, 1876: 70.

Schlegel based the description of this species on the description by Gray (1870: 22) of *Cercopithecus leucocampyxi* Cuvier from the White Nile, Sudan. This specimen in the NHM (NHMUK 1860.4.20.7) is therefore the holotype of this name.

### ***Cercopithecus albogularis erythrarchus*** Peters, 1852: 1, pl.I.

***Cercopithecus erythrarchus*** Peters, 1850: 95 (nomen nudum).

***Cercopithecus erythrarchus*** Peters, 1852: 1, pl.I.

Paralectotype, RMNH.MAM.39121 (Jentink 1887: 17 *a*; 1892: 19 *a*), male, subadult, mounted skin and skull. Loc.: Mozambique. Leg.: W.C.H. Peters, [1843-1847]. Ex: MfN, 25 Mai 1851.

This name is first mentioned as a nomen nudum in a preliminary communication by Peters (1850: 95) that precedes the extensive description in his later work (Peters 1852: 1, pl. I). Peters does not state how many specimens he has before him. In 1852 he gives the measurements of one animal only, but mentions two localities: "Inhambane, Quellimane, a 17° ad 24° Lat. Austr.".

The shipment from Peters was received on 25 May 1851 and contained a skin and skull of *Cercopithecus erythrarchus* (*Naturalis* archives). Schwarz (1927: 152) mentions a specimen in the MfN (No. 16059) as the type of *C. erythrarchus*, Peters, 1850, thereby designating it the lectotype.

Peters collected in Mozambique during 1843-1847 (Peters 1852: viii-ix).

### ***Cercopithecus nictitans*** (Linnaeus, 1766)

***Cercopithecus signatus*** "Schlegel" Jentink, 1886a: 55.

Holotype by monotypy, RMNH.MAM.39124 (Jentink 1887: 20 *a*; 1892: 23 *a*), male, mounted skin and skeleton. Loc.: ?Banana, Congo. Ex: Rotterdam Zoo, died 6 January 1877, received 1 February 1887.

Oates (1985: 41) suggests that this specimen represents a hybrid between *C. nictitans* and a member of the *Cercopithecus cephus* (L., 1758) species group.

***Cercopithecus stampflii* Jentink, 1888a: 10.**

Holotype, RMNH.MAM.39125 (Jentink 1892: 24 a), male, mounted skin and skeleton. Loc.: Pessy Country, Liberia. Leg.: J. Büttikofer and F.X. Stampfli (142), 24 March 1887.  
Paratype: RMNH.MAM.58929.

In 1887 Büttikofer and Stampfli worked in the coastal districts of Liberia and did not reach Pessy Country (Büttikofer 1888: 59-62, pl. 5). A single animal of this species was obtained from their hunters (Büttikofer 1890b: 358). Jentink mentions in the beginning of his description to have "One specimen", namely the one collected by Büttikofer and Stampfli. However later on he describes in detail a second specimen as also belonging to this new species (RMNH.MAM.58929, a juvenile male, later identified as *Cercopithecus ascanius*).

Zinner et al. (2013: 693) consider *Cercopithecus nictitans stampflii* Jentink, 1888 a valid subspecies.

***Cercopithecus petaurista buettikoferi* Jentink, 1886**

***Cercopithecus büttikoferi* Jentink, 1886a: 56.**

Syntype, RMNH.MAM.39109 (Jentink 1887: 20 b), male, skull. Loc.: Bavia on St. Paul River, Liberia. Leg.: J. Büttikofer and C.F. Sala, 9 February 1880.

Syntype, RMNH.MAM.39110 (Jentink 1887: 20 d), sex unknown, juvenile, skull. Loc.: Soforeh-Place on St. Paul River, Liberia. Leg.: J. Büttikofer and C.F. Sala, [April-October] 1880.

Syntype, RMNH.MAM.39111 (Jentink 1892: 22 a), male, mounted skin, skull in situ. Loc.: Soforeh-Place, Liberia. Leg.: J. Büttikofer and C.F. Sala, 1 August 1880.

Syntype, RMNH.MAM.39112 (Jentink 1892: 22 b), male, mounted skin, skull in situ. Loc.: Soforeh-Place, Liberia. Leg.: J. Büttikofer and C.F. Sala, 31 July 1880.

Syntype, RMNH.MAM.39113 (Jentink 1892: 22 c), male, mounted skin, skull extracted but not in collection. Loc.: Soforeh-Place, Liberia. Leg.: J. Büttikofer and C.F. Sala, 11 August 1880.

Syntype, RMNH.MAM.39114 (Jentink 1892: 23 d), juvenile female, mounted skin, skull in situ. Loc.: Soforeh-Place, Liberia. Leg.: J. Büttikofer and C.F. Sala, 12 September 1880.

Syntype, RMNH.MAM.39115 (Jentink 1887: 20 c; 1892: 23 e), subadult female, skin and skull. Loc.: Bavia, Liberia. Leg.: J. Büttikofer and C.F. Sala, 15 March 1880.

Syntype, RMNH.MAM.39116 (Jentink 1887: 20 a; 1892: 23 f), male, mounted skin and skeleton. Loc.: Bendoo on Fisherman Lake (Lake Pisa), Liberia. Leg.: J. Büttikofer and C.F. Sala, 30 November 1880.

Syntype, RMNH.MAM.39117 (Jentink 1892: 23 h), juvenile male, mounted skin, skull in situ. Buluma near Fisherman Lake [Lake Pisa], Liberia, 12 December 1880. Leg.: J. Büttikofer and C.F. Sala.

Syntype, RMNH.MAM.39118 (Jentink 1892: 23 g), juvenile female, mounted skin, skull in situ. Loc.: Bendoo, Liberia. Leg.: J. Büttikofer and C.F. Sala, 24 November 1880.

According to Jentink (1886a) he has a series of eight specimens, however in *Naturalis* are ten specimens received from Büttikofer and Sala. We consider all these part of the type series. RMNH.MAM.39111 is erroneously labelled 1878, but correctly catalogued by Jentink (1892: 22); in 1878 Büttikofer and Sala had not yet arrived in Liberia. They stayed at Soforeh-Place from 1 April to 15 October 1880 (Büttikofer 1885: 143). RMNH.MAM.39116 is wrongly dated 1881 by Jentink (1887: 20; 1892: 23), which is the year when the specimens arrived in *Naturalis*. See for the localities and collecting periods Schlegel (1881) and Büttikofer (1884: 96-119, 125, map; 1885: 142-147, pl. 7; 1890a: map).

### ***Cercopithecus pogonias* Bennett, 1833**

#### ***Cercopithecus petronellae* Büttikofer, 1911: 1.**

Syntype, RMNH.MAM.244, juvenile male, skin and skeleton. Loc.: Upper Congo, imported December 1910 and died 23 June 1911. Ex: Rotterdam Zoo (J. Büttikofer).

According to Büttikofer (1911), then director of the Rotterdam Zoo, he has seen three specimens of this new species: the Naturalis specimen, a living animal in the Antwerp Zoo, now in the RMCA (RMCA 3428; Wendelen 2014: 150) and a third in possession of the dealer Ruhe (Alfeld). The animal was said to be imported from the Upper Congo. In his description, its sex is erroneously recorded as female.

### ***Lophocebus aterrimus* (Oudemans, 1890)**

#### ***Cercopithecus aterrimus* Oudemans, 1890: 267.**

Holotype by monotypy, RMNH.MAM.39108 (Jentink 1892: 26 f), subadult female, mounted skin and skeleton. Loc.: Stanley [Boyoma] Falls, Congo, "25° 10' O. L., Greenw. 0° Br". Leg.: A. Greshoff, imported June 1890, died 8 October 1890. Ex: The Hague Zoo.

### ***Macaca fascicularis karimondjawae* Sody, 1949**

#### ***Macaca irus karimondjawae* Sody, 1949b: 132.**

Holotype, RMNH.MAM.10608, male, skin and skull. Loc.: Karimunjawa Islands, Indonesia. Leg.: W. Romswinkel, 28 November 1930. Ex: MZB (2719), 27 June 1950.

Sody (1949b) examines nine specimens for his description, only the holotype is in Naturalis. The collection date was erroneously given as "28.VI.1930".

#### ***Macaca irus submordax* Sody, 1949b: 133.**

Holotype, RMNH.MAM.34332, male, skin and skull. Loc.: Mt. Agung, Bali, Indonesia. Leg.: [A. Samat], 24 July 1930. Ex: H.J.V. Sody (E.85).  
Paratypes: RMNH.MAM.34329–34331, 34333, 34334.

Sody (1949b) examines ten specimens, six from his own collection. The latter are now in Naturalis.

### ***Macaca fuscata* (Gray, 1870)**

#### ***Inuus fuscatus* Gray, 1870: 32.**

#### ***Inuus fuscatus* Blyth, 1875: 6.**

Syntype, RMNH.MAM.39404 (Jentink 1887: 27 f), female, skull. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].

Syntype, RMNH.MAM.39405 (Jentink 1887: 27 g), female, skull. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].

Syntype, RMNH.MAM.39406 (Jentink 1887: 27 h), sex unknown, juvenile skull. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829]. Figured in Temminck (1842: pl. II figs 5, 6).

Syntype, RMNH.MAM.45486 (formerly 39397) (Jentink 1892: 31 c), female, mounted skin, skull in situ. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].

Syntype, RMNH.MAM.54921 (formerly 39395) (Jentink 1887: 27 d; 1892: 31 a), very old male, mounted skin and skull. Loc.: Japan. Leg.: P.F. von Siebold, [captured alive 1824, died in captivity after 1829]. Figured in Temminck (1842: pl. I, figs 2, 5-7).

Syntype, RMNH.MAM.54922 (formerly 39396) (Jentink 1892: 31 b), male, mounted skin, skull extracted but not in collection. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].

Syntype, RMNH.MAM.54924 (formerly 39398) (Jentink 1892: 31 d), female, mounted skin, skull extracted but not in collection. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].

Syntype, RMNH.MAM.54925 (formerly 39399) (Jentink 1887: 27 c; 1892: 31 e), juvenile female, mounted skin and skeleton. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].  
 Syntype, RMNH.MAM.54926 (formerly 39400) (Jentink 1892: 31 f), juvenile female, mounted skin, skull in situ. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].  
 Syntype, RMNH.MAM.54927 (formerly 39401) (Jentink 1887: 27 a), male, skeleton. Loc.: Japan. Leg.: H. Bürger, [1830-1834].  
 Syntype, RMNH.MAM.54928 (formerly 39402) (Jentink 1887: 27 b), sex unknown, skeleton. Loc.: Japan. Leg.: P.F. von Siebold, [1823-1829].  
 Syntype, RMNH.MAM.54929 (formerly 39403) (Jentink 1887: 27 e), male, skull. Loc.: Japan. Leg.: H. Bürger, [1830-1834].

The complicated nomenclatural history of this species is extensively discussed by Fooden and Aimi (2005: 79-82). The name *Inuus fuscatus* is coined by Reinwardt and used by him, by Temminck and by Von Siebold as a manuscript name for the specimens that were sent to Leiden from Japan. In the Fauna Japonica, however, Temminck (1842: 9-10, pls I, II) uses the published name *Inuus speciosus*, attributed by him to F. Cuvier, but in fact already given by I. Geoffroy in 1826 (as *Macacus speciosus*). The name *Macacus speciosus* is then used by Schlegel (1876: 114) and Jentink (1887: 27, 1892: 31) for the Japanese Macaques. However, despite Temminck's explanation, it has been widely misapplied to the Bear Macaque *Macaca arctoides* (I. Geoffroy, 1831) from Indochina. Since this has caused considerable confusion, Fooden (1967) proposes conservation of the name *Macaca fuscata* (Blyth, 1875). Following this, the name *speciosus* I. Geoffroy, 1826 is suppressed and *Inuus fuscatus* Blyth, 1875 validated by Opinion 920 of the ICZN (Melville and China 1970: 77).

The name *Inuus fuscatus* is first published by Gray (1870: 32) as a junior synonym of *M. speciosus* (here correctly applied to the Japanese macaque, but again attributed to F. Cuvier). Blyth (1875: 6) again misapplies the name *I. speciosus* to the bear macaque and like many authors, overlooks the fact that the name *M. speciosus* has already been given to the Japanese macaque by I. Geoffroy in 1826. Both Fooden (1967) and the ICZN (Melville and China 1970) attribute the name *I. fuscatus* to Blyth (1875), but Fooden and Aimi (2005: 80-82) correctly point out that technically, Gray (1870) is the author, which is followed here. Since Gray exclusively refers to the specimens from Japan in *Naturalis*, those constitute the type series of *Inuus fuscatus* Gray, 1870. The animals sent to Leiden by Reinwardt are no longer present in *Naturalis*, leaving only the collections received from Von Siebold and Bürger.

Most material collected by Von Siebold and Bürger is only labelled "Japon", and their exact provenance cannot be reconstructed. From shipment inventories preserved in archives of *Naturalis* it appears that Von Siebold dispatched a skeleton of *I. fuscatus* in May 1827 and in 1828; the mammals in his last shipment, which he took with him in 1829, are not specified. There is a specification of live mammals that he brought with him to The Netherlands, which contained four monkeys. In a manuscript on the mammals of Japan by Von Siebold (though copied in another hand), used by Temminck as a source for the mammal section of the Fauna Japonica, he says: "Der große Affe, den ich lebend mit nach Leiden gebracht, wurde bereits im Jahre 1824 auf Japan gefangen. Schon damals hatte er sein volles Wachstum und zwar in freier Natur erreicht, daher er auch bis an sein Ende unbändig geblieben. Demnach mag dieser Affe ein Alter von 20 Jahren erreicht haben". This animal (RMNH.MAM.54921) is figured in the Fauna Japonica (Temminck 1842: 11, pl. I figs 2, 5-7). The fate of the other animals is not known. The shipment inventories sent by Bürger list one mounted skin for 1831, one mounted skin and one skeleton for 1832, and one mounted animal for 1834. None of these can be associated with certainty with any of the types listed

above. Since the collections of Von Siebold and Bürger were not always kept apart and no original labels are preserved, it cannot be excluded that one or more specimens assumed to be from Von Siebold, are in fact acquired through Bürger.

### ***Macaca maura*** (Schinz, 1825)

***Macacus (Maimon) Brachyurus*** "Temminck" Kuhl, 1820a: 17.

Holotype by monotypy, RMNH.MAM.39407 (Jentink 1892: 31 *b*), male, albino, mounted skin and incomplete skull. Loc.: "India". Ex: Cabinet Temminck.

This name is generally attributed to Hamilton Smith (1846: 103, pl.1; see Wilson and Reeder 2005: 162). However, Kuhl (1820a: 17) was the first to publish this name for this white variety, albeit as a synonym of *Inuus leucophaeus* Cuvier. In his copy of Kuhl's monograph preserved in the library of Naturalis, Temminck has added a remark confirming that he believed it to be a new species. Hamilton Smith made this name available by using it as a valid name. Following the ICZN (art. 11.6) Kuhl is still the author and the original type series still applies. This also implies that *M. Brachyurus* Kuhl, 1820 has priority over *M. maura* (Schinz, 1825). However, we recommend that due to long term usage of the name by Schinz this name should be conserved.

### ***Macaca nemestrina*** (Linnaeus, 1766)

***Macaca nemestrina nucifera*** Sody, 1936a: 42.

Holotype, RMNH.MAM.34291, male, skin of head and skull. Loc.: Bangka Island, Indonesia. Leg.: Mr Langen or W.C. van Oosterhout, November 1930 - September 1932. Ex: H.J.V. Sody (Bk 75).

Sody (1936a) does not provide any information about localities, dates or collectors for the mammals collected for him in Bangka. According to Becking (1989: 85-86, 232) they were obtained by forestry officers: in November 1930 by Mr. Langen (initials not recorded) and between May 1931 and September 1932 by W.C. van Oosterhout (most material); their activities had been arranged by H.A.L. de Leeuw. Becking (1989) omitted this new name in his overview of new descriptions by Sody.

### ***Macaca nigrescens*** (Temminck, 1849)

***papio*** [sic] ***nigrescens*** Temminck, 1849: 111.

Lectotype, RMNH.MAM.39136 (Jentink 1892: 33 *f*), female, mounted skin, skull extracted but not in collection. Loc.: Gorontalo, Sulawesi, Indonesia. Leg.: E.A. Forsten, [12 October 1841]. Paralectotypes: RMNH.MAM.39135, 39137, 63706 (possible paralectotype).

Identifying the type material of this species is somewhat complicated; see Fooden (1969: 101-102). Temminck (1849: 111-112 ) describes two species of macaque from Sulawesi. He does not specify the distribution areas of these neighbouring forms, nor any details on the number and provenance of the specimens he had before him. Moreover, his "*papio niger*" was not a new species, but had already been described by Desmarest (1822) as *Macaca nigra*.

Schlegel (1876: 120-122) enumerates the material in Naturalis. The mounted skins with catalogue numbers 1-5 and 10 (Jentink 1892: 32-33 cat. *a-e*) were all collected by Forsten and labelled "Menado" (Manado). The next skins (catalogue numbers 6-9) were collected by Von Rosenberg in 1864, therefore cannot have been among Temminck's types of 1849 (Matschie 1901: 254-255; Büttikofer 1917: 19;

Fooden 1969: 101). This would leave us with only two possible types collected by Forsten at Gorontalo and Tomini, respectively, in the western part of the northern peninsula: nr 6 (RMNH.MAM.39136; Jentink's skin *f*) and nr 10 (RMNH.MAM.39137; Jentink's skin *j*).

RMNH.MAM.39135 (Schlegel's skin nr 2, Jentink's skin *b*, with skull nr 19, Jentink's skull *f*) must be added to the serie. It was erroneously labelled Menado, though the pedestal reads Gorontalo. Its characters agree with those given for *M. nigrescens*. These three types are also specified as such by Büttikofer (1917) and Fooden (1969). Unfortunately, the skull *f* cannot be found. The skull RMNH.MAM.63706 might be the skull belonging to skin RMNH.MAM.39135, since this specimens matches the description of Büttikofer (1917: 19) of a skull of an adult female where the fifth molar didn't break through. Elliot (1913b: 163) remarked on the specimens listed by Schlegel: "Of these, only No. 6 can be a type" which, though erroneous, may be regarded as a lectotype designation. Fooden (1969: 102) formally designated that specimen (RMNH.MAM.39136) the lectotype to establish this.

Forsten was in northern Sulawesi from March 1840 until April 1842, interrupted by a stay on Ternate Island. He worked mainly in Minahasa district in the northeastern tip of Sulawesi (Manado and other places), but collected in Gorontalo and surroundings between 20 September and 1 November 1841, and around Pagawat (Paguat) further west between 4 and 12 November of that year; see his diary, a copy of which (in another hand) is preserved in the archives of Naturalis. The entry for 12 October 1841 tells how his hunters brought four specimens of "*Cijnocephalus niger*" (3 females, 1 juvenile male) and describes how they differ markedly from those of Manado. There are no other records of specimens collected near Gorontalo or Paguat. The two females RMNH.MAM.39135 and 39136 must be of this lot. The juvenile male RMNH.MAM.39137 is labelled "Tomini", as is recorded by all subsequent authors. This is strange, since Forsten did not visit that place, Paguat being the westernmost locality that he reached. There can be little doubt that this youngster is the juvenile male recorded above. Gorontalo is situated at the entrance of Tomini Bay as mentioned by Forsten in his diary, and "Tomini" almost certainly stands for that, not for the town at the westernmost end of the northern peninsula. This would agree with Fooden's (1969: 103) suspicion that the young animal was not from Tomini town which is within the range of *Macaca hecki* (Matschie, 1901), but from further east. The year 1842 given on the labels and by Schlegel (1876) and Jentink (1887, 1892) is the year when the material was sent to Leiden.

### ***Macaca tonkeana*** (Meyer, 1899)

***Cynopithecus togeanus*** Sody, 1949b: 137.

Holotype, RMNH.MAM.10609, male, skin and skull. Loc.: Malenge Island, Togian Islands, Indonesia. Leg.: J.J. Menden, 3 December 1939. Ex: MZB, 27 June 1950 (MZB 6545).

Sody (1949b) examines 12 specimens for his description, of which only the holotype is in Naturalis.

According to Zinner et al. (2013: 632) there is morphometric and dermatoglyphic evidence for separating the population from the Togian Islands in a distinct species. However subsequent molecular analysis does not support this distinction.

## ***Papio anubis*** (Lesson, 1827)

### ***Papio rubescens*** Temminck, 1853: 39.

Lectotype, RMNH.MAM.39138 (Jentink 1892: 35 a), Semi-adult female, mounted skin, skull in situ. Loc.: Côte d'Or [Ghana]. Leg.: 1820.

Temminck (1853) gives no indication of the number of specimens available to him. By listing RMNH.AVES.39183 as "individue type", Schlegel (1876: 129) designated it the lectotype. A specimen in Naturalis (RMNH.MAM.63704) originating from the Kabinet des Stadhouders could have been known to Temminck, but it only entered Naturalis in 1867 through the collection of Lidth de Jeude.

## ***Theropithecus gelada*** (Rüppell, 1835)

### ***Macacus Gelada*** Rüppell, 1835: 5, Taf. 2.

### ***Gelada Rüppellii*** Gray, 1843: 77 (nomen novum).

Paralectotype for *gelada*, syntype for *rüppellii*, RMNH.MAM.39174 (Jentink 1887: 25 a; 1892: 29 a), adult male, mounted skin and skull. Loc.: Simēn Mountains, Ethiopia. Leg.: E. Rüppell, [June-September 1832]. Received 15 October 1835.

Rüppell was in the Simēn Mountains from June until the first week of October 1832 (Mertens 1949: 68-75). RMNH.MAM.39174 was sent by Rüppell in exchange on 15 October 1835. It is mentioned as "1 *Macaca gelada* R" in a list of specimens enclosed with Rüppell's letter, preserved in the archives of Naturalis.

Gray (1843: 77) lists Rüppell's *Macacus gelada* under the new name *Gelada Rüppellii*, and refers to the description by Rüppell (1835), thus including all original specimens in the type series of this new name.

Mertens (1925: 36) has designated a specimen in the SMF (Nr 1011) as the lectotype.

## ***Theropithecus gelada obscurus*** Heuglin, 1863

### ***Theropithecus obscurus*** Von Heuglin, 1862: 427 (nomen nudum).

### ***Theropithecus obscurus*** Von Heuglin, 1863: 10.

Syntype, RMNH.MAM.39130 (Jentink 1887: 25 e), subadult female, skull. Loc.: Sources of Tekeze River, Ethiopia. Leg.: T. von Heuglin, [March 1862]. Received 1865.

Syntype, RMNH.MAM.39131 (Jentink 1887: 25 a; 1892: 29 a), male, mounted skin and skull. Loc.: Sources of Tekeze River, Ethiopia. Leg.: T. von Heuglin, [March 1862]. Received 1865.

Syntype, RMNH.MAM.39132 (Jentink 1887: 25 b; 1892: 29 b), female, mounted skin and skull. Loc.: [Sources of] Tekeze River, Ethiopia. Leg.: T. von Heuglin, [March 1862]. Received 1865.

Syntype, RMNH.MAM.39133 (Jentink 1887: 25 c; 1892: 29 c), female, mounted skin and skull. Loc.: [Sources of] Tekeze River, Ethiopia. Leg.: T. von Heuglin, [March 1862]. Received 1865.

Syntype, RMNH.MAM.39134 (Jentink 1887: 25 d; 1892: 30 d), juvenile male, mounted skin and skull. Loc.: [Sources of] Tekeze River, Ethiopia. Leg.: T. von Heuglin, [March 1862]. Received 1865.

This name was first published by Von Heuglin (1862) as a nomen nudum. The formal description appeared the following year (Von Heuglin 1863).

The labels and pedestals of all skins, as well as that of the separate skull, bear the locality "Takassie", the pedestals of RMNH.MAM.39130 and 39131 specifying this further, in Schlegel's handwriting, as "Bronnen" (Sources) of this river. The exact locality where the Naturalis animals were collected cannot be traced. Von Heuglin (1863: 10) writes about a presumed second species of *Theropithecus* near the sources of the Takasseh river. He found this species on a trip from Begemededer to Wollo-Galla

in great numbers. This is further south than the main sources of Tekeze River, though some smaller tributaries originate from those highlands at the other side of the watershed. Von Heuglin stayed in this area between 13 and 28 March 1862, but does not mention a visit to the sources of the Tekeze (Von Heuglin 1862: 424-425), and the locality where the specimens were collected may in fact have been near the southern edges of these highlands.

Schlegel (1876) records that the Naturalis series was received in 1865; this year is also given by Jentink (1887; 1892), but only for his skin and skull RMNH.MAM.39131. This is not in agreement with the correspondence between Von Heuglin and Schlegel, preserved in the archives of Naturalis. In a letter dated Chartum, 5 January 1863, Von Heuglin announces the despatch of “Schädel von Theropithecus obscurus Heugl. 1 sts” and “Bälge von... Theropithecus obscurus 2. sts (1 sehr altes Männchen u. 1. junges)”; these must be RMNH.MAM.39130, 39131 and 39134, respectively. These two skins appear in a specification of payments to Von Heuglin dated 1 March 1864; the separate skull is not mentioned here. The remaining specimens may indeed have been received in 1865, but there is no record. Given the locality on the labels and pedestals, they must all belong in the same series and thus are to be regarded as types. Hill (1970: 603) erroneously locates the types series in the NMW; see the correction by Engelberger (2010).

### ***Colobus guereza* Rüppell, 1835**

***Colobus Guereza* Rüppell, 1835: 1, Taf. 1.**

***Colobus Rüppellii* Gray, 1870: 19 (nomen novum).**

Paralectotype for *Guereza*, syntype for *Rüppellii*, RMNH.MAM.39127 (Jentink 1887: 7 b; 1892: 6 b), female, mounted skin and incomplete skull. Loc.: Kulla district, Ethiopia. Leg.: E. Rüppell, [October 1832 - January 1833].

Schlegel (1876: 26) mentions the presence of three specimens from Ethiopia, of which he only attributes the female (nr. 2) to Rüppell, which is in agreement with the labels. However, the name Rüppell has been added on the pedestals of the skin and skull of the male from Shoa (nr 1), though not in Schlegel’s handwriting. In his osteological catalogue, Jentink (1887: 6 a) does not give Rüppell as the collector of this male (RMNH.MAM.39126), but in his skin catalogue (1892: 6, cat a) he does; the latter must be erroneous.

Rüppell (1835: 1) collected these specimens in Gojam und Kulla. He departed from Gonder for the Kulla area further north in October 1832 and returned to Gonder on 18 January 1833 (Mertens 1949: 78-79, pl. 15). Rüppell never proceeded as far south as Shoa, so an animal from that area cannot have been collected by him. The confusion may have arisen from the correspondence between Rüppell and Schlegel. In a list of specimens sent to Naturalis in exchange, enclosed with his letter of 15 October 1837, Rüppell mentions “2 *Colobus guereza*, (einer zurück)”. This clearly means that only one of these animals was retained by Naturalis.

Gray (1870: 19) lists Rüppell’s *Colobus guereza* under the new name *Gelada Rüppellii*, and refers to the description by Rüppell (1835), thus including all original specimens in the type series of this new name.

Jentink (1887: 7; 1892: 6) does not mention these specimens as types, though the one from Kulla clearly belongs in the type series. Mertens (1925: 37) has designated a specimen in the SMF (Nr 1856, from Damot, Gojam) the lectotype of the species.

### ***Colobus vellerosus* (I. Geoffroy, 1834)**

***Colobus Leucomeros*** Ogilby, 1838c: 288.

Paralectotype, RMNH.MAM.63707 (Jentink 1892: 7 f), juvenile, sex unknown, alcohol. Loc.: Guinea.

Ogilby (1838c) bases his description on a skin in the Zoological Society, a specimen in the MNHN and a juvenile in *Naturalis* from Guinea. Schlegel (1876: 26 cat. 5) and Jentink (1892: 7 cat. f) list two juveniles, one collected by Pel, which cannot be the specimen Ogilby refers to, since Pel only arrived in Ghana in 1840. The other juvenile, stored in alcohol, must be the specimen Ogilby examined.

Napier (1985: 6) designates the lectotype by listing a specimen in the NHM (NHMUK 1855.12.24.405) as holotype.

### ***Piliocolobus badius temminckii* (Kuhl, 1820)**

***Colobus temminckii*** [sic] Kuhl, 1820a: 7.

***Colobus rufo-fuliginosus*** Ogilby, 1838c: 270 (nomen novum).

Holotype, RMNH.MAM.39128 (Jentink 1892: 7 a), adult, sex unknown, mounted skin, skull extracted but not in collection. Ex: Bullock Museum, 1819.

In the original description by Kuhl (1820a) the name is written as *Temminckii*, clearly a lapsus for *Temminckii*. Ogilby (1838c) introduces *rufo-fuliginosus* as a new name for *C. fuliginosus* Ogilby, 1835 and *C. temminckii* Kuhl, 1820.

### ***Presbytis chrysomelas* (Müller, 1838)**

***Semnopithecus chrysomelas*** Müller, 1838: 138.

Syntype, RMNH.MAM.39140 (Jentink 1892: 12 a), male, mounted skin, skull extracted but not in collection. Loc.: Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard, [1826]. Figured in Müller and Schlegel (1840: pl. 10 fig. 1).

Syntype, RMNH.MAM.39141 (Jentink 1892: 12 b), female, mounted skin, skull extracted but not in collection. Loc.: Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard, [1826].

Syntype, RMNH.MAM.39142 (Jentink 1892: 12 c), female, mounted skin, skull extracted but not in collection. Loc.: Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard, [1826]. Figured in Müller and Schlegel (1840: pl. 10 fig. 2).

Syntype, RMNH.MAM.39143 (Jentink 1892: 12 d), juvenile female, mounted skin, skull in situ. Loc.: Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard, [1826]. Figured in Müller and Schlegel (1840: pl. 11 fig. 2).

Possible syntype, RMNH.MAM.54940 (Jentink 1887: 11 a), sex unknown, skull. Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard, [1826].

Possible syntype, RMNH.MAM.54941 (Jentink 1887: 11 b), sex unknown, skull. Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard, [1826].

The description in Müller (1838) predates the extensive account by Müller and Schlegel (1840: 61, 71-73, pls 10-11). According to Müller and Schlegel (1840: 71) these specimens were collected by Diard fifteen years before the publication. Diard spent most of 1826 in Borneo. In his description Müller mentions three specimens by Diard (two females, one male) and one specimen (an adult female) donated to him by Dr. Fritze, the chief medical officer of the Dutch East Indies, received from Pontianak. However in the catalogues by Schlegel (1876: 47) and Jentink (1892: 12) all specimens are collected by Diard.

The status of the two skulls is unknown, both Schlegel and Jentink list them as separate individuals and not belonging to mounted skins in the collection. Müller

makes no mention of these skulls in his description and all the skins have their skulls extracted. This might suggest that the skulls belong to the skins and for this reason we tentatively include them in the type series.

### ***Presbytis comata fredericae* Sody, 1930**

#### ***Presbytis aygula fredericae* Sody, 1930c: 68.**

Lectotype, RMNH.MAM.34316, adult male, skin and skull. Loc.: Tjoeroegilang, Java, Indonesia. Leg.: A. Samat, 28 September 1929. Ex: H.J.V. Sody.  
Paralectotypes: RMNH.MAM.34318, 34346.

Sody (1930c) gave no information on the specimens available to him. By listing RMNH.MAM.343416 as holotype, Becking (1989: 50) designated it the lectotype. Based on the collecting date this specimen must have been collected at Curug Ilang (Tjoeroegilang) (Becking 1989: 79).

### ***Presbytis femoralis* (Martin, 1838)**

#### ***Semnopithecus neglectus* Schlegel, 1876: 45.**

Syntype, RMNH.MAM.39154 (Jentink 1887: 11 a; 1892: 12 a), adult male, mounted skin and skull. Loc.: Singapore. Leg.: G.A. Frank, 1869.  
Syntype, RMNH.MAM.39155 (Jentink 1887: 11 c; 1892: 13 b), adult, remnants of mounted skin and skull. Loc.: Singapore. Leg.: P. Diard, 1859.  
Syntype, RMNH.MAM.39156 (Jentink 1887: 11 b; 1892: 13 c), juvenile, mounted skin and skull. Loc.: Singapore. Leg.: G.A. Frank, 1869.

### ***Presbytis frontata* (Müller, 1838)**

#### ***Semnopithecus frontatus* Müller, 1838: 136.**

Syntype, RMNH.MAM.39147 (Jentink 1887: 8 b; 1892: 9 a), adult female, mounted skin and skull. Loc.: Pamattan [Pematang], Borneo, Indonesia. Leg.: S. Müller, October 1836.  
Syntype, RMNH.MAM.39148 (Jentink 1887: 8 a; 1892: 9 b), adult male, mounted skin and skeleton. Loc.: Poulo-Lampy [Pulau Sari], Borneo, Indonesia. Leg.: S. Müller, 1836.  
Syntype, RMNH.MAM.39149 (Jentink 1892: 9 c), juvenile male, mounted skin, skull extracted but not in collection. Loc.: Pamattan [Pematang], Borneo, Indonesia. Leg.: S. Müller, 1836.  
Syntype, RMNH.MAM.39150 (Jentink 1887: 8 c; 1892: 9 d), juvenile male, mounted skin and skull. Loc.: Pamattan [Pematang], Borneo, Indonesia. Leg.: S. Müller, 1836.

### ***Presbytis melalophos* (Raffles, 1821)**

#### ***Semnopithecus ferrugineus* Schlegel, 1876: 42.**

Syntype, RMNH.MAM.39144 (Jentink 1887: 9 a), adult male, skeleton, missing. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.  
Syntype, RMNH.MAM.39145 (Jentink 1887: 10 b), adult female, skeleton. Loc.: Batang-Singalang, Sumatra, Indonesia. Leg.: S. Müller, August 1835.  
Syntype, RMNH.MAM.39146 (Jentink 1887: 10 c), semi-adult, sexe unknown, skeleton. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, September 1835.  
Syntype, RMNH.MAM.42339 (formerly 39180) (Jentink 1892: 11 r), adult male, mounted skin, skull extracted but not in collection. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.  
Syntype, RMNH.MAM.42399 (formerly 39180) (Jentink 1892: 11 r), juvenile, sexe unknown, skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.  
Syntype, RMNH.MAM.42400 (formerly 39181) (Jentink 1892: 11 s), adult male, mounted skin and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.  
Syntype, RMNH.MAM.52983 (formerly 39175) (Jentink 1887: 10 d), semi-adult, skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.

Syntype, RMNH.MAM.52984 (formerly 39176) (Jentink 1887: 10 e), semi-adult, sexe unknown, skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.

Syntype, RMNH.MAM.52985 (formerly 39177) (Jentink 1892: 11 q), adult female, mounted skin and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.

Syntype, RMNH.MAM.52986 (formerly 39178) (Jentink 1892: 11 o), adult female, mounted skin and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.

Syntype, RMNH.MAM.52987 (formerly 39179) (Jentink 1892: 11 p), adult female, mounted skin and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.

Syntype, RMNH.MAM.52988 (formerly 39182) (Jentink 1892: 11 t), juvenile female, mounted skin and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, 1835.

The skull originally associated with the mounted specimen RMNH.MAM.42339 clearly is from a juvenile animal. As the skin is an adult specimen, we assume that Hooijer (1962: 13, no. 5) has mistakenly combined the skin and skull as being from the same specimen. This skull is hereby separated from the skin (RMNH.MAM.42339) and listed separately (RMNH.MAM.42399).

### ***Presbytis melalophos sumatranus* (Müller & Schlegel, 1841)**

#### ***Semnopithecus sumatranus* Müller & Schlegel, 1841a: 61.**

Syntype, RMNH.MAM.39169 (Jentink 1887: 11 c; 1892: 12 a), adult male, mounted skin and skull. Loc.: Mount Ophir [Gn. Talakmau], Sumatra, Indonesia. Leg.: L. Hörner, May 1838. Figured in Müller and Schlegel, plate 10b, fig. 1.

Syntype, RMNH.MAM.39170 (Jentink 1887: 11 d; 1892: 12 b), adult male, mounted skin and skull. Loc.: Mount Ophir, Sumatra, Indonesia. Leg.: L. Hörner, May 1838.

Syntype, RMNH.MAM.39171 (Jentink 1887: 11 a; 1892: 12 c), adult female, mounted skin and skeleton. Loc.: Mount Ophir, Sumatra, Indonesia. Leg.: L. Hörner, May 1838.

Syntype, RMNH.MAM.39172 (Jentink 1887: 11 e; 1892: 12 d), juvenile female, mounted skin and skull. Loc.: Mount Ophir, Sumatra, Indonesia. Leg.: L. Hörner, May 1838.

Syntype, RMNH.MAM.39173 (Jentink 1887: 11 b; 1892: 12 e), adult female, mounted skin and skeleton. Loc.: Mount Ophir, Sumatra, Indonesia. Leg.: L. Hörner, May 1838.

Syntype, RMNH.MAM.42367 (Jentink 1887: 11 f), adult male, skull. Loc.: Mount Ophir, [Kampong Sawa], Sumatra, Indonesia. Leg.: L. Hörner, [10] May 1838.

L. Hörner, a Swiss geologist in service of the Natuurkundige Commissie voor Nederlandsch-Indië climbed Mount Ophir [Gunung Talamau] in May 1838 (Hörner 1839: 609). In his description of the ascent of the mountain Hörner mentions shooting a male of a new species of monkey in "kampong Sawa 920' above sealevel" on the 10th of May, but the damp weather destroyed the skin. This is probably the skull RMNH.MAM.42367. He does not mention any other specimens.

#### ***Presbytis aygula margae* Hooijer, 1948: 234.**

Holotype, RMNH.MAM.39139 (Jentink 1892: 12 f), subadult female, mounted skin and mandible.

Loc.: Deli, Serdang, Sumatra, Indonesia. Leg.: B. Hagen, 25 March 1887. Received 1889.

Paratypes: RMNH.MAM.42404, 1854.

### ***Presbytis natunae* (Thomas & Hartert, 1894)**

#### ***Semnopithecus natunae* Thomas & Hartert, 1894: 652.**

Paratype, RMNH.MAM.39153, adult, sex unknown, study skin and skull. Loc.: Bunguran [Natuna Besar Island], Indonesia. Leg.: A. Everett, 4 October 1893. Ex: G.A. Frank, July 1900, from W. Rothschild (Tring).

Thomas and Hartert (1894) only nominate one specimen as the type, however, in the introduction they refer to the specimens in the collection of Rothschild as "co-

types". Therefore we consider the male in the NHM (NHMUK 1894.9.28.1) the holotype, and list RMNH.MAM.39153 as paratype.

### ***Presbytis rubicunda*** (Müller, 1838)

***Semnopithecus rubicundus*** Müller, 1838: 137.

Syntype, RMNH.MAM.39158 (Jentink 1887: 8 a), adult female, skeleton. Loc.: Mt. Sakoumbang, Borneo, Indonesia. Leg.: S. Müller, [11 November] 1836.

Syntype, RMNH.MAM.39159 (Jentink 1892: 9 a), adult female, mounted skin, skull extracted but not in collection. Loc.: Tanah-Lawout, Borneo, Indonesia. Leg.: S. Müller, [21-23 October] 1836. Mother of RMNH.MAM.39164.

Syntype, RMNH.MAM.39160 (Jentink 1892: 9 b), adult female, mounted skin, skull extracted but not in collection. Loc.: Mt. Sakoumbang, Borneo, Indonesia. Leg.: S. Müller, [11 November] 1836.

Syntype, RMNH.MAM.39161 (Jentink 1887: 8 b; 1892: 9 c), adult male, mounted skin, skull in situ. Loc.: Kertingan, Borneo, Indonesia. Leg.: S. Müller, November 1836.

Syntype, RMNH.MAM.39162 (Jentink 1892: 9 d), subadult male, mounted skin, skull in situ. Loc.: Mt. Sakoumbang, Borneo, Indonesia. Leg.: S. Müller, [11] November 1836.

Syntype, RMNH.MAM.39163 (Jentink 1887: 9 c; 1892: 9 e), subadult, sexe unknown, mounted skin and skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, 1836.

Syntype, RMNH.MAM.39164 (Jentink 1887: 9 d; 1892: 9 f), juvenile female, mounted skin and skull. Loc.: Tanah-Lawout, Borneo, Indonesia. Leg.: S. Müller, [21-23 October] 1836. Young of RMNH.MAM.39159.

Syntype, RMNH.MAM.42332 (Jentink 1887: 8 a), adult male, skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, 1836.

Syntype, RMNH.MAM.42333 (Jentink 1887: 8 a), adult female, skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, 1836.

Syntype, RMNH.MAM.42334 (Jentink 1887: 8 a), adult female, skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, 1836.

### ***Presbytis siamensis*** (Müller & Schlegel, 1841)

***Semnopithecus siamensis*** Müller & Schlegel, 1841a: 60.

Syntype, RMNH.MAM.39166 (Jentink 1892: 11 f), adult male, mounted skin, skull extracted but not in collection. Loc.: Malaysia. Leg.: P. Diard [1818-1824].

Syntype, RMNH.MAM.39167 (Jentink 1892: 11 g), adult male (originally identified as female), mounted skin, skull extracted but not in collection. Loc.: Malaysia. Leg.: P. Diard [1818-1824].

Syntype, RMNH.MAM.39168 (Jentink 1892: 11 h), adult female, mounted skin, skull extracted but not in collection. Loc.: Malaysia. Leg.: P. Diard [1818-1824].

Diard accompanied T.S. Raffles to Malakka (Penang) and Sumatra in the years 1818-1819. He collected in the Malay Peninsula until 1824, when he went to Java (Fransen et al. 1997: 228).

According to Schlegel (1876: 39) the skins of these types show yellowing due to preservation in alcohol. The whereabouts of the skulls is unknown, in their description Müller and Schlegel (1841a) mention skulls, they also mention having four specimens from Diard. In the collection and in the catalogues by Schlegel (1876: 39) and Jentink (1892: 11) there are only three specimens listed and there is no mention of skulls collected by Diard.

### ***Rhinopithecus roxellana*** (Milne-Edwards, 1870)

***Semnopithecus Roxellana*** Milne-Edwards, 1870: 341.

Syntype, RMNH.MAM.39157 (Jentink 1892: 17 a), adult female, mounted skin, skull extracted but not in collection. Loc.: Moupin [Baoting], China. Leg.: A. David. Ex: MNHN, 1875.

***Semnopithecus dussumieri*** I. Geoffroy, 1843: 719.

Possible syntype, RMNH.MAM.42351 (Jentink 1887: 14 a; 1892: 17 a), subadult female, mounted skin and skull. Loc.: Malabar, India. Leg.: Dussumier. Ex: MNHN, 1836.

If the date of acquisition is correct, then the date of publication of *dussumieri* (1843) is after the specimen went to Naturalis. Geoffroy mentions having examined two specimens, an adult and a young individual, but does not say when. As this article is a revision of earlier work it is likely RMNH.MAM.42351 is part of the type series.

***Semnopithecus schistaceus*** Hodgson, 1840: 1212.

Syntype, RMNH.MAM.39165 (Jentink 1892: 16 b), adult female, mounted skin, skull in situ. Loc.: Nepal. Leg.: B.H. Hodgson.

In his article Hodgson (1840) gives this new name to a species until then listed in his unpublished catalogue as *nipalensis* (see Hodgson, 1842: 212).

***Trachypithecus auratus*** (E. Geoffroy, 1812)

***Cercopithecus auratus*** E. Geoffroy, 1812: 93.

According to Schlegel (1876: 46) Geoffroy (1812) based this new name on a specimen sent to the MNHN in 1812 from the collection of Temminck (MNHN-ZM-2005-912).

***Pithecus pyrrhus kohlbruggei*** Sody, 1931b: 349.

Holotype, RMNH.MAM.34328, adult female, skin and skull. Loc.: Sendang, Bali, Indonesia. Leg.: A. Samat, 15 July 1930 (E.42).  
Paratypes: RMNH.MAM.26118, 34323–34327.

The series was collected by A. Samat, preparator at the Bogor Museum, for H.J.V. Sody (Becking, 1989: 94).

***Trachypithecus obscurus*** (Reid, 1837)

***Semnopithecus leucomystax*** Müller & Schlegel, 1841a: 59.

Syntype, RMNH.MAM.39151 (Jentink 1892: 13 f), subadult male, mounted skin, skull extracted but not in collection. Loc.: Malacca, Malaysia. Leg.: P.-M. Diard [1818-1824].  
Syntype, RMNH.MAM.39152 (Jentink 1892: 13 g), subadult female, mounted skin, skull extracted but not in collection. Loc.: Malacca, Malaysia. Leg.: P.-M. Diard [1818-1824].

Müller and Schlegel (1841a) tentatively describe these animals as a new species, though already suggesting that they could be identical with *Semnopithecus obscurus* Reid, 1837. Later Schlegel (1876: 49) includes them in that species. According to Schlegel the skins were kept in alcohol.

Diard accompanied T.S. Raffles to Malakka (Penang) and Sumatra in the years 1818-1819. He collected in the Malay Peninsula until 1824, when he went to Java (Fransen et al. 1997: 228).

***Trachypithecus popa*** Roos et al., 2020: 9

Paratype, RMNH.MAM.59807 (Jentink 1892: 13 l), male, skin, skull in situ. Loc.: Yado, Mt. Cariani, E. di. Tounghoc, Myanmar, 800-1000 m. Leg. L. Fea, December 1887.

Based on molecular data Roos et al. (2020) introduce this new species, which was until then included in *Trachypithecus phayrei* (Blyth, 1847).

### ***Trachypithecus vetulus*** (Erxleben, 1777)

***Simia latibarba*** Temminck, 1807: 3 (nomen nudum).

***Cercopithecus latibarbatus*** É. Geoffroy, 1812: 94.

Syntype, RMNH.MAM.42199 (Jentink 1892: 14 e), male, mounted skin. Loc.: Ceylon [Sri Lanka]. Leg.: unknown, 1800. Ex: Cabinet Temminck.

Temminck (1807: 3) lists this species in the catalogue of his collection as *Simia Latibarba*, but fails to give a description. The description follows in the publication of É. Geoffroy (1812: 94), under the name proposed by Temminck. But in error he uses the epithet *latibarbatus* and he failed to give the origin of this specimen.

***Semnopithecus kelaartii*** Schlegel, 1876: 30, 52.

Holotype by monotypy, RMNH.MAM.42213 (Jentink 1892: 14: a), adult male, mounted skin, skull extracted but not in collection. Loc.: South Ceylon, Sri Lanka. Leg.: P. Diard, 1859.

Schlegel (1876) introduces this name based on the description of '*Presbytis priamus*' in Kelaart (1852: 3) from Sri Lanka and a single specimen in Naturalis. Diard visited Sri Lanka sometime between 1857 and 1859.

Wilson and Reeder (2005: 178) erroneously spell this name as *kelaarti*.

## **Hylobatidae** Gray, 1871

### ***Hylobates agilis*** Cuvier, 1821807

***Hylobates albo nigrescens*** Ludeking, 1862: 36.

***Hylobates albo griseus*** Ludeking, 1862: 36.

Ludeking (also spelled Lüdeking) describes these forms without referring to any collected specimens. In the collection of Naturalis no specimens could be found.

### ***Hylobates muelleri*** Martin, 1841: 444.

Syntype, RMNH.MAM.42117 (Jentink 1887: 5 b; 1892: 5 f), juvenile female, mounted skin and skull. Loc.: Southeast Borneo, Indonesia. Leg.: S. Müller, [28 July 1836 -17 December 1836]. Received 1837.

Syntype, RMNH.MAM.42134 (Jentink 1892: 5 a), adult male, mounted skin, skull extracted but not in collection. Loc.: Mount Sakoumbang [Sekumbang], Southeast Borneo. Leg.: S. Müller, [28 July 1836 - 17 December 1836]. Received 1837.

Syntype, RMNH.MAM.42135 (Jentink 1892: 13 b), adult male, mounted skin, skull extracted but not in collection. Loc.: Pamattan [Pematang], Southeast Indonesia. Leg.: S. Müller, October 1836.

Syntype, RMNH.MAM.42144 (Jentink 1892: 4 f), subadult female, mounted skin, skull in situ. Loc.: "Java Occ, "[= Borneo], Indonesia. Leg.: S. Müller.

Martin (1841) refers to Müller's description of the gibbon's he collected in Borneo under the heading of *Hylobates concolor* (Müller, 1840a: 48). According to Martin these animals are probably a new species and he names them *Hylobates muelleri*. Müller does not mention any particular specimens but he clearly bases his description on his own material. The above listed specimens are catalogued by Jentink (1887: 5; 1892: 5) as *Hylobates muelleri*, but he fails to recognise their type status.

RMNH.MAM.42144 was originally labelled as originating from “Java Occ.”. As this species does not occur there, probably the labels have been mixed up. Lyon (1911: 142) restricts the type locality to Southeastern Borneo.

## RODENTIA

### **Sciuridae** Fischer de Waldheim, 1817

#### ***Ratufa affinis baramensis*** Bonhote, 1900

***Ratufa ehippium baramensis*** Bonhote, 1900: 496.

Paratype, RMNH.MAM.31118, adult male, skin and skull. Loc.: Batu Sang, Baram River, Borneo, Indonesia. Leg.: C. Hose, March 1892.

The holotype is in the NHM (NHMUK 99.12.9.40), but Bonhote also refers to the specimens listed by Hose (1893: 44) including RMNH.MAM.31118.

#### ***Ratufa affinis cothurnata*** Lyon, 1911

***Ratufa cothurnata*** Lyon, 1911: 93.

Paratype, RMNH.MAM.31097, adult female, skin and skull. Loc.: Sempang River, Borneo, Indonesia. Leg.: W.L. Abbott (5544), 6 September 1907. Ex: NMNH (USNM 145380).

The holotype is in the NMNH (USNM 145378), RMNH.MAM.31097 is listed in the table with examined material.

#### ***Ratufa affinis ehippium*** (Müller, 1838)

***Sciurus ehippium*** Müller, 1838: 147.

Holotype by monotypy, RMNH.MAM.39344 (Jentink 1888: 15 *n*), adult male, mounted skin and skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, [28 July - 17 December] 1836.

Jentink (1888: 15) includes two other specimens in the type series (RMNH.MAM.39345 and 39346, males collected by Diard on Borneo, 1829, later identified as *Ratufa affinis cothurnata*), probably based on a later publication (Müller 1839) in which they are depicted. However in his original description Müller does not refer to any other specimens than the one collected by himself. We therefore exclude them from the type series. In the manuscript of this catalogue by C. Smeenk we find the holotype listed as lectotype and the Diard specimens as paralectotypes without specification who designated the lectotype. Lyon (1911: 93) refers to "the type" in *Naturalis* without further specification, but it is clear the Müller specimen is meant. Due to its ambiguity and the fact that there is only one specimen that fits the original description, we don't see this as a valid and necessary lectotypification.

Müller was on Borneo from July 28 to 17 December 1836.

***Sciurus albiceps*** Jentink, 1897: 55 (nec Desmarest).

Syntype, RMNH.MAM.31102, adult female, skin and skull. Loc.: Mount Kenepai, Borneo, Indonesia. Leg.: J. Büttikofer, 16 January 1894, Central Borneo Expedition 1893-1894 (65).

Syntype, RMNH.MAM.31103, adult male, skin and skull. Loc.: Mount Kenepai, Borneo, Indonesia. Leg.: J. Büttikofer, 19 January 1894, Central Borneo Expedition 1893-1894 (72).

Syntype, RMNH.MAM.31104, adult male, skin and skull. Loc.: Mount Liang Koeboeng, Borneo, Indonesia. Leg.: J. Büttikofer, 20 January 1894, Central Borneo Expedition 1893-1894 (74).  
Syntype, RMNH.MAM.31105, adult female, skin and skull. Loc.: Mount Kenepai, Borneo, Indonesia. Leg.: J. Büttikofer, 27 January 1894, Central Borneo Expedition 1893-1894 (101).  
Syntype, RMNH.MAM.31106, adult female, skin and skull. Loc.: Mount Liang Koeboeng, Borneo, Indonesia. Leg.: J. Büttikofer, 30 March 1894, Central Borneo Expedition 1893-1894 (131).  
Syntype, RMNH.MAM.31107, adult male, skin and skull. Loc.: Mount Liang Koeboeng, Borneo, Indonesia. Leg.: J. Büttikofer, 30 March 1894, Central Borneo Expedition 1893-1894 (146).  
Syntype, RMNH.MAM.31108, adult, sex unknown, skin and skull. Loc.: Mount Liang Koeboeng, Borneo, Indonesia. Leg.: J. Büttikofer, 12 April 1894, Central Borneo Expedition 1893-1894 (162).  
Syntype, RMNH.MAM.31109, adult female, skin and skull. Loc.: Mount Liang Koeboeng, Borneo, Indonesia. Leg.: J. Büttikofer, 17 April 1894, Central Borneo Expedition 1893-1894 (177).  
Syntype, RMNH.MAM.31110, adult, sex unknown, skin. Loc.: Nanga Raoen, Borneo, Indonesia. Leg.: A.W. Nieuwenhuis, 7 May 1894, Central Borneo Expedition 1893-1894 (199).  
Syntype, RMNH.MAM.59745, adult female, skeleton. Loc.: Pontianak, Borneo, Indonesia. Leg.: M. Moret, 20 January 1895, Central Borneo Expedition 1893-1894 (283).  
Syntype, RMNH.MAM.63789, adult female, skeleton. Loc.: Mount Liang Koeboeng, Borneo, Indonesia. Leg.: J. Büttikofer, 16 April 1894, Central Borneo Expedition 1893-1894 (176).

Although Jentink (1897) attributes this name to Desmarest, these specimens clearly represent a different taxon from a different location. So *S. albiceps* Jentink, 1897 is a junior synonym for *Ratufa affinis* (Wilson and Reeder 2005: 756), whereas *S. albiceps* Desmarest is a synonym of *Ratufa bicolor bicolor*. The specimens Jentink mentions in his description are listed here as syntypes.

***Ratufa vittata*** Lyon, 1911: 94.

Paratype, RMNH.MAM.31100, male, skin and skull. Loc.: Pulau Laut, Borneo, Indonesia. Leg.: W.L. Abbott (5633), 20 December 1907. Ex: NMNH (USNM 151759).

Lyon (1911) examines five specimens, the holotype is in NMNH (USNM 151758).

***Ratufa vittatula*** Lyon, 1911: 95.

Paratype, RMNH.MAM.31101, female, skin and skull. Loc.: Pulau Sebuk, Borneo, Indonesia. Leg.: W.L. Abbott (5722), 2 Januari 1908. Ex: NMNH (USNM 151764).

Lyon (1911) examines five specimens. The holotype is in the NMNH (USNM 151762).

***Ratufa bicolor*** (Sparrman, 1778)

***Sciurus bicolor* Var. *Sondaica*** Müller & Schlegel, 1844: 85.

Syntype, RMNH.MAM.63641 (Jentink 1888: 14 a), adult male, mounted skin, skull in situ. Loc.: Padang, Sumatra [Indonesia]. Leg.: S. Müller, [1833-1835]. Received 1836.  
Syntype, RMNH.MAM.63642 (Jentink 1888: 14 b), adult male, mounted skin, skull in situ. Loc.: Padang, Sumatra [Indonesia]. Leg.: S. Müller, [1833-1835]. Received 1836.  
Syntype, RMNH.MAM.63643 (Jentink 1888: 14 f), adult male, mounted skin, skull in situ. Loc.: Java [Indonesia]. Leg.: H. Kuhl and J.C. van Hasselt, [1820-1821].  
Syntype, RMNH.MAM.63644 (Jentink 1888: 14 h), adult female, mounted skin, skull in situ. Loc.: Java. Leg.: C.G.C. Reinwardt [April 1816-March 1822].  
Syntype, RMNH.MAM.63645 (Jentink 1888: 14 j), adult female, mounted skin, skull in situ. Loc.: Tjikao, Java. Leg.: H. Boie and H.C. Macklot [June 1826 - September 1827].

Syntype, RMNH.MAM.63646 (Jentink 1888: 14 k), juvenile, sex unknown, mounted skin, skull in situ. Loc.: Java [Indonesia]. Leg.: H. Kuhl and J.C. van Hasselt, [1820-1821].

Syntype, RMNH.MAM.63647 (Jentink 1888: 14 l), juvenile, sex unknown, mounted skin, skull in situ. Loc.: Java [Indonesia].

Syntype, RMNH.MAM.63648 (Jentink 1888: 14 m), juvenile, female, mounted skin, skull in situ. Loc.: Java [Indonesia]. Leg.: 1840.

Müller and Schlegel (1844: 85) introduce this new name for the Javan and Sumatran form of *Sciurus bicolor* and give a short description, but fail to mention any specimens. We have included in the type series specimens that agree with their description and have left out the specimens that were labelled *Sciurus hypoleucos*.

Reinwardt visited Java several times between April 1816 and March 1822. Boie visited Java between June 1826 and September 1827. Müller visited West Sumatra from 1833-1835, so the date 1836 given by Jentink (1888: 14) must be the date the specimens arrived in Naturalis.

***Sciurus bicolor* Var. *Indica* Müller & Schlegel, 1844: 85 (nec Erxleben, 1777).**

Syntype, RMNH.MAM.63650, (Jentink 1888: 14 a), adult male, mounted skin (missing). Loc.: Malakka, Malaysia. Leg.: P.-M. Diard, 1828.

Syntype, RMNH.MAM.63649 (Jentink 1888: 14 b), adult female, mounted skin, skull extracted but not in collection. Loc.: Malakka, Malaysia. Leg.: P.-M. Diard, 1828.

#### ***Ratufa bicolor giganteus* (McClelland, 1839)**

***Sciurus Macruroides* Hodgson, 1849b: 775.**

Syntype, RMNH.MAM.60461 (Jentink 1887:186 a; 1888:13 a), adult female, mounted skin and skull. Loc.: Himalaya. Leg.: B.H. Hodgson.

Hodgson (1841b: 220) first published this name without a description followed by a very short description later (Hodgson 1849b: 775).

#### ***Sciurus granatensis variabilis* I. Geoffroy St. Hilaire, 1832**

***Sciurus Lansbergei* "Temminck" Jentink, 1887: 11.**

Jentink (1887) publishes this manuscript name by Temminck in the synonymy of *Sciurus variabilis*. We have found no subsequent use as a valid name, therefore this name is not available.

#### ***Sciurus lis* Temminck, 1844: 45, pl. XII fig 1, 2.**

Syntype, RMNH.MAM.39347 (Jentink 1887: 188 a; 1888: 18 a), adult male, mounted skin and skull. Loc.: Jeddo, Japan. Leg.: Ph.F. von Siebold, [1823-1829].

Syntype, RMNH.MAM.39348 (Jentink 1887: 188 b; 1888: 18 b), adult female, mounted skin and skull. Loc.: Japan. Leg.: H. Bürger.

Syntype, RMNH.MAM.39349 (Jentink 1888: 18 c), adult, sex unknown, mounted skin, skull in situ. Loc.: Japan. Leg.: H. Bürger.

## ***Sciurus niger*** Linnaeus, 1758

***Sciurus anomalus*** "Güldenstedt" Kuhl, 1820b: 68 (nec Gmelin, 1778).

According to Jentink (1883a: 95) RMNH.MAM.63817 (from Georgia, USA, acquired at the Bullock Museum auction) is the type of *Sciurus anomalus* Kuhl, 1820. Jentink later, under *Sciurus syriacus*, explains how the origin of this specimen was erroneously located in Georgia, Asia and the specimen, based on this origin, wrongly attributed to this species. As Kuhl had no intention to describe a new species and the application of *anomalus* by Kuhl is clearly based on a misidentification, we don't consider this an available name.

According to Kuhl, who accompanied Temminck to the auction of the Bullock museum, this specimen originated from this collection. In his copy of the sales catalogue (Bullock 1819), preserved in the archives of Naturalis, Temminck marked the items he bought with a thick line and a T, and noted the price he paid. One of the entries thus marked is no. 97 on page 39 auctioned on 7 May 1819 and consisted of a "Georgian Squirrel, *Sciurus Anomalus*, and Senegal ditto". In the margin Temminck noted "gut" and "£4".

## ***Aeromys tephromelas*** (Günther, 1873)

***Petaurista bartelsi*** Sody, 1936b: 146.

Holotype, RMNH.MAM.24076, adult male, skin and skull. Loc.: Pagar Djawa, Pematang Siantar, Deli, Sumatra, Indonesia (500 m.). Leg.: H. Bartels, 1934. Ex: M. Bartels Jr.

## ***Belomys pearsonii*** (Gray, 1842) (or ***Hylopetes phayrei*** (Blyth, 1859))

***Sciuropterus kaleënsis*** Swinhoe 1863: 359.

Syntype, RMNH.MAM.39333 (Jentink 1887: 183 a; 1888: 5 a), adult, sex unknown, relaxed mount and skull. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe. Ex: G.A. Frank, 1865.

Swinhoe (1863) describes how he received two immature specimens of this new species through a local. Although RMNH.MAM.39333 is identified as an adult, we follow Jentink (1887: 183; 1888: 5), who refers to this specimen as one of the syntypes.

According to Illar Muul (in. litt., 1972) this specimen has been wrongly identified, it belongs to *Hylopetes phayrei* (Blyth, 1859). But this species is not known from Taiwan, so if the locality is correct it would represent the first record of this species from that area. However, as Swinhoe did not collect these specimens from the wild, import of these specimens from another location is more likely.

Koprowski et al. (2016: 778) consider *Belomys pearsonii kaleënsis* (Swinhoe, 1863) to be a valid subspecies. Considering the re-identification by Illar Muul, it either is a mixed type series for *S. kaleënsis* or this form should be a synonym of *Hylopetes phayrei* instead of *Belomys pearsonii*. This should be further studied.

## ***Eupetaurus cinereus*** Thomas, 1888.

***Eupetaurus tibetensis*** Jackson, Helgen, Q. Li & Jiang, 2021: 6.

Holotype, RMNH.MAM.19524 (Jentink 1887: 180 b; 1888: 2 b), subadult male, relaxed mount and skull. Loc.: Tibet.

In his description of *Eupetaurus cinereus* Thomas (1888: 257) nominates two specimens as "cotypes", but he also mentions two specimens in Naturalis in his description as belonging to this species, one from Tibet (RMNH.MAM.19524) and a

melanistic form from Kashmir (RMNH.MAM.55222). These are not part of the type series and the latter is identified as *Petaurista petaurista albiventer* Gray, 1834. For discussion of these specimens see also Jentink (1890c: 143-144 on *E. cinereus*) and Anderson (1878: 279, on the melanistic specimen from Kashmir).

Jackson et al. (2021: 6) describe the *Eupetaurus* from Tibet as a new species and select RMNH.MAM.19524 as the holotype.

### ***Hylopetes alboniger*** (Hodgson, 1836)

***Sciuropterus alboniger*** Hodgson, 1836: 231.

Syntype, RMNH.MAM.63846 (Jentink 1888: 5 *b*), unknown, mounted skin, skull in situ. Loc.: Nepal. Leg.: B.H. Hodgson.

Syntype, RMNH.MAM.63847 (Jentink 1888: 5 *d*), sex unknown, mounted skin (tail missing), skull in situ. Loc.: Nepal. Leg.: B.H. Hodgson.

According to Jentink (1888: 5) RMNH.MAM.63846 is a male. On the stand however, female is written in Temminck's hand. The specimen listed by Jentink (1888: 5) as cat. *c* is no longer present in Naturalis.

Naturalis holds another specimen (RMNH.MAM.63716) from Hodgson collected in "Sikkim/Tibet". As Hodgson only mentions specimens from Nepal in his description, we don't include this specimen in the type series..

### ***Hylopetes bartelsi*** (Chasen, 1939)

***Petinomys bartelsi*** Chasen, 1939a: 185.

Syntype, RMNH.MAM.15680, adult male, skin and skull. Loc.: Mt. Pangrango, Tjilondong, Java, Indonesia. Leg.: M. Bartels, 19 April 1938. Ex: Bartels (no. 2000).

Syntype, RMNH.MAM.15539, adult female, skin, skull missing. Loc.: Mt. Pahystringrango, Java, Indonesia. Leg.: M. Bartels, 2 September 1902. Ex: Bartels.

### ***Hylopetes platyurus*** (Jentink, 1890)

***Sciuropterus platyurus*** Jentink, 1890d: 145.

Holotype, RMNH.MAM.13315, adult female, relaxed mount and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: B. Hagen. Received 1889.

### ***Hylopetes spadiceus*** (Blyth, 1847)

***Hylopetis [sic] sagitta sumatrae*** Sody, 1949a: 71.

Holotype, RMNH.MAM.9844, adult male, skin and skull. Loc.: Radelong, Sumatra, Indonesia. Leg.: Madzoed, 14 July 1936. Ex: MZB (MZB 3111), 12 January 1950.

Koprowski et al. (2016: 764) consider *Hylopetes spadiceus sumatrae* Sody, 1949 to be a valid subspecies.

### ***Hylopetes winstoni*** (Sody, 1949)

***Iomys winstoni*** Sody, 1949a: 75.

Holotype, RMNH.MAM.9845, adult male, skin and skull. Loc.: Baleg, Atjeh, Sumatra, Indonesia. Leg.: Madzoed, 19 August 1930. Ex: MZB (MZB 3112), 12 January 1950.

This species is known from the holotype only. According to Corbet and Hill (1992) it is possibly conspecific with *Hylopetes bartelsi* (Chasen, 1939).

### ***Petaurista elegans elegans*** (Temminck, 1836)

***Pteromys elegans*** Temminck, 1836: xii.

Syntype, RMNH.MAM.64144 (Jentink 1888: 4 f), adult, sex unknown, relaxed mount, skull extracted but not in the collection. Loc.: Nusa Kambangan, Indonesia. Leg.: C.L. Blume, [3 November - 1 December 1824].

The authorship and dating of this name have long been attributed to Müller (1840a: 35; see Wilson and Reeder 2005: 771). However this name was first published by Temminck (1836), correctly cited in Koprowski et al. (2016: 775). As Temminck (1836) only refers to a specimen from the island Nusa Kambangan, even explicitly states that on Java itself this species has not been found, all types listed in Jentink (1887: 182; 1888: 4) from Java are excluded from the type series. Temminck must have overlooked these specimens collected by Kuhl and Van Hasselt in 1820-1821 (RMNH.MAM.13310 and 60455) and by Müller in 1826-1832 (RMNH.MAM.60454).

The holotype was stored together with another relaxed mount collected by F.W. Junghuhn in 1864 (RMNH.MAM.64143) and the labels of both specimens had become disassociated, making identification of the correct specimen problematic. Fortunately, the collection holds another specimen from Junghuhn, still mounted and with the correct label (RMNH.MAM.64145). Comparing the specimens, in particular the type of glass eyes used, made it possible to identify the holotype.

Blume (also written as Blüme) collected on Nusa Kambangan between 3 November and 1 December 1824 (Van Steenis-Kruseman 1950: 64).

### ***Petaurista elegans sumatrana*** Kloss, 1921

***Petaurista punctata sumatrana*** Kloss, 1921a: 230, pl. III.

Holotype, RMNH.MAM.60452, adult female, skin and skull. Loc.: Padang Highlands, West Sumatra (probably near Fort de Kock), Indonesia, 29 May 1918. Leg.: E. Jacobson (398).

### ***Petaurista leucogenys leucogenys*** (Temminck, 1827)

***Pteromys leucogenys*** Temminck, 1827a: xxvii.

Syntype, RMNH.MAM.13311 (Jentink 1887: 181 a; 1888: 4 a), adult, sex unknown, mounted skin and skull. Loc.: Japan. Leg.: H. Bürger.

Syntype, RMNH.MAM.13312 (Jentink 1887: 182 b; 1888: 4 b), juvenile, sex unknown, mounted (faded) skin and cranium. Loc.: Japan. Leg.: H. Bürger.

### ***Petaurista magnificus*** (Hodgson, 1836)

***Sciuropterus Magnificus*** Hodgson, 1836: 231.

Syntype, RMNH.MAM.60453 (Jentink 1888: 2 a), adult male, mounted skin, skull in situ. Loc.: Nepal. Leg.: B.H. Hodgson.

***Petaurista petaurista rufipes* Sody, 1949a: 68.**

Holotype, RMNH.MAM.9848, adult female, skin and skull. Loc.: Palembang, Kluang [Keluang], Sumatra, Indonesia. Leg.: Soekarno, 22 July 1933. Ex: MZB (MZB 5941; 1/33), 12 January 1950.

Sody (1949a) refers to three specimens in his description, only the holotype is in *Naturalis*.

***Petaurista petaurista interceptio* Sody, 1949a: 69.**

Holotype, RMNH.MAM.9847, adult male, skin and skull. Loc.: Tjerimai [Ciremai], Cheriben, Java, Indonesia. Leg.: J.J. Menden, 11 July 1931. Ex: MZB (MZB 2666), 12 January 1950.

Sody (1949a) uses 15 specimens for his description. Only the holotype is in *Naturalis*. Becking (1989: 58) considers *interceptio* a lapsus, to be corrected in *interceptis*. However this name is still used in its original form.

***Petaurista philippensis grandis* (Swinhoe, 1863)**

***Pteromys grandis* Swinhoe, 1863: 358.**

Syntype, RMNH.MAM.39325 (Jentink 1887: 181 a), adult, sex unknown, skull. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe. Received 1863.

Syntype, RMNH.MAM.39326 (Jentink 1887: 181 b; 1888: 3 a), adult, sex unknown, mounted skin and skull. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe. Ex: G.A. Frank, 1877.

Syntype, RMNH.MAM.39327 (Jentink 1888: 3 b), adult, sex unknown, mounted skin, skull in situ. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe, April 1862.

Syntype, RMNH.MAM.39328 (Jentink 1888: 3 c), juvenile, sex unknown, mounted skin, skull in situ. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe, April 1862.

Syntype, RMNH.MAM.39329 (Jentink 1888: 3 d), adult, sex unknown, mounted skin, skull in situ. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe. Ex: G.A. Frank, 1877.

Syntype, RMNH.MAM.39330 (Jentink 1888: 3 e), juvenile, sex unknown, mounted skin, skull in situ. Loc.: Formosa [Taiwan]. Leg.: R. Swinhoe. Ex: G.A. Frank, 1877.

The two specimens with the collecting date of April 1862 are clearly not the animals Swinhoe mentions in his description of this new species. However they were in his possession during the writing of the publication, so are part of the type series. When he acquired the other specimens is not known, they could be (in part) the original male, female and juvenile. The NHM online database lists one syntype (NMHUK 1862.12.24.11), a juvenile.

***Petinomys hageni* (Jentink, 1889)**

***Sciuropterus hageni* Jentink, 1889: 26.**

Lectotype, RMNH.MAM.13313 (Jentink 1888: 6 a), adult, sex unknown, relaxed mount and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: B. Hagen, 28 August 1887 (63). Received June 1888.

Paralectotype: RMNH.MAM.13314.

Both specimens were collected by Hagen in 1887 and were in Jentink's possession at the time of description. Jentink (1889) does not mention the number of specimens available to him. However, in his catalogue (1888a: 6) he only mentions one specimen as the type of the species, we consider this to be the designation of a lectotype.

Generally the date for this publication is given as 1888 (Wilson and Reeder 2005: 773; Koprowski et al. 2016: 763), based on the date in the title (November 1888).

However this article (Note VI) was published in the first instalment of Volume XI of the Notes issued in January 1889 (Dickinson 2005).

***Petinomys hageni ouwensi*** Sody, 1949a: 74.

Holotype, RMNH.MAM.9846, adult female, skin and skull. Loc.: Koeboe, Pontianak, Borneo, Indonesia. Leg.: W. Brautigam, June 1917. Ex: MZB (MZB 3759), 12 January 1950.

***Petinomys setosus*** (Temminck, 1844)

***Pteromys (sciuropterus) setosus*** Temminck, 1844: 48.

Syntype, RMNH.MAM.13316 (Jentink 1887: 183 a; 1888: 6 a), adult female, relaxed mount and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: L. Horner, [1835-1838].

From his description (Temminck 1844) it is not clear how many specimens were available at the time of the writing. Ludwig Horner arrived in Sumatra in 1835 and collected there (and other islands) until his death in 1838.

***Petinomys vordermanni*** (Jentink, 1890)

***Sciuropterus vordermanni*** Jentink, 1890e: 150.

Holotype, RMNH.MAM.13317, adult male, relaxed mount and skull. Loc.: Billiton, Indonesia. Leg.: A. Vorderman, June 1888. Received 1890.

***Pteromys momonga*** Temminck, 1844.

***Pteromys (sciuropterus) momonga*** Temminck, 1844: 47, tab. XIV.

***Pteromys momoga*** Temminck, 1844: tab. XIV.

Syntype, RMNH.MAM.39334 (Jentink 1887: 182 a), adult, sex unknown, mounted skeleton. Loc.: Japan. Leg.: Ph.F. Von Siebold.

Syntype, RMNH.MAM.39335 (Jentink 1887: 182 b), adult, sex unknown, mounted skeleton. Loc.: Japan.

Syntype, RMNH.MAM.39336 (Jentink 1887: 182 d), semi-adult, sex unknown, skull. Loc.: Japan.

Syntype, RMNH.MAM.39337 (Jentink 1887: 182 e), semi-adult, sex unknown, skull. Loc.: Japan.

Syntype, RMNH.MAM.39338 (Jentink 1887: 182 c; 1888: 5 a), semi-adult sex unknown, relaxed mount and skull. Loc.: Japan. Leg.: H. Bürger, 1834.

Syntype, RMNH.MAM.39339 (Jentink 1888: 5 b), adult, sex unknown, mounted skin, skull missing. Loc.: Japan. Leg.: H. Bürger, 1834.

Syntype, RMNH.MAM.39340 (Jentink 1888: 5 c), semi-adult, sex unknown, mounted skin, skull missing. Loc.: Japan. Leg.: H. Bürger, 1834.

Syntype, RMNH.MAM.39341 (Jentink 1888: 5 d), semi-adult, sex unknown, relaxed mount, skull missing. Loc.: Japan. Leg.: H. Bürger, 1834.

In the caption of the plate (Temminck 1844: tab. XIV) the name is misspelt *momoga*. Temminck himself mentions this in the footnote on page 48. According to Jentink (1888: 182) the skull of RMNH.MAM.39336 is the one figured on plate XIV. Although Temminck specifically only mentions the material received from Bürger in his description, Jentink lists them all as types and they were at Temminck's disposal at the time of writing. Bürger was responsible for the shipment of Von Siebold's collection to Leiden. So we consider all the specimens to be syntypes.

***Callosciurus caniceps bimaculatus* (Temminck, 1853)**

***Sciurus bimaculatus*** Temminck, 1853: 251.

Holotype by monotypy, RMNH.MAM.13363 (Jentink 1887: 188 c; 1888: 20 d), adult male, mounted skin and skull. Loc.: Malacca, Malaysia.

***Callosciurus finlaysonii cinnamomeus* (Temminck, 1853)**

***Sciurus cinnamomeus*** Temminck, 1853: 250.

Syntype, RMNH.MAM.13367 (Jentink 1888: 19 c; 1887: 188 a), adult, sex unknown, mounted skin and skull. Loc.: Cambodia (Kampuchea). Leg.: P. Diard, [1824].

Syntype, RMNH.MAM.13368 (Jentink 1888: 19 d; 1887: 188 b), adult male, mounted skin and skull. Loc.: Cambodia (Kampuchea). Leg.: P. Diard, [1824].

Syntype, RMNH.MAM.13369 (Jentink 1888: 19 e), adult, sex unknown, mounted skin, skull in situ. Loc.: Cambodia (Kampuchea). Leg.: P. Diard, [1824].

Diard was in Indochina around the year 1824.

***Callosciurus nigrovittatus nigrovittatus* (Horsfield, 1823)**

***Callosciurus nigrovittatus madsoedi*** Sody, 1929a: 163.

Syntype, RMNH.MAM.10053, adult female, skin and skull. Loc.: Gn. Moeria, Kp. Gingsir, desa Rahtowu, Java, Indonesia. Leg.: H.J.V. Sody (22), 16 December 1928.

Syntype, RMNH.MAM.63703, adult female, skin and skull. Loc.: Pongonan, Gn. Moeria (E. slope, 550 m.), Java, Indonesia. Leg.: H.J.V. Sody (M 36), 18 December 1928.

Sody (1929a) introduces this new name in a footnote, with a very short description. He gives no indication of the number of specimens available to him. In a later publication (Sody 1949a: 101) he mentions having measured four skulls, only two are present in the Naturalis collection.

***Callosciurus nigrovittatus salakensis*** Sody, 1949a: 98.

Holotype, RMNH.MAM.9829, adult female, skin and skull. Loc.: Tjianten, Mt. Salak, Java, Indonesia. Leg: P. Franck, 29 December 1931. Ex: MZB (MZB 3278), 12 January 1950. Paratypes: RMNH.MAM.24532–24543, 24553, 24555–24559, 24670.

***Callosciurus nigrovittatus bantamensis*** Sody, 1949a: 99.

Holotype, RMNH.MAM.9830, adult male, skin and skull. Loc.: Tjikudjang [Cikujang], Bantam, Java, Indonesia. Leg.: P.F. Franck, 28 July 1932. Ex: MZB (MZB 3636), 12 January 1950.

***Callosciurus nigrovittatus phoenicurus*** Sody, 1949a: 99.

Holotype, RMNH.MAM.9831, adult male, skin and skull, baculum. Loc.: Mt. Tjerimai (1000 m.), Cheribon, Java, Indonesia. Leg.: J.J. Menden, 23 February 1931. Ex: MZB (MZB 2677), 12 January 1950.

Sody (1949a) examines 12 specimens of which only the holotype is in Naturalis.

***Callosciurus nigrovittatus tenggerensis*** Sody, 1949a: 99.

Holotype, RMNH.MAM.9828, adult female, skin and skull. Loc.: Ranu Pani, Tengger Mts., Java, Indonesia. Leg.: A.C.V. van Bemmelen, 08 July 1939. Ex: MZB (MZB 3627; 74/39), 12 January 1950.

Sody (1949a) examines 10 specimens of which only the holotype is in Naturalis.

### ***Callosciurus notatus diardii*** (Jentink, 1879)

#### ***Sciurus Diardii*** Jentink, 1879b: 38.

Holotype by monotypy, RMNH.MAM.13366 (Jentink 1887: 189 a; 1888: 21 a), adult female, mounted skin and skull. Loc.: Nusa Kambangan, Indonesia. Leg.: C.L. Blume, [3 November 1824 - 1 December 1824]. Ex: P. Diard.

Blume (also written as Blüme) collected on Nusa Kambangan sometime between 3 November and 1 December 1824 (Van Steenis-Kruseman 1950: 64).

#### ***Callosciurus notatus vanheurni*** Sody, 1929b: 327.

Holotype, RMNH.MAM.22906, adult male, skin and skull. Loc.: Tjipanas [Cipanas] near Garoet, Java, Indonesia. Leg.: W.C. van Heurn, 06 November 1927. Ex: H.J.V. Sody.  
Possible paratypes: RMNH.MAM.2850, 13377, 63729, 63730.

Sody (1929b) bases his description on four males in his own collection, which were sent to him on alcohol by Van Heurn. Naturalis holds five specimens from Tjipanas, collected by Van Heurn in 1927, possibly all seen by Sody. On the label of RMNH.MAM.22906 "type" is written by Sody, which we follow.

The type status of the other four specimens is unclear. On the label of RMNH.MAM.13377 (same data as RMNH.MAM.22906) is added "Lectotype - Tate - 1951". No publication of this lectotype designation is found. Besides there is no need for a lectotype designation, as Sody clearly lists a (holo)type. However, RMNH.MAM.13377 could be a paratype. RMNH.MAM.2850, RMNH.MAM.63729, RMNH.MAM.63730 could also be paratypes. Unfortunately, there is no indication that these were part of Sody's collection, something that Sody specifically states. Additionally, there is also a female (RMNH.MAM.64142) collected by Van Heurn with similar data as the males, but Sody does not mention any females in his description.

#### ***Callosciurus notatus verbeeki*** Sody, 1929b: 330.

Holotype, RMNH.MAM.13375, adult female, skin and skull. Loc.: Rembang, Bandar, Java, Indonesia. Leg.: H.J.V. Sody, 10 December 1927.  
Paratypes: RMNH.MAM.24926, 24929–24940, 24943, 24971, 24972.

Sody (1929b) examines 23 specimens, of which the above types are in Naturalis.

#### ***Callosciurus notatus prinsulae*** Sody, 1949a: 89.

Holotype, RMNH.MAM.9834, adult male, skin and cranium, baculum. Loc.: Prinsen Island [Panaitan], Indonesia. Leg.: K.W. Dammerman, 23 July 1929. Ex: MZB (MZB 712), 12 January 1950.

#### ***Callosciurus notatus magnificus*** Sody, 1949a: 92.

Holotype, RMNH.MAM.9832, adult male, skin and skull. Loc.: Nusa Barung, Indonesia. Leg.: A. Hoogerwerf, 03 July 1939. Ex: MZB (MZB 6096; 47/39), 12 January 1950.

Of the 7 specimens examined by Sody (1949a) only the holotype is in Naturalis.

### ***Callosciurus notatus suffusus*** Bonhote, 1901

#### ***Callosciurus notatus vinocastaneus*** Sody, 1949a: 86, 93.

Holotype, RMNH.MAM.9833, adult female, skin and skull. Loc.: Kali Tjempaga, Borneo, Indonesia. Leg.: J.J. Menden, 17 June 1935. Ex: MZB (MZB 6140; 132/35), 12 January 1950.

Of the 18 specimens used by Sody (1949a) for his description only the holotype is in Naturalis.

***Callosciurus notatus vittatus*** (Raffles, 1821)

***Callosciurus notatus nicotianicae*** Sody, 1936c: 217.

Holotype, RMNH.MAM.13376, adult female, skin and skull. Loc.: Deli, Silalas, Sumatra, Indonesia.

Leg.: H.J.V. Sody (22), 06 December 1927.

Paratypes: RMNH.MAM.25026–25028, 25032–25033, 25036, 25039–25041, 25043–25044, 25047.

Sody (1936c) examines 14 specimens; we have been able to locate 13 in the Naturalis collection.

***Sciurus notatus percommodus*** Chasen, 1940a: 489.

Holotype, RMNH.MAM.9835, adult female, skin and skull. Loc.: Lesten, Atjeh, Sumatra, Indonesia.

Leg.: A. Hoogerwerf, N. Sumatra Expeditie Atjeh I-V, 1937 (113), 21 March 1937. Ex: MZB (MZB

6046; 416/37), 12 January 1950.

Chasen (1940a) examines 10 specimens, only the holotype is in Naturalis

***Callosciurus notatus kalianda*** Sody, 1949a: 88.

Holotype, RMNH.MAM.9836, adult female, skin and skull. Loc.: Kalianda, Lampongs, Indonesia. Leg.:

J.J. Menden, 02 August 1934. Ex: MZB (MZB 6065; 108/34), 12 January 1950.

Sody (1949a) examines 4 specimens, only the holotype is in Naturalis.

***Callosciurus notatus*** (Boddaert, 1785)

***Sciurus (Rheithrosciurus) microtis*** Jentink, 1879b: 41.

Lectotype, RMNH.MAM.13349 (Jentink 1888: 29 e), female, mounted skin and incomplete skull.

Salayar, Indonesia. Leg.: J.E. Teysmann, [16 November -11 December 1877]. Received 1878.

Paralectotypes: RMNH.MAM.13345–13348, 13350.

Teysmann (also spelled Teijsmann) worked on Selayar from 16 November to 11 December 1877 (Van Steenis-Kruseman 1950: 524). The year 1878 given by Jentink (1887: 193; 1888: 29) thus refers to the year when the material was received in Naturalis. The species is almost certainly introduced on Selayar from elsewhere in the archipelago (Musser 1987: 80; Musser et al. 2010: 197-198).

The lectotype has been designated by Musser et al. (2010: 196), which we follow, even though we feel this lectotype designation is not according to ICZN recommendations.

***Callosciurus prevostii atricapillus*** (Schlegel, 1863)

***Sciurus atricapillus*** Schlegel, 1863: 27, pl. 2 fig. 1.

***Sciurus atrocapillus*** Gray, 1867: 278.

Syntype, RMNH.MAM.13383 (Jentink 1888: 26 s), male, mounted skin and skull. Loc.: [Lower] Kapuas [Bohang] River, Borneo, Indonesia. Leg.: C.A.L.M. Schwaner, [28 January - 2 February 1848].

Syntype, RMNH.MAM.13384 (Jentink 1888: 26 r), male, mounted skin and skull. Loc.: [Lower] Kapuas [Bohang] River, Borneo. Leg.: C.A.L.M. Schwaner, [28 January - 2 February 1848].

Syntype, RMNH.MAM.13385 (Jentink 1888: 26 t), female, mounted skin, skull in situ. Loc.: [Lower] Kapuas [Bohang] River, Borneo. Leg.: C.A.L.M. Schwaner, [28 January - 2 February 1848].

Syntype, RMNH.MAM.13386 (Jentink 1888: 26 *u*), juvenile female, mounted skin and skull. Loc.: [Lower] Kapuas [Bohang] River, Borneo. Leg.: C.A.L.M. Schwaner, [28 January - 2 February 1848].  
Syntype, RMNH.MAM.13387 (Jentink 1888: 26 *v*), male, mounted skin and skull. Loc.: [Upper] Duson [Barito] River, Borneo. Leg.: C.A.L.M. Schwaner, [1843-1846].

There are two rivers in Borneo named Kapuas: the Kapuas Bohang in western Borneo, and the Kapuas Murung in the southeast. Schwaner visited both rivers, the latter, however, only very briefly, on 21-22 November 1847; between 28 January and 2 February 1848 he travelled down the Kapuas Bohang, from Sintang to Pontianak (Schwaner 1854: 39-44, 188-200). Schlegel gives the locality as "le district de Kapouas, situé, dans l'Intérieur, à quatre degrés environ à l'est de la ville de Pontianak", which is the Kapuas Bohang. The fifth specimen was collected, according to Schlegel, "sur les bords du haut Douson, à peu près dans le centre de l'île." The exact locality or date cannot be traced; it must have been in the period 1843-1846.

Gray (1867: 278) emends *atricapillus* in *atrocapillus* but without any justification.

***Callosciurus prevostii waringensis* Sody, 1949a: 103.**

Holotype, RMNH.MAM.9837, adult male, skin and skull. Loc.: Riam, Borneo, Indonesia. Leg.: J.J. Menden, 06 December 1935. Ex: MZB (MZB 6188; 28/36), 12 January 1950.

Of the ten specimens examined by Sody (1949a), only the holotype is in Naturalis. Koprowski et al. (2016: 764) consider *Callosciurus prevostii waringensis* Sody, 1949 to be a valid subspecies.

***Callosciurus prevostii coomansi* Sody, 1949a: 103.**

Holotype, RMNH.MAM.9838, adult female, skin and skull. Loc.: Pematang Tudjuh, Borneo, Indonesia. Leg.: Madzoed, 14 March 1931. Ex: MZB (MZB 2898), 12 January 1950.

Sody (1949a) examines three specimens, only the holotype is in Naturalis. Koprowski et al. (2016: 764) consider *Callosciurus prevostii coomansi* Sody, 1949 to be a valid subspecies.

***Sciurus rafflesii* Var. *borneoensis* Müller & Schlegel, 1844: 86.**

Syntype, RMNH.MAM.13380 (Jentink 1887: 192 *c*; 1888: 26 *p*), female, mounted skin and skull. Loc.: Pontianak, Borneo, Indonesia. Leg.: P.-M. Diard (32), [1826].

Syntype, RMNH.MAM.13381 (Jentink 1887: 192 *b*; 1888: 26 *o*), male, mounted skin and skull. Loc.: Pontianak, Borneo. Leg.: P.-M. Diard (31), [1826].

Syntype, RMNH.MAM.13382 (Jentink 1887: 192 *d*; 1888: 26 *q*), female, mounted skin and skull. Loc.: Pontianak, Borneo. Leg.: P.-M. Diard (33), [1826].

The date for this publication is given by most authors (Wilson and Reeder 2005: 779; Koprowski et al. 2016: 764) as 1842, however the date of publication of issue 10 of the *Verhandelingen* in which the pages 85-100 of the Mammalia chapter were published on 22 March 1844. (Husson and Holthuis 1955: 23).

Diard collected in Borneo during the second half of 1826 (Veth 1879: 62; Van Steenis-Kruseman 1950: 136).

Koprowski et al. (2016: 764) consider *Callosciurus prevostii borneoensis* Müller & Schlegel, 1844 to be a valid subspecies.

***Callosciurus prevostii prevostii*** (Desmarest, 1822)

***Sciurus rafflesii* Var. *indica*** Müller & Schlegel, 1844: 86 (nec Erxleben).

Syntype, RMNH.MAM.60456. (Jentink 1888: 26 a) adult male, mounted skin, skull extracted but not in collection. Loc.: Malacca. Leg.: P.-M. Diard.

Syntype, RMNH.MAM.60457 (Jentink 1888: 26 b) adult male, mounted skin, skull extracted but not in collection. Loc.: Malacca. Leg.: P.-M. Diard.

Syntype, RMNH.MAM.60458 (Jentink, 1888: 26 c) adult female, mounted skin, skull extracted but not in collection. Loc.: Malacca. Leg.: P.-M. Diard.

See for the publication date *Sciurus rafflesii* Var. *borneoensis*.

***Callosciurus prevostii rafflesii*** (Vigors & Horsfield, 1828)

***Sciurus redimitus*** Van der Boon Mesch, 1829: 243.

***Sciurus prevostii sumatranus*** Schlegel, 1863: 25.

Schlegel (1863) introduces this subspecies (“conspicies” in his words) for the Sumatran form of *Sciurus prevostii* and places the Sumatran *Sciurus rafflesii* and *Sciurus redimitus* in its synonymy. The typeseries consist therefore of the Sumatran type for *S. rafflesii* (a single specimen collected by Raffles, not in Naturalis) and *S. redimitus*.

Schlegel (1863: 26) mentions having taken the type specimen for *Sciurus redimitus* from alcohol himself in 1825 and states its origin as Sumatra. According to Van der Boon Mesch (1829) the specimen came from the collection of J.P. van Braam and originated from the East Indies, “India orientali”. Gray (1867: 278) uses this name in the combination *Macroxus rufogularis* var. *redimitus*, referring to Boon Mesch. He places this taxon however in Borneo.

Until now we haven't been able to locate this specimen.

***Callosciurus prevostii*** subsp.

***Sciurus prevostii bangkanus*** Schlegel, 1863: 26, pl. 1 fig. 2.

Holotype by monotypy, RMNH.MAM.13373 (Jentink 1888: 26 l), sex unknown, mounted skin and skull. Loc.: Bangka, Indonesia. Leg.: J.F.R.S. van den Bossche, [1859-1860].

Van den Bossche worked on Bangka between 1859 and 1861; he did not provide exact details on provenance and collection dates of his specimens, which he obtained from local hunters. His first consignment, despatched in July 1860 and received in Naturalis in June 1861, included several mammals. The year 1861 given by Jentink (1888: 26) refers to the date when the collection arrived. Mees (1986: 9-10) assumes that the majority of this material was collected in the surroundings of Mentok, which was Van den Bossche's residence.

***Sciurus erythromelas*** Temminck, 1853: 248.

***Sciurus erythrogenys*** Schlegel, 1863: 29, pl. 2 fig. 3 (nec Waterhouse, 1843).

***Macroxus Schlegelii*** Gray, 1867: 278.

***Sciurus rubicaudus*** "Temminck" Jentink, 1887: 27 (nomen nudum).

Lectotype for *erythromelas*, syntype for *erythrogenys* and *Schlegelii*, RMNH.MAM.13378 (Jentink 1888: 27 *bb*), male, mounted skin and skull. Loc.: Kema, Sulawesi, Indonesia. Leg.: E.A. Forsten, [1840-1842].

Paralectotype for *erythromelas* only: RMNH.MAM.13379.

Temminck (1853) does not state how many specimens he had before him, but his description makes clear he had more than two skins. The provenance is specified (p. 249) as Gorontalo and Kema. There are two specimens in Naturalis, from Manado and Kema, none from Gorontalo. An animal from Manado (RMNH.MAM.13379) is also described and illustrated by Schlegel (1863: 28-29, pl. 2 fig. 2) and he renames the specimen from Kema (RMNH.MAM.13378) as *Sciurus erythrogenys*.

Forsten collected in NE Sulawesi between March 1840 and April 1842; see under *Prosciurillus leucomus* below for more details. His diary, a copy of which (in an unknown hand) is preserved in Naturalis, sheds no light on the exact provenance and collection dates of these animals. The squirrels described here must have been introduced from Borneo (Musser 1987: 80; Musser et al. 2010: 201), perhaps as pets; the coastal towns of Manado, Kema and Gorontalo have always been centres of trade. Corbet and Hill (1992: 290-91) place *erythromelas* in synonymy of *Callosciurus baluensis* (Bonhote, 1901). We follow Wilson and Reeder (2005) and Musser (2010) and identify these specimens as *Callosciurus prevostii*, one of the Bornean races.

Jentink (1888: 27) lists these specimens as types of the manuscript name *rubicaudus* by Temminck in the synonymy of *prevostii*. Jentink gives no description and this name has not been used as a valid name since, so this is not an available name.

Schlegel regarded the two squirrels from NE Sulawesi named *Sciurus erythromelas* by Temminck (1853: 248) as specifically distinct. He restricts the name *S. erythromelas* to the specimen from Manado (RMNH.MAM.13379) and describes the animal obtained at Kema as *S. erythrogenys*.

Since that name is preoccupied by *Sciurus erythrogenys* Waterhouse, 1843 from Fernando Póo, Gray (1867: 278) has renamed the form, which he includes in his *Macroxus atrocapillus* (= *Sciurus atricapillus* Schlegel, 1863, see above), writing: "See also *Sc. Schlegelii* (with cheeks red), *Sc. erythrogenys*, Schlegel, *l.c.* t. 2. f. 3 (1863), not Waterhouse", thus referring to the same syntype.

The lectotype for *Sciurus erythromelas* Temminck, 1853 has been designated by Musser et al. (2010: 198), who also referred to RMNH.MAM.13378 as the holotype for *Sciurus erythrogenys* and *Macroxus Schlegelii* Gray, 1867. However, it is unknown how many specimens were available to Schlegel and we don't consider this a valid lectotype designation.

### ***Callosciurus pygerythrus lokroides*** (Hodgson, 1836)

***Sciurus Lokroides*** Hodgson, 1836: 232.

Syntype, RMNH.MAM.13364 (Jentink 1887: 188 *a*; 1888: 19 *a*), adult, sex unknown, mounted skin and skull. Loc.: Nepal. Leg.: B.H. Hodgson.

Syntype, RMNH.MAM.13365 (Jentink 1887: 188 *b*; 1888: 19 *b*), adult, sex unknown, mounted skin and skull. Loc.: Nepal. Leg.: B.H. Hodgson.

### ***Dremomys lokriah*** (Hodgson, 1836)

#### ***Sciurus Lokriah*** Hodgson, 1836: 232.

Syntype, RMNH.MAM.39350 (Jentink 1888: 20 a), adult, sex unknown, mounted skin and skull. Loc.: Tibet. Leg.: B.H. Hodgson.

Syntype, RMNH.MAM.39351 (Jentink 1887: 189 a; 1888: 20 b), adult, sex unknown, mounted skin and skull. Loc.: Nepal. Leg.: B.H. Hodgson. Ex: MNHN, 1868.

### ***Exilisciurus exilis*** (Müller, 1838)

#### ***Sciurus exilis*** Müller, 1838: 148.

Lectotype, RMNH.MAM.13318 (Jentink 1887: 190 b; 1888: 23 b), adult, sex unknown, relaxed mount and skull. Loc.: Mt. Singgalang, Sumatra, Indonesia. Leg.: S. Müller, [May-November 1834].

Paralectotype: RMNH.MAM.13319.

The collecting locality for RMNH.MAM.13319 is described by Müller (1838) as the mountainous regions of the Laut countries on Borneo. Medway (1977: 99) interpreted this as 'Tanah Laut [Pleihari] district, South Kalimantan. Jentink (1888: 23) lists an additional specimen (cat. d; RMNH.MAM.13320) as a cotype, however this specimen was collected by Schwaner and is not mentioned by Müller in the original publication. Therefore it is excluded from the type series. The mandibles and cranium of RMNH.MAM.13318 do not belong together. According to Kris Helgen (in lit., 5 December 2018) the mandibles belong to *Sundasciurus*, probably *lowi*. Heaney (1985: 18) designated RMNH.MAM.13318 the lectotype, being the specimen from Sumatra. He doubts the correctness of the locality and follows Medway (1977) in selecting Tanah Laut, South Kalimantan as the type locality. Until recently no other specimens have been recorded from Sumatra and most authors follow Heaney (see for instance Chasen and Kloss 1928: 44; Medway 1963: 108). However in 2015 an animal was photographed in Batang Toru, North Sumatra and later identified as belonging to *Exilisciurus exilis* (Meijaard et al. 2018).

*Exilisciurus exilis* Müller, 1838 is also the type species for the genus *Exilisciurus* Moore, 1958.

#### ***Nannosciurus exilis sordidus*** Chasen & Kloss, 1928: 44.

Holotype, RMNH.MAM.10117, adult female, skin and skull. Loc.: Long Temelen, Borneo, Indonesia. Leg.: H.C. Siebers, Midden Oost Borneo Exp. 1925 (23), 26 August 1925. Ex: MZB (MZB 1189), 19 April 1950.

Chasen and Kloss (1928) mention 28 specimens, only the holotype is in Naturalis.

### ***Funambulus sublineatus*** (Waterhouse, 1838)

#### ***Sciurus delessertii*** Gervais, 1841: 51.

Syntype, RMNH.MAM.60459 (Jentink 1887: 193 a; 1888: 30 a), adult, sex unknown, mounted skin and skull. Loc.: Ghats Mts., Bengal, India. leg. A. Delessert, [1834-1839].

Syntype, RMNH.MAM.60460 (Jentink 1887: 25 b), adult, sex unknown, skull. Loc.: Bengal, India. Leg A. Delessert, [1834-1839].

Delessert returned from his collecting trip in India in 1839, well before the description of this new species by Gervais (1841). So these specimens were in the possession of Gervais, although the locality doesn't agree with the locality given in the description (Nilgiri mountains). Therefore we tentatively list them as syntypes.

The first publication of this new taxon was by Gervais in 1841, a more detailed description with plate was published in Delessert 1843 (p. 18, pl. 3-4).

***Lariscus insignis insignis*** (F. Cuvier, 1821)

***Lariscus insignis diversoides*** Sody, 1949a: 114.

Holotype, RMNH.MAM.9839, adult male, skin and skull. Loc.: Sanggul, Sumatra, Indonesia. Leg.: J.J. Menden, 11 August 1936. Ex: MZB, 12 January 1950.

Sody (1949a) examines 6 specimens, only the holotype is in Naturalis.

***Lariscus insignis atchinensis*** Sody, 1949a: 115.

Holotype, RMNH.MAM.9841, adult male, skin and skull. Loc.: Atang Putar, Atjeh, Sumatra, Indonesia. Leg.: A. Hoogerwerf, 11 April 1937. Ex: MZB (MZB 472/37), 12 January 1950. Paratypes: RMNH.MAM.24456, 24457.

For a preliminary report and map of this expedition, see Hoogerwerf, 1939.

***Lariscus insignis javanus*** Thomas & Wroughton, 1909

***Lariscus insignis murianus*** Sody, 1937: 219.

Holotype, RMNH.MAM.13374, adult male, skin and skull. Loc.: Kampong Semliro, Gunung Muriah 800 m.), Java, Indonesia. Leg.: H.J.V. Sody, 13 December 1928 (M. 6). Paratypes: RMNH.MAM.24519, 24520.

***Lariscus obscurus aureus*** Sody, 1949

***Lariscus insignis aureus*** Sody, 1949a: 114.

Holotype, RMNH.MAM.9840, adult female, skin and skull. Loc.: North Pagi Isl., Indonesia. Leg.: J.J. Menden, 23 January 1935. Ex: MZB (MZB 6363; 16/35), 12 January 1950.

Sody (1949a) examines 10 specimens, only the holotype is in Naturalis.

***Nannosciurus melanotis melanotis*** (Müller, 1841)

***Sciurus melanotis*** Müller, 1840: 35 (nomen nudum).

***Sciurus melanotis*** Müller, 1841: pl. 14 figs 4-7.

***Sciurus soricinus*** Waterhouse, 1838: 46 (nomen nudum).

***Sciurus soricinus*** "Waterhouse" Anderson, 1878: 265.

Syntype for *melanotis* and *soricinus*, RMNH.MAM.13337 (Jentink 1888: 25 g), adult male, relaxed mount, skull in situ. Loc.: Java, Indonesia. Leg.: S. Müller.

Syntype for *melanotis*, RMNH.MAM.39354 (Jentink 1887: 191 e) adult, sex unknown, cranium. Loc.: Java, Indonesia. Leg.: H. Boie and H.C. Macklot, [1826-1827].

Syntype for *melanotis*, RMNH.MAM.59653 (Jentink 1888: 25 c), adult male, relaxed mount, skull in situ. Loc.: Borneo, Indonesia. Leg.: S. Müller, [28 July 1836 - 17 December 1836]. Received 1837. (= *Nannosciurus melanotis borneanus*).

The publication history for this name is complicated. The name *Sciurus melanotis* is first mentioned by Müller (1840: 35) as a nomen nudum. Wilson and

Reeder (2005) consider this a valid publication and therefore date this name in 1840. However this first publication lacks a formal description, it only gives locations and description of the habitat. On 11 October 1841 the plate for this taxon was published, accompanied by the scientific name, followed by a formal description in the issue of March 1844 (see for publication dates Husson and Holthuis 1955: 22-23).

This species was first described under the name *Sciurus soricinus* in 1838 by Waterhouse (1838: 46), a manuscript name by Temminck. Waterhouse is clearly uncertain about his reference to Temminck and we haven't been able to find any publication by Temminck of this name. Waterhouse provides no description and only gives a location ("Java") and is generally seen as a nomen nudum (Heaney 1985: 25; Wilson and Reeder 2005). The first valid publication we could find of this name is by Anderson (1878: 265), giving a formal description and referring to the specimen listed by Waterhouse in the NHM and the specimen depicted on pl. 14, fig. 4 in Müller, 1841.

However, this description is comparable to the first publication of *melanotis* by Müller (1840: 35), which we consider to be a nomen nudum. Therefore, contrary to Wilson and Reeder (2005) we consider the first valid publication of the name *Sciurus melanotis* to be the plate from 1841. Consequently the type series consists of the depicted specimens, a male from Java, a male from Borneo and a skull. Heaney (1985: 25), who doesn't mention the first publication of 1840, designates a lectotype (RMNH.MAM.13338) based on the assumption that this specimen was depicted in Müller 1841 and follows Lyon (1906: 52), who restricted the type locality to Java. However, this specimen is not part of the type series, as it is a female. To fix *melanotis* to the Javan race, RMNH.MAM.13337 should be designated as lectotype.

Jentink (1883; 1887; 1888) in his catalogues of the Naturalis mammal collection inconsistently lists specimens as types for *melanotis*. He omits specimens collected by Müller himself and even lists specimens collected by Schwaner, who arrived in Indonesia in 1842, well after the publication. According to Jentink (1887: 191) the skull depicted on the plate (fig. 6-7) is RMNH.MAM.39354 (cat. e) and the two depicted specimens are RMNH.MAM.13337 and 13338. However, these specimens are both from Java and one is a female. We partly follow Jentink and include RMNH.MAM.13337 in the type series. For the Borneo specimen we select RMNH.MAM.59653, partly based on similarity with the plate (although none of the Borneo specimens are a perfect match) and partly because it is collected by Müller himself.

***Nannosciurus melanotis borneanus* Lyon, 1906.**

***Nannosciurus melanotis pallidus* Chasen & Kloss, 1928: 43.**

Holotype, RMNH.MAM.10116, adult male, skin and skull. Loc.: Long Poehoes, Borneo, Indonesia. Leg.: H.C. Siebers, Midden-Oost Borneo Expeditie 1925, 10 August 1925 (10). Ex: MZB (MZB 1178), 19 April 1950.

Chasen and Kloss (1928) examine 4 specimens, only the holotype is in Naturalis.

***Prosciurillus leucomus leucomus* (Müller & Schlegel, 1844)**

***Sciurus leucomus* Müller & Schlegel, 1844: 87.**

Lectotype, RMNH.MAM.13344 (Jentink 1888: 24 b), male, mounted skin and skull. Loc.: Kema, Sulawesi, Indonesia. Leg.: E.A. Forsten, 1840.

Paralectotypes: RMNH.MAM.13343, 54910–54915, 54918 (= *Sciurus leucomus occidentalis*).

Müller and Schlegel (1844) do not state how many specimens they have before them. The skulls of RMNH.MAM.13343 and 13344 were extracted at a later date. Jentink (1887: 191) also lists as types two skeletons and four separate skulls collected by Forsten. Although Müller and Schlegel (1844) do not mention skeletal material, they had these specimens available when writing their descriptions, and hence they are included in the type series here.

Forsten arrived in Manado in Northeast Sulawesi on 22 March 1840; on 15 April he made his headquarters at Tondano, from where he explored Minahasa (Manado) District in the northeastern tip of the island. He arrived back in Manado on 24 April 1841, departed from Kema on 14 June, and landed in Ternate on 19 June. On 9 September 1841 he proceeded to Gorontalo in NE Sulawesi, where he arrived on 18 September. From there, he travelled further west along the coast as far as Paguat, and returned to Gorontalo on 14 November. He arrived back at Kema on 28 November and worked again in Minahasa District, until he finally left Sulawesi on 14 April 1842 (Veth 1879: 98, 107; Van Steenis-Kruseman 1950: 179; and Forsten's unpublished diary in Naturalis archives).

RMNH.MAM.13343 must be the animal collected on 6 April 1840 near Manado. In Forsten's diary the entry for that day relates that his hunter brought "a *Sciurus* which I believe to be new". In the same diary, Forsten records having collected a *Sciurus* at Pagowat (Paguat) during the week of 5-12 November 1841. This is almost certainly RMNH.MAM.54918, the pedestal of which reads "Sciurus leucomus Forst Pagowat Célebes" in C.J. Temminck's handwriting, though Forsten is not mentioned as the collector. Jentink (1888: 25) must have overlooked Forsten's diary note and so did not mention this specimen as a type; it is included in the type series here.

The lectotype has been designated by Musser et al. (2010: 62). In the following details on the type series, these authors accidentally list RMNH.MAM.13343 as the lectotype (p. 63).

### ***Sciurus leucomus occidentalis* Meyer, 1898: 2.**

Paralectotype, RMNH.MAM.46075, (formerly 39401) (Jentink 1887: 191 *h*; 1888: 25 *l*), male, mounted skin and skull. Loc.: Panibi near Gorontalo, Sulawesi, Indonesia. Leg.: C.B.H. von Rosenberg, [7-15] September 1863.

Paralectotypes: RMNH.MAM.54916–54920 (skull RMNH.MAM.54918 is missing).

Meyer (1896: 25-26) discusses the differences in coloration between specimens of *Sciurus leucomus* from various localities in NE Sulawesi. He extensively treats the material in Naturalis and tentatively distinguishes the animals from Gorontalo from the material collected in the Minahasa district. Meyer uses the catalogue numbers given by Jentink (1883a: 130), including the corrections that Jentink had pointed out to him. He excludes the Naturalis specimens for which no exact locality was known. Later, after having received additional material from Sulawesi, Meyer (1898: 2) describes the populations from the surroundings of Gorontalo as the subspecies *S. l. occidentalis*. Apart from the two specimens he had recently received, Meyer (1898) again refers to the Naturalis material which he had discussed earlier, these specimens therefore are to be included in the type series.

For the dates and localities of Von Rosenberg's collecting trips in the surroundings of Gorontalo, see Von Rosenberg 1865 (p. 34-37, 60; and his notes preserved in the Naturalis archives).

The lectotype is one of the two specimens from Gorontalo in the MTKD (SNSD B 168), which Feiler (1998: 407) erroneously published as Holotypus, thereby

designating it the lectotype of the *S. l. occidentalis* Meyer, 1898. This and other details on the type series are extensively discussed by Musser et al. (2010: 75-77).

### ***Prosciurillus murinus murinus*** (Müller & Schlegel, 1844)

***Sciurus murinus*** Müller & Schlegel, 1844: 87.

***Sciurus umbrinus*** "Temminck" Jentink, 1883a: 126 (nomen nudum).

Lectotype, RMNH.MAM.13213 (Jentink 1887: 190 a; 1888: 22 a), female, mounted skin and cranium.

Loc.: North[east] Sulawesi, Indonesia. Leg.: E.A. Forsten, [1840-1842].

Paralectotypes: RMNH.MAM.13214, 13219.

For Forsten's stay in NE Sulawesi and for the inclusion of the separate skull in the type series, see under *P. leucomus*; see also Musser et al. (2010: 134-135), who also designates the lectotype.

Jentink (1883a: 126) lists two of these specimens (RMNH.MAM.13213 and 13214) as the types of the manuscript name *umbrinus* by Temminck in the synonymy of *Sciurus murinus*. As far as we could establish, this name has never been validly used since and therefore is not available.

This is also the type species for the genus name *Prosciurillus* Ellerman, 1947.

### ***Prosciurillus murinus griseus*** (Sody, 1949)

***Sciurillus murinus griseus*** Sody, 1949a: 77.

Holotype, RMNH.MAM.9827, female, skin, skull missing. Loc.: Bumbulan, Sulawesi, Indonesia. Leg.: J.J. Menden, 24 October 1939. Ex: MZB (MZB 5974; 220/39), 12 January 1950.

Sody (1949a: 78) also describes the skull of RMNH.MAM.9827, which was still present in Naturalis in 1951, when it was studied and photographed by G.H.H. Tate (Musser et al. 2010: 157); however, it now appears to be missing.

According to Koprowski et al. (2016: 718) *Prosciurillus murinus* is monotypic.

### ***Prosciurillus rosenbergii*** (Jentink, 1879)

***Sciurus Rosenbergii*** Jentink, 1879b: 37.

Lectotype, RMNH.MAM.13362 (Jentink 1888: 24 l), female, mounted skin and skull. Loc.: Siau, Sangir Islands, Indonesia. Leg.: D. Hoedt, 27 October 1865.

Paralectotypes: RMNH.MAM.13351–13361.

Jentink (1879b: 36) gives a type series of twelve specimens, all of which are still present in Naturalis. Five skulls were extracted in Jentink's days, the others were taken out later.

Jentink (1888: 24) does not mention the locality for the specimens collected by Von Rosenberg, now paralectotypes. Their labels read "Sanghir", which in this case probably means one of the islands in the Sangihe Archipelago, not Sangihe Island in particular. Von Rosenberg did not visit the Sangir Islands himself, but sent local hunters to collect on the islands during September - November 1864, when he worked in NE Sulawesi; see his notes preserved in our archives.

The lectotype has been designated by Musser et al. (2010: 123).

### ***Prosciurillus weberi*** (Jentink, 1890)

***Sciurus weberi*** Jentink, 1890a: 115, pl. VIII, X figs 1-3.

Lectotype, RMNH.MAM.13342, adult female, mounted skin and skeleton. Loc.: Palopo, Luwu District, Sulawesi, Indonesia. Leg.: M. Weber, February 1889.  
Paralectotypes: ZMA.MAM.11327 – 11328.

Jentink (1890a) based this species on three skins, two skeletons and one skull. The mammals collected by Weber were deposited in Naturalis and the ZMA, so after the merger of these two collections these specimens were reunited. According to Musser et al. (2010: 60) NHM skin NHMUK 1894.7.4.6 is also one of the specimens upon which Jentink's original description of *Sciurus weberi* is based and thus also a paralectotype. This could be the skin belonging to skeleton ZMA.MAM.11327; see also Bergmans 2011: 837.

Weber visited the Luwu District in February 1889 (Weber 1890: vii, map III). Musser et al. (2010: 103) designate the lectotype.

### ***Rhinosciurus laticaudatus laticaudatus*** (Müller, 1840)

***Sciurus laticaudatus*** Müller, 1840: 34.

Syntype, RMNH.MAM.13370 (Jentink 1887: 197 a; 1888: 37 a), adult female, mounted skin and skeleton. Loc.: Pontianak, Borneo, Indonesia. Leg.: P. Diard, 1827.

Syntype, RMNH.MAM.13371, (Jentink 1887: 197 a; 1888: 37 a), adult female, mounted skin and skeleton. Loc.: Pontianak, Borneo, Indonesia. Leg.: P. Diard, 1827.

Syntype, RMNH.MAM.13372, (Jentink 1887: 197 a; 1888: 37 a), adult female, mounted skin, skull extracted but not in collection. Loc.: Pontianak, Borneo, Indonesia. Leg.: P. Diard, 1827..

Müller (1840) bases his short description on material collected by Diard. The species is later depicted in Müller and Schlegel 1841b (pl. 15 figs 1-3) and eventually extensively described in Müller and Schlegel 1844 (p. 100). According to Jentink (1887: 197) the depicted skull belongs to female RMNH.MAM.13370, which is also the depicted skin according to him; however, according to the index for the illustrations the depicted specimen is a male.

In the original manuscript of this catalogue this specimen was listed by Smeenk as a lectotype. We could however not find the lectotype designation and therefore list these specimens as a syntypes.

### ***Rhinosciurus laticaudatus saturatus*** Robinson & Kloss, 1919: 274

Holotype, RMNH.MAM.64146, adult female, study skin and skull. Loc.: Rimbo Pengadang, Barisan Mts, West Sumatera, Indonesia. Leg.: E. Jacobson, (65), 22 June 1916.

Robinson and Kloss (1919) examine two specimens for their description of this new species. Only the holotype is in Naturalis.

### ***Rubrisciurus rubriventer*** (Müller & Schlegel, 1844)

***Sciurus rubriventer*** "Forsten" Müller & Schlegel, 1844: 86.

Lectotype, RMNH.MAM.13341 (Jentink 1888: 23 a), male, mounted skin, skull extracted but not in collection. Loc.: [Northeast] Sulawesi, Indonesia. Leg.: E.A. Forsten, [1840-1842].

Müller and Schlegel (1844) give no indication of the number of specimens available to them, the listing by Jentink (1888: 23) of RMNH.MAM.13341 as "type de l'espèce" constitutes a lectotype designation. Musser et al. (2010: 33) erroneously list

this specimen as holotype. For Forsten's stay in NE Sulawesi, see under *Prosciurillus leucomus* above.

This is also the type species for the genus name *Rubrisciurus* Ellerman, 1954.

### ***Sundasciurus rabori* Heaney, 1979**

***Sciurus cagsi* Meyer, 1890: 600.**

Paratype, RMNH.MAM.39342, adult, sex unknown, mounted skin and skeleton. Loc.: Davao, Philippines. Leg.: C.C. Platen, 28 August 1889. Ex: MTKD, 1891.

### ***Sundasciurus tenuis modestus* (Müller, 1840)**

***Sciurus modestus* Müller, 1840a: 34.**

Syntype, RMNH.MAM.13323 (Jentink 1888: 21 c), adult male, relaxed mount and skull. Loc.: [West] Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received 1837.

Syntype, RMNH.MAM.13324 (Jentink 1888: 21 d), juvenile male, relaxed mount and skull. Loc.: [West] Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received 1837.

Syntype, RMNH.MAM.13325 (Jentink 1887: 190 a; 1888: 22 e), adult male, relaxed mount and skull. Loc.: Mount Singgalang, Sumatra, Indonesia. Leg.: S. Müller, [May 1834 - November 1834]. Received July 1837.

Syntype, RMNH.MAM.13326 (Jentink 1888: 22 f), adult female, relaxed mount and skull. Loc.: Padang, Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received July 1837.

Syntype, RMNH.MAM.13327 (Jentink 1888: 22 g), subadult, sex unknown, relaxed mount and skull. Loc.: [West] Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received July 1837.

Syntype, RMNH.MAM.13328 (Jentink 1888: 22 h), adult, sex unknown, relaxed mount, skull in situ. Loc.: [West] Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received July 1837.

Syntype, RMNH.MAM.13329 (Jentink 1888: 22 i), adult, sex unknown, relaxed mount and skull. Loc.: [West] Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received July 1837.

Syntype, RMNH.MAM.13330 (Jentink 1888: 22 j), adult, sex unknown, relaxed mount and skull. Loc.: [West] Sumatra, Indonesia. Leg.: S. Müller, [1833-1835]. Received July 1837.

Syntype, RMNH.MAM.13331 (Jentink 1888: 22 k), adult, sex unknown, relaxed mount and skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, [28 July 1836 - 17 December 1836]. (= *Sciurus tenuis parvus*).

Jentink (1888a: 21) additionally lists two specimens collected in Malakka by Diard (RMNH.MAM.13321 and 13322) and two from Borneo collected by Diard and Schwaner (RMNH.MAM.13332 and 63717) as types. However in the original description Müller (1840a) makes no reference to specimens from Malacca and only refers to specimens collected by him or his travel companions (p. 34, 55).

The typeseries of *Sciurus modestus* Müller, 1840 represents two taxa, *modestus* (RMNH.MAM.13323–13330) from Sumatra and *parvus* from Borneo (RMNH.MAM.13331). To fix the name *modestus* to the Sumatran form a lectotype should be designated.

Müller collected in West-Sumatra from 1833 until 1835, May to November 1834 he spent in the area around Mount Singgalang. From 28 July to 17 December 1836 Müller visited Borneo. Schwaner was in Borneo between 1843 and 1848.

***Sciurus minor* “Diard” Jentink, 1883a: 126.**

Jentink (1883a: 126) publishes this manuscript name by Diard in the synonymy of *Sundasciurus tenuis*. We could not find any subsequent use validating this name. Therefore this name is not available and RMNH.MAM.63717 is not a type.

### ***Tamiops maclellandii leucotis*** (Temminck, 1853)

***Tamias leucotis*** Temminck, 1853: 252.

Syntype, RMNH.MAM.59664 (Jentink 1888: 31 *k*), male, mounted skin, skull in situ. Loc.: Malacca. Leg.: P.-M. Diard, "May".

Syntype, RMNH.MAM.59665 (Jentink 1888: 31 *l*), male, mounted skin, skull in situ. Loc.: Malacca. Leg.: P.-M. Diard, "December".

### ***Xerus erythropus*** (E. Geoffroy, 1803)

***Sciurus ebii*** Pel, 1851: 161 (nomen oblitum).

Lectotype, RMNH.MAM.19622 (Jentink 1888: 37 *g*), adult male, mounted skin, skull in situ. Loc.: Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Paralectotypes: RMNH.MAM.19623–19625.

See for remarks on the taxonomic status of this name the remarks with *Sciurus ebii* Temminck, 1853. Husson and Holthuis (1968: 126) designated the lectotype.

### ***Xerus rutilus*** (Cretzschmar, 1826)

***Sciurus rutilus*** Cretzschmar, 1826: 59.

Paralectotype, RMNH.MAM.26467 (Jentink 1888: 37 *a*; 1887: 197 *a*), adult male, mounted skin and skull. Loc.: Abyssinia (Ethiopia). Leg.: E. Rüppell.

Paralectotypes: RMNH.MAM.26468, 26469.

Mertens (1925: 26) designates a specimen in the SMF (SMF 4328) the lectotype.

### ***Epixerus ebii ebii*** (Temminck, 1853)

***Sciurus ebii*** Temminck, 1853: 129.

Lectotype, RMNH.MAM.19626 (Jentink 1888: 32 *a*; 1887: 194 *a*), adult male, mounted skin and skull. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, June.

Paralectotype: RMNH.MAM.19627.

The name *Sciurus ebii* is first published by Pel in 1851. This *Sciurus ebii* is a junior synonym for *Xerus erythropus* Geoffroy, 1803 and is clearly a different species than *Sciurus ebii* Temminck, 1853. As the latter had been used widely for over a century, Husson and Holthuis (1968) propose to suppress *Sciurus ebii* Pel 1851 in order to save *Sciurus ebii* Temminck, 1853. They also designate the lectotype (Husson and Holthuis 1968: 126).

### ***Funisciurus congicus*** (Kuhl, 1820)

***Sciurus Poolii*** Jentink, 1906: 139.

Holotype by monotypy, RMNH.MAM.26429 (formerly 66), female, skin and skull. Loc.: Stanley (Boyoma) Falls, Congo. Leg.: G.C.A. Pool, August 1905. Received from A.A.W. Hubrecht, 22 April 1906.

### ***Funisciurus pyrropus leucostigma* Temminck, 1853**

#### ***Sciurus leucostigma* Temminck, 1853: 133.**

Syntype, RMNH.MAM.26431 (Jentink 1887: 196 *b*; 1888: 35 *e*), adult male, mounted skin and skull.

Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, May 1842.

Syntype, RMNH.MAM.26432 (Jentink 1888: 35 *f*), adult male, mounted skin, skull in situ. Loc.:

Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, May 1842.

Syntype, RMNH.MAM.26433 (Jentink 1888: 35 *g*), adult female, mounted skin, skull in situ. Loc.:

Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, May 1842.

Syntype, RMNH.MAM.26434 (Jentink 1887: 196 *a*; 1888: 35 *h*), adult female, mounted skin and skull.

Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, February 1843.

Syntype, RMNH.MAM.26435 (Jentink 1887: 196 *b*; 1888: 35 *i*), adult female, mounted skin and skull.

Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Syntype, RMNH.MAM.26436 (Jentink 1888: 35 *j*), adult male, mounted skin, skull in situ. Loc.:

Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Syntype, RMNH.MAM.26437 (Jentink 1888: 35 *k*), adult male, mounted skin, skull in situ. Loc.:

Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

### ***Heliosciurus gambianus multicolor* (Rüppell, 1835)**

#### ***Sciurus multicolor* Rüppell, 1835: 38.**

Paralectotype, RMNH.MAM.26356 (Jentink 1888: 34 *f*; 1887: 196 *b*), adult female, mounted skin and skull. Loc.: Ethiopia. Leg.: E. Rüppell.

Paralectotype: RMNH.MAM.26357.

Mertens (1925: 27) designates a specimen in the SMF (SMF 4329) the lectotype.

### ***Heliosciurus punctatus punctatus* (Temminck, 1853)**

#### ***Sciurus punctatus* Temminck, 1853: 138.**

Syntype, RMNH.MAM.26366 (Jentink 1888: 33 *d*; 1887: 196 *b*), adult female, mounted skin and skull. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, June 1843.

Syntype, RMNH.MAM.26367 (Jentink 1888: 33 *e*; 1887: 196 *c*), adult female, mounted skin and skull.

Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, June 1843.

Syntype, RMNH.MAM.26368 (Jentink 1888: 33 *f*; 1887: 196 *d*), adult male, mounted skin and skull.

Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.26369 (Jentink 1888: 33 *g*; 1887: 196 *e*), adult female, mounted skin and skull.

Loc.: Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.26370 (Jentink 1888: 33 *h*), adult female, mounted skin, skull in situ. Loc.: Rio

Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, June 1843.

### ***Heliosciurus rufobrachium rufobrachium* (Waterhouse, 1842)**

#### ***Sciurus rufo-brachium* Waterhouse, 1843: 202.**

In his manuscript of this catalogue Smeenk lists specimens (RMNH.MAM.26388–26390) as types, but we have no indication to support this status and they are not mentioned as types in Jentinks catalogues. The types for *Sciurus rufo-brachium* are the specimens collected by Fraser on Ferdinand-Po during the so-called Niger Expedition of 1841.

Waterhouse (1843) gives in the *Proceedings of the Zoological Society of London* 10, p. 128 a formal description of this species. However this issue of the PZS was published in January 1843 (Sclater 1893: 438).

### ***Heliosciurus rufobrachium maculatus* (Temminck, 1853)**

#### ***Sciurus maculatus* Temminck, 1853: 130.**

Syntype, RMNH.MAM.26381 (Jentink 1887: 195 *b*; 1888: 32 *î*), adult male, mounted skin and skull.

Loc.: Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.26382 (Jentink 1888: 32 *î*), adult male, mounted skin, skull in situ. Loc.: Rio

Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.26383 (Jentink 1887: 195 *c*; 1888: 32 *k*), adult female, mounted skin and skull.

Loc.: Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.26384 (Jentink 1887: 195 *d*; 1888: 33 *î*), adult male, mounted skin and skull.

Loc.: Sacconde, Côte d'Or [Ghana]. Leg.: H.S. Pel, 25 April 1842.

Syntype, RMNH.MAM.26385 (Jentink 1888: 33 *m*), juvenile female, mounted skin, skull in situ. Loc.:

Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.26395, adult male, skull. Loc.: Dabocrom, [Ghana]. Leg.: H.S. Pel, February 1843.

### ***Paraxerus boehmi emini* (Stuhlmann, 1894)**

#### ***Sciurus emini* "Matschie" Stuhlmann, 1894: 320.**

Syntype, RMNH.MAM.26455 (Jentink 1888: 36 *a*), adult female, mounted skin and skull. Loc.: Gadda

[Uele River], Monbuttu, Congo. Leg.: Emin Pasha ( E.C.O.T. Schnitzer), 29 March 1884. Ex: NHM, March 1888.

### ***Paraxerus poensis* (A. Smith, 1830)**

#### ***Sciurus musculus* Temminck, 1853: 142.**

Syntype, RMNH.MAM.26407 (Jentink 1888: 34 *d*), adult male, mounted skin, skull in situ. Loc.: Rio

Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Syntype, RMNH.MAM.26408 (Jentink 1888: 34 *e*), adult male, mounted skin, skull in situ. Loc.: Rio

Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Syntype, RMNH.MAM.26409 (Jentink 1887: 196 *b*; 1888: 34 *f*), adult female, mounted skin and skull.

Loc.: Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Syntype, RMNH.MAM.26410 (Jentink 1888: 35 *g*), semi-adult, sex unknown, mounted skin, skull in

situ. Loc.: Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

Syntype, RMNH.MAM.26411 (Jentink 1888: 35 *h*), semi-adult male, mounted skin, skull in situ. Loc.:

Rio Boutry, Côte d'Or [Ghana]. Leg.: H.S. Pel, 1842.

### ***Protoxerus aubinnii salae* (Jentink, 1881)**

#### ***Sciurus salae* Jentink, 1881: 63.**

Syntype, RMNH.MAM.26396 (Jentink 1888: 32 *a*), adult male, mounted skin and skull. Loc.: Sofore-Place, Liberia. Leg.: J. Büttikofer and J.A. Sala, 15 May 1880.

Syntype, RMNH.MAM.26397 (Jentink 1887: 195 *a*; 1888: 32 *b*), adult male, mounted skin and skull.

Loc.: Sofore-Place, Liberia. Leg.: J. Büttikofer and J.A. Sala, 16 May 1880.

Syntype, RMNH.MAM.26398 (Jentink 1887: 195 *b*; 1888: 32 *c*), adult male, mounted skin and skull.

Loc.: Sofore-Place, Liberia. Leg.: J. Büttikofer and J.A. Sala, 25 May 1880.

Syntype, RMNH.MAM.26399 (Jentink 1888: 32 *d*), adult female, mounted skin, skull in situ. Loc.:

Sofore-Place, Liberia. Leg.: J. Büttikofer and J.A. Sala, 05 July 1880.

Syntype, RMNH.MAM.26400 (Jentink 1888: 32 *e*), adult female, mounted skin, skull in situ. Loc.:

Bavia, Liberia. Leg.: J. Büttikofer and J.A. Sala, 13 March 1880.

According to Jentink (1881: 63) the type locality is Liberia, St. Paul's River (Bavia, Sofore-Place). Therefore, another specimen (RMNH.MAM.26401), same collectors, but from Bendo is excluded in the type series.

***Protoxerus stangeri temminckii*** (Anderson, 1879)

***Sciurus caniceps*** Temminck, 1853: 127.

***Sciurus temminckii*** Anderson, 1879: 229 (nomen novum).

Syntype, RMNH.MAM.26418 (Jentink 1888: 31 c), adult male, mounted skin and skull. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, May 1849.

Syntype, RMNH.MAM.26419 (Jentink 1888: 31 d), adult female, mounted skin, skull in situ. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, May 1849.

Syntype, RMNH.MAM.26420 (Jentink 1888: 31 e), adult female, mounted skin, skull in situ. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel, May 1849.

Syntype, RMNH.MAM.26421 (Jentink 1887: 194 f), adult, sex unknown, cranium. Loc.: Côte d'Or [Ghana]. Leg.: H.S. Pel.

This taxon was first described under the name *Sciurus caniceps* Temminck, 1853. This name was preoccupied by *Sciurus caniceps* Gray, 1842, so Anderson (1879: 229) proposed *Sciurus temminckii* as a new name. Apparently not aware of this act by Anderson, Jentink (1881a: 65) also renames *caniceps* as *Sciurus temminckii* for the same reason without referring to Anderson. Anderson's publication was published for the year 1878, but contemporary sources show that it had not been issued until the following year.

***Marmota himalayana himalayana*** (Hodgson, 1841)

***Arctomys himalayanus*** Hodgson, 1841c: 777.

Syntype, RMNH.MAM.39323 (Jentink 1888: 43 b), adult, sex unknown, mounted skin, skull in situ. Loc.: Tibet. Leg.: B.H. Hodgson.

***Marmota himalayana robusta*** (Milne-Edwards, 1872)

***Arctomys robustus*** Milne-Edwards, 1872: 92.

Syntype, RMNH.MAM.39324 (Jentink 1887: 201 a; 1888: 43 a), adult male, mounted skin and skull. Loc.: Moupin (Baoxing), China. Leg.: J.P.A. David, July 1869. Ex: MNHN, 1875.

***Sciurotamias davidianus*** (Milne-Edwards, 1867)

***Sciurus davidianus*** Milne-Edwards, 1867: 196.

Syntype, RMNH.MAM.39343 (Jentink 1887: 189 a; 1888: 20 a), adult, sex unknown, mounted skin and skull. Loc.: 'Environ de Pekin', China. Leg.: J.P.A. David. Ex: MNHN, 1868.

***Tamias sibericus lineatus*** (Siebold, 1824)

***Myoxus lineatus*** Von Siebold, 1824: 13.

Syntype, RMNH.MAM.59667, adult, sex unknown, flat skin. Loc.: Jesso [Hokkaido], Japan. Leg.: [Ph.F. von Siebold.]

Von Siebold (1824) does not state how many specimens he has in his possession; in the Naturalis collection only one flat skin is found. This specimen was undetected by Jentink, since it has not been listed in any of his catalogues and there are no Naturalis labels attached to this specimen. Which is fortunate because this way it escaped the practice by former curators of removing the "untidy" original labels. Thus the original label by Von Siebold is preserved, stating "Myoxus lineata e Jesso relata" and in a later hand "Tamias".

## Gliridae Muirhead, 1819

### *Graphiurus crassicaudatus* (Jentink, 1888)

***Claviglis crassicaudatus*** Jentink, 1888a: 41.

Holotype by monotypy, RMNH.MAM.26639 (Jentink 1888: 46 a), adult female, alcohol and cranium. Loc.: Hill-town, DuQueah river, Liberia. Leg.: J. Büttikofer; F.X. Stämpfli, 3 April 1887.

This is also the type species for the genus *Claviglis* Jentink, 1888.

### *Graphiurus kelleni* (Reuvens, 1890)

***Eliomys kelleni*** Reuvens 1890: 70.

Holotype, RMNH.MAM.26638, adult female, alcohol and skull. Loc.: Interieur de Mossamedes, Angola. Leg.: P.J. van der Kellen, Southwest Afrika Expedition 1884-1885, KNAG. Received 1888.

### *Graphiurus nagtglasii* (Jentink, 1888)

***Eliomys nagtglasii*** Jentink, 1888a: 38.

Syntype, RMNH.MAM.26631 (Jentink 1888: 46 a), adult male, mounted skin and skull. Loc.: Côte d'Or [Ghana]. Leg.: C.J.M. Nagtglas. Received November 1862.

Syntype, RMNH.MAM.26632 (Jentink 1888: 46 b), adult, sex unknown, mounted skin, skull in situ. Loc.: Côte d'Or [Ghana]. Leg.: C.J.M. Nagtglas. Received 1862.

Syntype, RMNH.MAM.26633 (Jentink 1888: 46 d), adult female, alcohol. Loc.: Farmington river, Liberia. Leg.: F.X. Stämpfli, 1887.

Syntype, RMNH.MAM.26634 (Jentink 1888: 46 e), adult female, alcohol. Loc.: Farmington river, Liberia. Leg.: F.X. Stämpfli, 1887.

Syntype, RMNH.MAM.26635 (Jentink 1888: 46 c), adult male, alcohol and skull. Loc.: Hill-town, DuQueah river, Liberia. Leg.: J. Büttikofer, 2 April 1887.

C.J.M. Nagtglas was a high official (later governor) in the Dutch Goldcoast from 1851 until 1871, with a stay in the Netherlands from 1862 to 1869. He was posted in Elmina and Accra.

### *Glirulus japonicus* (Schinz, 1845)

***Myoxus elegans*** Temminck, 1844: 52 [nec Ogilby, 1838].

***Myoxus japonicus*** Schinz, 1845: 530 (nomen novum).

***Myoxus javanicus*** Schinz, 1845: 530 (nomen novum, lapsus for *japonicus*).

***Myoxus lasiotis*** Thomas, 1880: 40 (nomen novum).

Syntype, RMNH.MAM.39367 (Jentink 1887: 202 a; 1888: 45 a), adult, sex unknown, mounted skin and skull. Loc.: Awa province, Shikoku Island, Japan. Leg.: H. Bürger, 1834.

Syntype, RMNH.MAM.39368 (Jentink 1887: 202 b; 1888: 45 b), adult, sex unknown, mounted skin and skull. Loc.: Awa province, Shikoku Island, Japan. Leg.: H. Bürger, 1834.

Syntype, RMNH.MAM.39369 (Jentink 1888: 45 c), adult, sex unknown, mounted skin, skull in situ. Loc.: Awa province, Shikoku Island, Japan. Leg.: H. Bürger, 1834.

Schinz (1845: 530) renames *Myoxus elegans* Temminck, 1844 as this name was preoccupied by *Myoxus elegans* (Ogilby, 1838). He gives the new name *Myoxus javanicus* (Schinz, 1845: 350), this is however conceived by later authors as a misprint for *japonicus* (Thomas 1905: 347).

Thomas (1880: 40) overlooks the Schinz name and renames *M. elegans* Temminck, 1844 in *Myoxus lasiotis*. After acknowledging his mistake he still adheres

to his new name. In his later publication Thomas (1905: 347) accepts the validity and priority of the Schinz name.

As proposed by Smeenk and Kaneko (2000: 36: case 3033) the ICZN (2001: opinion 1978) has ruled the conservation of *Glirulus japonicus* (Schinz, 1845) as the correct spelling and that *elegans*, *javanicus* and *lasiotis* are invalid synonyms.

This is the type species for the genus name *Glirulus* Thomas, 1906.

## Heteromyidae Gray, 1868

### *Perognathus fasciatus fasciatus* Wied, 1839

***Perognathus fasciatus*** Wied, 1839: 369.

Syntype, RMNH.MAM.63739 (Jentink 1887: 226 *b*; 1888: 94 *a*), juvenile, sex unknown, mounted skin and skull. Loc.: upper Missouri, USA. Leg.: M. Zu Wied-Neuwied, [1832]. Received 1846.

Wied travelled in the USA in 1832, so the date 1846 given by Jentink (1887; 1888) must be the date the specimen entered the Naturalis collection. According to Wied (1839), he collected these specimens (Wied gives measurements for two specimens) near the confluence of the Yellowstone and the upper Missouri River.

Williams and Genoways (1979) erroneously designate a neotype (BS 168599 in the Biological Survey Collections, National Fish and Wildlife Laboratory, Washington D.C.). According to the website of the Carnegie Museum, this article has been withdrawn.

## Spalacidae Gray, 1821

### *Cannomys badius* (Hodgson, 1841)

***Rhizomys badius*** Hodgson, 1841a: 60.

Jentink (1888: 92) records a specimen in Naturalis (RMNH.MAM.39360) as one of the types for *R. badius*. However Hodgson (1841a: 60) bases his description on "a fine male specimen" from Nepal, which thus is the holotype by monotypy. The specimen in Naturalis is unsexed and from "Sikkim/Tibet", so cannot be the type.

### *Rhizomys sumatrensis* (Raffles, 1821)

***Rhizomys sumatrensis padangensis*** Brongersma, 1936: 139.

Holotype, RMNH.MAM.54938 (formerly 1013a), female, skin and skull. Loc.: Kotagadang, Mt Singgalang at 1000 m, Sumatra, Indonesia. Leg.: E. Jacobson (382), 10 September 1917. Received 2 September 1920.

Paratypes: RMNH.MAM.52999–53000, 54937, 54939, 59666.

Norris (2017: 135) considers *Rhizomys sumatrensis padangensis* Brongersma, 1936 to be a valid subspecies.

***Nyctoleptes Dékan*** Temminck, 1832: 5 (nomen novum).

The specific name *dekan* is a nomen novum for *sumatrensis* Raffles, 1821, which is placed by Temminck into a new genus *Nyctoleptes*. Temminck, who objects to names based on geographical names (Temminck 1832: 3), explicitly identifies his

*N. dekan* with the species described by Raffles and gives a Dutch translation of the latter's description (Temminck 1832: 5-6).

Unfortunately, Jentink (1887; 1888) has caused confusion by confounding the skins and skulls of Temminck's two specimens; first he (Jentink 1887: 224) only lists skull *b* (RMNH.MAM.39359, collected in Malacca, August 1830 by Eudoux) as a type figured by Temminck in 1832, whereas later (Jentink 1888: 92) he lists skin *b* (RMNH.MAM.39358, collected in 1823-1824 in Malacca by Diard) as such. It cannot be reconstructed with absolute certainty which of the two specimens was collected by whom. The skin and skull figured in Temminck's publications are those of the subadult animal, assumed to have been collected by Diard. Brongersma (1936: 149-150) too, erroneously refers to the Naturalis animals as "co-types".

### ***Tachyoryctes splendens*** (Rüppell, 1836)

***Bathyergus splendens*** Rüppell, 1836: 36, Taf. 12.

Paralectotype, RMNH.MAM.26673 (Jentink 1887: 224 *a*; 1888: 92 *a*), sex unknown, mounted skin and skull. Loc.: [Dembea province near Gondar], Ethiopia. Leg.: E. Rüppell, [1832-1833]. Received December 1837.

Rüppell (1836: 36) records the occurrence of this species in Dembea Province and Gondar. Although he gives the measurements of one animal only, he clearly had more specimens before him (p. 37).

Mertens (1925: 24) designated a specimen in the SMF (SMF 4317) the lectotype. Rüppell's work is dated 1835 by most authors (including Wilson and Reeder 2005: 925; Norris 2017: 136), but Mertens (1925: 19) specifies the correct publication dates of the various instalments, which is 1836 in this case. Rüppell worked in the surroundings of Gondar between October 1832 and May 1833 (Mertens 1949: 78-80, fig. 15).

## **Nesomyidae Major, 1897**

### ***Cricetomys gambianus*** Waterhouse, 1840

***Cricetomys gambiensis*** Temminck, 1853: xvi, 168 (lapsus).

Temminck (1853) had no intention to describe a new species, but misspelt *Cricetomys gambianus* Waterhouse, 1840.

### ***Saccostomus campestris*** Peters, 1846

***Saccostomus campestris*** Peters, 1846: 258.

***Saccostomus lapidarius*** Peters, 1852: 167, pl. XXXIV fig. 3, XXXV fig. 12.

Syntype, RMNH.MAM.26574 (Jentink 1887: 207 *a*; 1888: 53 *a*), sex unknown, mounted skin and skull. Loc.: Tete, Mozambique. Leg.: W.C.H. Peters, [1843-1847]. Ex: MfN, Berlin.

This name was first published in a preliminary communication, read in 1846 on behalf of Peters, still in Tete, Mozambique, for the Royal Prussian Academy of Sciences in Berlin. In his definitive work, Peters (1852) renamed the species *S. lapidarius*. In neither publication does he specify how many specimens he had before him; in 1852 he gives the measurements of only three animals: a male, a female and

a young. In the absence of more exact data, it seems best to regard all specimens collected by Peters as belonging in the type series for both names. Naturalis holds a specimen from Tete. It is included as "*Saccostomus campestris*" in an inventory of animals from Mozambique offered in exchange by the MfN in June 1850 (Naturalis archives); the specimen was then in alcohol. Probably the same animal (there is now only one in Naturalis) appears in a list of specimens received from Peters on 25 May 1851. Peters arrived in Mozambique in 1843 and returned to Germany in 1848 (Peters 1852: viii-ix).

This is also the type species for the genus *Saccostomus* Peters, 1946.

### ***Steatomys pratensis* Peters, 1846**

***Steatomys pratensis* Peters, 1846: 258.**

***Steatomys edulis* Peters, 1852: 163, pl. XXXIV fig. 2, XXXV fig. 11.**

Syntype, RMNH.MAM.26491 (Jentink 1888: 52 a), sex unknown, mounted skin, skull in situ. Loc.: Tete, Mozambique. Leg.: W.C.H. Peters, [1843-1847]. Ex: MfN, Berlin.

This species was preliminary described on behalf of Peters (1846) as *Steatomy pratensis* and later renamed by him as *Steatomys edulis* (Peters 1852). The number of specimens that Peters had before him is not specified. Peters (1852: 164) gives the measurements of three animals: a male and two females. It seems best to regard all material collected by Peters as belonging in the type series for both names. The Naturalis specimen also occurs in the two lists in the archives (see *Saccostomus campestris*), as "*Steatomys pratensis*", and was originally in alcohol.

This is also the type species for the genus *Steatomys* Peters, 1946.

### ***Brachyuromys ramirohitra* Major, 1896: 323.**

Paratype, RMNH.MAM.26525, male, skin and skull. Loc.: Ampitambe Forest, Madagascar. Leg.: C.I.F. Major (M 1016), 17 March 1896.

Major (1896) mentions four specimens in his original description.

### ***Gymnuromys roberti* Major, 1896**

***Gymnuromys Roberti* Major, 1896: 324.**

Paratype, RMNH.MAM.26523, females, skin and skull. Loc.: Ampitambe Forest, Madagascar. Leg.: C.I.F. Major (M 948, M 945), 15 March 1896.

Paratype: RMNH.MAM.26524.

The holotype is in the NHM, but according to Largen (1985: 416) it is lost. However, the online database of the NHM lists several specimens collected by Major.

### ***Nesomys audeberti* (Jentink, 1879)**

***Hallomys Audeberti* Jentink, 1879e: 107.**

Lectotype, RMNH.MAM.26527 (Jentink 1887: 217 b; 1888: 74 a), adult male, mounted skin, skull, postcranial skeleton and viscera in alcohol. Loc.: Savary, west of Mananare [Mananara Avaratra], Madagascar. Leg.: J.P. Audebert, February 1878.

Paralectotypes: RMNH.MAM.26528, 39356.

Some of the collection localities of Audebert are difficult to trace, and the two localities given here cannot be found. In February and March 1878 Audebert worked

in the area around Antongil Bay and Mananara Avaratra. In a letter to Schlegel of 4 March 1878, he locates “Savary” at “Antongil Bai - westl. Mananare Grenze von Ancai, 7 Tagereisen im Innern”. Since the paralectotypes from “Maisine” are dated 6 and 16 March, respectively, this locality must be in the same general area.

Carleton et al. (2014: 429) selected as lectotype the specimen for which Jentink (1879e) gives the measurements in his description. The skull of this specimen is also later depicted in Jentink 1887 (pl. VII).

This is also the type species for the genus *Hallomys* Jentink, 1879.

## **Cricetidae Fischer, 1817**

### ***Microtus oeconomus* (Pallas, 1776)**

#### ***Arvicola arenicola* De Selys-Longchamps, 1841: 236.**

Syntype, RMNH.MAM.18873 (Jentink 1887: 222 *b*; 1888: 87 *b*), female, mounted skin and skull. Loc.: Lisse, The Netherlands. Leg.: [C.J. Temminck], 1836.

Syntype, RMNH.MAM.18874 (Jentink 1888: 87 *c*), sex unknown, mounted skin, skull extracted but missing. Loc.: Lisse, The Netherlands. Leg.: [C.J. Temminck], 1836.

Syntype, RMNH.MAM.18875 (Jentink 1888: 87 *d*), male, mounted skin and skull. Loc.: Lisse, The Netherlands. Leg.: [C.J. Temminck], 1836.

Syntype, RMNH.MAM.18876 (Jentink 1888: 87 *e*), juvenile, sex unknown, mounted skin and skull. Loc.: Lisse, The Netherlands. Leg.: [C.J. Temminck], June 1836.

Jentink (1880a) identifies these specimens as *Arvicola ratticeps* Keyserling and Blasius, 1841 and lists them under this name in his catalogues (Jentink 1887; 1888). He overlooked the description by De Selys-Longchamps from the same year in which the *Naturalis* animals were tentatively described as *A. arenicola*, pending further examination. Later this article was brought to Jentink’s attention by G.S. Miller, who suggested that *A. arenicola* and *ratticeps* might be conspecific. After further study Jentink (1907b) agreed and recognized these specimens as the types of *Arvicola arenicola* De Selys-Longchamps, 1841.

The pedestal of RMNH.MAM.18875 bears an inscription in Temminck’s handwriting: “*Arvicola* qui a dévasté les champs en Hollande dans les années 1836 et 1837”. Strangely, Jentink (1907b: 265) did not recognize this characteristic handwriting and suggested that the note had been written by De Selys-Longchamps. The latter however states that Temminck had collected these specimens. Temminck had a country house Wildlust near Lisse, where he used to spend the summer months (Susanna 1858: 60).

Pardiñas et al. (2017: 330) consider *Microtus oeconomus arenicola* (De Selys-Longchamps, 1841) to be a valid subspecies.

### ***Neodon sikimensis* Horsfield, 1851**

This name was first published by Horsfield (1849: 203) as a *nomen nudum*, the description followed in 1851 (Horsfield 1851: 146). This description was based on a single specimen in the collection of the East India Company. Jentink (1888: 89) lists a specimen in *Naturalis* (RMNH.MAM.19144, mounted skin, skull in situ from Tibet by B.H. Hodgson) as type, however Horsfield describes a specimen from Sikkim, not Tibet (see also Kaneko and Smeenk 1996).

### ***Abrothrix jelskii*** (Thomas, 1894)

***Hesperomys (Habrothrix) scalops*** Thomas, 1884: 455 (nec *Oxymycterus scalops* Gay, 1847 = *Chelemys megalonyx*).

***Acodon Jelskii*** Thomas, 1894: 360.

Syntype for *scalops*, paratype for *Jelskii*, ZMA.MAM.26246, male, alcohol, skull in situ. Loc.: Junín, Peru. Leg.: C. Jelski (2), [1870-1873].

Thomas (1894) selects a specimen in the NHM as the type (NHMUK 85.4.1.44), but from the text it is clear he has more specimens before him. He furthermore refers to his article on the collections made by Jelski in Peru (Thomas 1884: 455).

In this publication Thomas (1884) lists the specimens collected by Jelski in Peru as *Hesperomys scalops* (Gay, 1884). However, this species has later been identified as *Chelemys megalonyx*. Later Thomas (1894) himself also notes the differences between the specimens from Peru and Chili and renames the specimens from Jelski.

### ***Calomys hummelincki*** (Husson, 1960)

***Baiomys hummelincki*** Husson, 1960: 34, pls VI-VII.

Holotype, RMNH.MAM.15994, female, skin and skull. Loc.: Klein Santa Martha, Curaçao. Leg.: A.B. Bitter, 5 January 1947. Ex: P. Wagenaar Hummelinck (Mus 33).

Paratypes: RMNH.MAM.15988, 16003, 16009; ZMA.MAM.1564, 1570, 2480

### ***Megalomys desmarestii*** (Fischer, 1829)(extinct)

***M(us) Desmarestii*** Fischer, 1829: 316 (nomen novum).

***Mus pilorides*** Desmarest, 1826: 483 (nec Pallas, 1778).

Syntype, RMNH.MAM.21287 (Jentink 1888: 80 a), male, mounted skin and incomplete skull. Loc.: Martinique. Leg.: A. Plée, [1820-1821]. Ex: MNHN, 1825.

Jentink (1888) records this specimen as “*Megalomys pilorides* Pallas”. Apparently, he had overlooked Fischer’s synopsis, in which the species was identified with “*M. pilorides* Desmar. in *Nouv. Dict.* XLIV. p. 483”. Desmarest (1826) does not state whether he has more than one specimen and implicitly gives Martinique as its provenance. Fischer (1829) recognizes that Desmarest’s name was preoccupied by *Mus pilorides* Pallas, 1778 from Ceylon, so he renames the species *Mus Desmarestii*. Fischer worked in Naturalis and obviously had this specimen available when compiling his work. It was received from the MNHN in 1825, so was among the material collected by Plée and seen by Desmarest some years earlier. Thus it is a syntype of *Mus pilorides* Desmarest, 1826 and of *Mus desmarestii* Fischer, 1829.

Plée collected in Martinique between May 1820 and February 1821, and again in 1825; he died on the island in November of that year. His collections were sent to the MNHN (Raymond 1957: 193-201). RMNH.MAM.21287 must have been collected during his first sojourn in Martinique.

### ***Oryzomys nitidus*** (Thomas, 1884)

***Hesperomys laticeps, var. nitidus*** Thomas, 1884: 452, pl. XLII fig. 1.

Paralectotype, ZMA.MAM.16884, female, skull. Loc.: Junín, Junín Dept., Peru. Leg: C. Jelski (14), 1870-1873. Ex: NHM (O. Thomas).

Thomas (1884) mentions 18 specimens in his description, however he doesn't select a type. Some years later Thomas (1927: 549) designates a lectotype in the NHM (NHMUK 85.4.1.41).

## Muridae Illiger, 1811

### *Acomys dimidiatus* (Cretzschmar, 1826)

***Mus dimidiatus*** Cretzschmar, 1826: 37, tab. 13 fig. b.

Possible paralectotype, RMNH.MAM.26499 (Jentink, 1887: 213 a; 1888: 68 a), sex unknown, mounted skin and skull. Loc.: Egypt. Leg.: E. Rüppell.

Possible paralectotypes: RMNH.MAM.26500, 26501.

Jentink (1887; 1888) does not list these specimens as types and their tpestatus is uncertain. The species was described based on material collected by Rüppell in the Sinai and surroundings, later also in Nubia (Cretzschmar 1826: 38). The pedestals of two of the Naturalis animals read, in Temminck's handwriting: "Rupp Atlas tab 13 f a Egypte". They can only belong in the type series if they were collected during the first part of Rüppell's first expedition, between January 1822 and July 1825; in 1822 Rüppell collected in Egypt and Sinai, and in January 1823 travelled further south into Sudan. Results of this part of the expedition were published by Cretzschmar before Rüppell's return to Germany (Mertens 1949: 29-50). It cannot be reconstructed whether our specimens were indeed collected in Egypt in 1822, or are from later expeditions. They are not mentioned in the lists of exchanges between Naturalis and SMF.

Mertens (1925: 25) designates a specimen in the SMF (SMF 4321) the lectotype.

### *Lophuromys sikapusi* (Temminck, 1853)

***Mus sikapusi*** Temminck, 1853: 160.

Syntype, RMNH.MAM.25734 (Jentink 1888: 52 a; 1887: 206 a), adult female, mounted skin and skull. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.25735 (Jentink 1888: 52 c), juvenile female, mounted skin, skull in situ. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Syntype, RMNH.MAM.25736 (Jentink 1888: 52 d), juvenile, sex unknown, mounted skin, skull extracted but not in collection. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel.

### *Gerbilliscus afra* (Gray, 1830)

***Gerbillus Afra*** Gray, 1830: 10.

***Mus sericeus*** "Temminck" Gray, 1830: 10.

***Meriones schlegelii*** Smuts, 1832: 41.

Syntype, RMNH.MAM.26610 (Jentink 1888: 49 e), adult, sex unknown, mounted skin, skull in situ. Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok.

Syntype, RMNH.MAM.26611 (Jentink 1888: 49 f), adult, sex unknown, mounted skin, skull in situ. Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok.

Syntype, RMNH.MAM.26612 (Jentink 1888: 49 g), juvenile, sex unknown, mounted skin, skull in situ. Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok.

Syntype, RMNH.MAM.26621 (Jentink 1887: 204 a), adult, sex unknown, skeleton. Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok.

Syntype, RMNH.MAM.26622 (Jentink 1887: 204 b), adult, sex unknown, skeleton. Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok.  
Syntype, RMNH.MAM.39357 (Jentink 1888: 49 k), juvenile, sex unknown, alcohol. Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok.

In his description of *Gerbillus afra*, Gray (1830) refers to specimens in Naturalis with the manuscript name *Mus sericeus* Temminck. We have found no subsequent use of *Mus sericeus* to validate this name and it is therefore not available. However, by referring to the specimens in Naturalis with this name, they are provisionally included in the type series of *Gerbillus Afra* Gray, 1830.

Smuts (1832: 44 cited as *cericeus*) also refers to the manuscript name by Temminck as a synonym for *Gerbillus afra* Gray 1830. Smuts (1832) introduces his new species *Meriones schlegelii*, but is uncertain about its status as in a footnote on p. 44, he seems to question whether it might be the same species as *Gerbillus afra*. It is however unclear to what part of the text this footnote refers to.

According to Smuts (1832: 45) the first reported specimen of this species originated from Port Elisabeth. None of the specimens listed in Jentink (1887; 1888) are from Port Elisabeth. It is unclear whether this specimen is preserved.

### ***Gerbilliscus robustus*** (Cretzschmar, 1826)

***Meriones macropus*** Von Heuglin, 1864: 9.

Syntype, RMNH.MAM.26604 (Jentink 1888: 48 a), adult male, mounted skin, skull in situ. Loc.: Bongos, Bahr el Ghazal, South-Sudan. Leg.: Th. von Heuglin, January 1863. Received 1865.  
Syntype, RMNH.MAM.26605 (Jentink 1888: 48 b), adult, sex unknown, mounted skin, skull in situ. Loc.: Bongos, Bahr el Ghazal, South-Sudan. Leg.: Th. von Heuglin, December 1863. Received 1865.

Dieterlen et al. (2013: 297) erroneously list a specimen in the SMNS (SMNS 1098) as holotype, as Von Heuglin does not nominate types and gives no indication of the number specimens available to him. Dieterlen et al. is published after 2000, so the mere use of the term holotype does not constitute a valid lectotype designation (ICZN art. 74.7). We therefore list these specimens as syntypes.

***Psammomys obesus*** Cretzschmar, 1828: 58, tab. 22, 23.

Paralectotype, RMNH.MAM.26593 (Jentink 1887: 205 a; 1888: 50 a), sex unknown, mounted skin and incomplete skull. Loc.: [Alexandria], Egypt. Leg.: E. Rüppell, [summer 1822]. Ex: SMF.  
Paralectotypes: RMNH.MAM.26596–26599.

Cretzschmar (1828: 59) writes that Rüppell has sent several specimens of this new species. Rüppell stayed in Alexandria in January-February and again in the late summer of 1822, leaving in October of that year (Mertens 1949: 30, 34, 300-301). During his second expedition, he was in Alexandria in January 1831, where he made additional observations of this species and collected one more specimen (Mertens 1949: 54, 343). We can therefore assume that our animals were obtained in the summer of 1822. However, only two specimens are mentioned in a list of an exchange by the SMF to Naturalis dated 6 June 1828 preserved in the archives of Naturalis, so that the third specimen might be the animal collected in 1831. This cannot be traced and therefore all our skins are included in the type series here. Jentink does not mention the skulls without skins, labelled "Egypt", as types, but it seems likely that these were taken from the two skins lacking skulls. Therefore, they are included in the type series here.

Mertens (1925: 26) designates a specimen in the SMF (SMF 4326) as the lectotype. See Mertens (1925: 19) for the publication dates of Cretzschmar's work.

### ***Apodemus argenteus*** (Temminck, 1844)

***Mus argenteus*** Temminck, 1844: 51.

Lectotype, RMNH.MAM.19688 (Jentink 1888: 63 b; 1887: 210 b), juvenile, sex unknown, mounted skin and skull. Loc.: Japan. Leg.: H. Bürger [1830-1834].

Paralectotype, RMNH.MAM.24211–24212 (= *Apodemus speciosus*).

The lectotype of *Apodemus argenteus* is the only specimen of the type series which actually belongs to this species. The paralectotypes have been identified as juvenile specimens of *Apodemus speciosus* (Temminck, 1844) by Smeenk et al. (1982: 126). They also designated the lectotype. However, they missed the earlier lectotype designation by Tate (1940: 7), who selected RMNH.MAM.24211 the lectotype by listing it as the type. As Tate however states not having seen the other specimens and RMNH.MAM.24211 does not belong to *Apodemus argenteus*, we follow the lectotype designation by Smeenk et al. (1982).

In the detailed cargo lists compiled by Bürger in the Naturalis archives several shipments with "Mus" specimens are recorded between December 1830 and November 1834 (see for the list Smeenk et al. 1982: pl. 4).

### ***Apodemus speciosus*** (Temminck, 1844)

***Mus speciosus*** Temminck, 1844: 52.

Syntype, RMNH.MAM.19686 (Jentink 1888: 63 a; 1887: 210 a), adult, sex unknown, mounted skin and skull. Loc.: Japan. Leg.: H. Bürger [1830-1834].

Syntype, RMNH.MAM.19687 (Jentink 1888: 63 b; 1887: 210 a), adult, sex unknown, mounted skin and skull. Loc.: Japan. Leg.: H. Bürger [1830-1834].

Smeenk, in his draft of this catalogue, lists RMNH.MAM.19686 as lectotype and RMNH.MAM.19687 as paralectotype. We have not been able to find the reference for this lectotype designating and therefore list these specimens as syntypes.

### ***Arvicanthis rufinus*** (Temminck, 1853)

***Mus rufinus*** Temminck, 1853: 163.

Syntype, RMNH.MAM.19207 (Jentink 1888: 70 a; 1887: 214 a), adult, sex unknown, mounted skin and skull. Loc.: St. George d'Elmina, Côte d'Or [Ghana]. Leg.: H.S. Pel.

Temminck (1853) mentions having two specimens; only one specimen is still present in Naturalis.

### ***Bandicota bengalensis*** (Gray, 1835)

***Gunomys bengalensis sundavensis*** Kloss, 1921b: 116.

Syntype, RMNH.MAM.9825, adult male, skin and skull. Loc.: Olee-Lheuë, Atjeh, Indonesia. Leg.: "Gouv. veearts", 22 September 1916. Ex: MZB (MZB 222).

Syntype, RMNH.MAM.9826, semi-adult female, skin and skull. Loc.: Olee-Lheuë, Atjeh, Indonesia. Leg.: "Gouv veearts", 22 September 1916. Ex: MZB (MZB 221).

The label on RMNH.MAM.39361 (adult female from Sumatra, collected 24 December 1914) mentions 'paratype', Kloss however in his description mentions only two syntypes. The specimens were collected by "Gouv. veearts" meaning the governmental veterinary.

### ***Chiruromys lamia*** (Thomas, 1897)

***Pogonomys lamia*** Thomas, 1897: 615.

Thomas (1897) nominates two syntypes ("co-types") in his article and refers to the remaining material as "paratypes". In his introduction (p. 607) he specifically mentions that one of the types is deposited in Genua, the other in the NHM and although he fails to specify the individual specimens, we assume that the types are still there. He has a series of seven specimens (a-g) available at the time of description of this species, but apart from the two syntypes these are excluded from the type series, including a specimen in Naturalis (RMNH.MAM.18690, from Ighiberei, New Guinea collected by L. Loria in 1890, Ex: Museo Civico di Storia Naturale "Giacomo Doria", 1898).

### ***Grammomys dolichurus*** (Smuts, 1832)

***Mus dolichurus*** Smuts, 1832: 38.

Lectotype, RMNH.MAM.19511 (Jentink 1888: 70 a), adult, sex unknown, relaxed mount, skull extracted (see remark). Loc.: 'Cap' (South Africa). Leg.: H.B. van Horstok. Paralectotypes: RMNH.MAM.19512, 26543, 26544.

Jentink (1888: 70) lists RMNH.MAM.19511 as the type, thereby designating it the lectotype for *Mus dolichurus* Smuts, 1832. The skulls of RMNH.MAM.19511 and 19512 are extracted, but not present in Naturalis. There is the possibility that the skull and skeleton here listed as separate specimens, are in fact derived from the two skins.

### ***Hybomys trivirgatus*** (Temminck, 1853)

***Mus trivirgatus*** Temminck, 1853: 159.

Syntype, RMNH.MAM.19508 (Jentink 1888: 70 a), semi-adult, sex unknown, mounted skin, skull in situ. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel.

### ***Hydromys hussoni*** Musser & Piik, 1982: 156.

Holotype, RMNH.MAM.29140, male, skin and skull. Loc.: Enarotali, Lake Paniai, Wissel Lakes, New Guinea, Indonesia. Leg.: H. Boschma (0126), 9 November 1939, K.N.A.G. Central New Guinea Expedition 1939. Paratypes: RMNH.MAM.29141–29175, 29177–29179, 29740–29752.

See for the localities Boschma (1943: 507). Most specimens were obtained by Boschma from local hunters. One of the specimens referred to by Musser and Piik (1982) was exchanged with the Australian Museum in 1987 (RMNH.MAM.29176, a female from Enarotali from 1 Oktober 1939, fieldnr. 1479/3853).

### ***Kadarsanomys sodyi*** (Bartels, 1937)

***Rattus canus sodyi*** Bartels, 1937a: 45.

Holotype, RMNH.MAM.13595, adult female, skin and skull. Loc.: S.W. slopes of Mts. Pangrango-Gede, West Java, Indonesia. Leg.: M. Bartels Jr., 18 October 1933. Ex: coll. Bartels (580), June 1954.

In his description Bartels (1937a) lists nine specimens and mentions having examined seventeen, all from the type locality, but he restricts the type series to the holotype, now in Naturalis, and two paratypes (MZB 5020 and 5083) in the MZB.

This species is also the type species for the genus *Kadarsanomys* Musser, 1981.

### ***Komodomys rintjanus*** (Sody, 1941)

***Rattus rintjanus*** Sody, 1941: 310.

Holotype, RMNH.MAM.9801, adult male, skin and skull. Loc.: Lohoboraja [Loh Buaya], Pulau Rintja, Indonesia. Leg.: J.K. de Jong, 8 November 1929. Ex: MZB (MZB 2405).

### ***Lemniscomys rosalia*** (Thomas, 1904)

***Mus spinalis*** "Sundevall" Jentink, 1888a: 70.

Jentink (1888: 70) lists a specimen (RMNH.MAM.19509, from South Africa by C.J. Sundevall) as one of the types of *Mus spinalis* Sundevall in the synonymy of *Mus dorsalis*. However until now we haven't been able to find any reference to this name or subsequent use found to validate this name. Later Thomas (1916: 69) introduces *Lemniscomys griselda spinalis* as a replacement for *Mus dorsalis* A. Smith, 1845, preoccupied by *Sicista dorsalis* G. Fischer, 1814.

### ***Lenomys meyeri*** (Jentink, 1879)

***Mus Meyeri*** Jentink, 1879a: 12.

Holotype by monotypy, RMNH.MAM.18302 (Jentink 1887: 211 a; 1888: 65 a), sex unknown, mounted skin (missing) and skull. Loc.: Langoan, Sulawesi, Indonesia. Leg.: S.C.J.W. van Musschenbroek, September 1875.

This is also the type species for the genus *Lenomys* Thomas, 1898.

### ***Leopoldamys sabanus*** (Thomas, 1887)

***Echimys macrourus*** "Temminck" Jentink, 1879d: 97.

Holotype by monotypy, RMNH.MAM.17215 (Jentink 1888: 101 a), juvenile, sex unknown, mounted skin, skull extracted, but not in collection. Loc.: "Suriname" [= West Sumatra, Indonesia. Leg.: S. Müller, 1833-1836].

The pedestal of this specimen reads, in C.J. Temminck's handwriting: "Echimys macrourus Temm Sp Nov par Dippering Surinam", this manuscript name and provenance were published much later by Jentink (1879d). Husson (1963: 37-40), however, demonstrated that the animal does not belong in the American family Echimyidae, and identified it with the Southeast Asian *Rattus sabanus* Thomas, 1887. Apparently a specimen in Naturalis collected in Sumatra had become mixed up with material from Suriname collected by H.H. Dieperink (misspelt "Dippering" by Temminck), who worked in that country between 1816 and 1836. The animal most probably was collected by S. Müller, who travelled in western Sumatra between January 1833 and July 1836.

### ***Lorentzimys nouhuysii* Jentink, 1911.**

***Lorentzimys Nouhuysii* Jentink, 1911b: 165, 174.**

Holotype by monotypy, RMNH.MAM.29280, adult male, skin and skull. Loc.: "Bivak II", New Guinea, Indonesia, alt. 400 m. Leg.: H.A. Lorentz (319), 10 October 1909, Second South New-Guinea Expedition 1909-1910.

The exact locality of Bivouak II cannot be traced, however on 12 October 1909 the expedition reached Bivouac IV (Peramelas Bivak) situated 4°34' S, 138°42' E on the Van der Sande River (Holthuis 1974: 15).

This is also the type species for the monotypic genus *Lorentzimys* Jentink, 1911.

### ***Margaretamys beccarii* (Jentink, 1880)**

***Mus beccarii* Jentink, 1880b: 11 (nomen novum).**

***Mus leucopus* Jentink, 1879a: 8 (nec Gray, 1867).**

Lectotype, RMNH.MAM.18305 (Jentink 1887: 212 a; 1888: 66 a), adult, sex unknown, relaxed mount and skull. Loc.: Menado-Langowan, Sulawesi, Indonesia. Leg.: S.C.J.W. van Musschenbroek, September 1875. Received 1877.  
Paralectotype: RMNH.MAM.18306.

The nomenclatural history of these taxa is very confusing and with it the selection of the type material. Jentink (1879a: 8) uses the name *Mus leucopus* Gray, 1867 to describe the specimens listed above as types for *Mus beccarii*, despite the remark by Alston (1877: 124) that this name is preoccupied by *Mus leucopus* Rafinesque. Jentink states that Gray placed his *leucopus* in *Acanthomys*, not in *Mus*. In reply Alston (1879: 645) reexamines the types for *Acanthomys leucopus* Gray, 1867 and separates the specimens from Australia and renames them as *Mus terrae-reginae*, referring to the description of Jentink (in part). By doing so he leaves Jentink's *Mus leucopus* available for the material from Sulawesi, nevertheless Jentink (1880b) renames it to *Mus beccarii*. This name is now treated as the valid name for this taxon by Wilson and Reeder (2005: 1359) and they list *Mus leucopus* Jentink, 1879 (not Gray, 1867) as a synonym.

Jentink (1888: 66; *terrae-reginae*, cat. a) lists a specimen from Aru collected by Von Rosenberg as the type for *Mus leucopus* Jentink. This specimen is mentioned in his 1880 description of *Mus beccarii*, but as agreeing with the description of *Mus terrae-reginae* by Alston and used as an illustration of the wide distribution of species of *Mus*. Because this specimen doesn't feature in the original description of *Mus leucopus* (Jentink 1879), it is not a type.

Musser (1971b: 153) designates the lectotype because of the better agreement of this specimen with the measurements given by Jentink. This is also the type species for the genus *Margaretamys* Musser, 1981.

***Rattus thysanurus* Sody, 1932b: 157.**

Holotype, RMNH.MAM.21235, adult female, skin and skull. Loc.: Toemaratas, Sulawesi, Indonesia. Leg.: H. Witkamp, 1932. Ex: H.J.V. Sody (P.59).

### ***Mastomys erythroleucus*** (Temminck, 1853)

***Mus erythroleucus*** Temminck, 1853: 160.

Syntype, RMNH.MAM.19206 (Jentink 1887: 214 a; 1888: 70 a), adult, sex unknown, mounted skin and skull. Loc.: Côte d'Or [Ghana]. Leg.: H.S. Pel.

Although Temminck (1853) only gives the measurements for one specimen and there is only one specimen in the Jentink catalogues, we still list this as a syntype for we have no certainty that there only was one specimen available.

### ***Mastomys natalensis*** (A. Smith, 1834)

***Mus illovoensis*** Jentink, 1909b: 240, 248.

Holotype, RMNH.MAM.27425, adult male, skin (missing) and skull. Loc.: Natal, lower Illovo River, South Africa. Leg.: M. Weber (227), [1894].

Weber visited South Africa in 1894 (Pieters and De Visser 1993).

### ***Maxomys bartelsii*** (Jentink, 1910)

***Mus bartelsii*** Jentink, 1910: 69.

Holotype by monotypy, RMNH.MAM.18329, adult, sex unknown, skin and skull. Loc.: Pangerango, Java, Indonesia. Leg.: M. Bartels, April 1903. Received September 1909.

This is also the type species for the genus *Maxomys* Sody, 1936.

***Rattus bartelsi* [sic] *tjibuniensis*** Sody, 1933: 430.

Holotype, RMNH.MAM.21343, adult male, skin and skull. Loc.: Tjiboeni (Cibuni), Bandung, Java, Indonesia. Leg.: M. Bartels Jr., 20 August 1932. Ex: H.J.V. Sody (Tjib.52).  
Paratypes: RMNH.MAM.21344–21362.

Sody (1933) examines 22 specimens.

***Rattus bartelsii obscuratus*** Bartels, 1938: 323.

Holotype, RMNH.MAM.14147, adult male, skin. Loc.: G. Slamet, Java, Indonesia. Leg.: M. Bartels Jr. and P.J. Bouma (SI.37), 26 August 1933. Ex: coll. Bartels, June 1954.  
Paratypes: RMNH.MAM.13207, 13528, 13529, 13547, 13582, 13583, 13758, 13841, 13998, 14140, 14145, 14146, 14148, 14150–14151, 14200–14203, 22914–22919.

According to Bartels (1938) the holotype was preserved as a skin and skull. However only the skin was received in June 1954, when the Bartels collection was acquired for the Naturalis collection.

### ***Maxomys hellwaldii*** (Jentink, 1879)

***Mus Hellwaldii*** Jentink, 1879a: 11.

Lectotype, RMNH.MAM.18307 (Jentink 1887: 212 a; 1888: 65 a), sex unknown, mounted skin and skull. Loc.: Langoan, Sulawesi, Indonesia. Leg.: S.C.J.W. van Musschenbroek, September 1875.  
Paralectotype: RMNH.MAM.18308.

Jentink (1887: 212) designates the lectotype.

***Rattus hellwaldii griseogenys* Sody, 1941: 305.**

Holotype, RMNH.MAM.9792, adult female, skin and skull. Loc.: Masembo River, Sulawesi, Indonesia, alt. 550 m. Leg.: G. Heinrich, 26 January 1932 (Heinrich-Expedition 1931, nr. 843). Ex: American Museum of Natural History. Ex: MZB (MZB 93/41; 4091).

Sody (1941) refers to two female specimens in his description. The paratype is not in Naturalis.

***Maxomys musschenbroekii* (Jentink, 1879)**

***Mus Musschenbroekii* Jentink, 1879a: 10.**

Lectotype, RMNH.MAM.21070 (Jentink 1887: 212 a; 1888: 66 a), sex unknown, mounted skin and incomplete skull. Loc.: Langoan, Sulawesi, Indonesia. Leg.: S.C.J.W. van Musschenbroek, September 1875.

Paralectotype: RMNH.MAM.21071.

Jentink (1887: 212) designates the lectotype.

***Rattus musschenbroekii lalawora* Sody, 1941: 305.**

Holotype, RMNH.MAM.9791, adult female, skin and skull. Loc.: Tanke Salokko, Sulawesi, Indonesia. Leg.: G. Heinrich, 23 December 1931 (Heinrich-Expedition 1931, nr. 682). Ex: American Museum of Natural History. Ex: MZB (MZB 94/41; 4093).

***Maxomys rajah* (Thomas, 1894)**

***Rattus rajah hidongis* Kloss, 1921b: 122.**

Holotype, RMNH.MAM.9804, adult female, skin and skull. Loc.: Serasan, Natuna Isl., Indonesia. Leg.: posthouder, 12 August 1916 (185). Ex: MZB (MZB 285).

Kloss (1921b) refers to this specimen with the number 185, an error for 285. The "posthouder" is the local representative of the government, we don't know his name.

***Maxomys surifer* (Miller, 1900)**

***Rattus rajah verbeeki* Sody, 1930b: 130.**

Holotype, RMNH.MAM.22452, adult male, skin and skull. Loc.: Gedangan, Java, Indonesia. Leg.: F.A.Th.H. Verbeek, 10 December 1929. Ex: H.J.V. Sody (I).

Paratype: RMNH.MAM.22453.

***Rattus surifer solaris* Sody, 1934: 170.**

Holotype, RMNH.MAM.22478, adult female, skin and skull. Loc.: Situ Gunung, Gunung Gedeh, Java, Indonesia. Leg.: M. Bartels Jr. (SG.169), Jan.-June 1933. Ex: H.J.V. Sody.

Paratypes: RMNH.MAM.22479–22488.

***Maxomys whiteheadi* (Thomas, 1894)**

***Rattus whiteheadi coritzae* Sody, 1941: 299.**

Holotype, RMNH.MAM.9795, adult female, skin and skull. Loc.: Kp. Riam distr., Kotawaringin, Borneo, Indonesia. Leg.: J.J. Menden, 1 November 1935. Ex: MZB (MZB 5682; 83/36), 12 January 1950.

Sody (1941) examines eight specimens in his description, of which only the holotype is in *Naturalis*. This specimen is a female and not a male (error on Sody's label on skin in *Naturalis*).

### ***Melomys leucogaster*** (Jentink, 1909)

***Pogonomys leucogaster*** Jentink, 1909a: 3.

Lectotype, RMNH.MAM.25493, adult female, skin and skeleton. Loc.: Alkmaar, Irian Jaya, Indonesia. Leg.: H.A. Lorentz (119), Eerste Zuid Nieuw-Guinea Expeditie 1907, 11 August 1907. Paralectotypes: RMNH.MAM.29267–29269.

Some sources (Wilson and Reeder 2005: 1378; Denys et al. 2017: 697) date the publication of this name in 1908, based on October 1908 as the the date in the header of the article. However the first issue of *Nova Guinea* 9 was published in 1909.

The lectotype was designated by Rümmler (1938: 103) by listing RMNH.MAM.25493 as “Typus”. Menzies (1996: 405) has probably overseen this lectotype designation and refers to this specimen as “Holotype”.

### ***Melomys rufescens*** (Alston, 1877)

***Pogonomys sexplicatus*** Jentink, 1907a: 366.

Holotype by monotypy, RMNH.MAM.29281, adult pregnant female, flat skin and skeleton. Loc.: Sentani meer, Indonesia. Leg.: C.E.A. Wichmann, 2 April 1903, Noord Nieuw-Guinea Expeditie (1903) (Humboldt Bay Expedition).

***Melomys rufescens wisselensis*** Menzies, 1996: 404.

Holotype, RMNH.MAM.29205, adult male, skin and skull. Loc.: Arabu River (Araboe bivouac), New Guinea, Indonesia. Leg.: H. Boschma (1615/3833), 4 November 1939, K.N.A.G. Central New Guinea Expedition 1939. Paratypes: RMNH.MAM.29184–29193, 29200–29204, 29206–29209, 29212, 29213, 29216.

Denys et al. (2017: 698) treat *Melomys rufescens wisselensis* Menzies, 1996 as a valid subspecies.

### ***Mus caroli*** Bonhote, 1902

***Mus musculus ouwensi*** Kloss, 1921b: 120.

Holotype, RMNH.MAM.9820, adult male, skin and skull. Loc.: Probolinggo, Java, Indonesia. Leg.: Lim King Siang, 13 February 1915. Ex: MZB (MZB 237), 12 January 1950. Paratypes: RMNH.MAM.39362–39364.

Kloss (1921b) writes having examined 17 specimens, of which four are in *Naturalis*. Corbet and Hill (1992) include this taxon tentatively in *Mus caroli*, although the form from Java has some features which differ from the other forms of *Mus caroli*.

### ***Mus musculoides*** Temminck, 1853

***Mus musculoides*** Temminck, 1853: 161.

Holotype by monotypy, RMNH.MAM.26521 (Jentink 1888: 73 a), sex unknown, mounted skin, skull in situ. Loc.: “Côte de Guinée” [Ghana]. Leg.: H.S. Pel, [1841-1850].

## ***Mus musculus*** Linnaeus, 1758

### ***Mus molossinus*** Temminck, 1844: 51.

Syntype, RMNH.MAM.18824 (Jentink 1887: 209 f, 1888: 60 o), adult female, mounted skin and skull.  
Loc.: Japan.

Yonekawa et al. (1988) conclude that this taxon is a hybrid between *Mus musculus musculus* and *Mus musculus castaneus*, based on mtDNA.

### ***Mus wagneri rotans*** Drooglever Fortuyn, 1912: 189.

Syntype, ZMA.MAM.27233, sex unknown, alcohol and skull. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27234, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27235, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27236, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27237, sex unknown, alcohol and skull. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27238, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27239, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27240, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27241, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.  
Syntype, ZMA.MAM.27242, sex unknown, alcohol. Loc.: Amsterdam, The Netherlands (bred in captivity). Leg.: A.B. Drooglever Fortuyn.

Drooglever Fortuyn (1912: 184) gives measurements for 11 specimens. Bergmans (2011: 838) refers to 10 type specimens for this name (ZMA.MAM.27233 – 27242). They were found in a jar labelled "Typen/ *Mus wagneri* varietas *rotans* Droogl. Fort./Japansche Dansmuis" However 19 more specimens (ZMA.MAM.27184 – 27203) are present in the collection; we don't include these in the type series. The paper by Cruz, announced by Bergmans (2011: 838), is still in prep., so a lectotype has never been designated. Therefore we list all the above specimens as syntypes.

Ten of the specimens available to Drooglever Fortuyn were imported from Vienna, Austria by C. Kerbert (then director of the NAM) and one was bred by C.U.A. Zwaardemaker in Utrecht (Drooglever Fortuyn 1912).

### ***Mus musculus fredericae*** Sody, 1933: 438.

Holotype, RMNH.MAM.22618, adult female, skin and skull. Loc.: Poso, Sulawesi, Indonesia. Leg.: H. Witkamp, 1932. Ex: H.J.V. Sody (PO.164).  
Paratypes: RMNH.MAM.22619–22625.

## ***Niviventer cremoriventer*** (Miller, 1900)

### ***Rattus cremoriventer sumatrae*** Bartels 1937b: 123.

Holotype, RMNH.MAM.23174, adult male, skin and skull. Loc.: Bandjarnegri, Sumatra, Indonesia.  
Leg.: M. Bartels Jr. and Ch. Berkholtz, 2 July 1935. Ex: M. Bartels (S.180)  
Paratype: RMNH.MAM.23175.

In his paper Bartels (1937b) indicated that he would send the paratype (S.161) to the MZB. It is, however, present in Naturalis.

***Niviventer fraternus*** (Robinson & Kloss, 1916)

***Rattus rapit atchinensis*** Sody, 1941: 295.

Holotype, RMNH.MAM.9803, adult male, skin and skull. Loc.: Paja Toong Kalan, Atjeh, N. Sumatra, Indonesia. Leg.: Madzoed and H.R. Rookmaker, 9 September 1930. Ex: MZB (MZB 3156).

Sody (1941) examines six specimens, only the holotype is in Naturalis.

***Niviventer fulvescens*** (Gray, 1847)

***Mus caudator*** Hodgson, 1849a: 203.

Syntype, RMNH.MAM.19198 (Jentink 1888: 62 a), adult, sex unknown, mounted skin, skull in situ. Loc.: Tibet. Leg.: B.H. Hodgson.

***Rattus lepturus besuki*** Sody, 1931a: 214.

Holotype, RMNH.MAM.21311, adult female, skin and skull. Loc.: Ongop-ongop, Java, Indonesia, alt. 1850 m. Leg.: K.W. Dammerman, 18 May 1924. Ex: H.J.V. Sody (Z.1). Ex: Museum Zoologicum Bogoriense.

Paratype: RMNH.MAM.21312.

***Rattus bukit baturus*** Sody, 1932a: 334.

Holotype, RMNH.MAM.21313, adult male, skin and skull. Loc.: G. Agoeng, Bali, Indonesia. Leg.: A. Samat, 30 July 1930. Ex: H.J.V. Sody (E. 101).

Paratypes: RMNH.MAM.21314, 21315.

Another specimen in Naturalis (RMNH.MAM.21316) is not included in the typeseries as it was only later identified as *Rattus bukit baturus* (Becking 1989: 60).

***Rattus bukit lepturoides*** Sody, 1934: 174.

Holotype, RMNH.MAM.21317, adult female, skin and skull. Loc.: G. Lawoe, Java, Indonesia. Leg.: M. Bartels Jr. and H.J.V. Sody (L.13), 14 June 1933.

Paratypes: RMNH.MAM.21318–21321.

***Rattus bukit jacobsoni*** Bartels, 1937b: 121.

Holotype, RMNH.MAM.23540, adult male, skin and skull. Loc.: "De Giesting", G. Tanggamoos, Sumatra, Indonesia. Leg.: M. Bartels Jr. and Ch. Berkholst, 18 June 1935. Ex: Coll. Bartels (S.30).

Paratypes: RMNH.MAM.13811, 23541.

Bartels (1937b) specifically mentions two paratypes (his S 135 and S 140), at that time housed in the MZB. These paratypes are now in Naturalis. All other specimens mentioned in his description are present in Naturalis, but not part of the type series.

***Rattus bukit lieftincki*** Chasen, 1939b: 208.

Holotype, RMNH.MAM.9798, adult female, skin and skull. Loc.: Atang Poetar, Atjeh, Indonesia. Leg.: A. Hoogerwerf, 12 April 1937, N. Sumatra Expedition Atjeh I-V 1937. Ex: MZB (MZB 5583; 478/37).

Chasen (1939b) examined 14 specimens for his description, but only the holotype is in Naturalis. For a report and map of this expedition see Hoogerwerf, 1939.

### ***Niviventer lepturus*** (Jentink, 1880)

***Mus lepturus*** "Temminck" Jentink, 1880c: 17.

Holotype by monotypy, RMNH.MAM.18321 (Jentink 1887: 211 a; 1888: 64 a), adult, sex unknown, mounted skin and skull. Loc.: Java, Indonesia.

***Rattus lepturus fredericae*** Sody, 1931a: 212.

Holotype, RMNH.MAM.21405, adult male, skin and skull. Loc.: G. Salak, Java, Indonesia. Leg.: A. Samat, 20 June 1931. Ex: H.J.V. Sody (A.188).  
Paratypes: RMNH.MAM.21406–21416.

***Rattus lepturus maculipectus*** Sody, 1934: 173.

Holotype, RMNH.MAM.21445, adult female, skin and skull. Loc.: Gunung Cereme, Java, Indonesia. Leg.: H.J.V. Sody and M. Bartels Jr. (K.20), 7 June 1933.  
Paratypes: RMNH.MAM.21446, 21467.

Sody's material consisted of twenty-five specimens (Sody 1934), all specimens except two are in Naturalis.

### ***Papagomys armandvillei*** (Jentink, 1892)

***Mus armandvillei*** Jentink, 1892a: 79.

Holotype, RMNH.MAM.18301 (1024), adult female, skin and skeleton. Loc.: Flores, Sikka, Indonesia. Leg.: C.J.F. le Cocq d'Armandville, 1889. Ex: M. Weber.

The type was originally sexed as male, but this was later corrected to female. This is also the type species for the genus *Papagomys* Sody, 1941.

### ***Paramelomys lorentzii*** (Jentink, 1909)

***Pogonomys lorentzii*** Jentink, 1909a: 3.

Holotype, RMNH.MAM.25494, adult female, skin and skeleton. Loc.: Resi kamp, Lorentz River, Papua, Indonesia. Leg.: H.A. Lorentz, September 1907, First South New Guinea Expedition 1907 (132).

Some sources (Wilson and Reeder 2005: 1432; Denys et al. 2017: 703) date the publication of this name in 1908, based on the date October 1908 in the header of the article, however the first livraison of Nova Guinea 9 was published in 1909.

Jentink described this specimen as a female, although the field label clearly says male. Rümmler (1938: 139), who states he has studied the specimen, also lists this specimen as a female.

### ***Paramelomys platyops*** (Thomas, 1906)

***Melomys platyops mamberanus*** Sody, 1937: 218.

Holotype, RMNH.MAM.22491, adult male, skin and skull. Loc.: Pionier bivak, Mamberamo River, New Guinea, Indonesia. Leg.: W.C. van Heurn (28), 15 July 1920, N. Guinea Expedition 1920. Ex: H.J.V. Sody.  
Paratypes: RMNH.MAM.22492, 22493.

***Paruromys dominator*** (Thomas, 1921)

***Taeromys dominator ursinus*** Sody, 1941: 312.

Holotype, RMNH.MAM.9823, adult male, skin and skull. Loc.: Wawa Karaeng, Mt. Lompobatang, Sulawesi, Indonesia. Leg.: G. Heinrich, 15 April 1931, Heinrich Expedition 1931, nr. 101170. Ex: MZB (MZB 5593; 92/41).

***Pogonomys loriae*** Thomas, 1897

***Pogonomys loriae*** Thomas, 1897: 613.

Thomas (1897) nominates two syntypes in his article. In his introduction (Thomas 1897: 607) he specifically mentions that one of the types is deposited in Genua, the other in the NHM and we assume these specimens are still there. Thomas bases his description on 17 specimens but apart from the two syntypes, these are excluded from the type series, including RMNH.MAM.26727 (adult male on alcohol from Haveri, New Guinea collected by L. Loria, 8 November 1893).

***Pogonomys macrourus*** (Milne-Edwards, 1877)

***Pogonomys lepidus*** Thomas, 1897: 614.

Thomas (1897) nominates two syntypes in his article and refers to the other material as paratypes. This is however not in accordance with the code (ICZN art 72.4.6). In his introduction (p. 607) he specifically mentions that one of the types is deposited in Genua, the other in the NHM and we assume they are still there. He had a larger series available at the time of description, but these are excluded from the type series, including RMNH.MAM.26726 (adult male on alcohol from Haveri, New Guinea collected by L. Loria, November 1893).

***Pseudomys australis*** Gray, 1832

***Mus lineolatus*** Gould, 1845: 77.

Paralectotype, RMNH.MAM.20347 (Jentink 1887: 213 a; 1888: 67 b), adult, sex unknown, mounted skin and skull. Loc.: Darling Plains, Australia. Ex: J. Gould.

It is doubtful that Gould himself was the collector of this specimen (as presumed by Jentink 1887; 1888) as he never reached this area of Australia. The collector could have been John Gilbert, who visited this area in 1844.

The lectotype, a specimen in the NHM (NHMUK 58.11.24.4) was designated by Thomas (1921: 432).

***Rattus adustus*** Sody, 1940

***Rattus rattus adustus*** Sody, 1940: 397.

Holotype, RMNH.MAM.9811, adult female, skin and skull. Loc.: Kiojoh, Enggano, Sumatra, Indonesia. Leg.: Saan, 15 June 1936. Ex: MZB (MZB 304/36; 5827).

***Rattus argentiventer*** (Robinson and Kloss, 1916)

***Mus rattus brevicaudatus*** Horst & De Raadt, 1918: 69.

Syntype, RMNH.MAM.63719 (formerly 118a), adult male, skin and skull. Loc.: Padang Boelan, near Medan, Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63720 (formerly 118b), adult male, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63721 (formerly 118c), adult female, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63722 (formerly 118d), adult female, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63723 (formerly 118e), adult male, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63724 (formerly 118f), adult male, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63725 (formerly 118g), adult male, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, RMNH.MAM.63726 (formerly 118h), adult female, skin and skull. Loc.: Deli, Sumatra, Indonesia. Leg.: J.J. van Loghem, 9 December 1909.

Syntype, ZMA.MAM.12751, adult female, alcohol. Loc.: Bedali, Malang, Java, Indonesia. Leg.: J.J. van Loghem (14), 1911. (= *ssp. roquei* = *Rattus tiomanicus*).

Syntype, ZMA.MAM.12752, adult male, alcohol. Loc.: Bedali, Malang, Java, Indonesia. Leg.: J.J. van Loghem (13), 1911. (= *ssp. roquei* = *Rattus tiomanicus*).

Syntype, ZMA.MAM.12753, adult female, alcohol. Loc.: Bedali, Malang, Java, Indonesia. Leg.: J.J. van Loghem (17), 1911. (= *ssp. roquei* = *Rattus tiomanicus*).

Syntype, ZMA.MAM.12754, adult male, alcohol. Loc.: Padang Boelan, Deli, Sumatra, Indonesia. Leg.: L.P. Cosquino de Bussy [1905-1917].

Syntype, ZMA.MAM.12755, adult female, alcohol. Loc.: Padang Boelan, Deli, Sumatra, Indonesia. Leg.: L.P. Cosquino de Bussy [1905-1917].

Syntype, ZMA.MAM.12756, adult female, alcohol. Loc.: Karanglo, Malang, Java, Indonesia. Leg.: J.J. van Loghem (16), 1911.

Syntype, ZMA.MAM.12757, adult pregnant female, alcohol. Loc.: Karanglo, Malang, Java, Indonesia. Leg.: J.J. van Loghem (15), 1911.

Syntype, ZMA.MAM.12758, adult female, alcohol. Loc.: Kepanjen, Malang, Java, Indonesia. Leg.: J.J. van Loghem (18), 1911.

Syntype, ZMA.MAM.12759, adult female, alcohol. Loc.: Kepanjen, Malang, Java, Indonesia. Leg.: J.J. van Loghem (18b), 1911.

Syntype, ZMA.MAM.12760, adult male, alcohol. Loc.: Kepanjen, Malang, Java, Indonesia. Leg.: J.J. van Loghem (18a), 1911.

Syntype, ZMA.MAM.12761, adult male, alcohol. Loc.: Padang Boelan, Deli, Sumatra, Indonesia. Leg.: L.P. Cosquino de Bussy [1905-1917].

When plague was diagnosed in Java in 1911, Dutch colonial health officials, led by J.J. van Loghem, tried to identify the particular species of rodents responsible for the transmission of the disease. To aid with these identifications Horst and De Raadt studied specimens of the Javan rodent species in the Naturalis collection.

They identify the type specimen of *Mus diardii* Jentink, 1880 as a Javan houserat, which until then was named *Mus rattus griseiventer* Bonhote, 1903. As Jentink's name has priority over Bonhote, the valid name for the Javan houserat should in their opinion be *Mus rattus diardii* Jentink, 1880. This leaves the Javan field(sawah)rat (until then considered to be *diardii*, see De Beaufort 1913: 32) without a name, for which Horst and De Raadt (1918) propose *Mus rattus brevicaudatus* as a new name.

Horst and De Raadt do not mention any specimens, but give measurements so they clearly must have examined specimens in the Naturalis collection. They also refer to the descriptions given by Van Loghem (1910: 1800, discussing rats collected in Sumatra by the author and De Bussy and specimens in Naturalis) and van Loghem (1912: 142, discussing rats collected by the author in Malang, Java). We therefore also include all these specimens in the type series. We excluded from the type series material collected later than 1912 (ZMA.MAM.12795-12809), although this might also have been seen by the authors.

***Rattus rattus bali*** Kloss, 1921b: 123.

Syntype, RMNH.MAM.9805, adult male, skin and skull. Loc.: Kloengkoeng, Bali, Indonesia. Leg.: 01 May 1915. Ex: MZB (MZB 199)

Syntype, RMNH.MAM.9806, adult female, skin and skull. Loc.: Laboean Amok, Bali, Indonesia. Leg.: 05 July 1915. Ex: MZB (MZB 200).

Kloss (1921b) designates two co-types, but clearly mixes up the associated data. In his description of the types he refers to a male from Laboean Amok, 5 July 1915, no. 99 and a female from Kloengkoeng, 1 May 1915, no. 100. The original labels from the MZB marked "co-type" give a female, no. 200 from Laboean Amok, 5 July 1915 (RMNH.MAM.9806) and a male, no. 199 from Kloengkoeng, 01 May 1915 (RMNH.MAM.9805).

***Rattus rattus saturnus*** Sody, 1941: 269.

Holotype, RMNH.MAM.9808, adult female, skin and skull. Loc.: Melolo, Sumba, Indonesia. Leg.: G. Stein, 15 June 1932. Ex: MZB (MZB 4943; 265/35).

***Rattus elaphinus*** Sody, 1941

***Rattus elaphinus*** Sody, 1941: 307.

Holotype, RMNH.MAM.9799, adult male, skin and skull. Loc.: Taliabu, Sulawesi, Indonesia. Leg.: J.J. Menden, 23 October 1938. Ex: MZB (MZB 4087; 347/38).

Sody (1941) bases his description on twelve specimens, only the holotype is in Naturalis.

***Rattus exulans*** (Peale, 1848)

***Mus ephippium*** "Temminck" Jentink, 1880c: 15.

Holotype by monotypy, RMNH.MAM.18345 (Jentink 1887: 211 a; 1888: 64 a), adult male, relaxed mount and skull. Loc.: Sumatra, Indonesia.

***Mus jessoock*** Jentink, 1880c: 15.

Lectotype, RMNH.MAM.19202 (Jentink 1887: 213 a; 1888: 68 a), adult female, mounted skin and skull. Loc.: Vanuatu, 'Nouvelles Hebrides', Tana. Leg.: unknown. Received 1860. Paralectotype: RMNH.MAM.19203.

In his description Jentink (1880c) mentions having two specimens. In his catalogue of 1887 (p. 213: cat. a) he lists the skull of RMNH.MAM.19202 as the type, thereby designating it the lectotype.

***Mus wichmanni*** Jentink, 1890a: 120.

Holotype, RMNH.MAM.37695, adult male, skull and alcohol. Loc.: Sikka, Flores, Indonesia. Leg.: M. Weber (518), [1 - 9 January] 1889. Paratype: ZMA.MAM.27231.

Another specimen in Naturalis (ZMA.MAM.12671, immature male from Kotting, Flores collected by Weber in November/December 1888, no. 514) is not mentioned by Jentink (1890a) and therefore not included in the type series. Weber visited Flores from 21 November 1888 until 9 January 1889.

***Epimys stragulum*** Robinson & Kloss, 1916: 274.

Paratype, RMNH.MAM.23721, male, skin, skull missing. Loc.: Mt. Kerinci, Sumatra, Indonesia. Leg.: H.C. Robinson and C.B. Kloss (6366), 6 May 1914. Ex: H.J.V. Sody.

Robinson and Kloss (1916) examine ten specimens, the holotype is in the Federated Malay States Museums (no. 482/14).

***Rattus schuitemakeri*** Sody, 1933: 431.

Holotype, RMNH.MAM.22586, adult female, skin and skull. Loc.: Pontianak, Borneo, Indonesia. Leg.: H.J.V. Sody (12), July 1932.

***Rattus concolor lassacquèrei*** Sody, 1933: 433.

Holotype, RMNH.MAM.22575, adult female, skin and skull. Loc.: Manokwari, Anggi Guyi, New Guinea, Indonesia. Leg.: G. de Lassacquère, 28 January 1933. Ex: H.J.V. Sody (N.G.51). Paratypes: RMNH.MAM.22576–22578.

***Rattus concolor manoquarius*** Sody, 1934: 175.

Holotype, RMNH.MAM.22580, adult male, skin and skull. Loc.: Amberbaki, New Guinea, Indonesia. Leg.: Z.L. Litaay, December 1932. Ex: H.J.V. Sody (N.G.57). Paratypes: RMNH.MAM.22581–22585.

***Rattus concolor malengiensis*** Sody, 1941: 281.

Holotype, RMNH.MAM.9793, adult male, skin and skull. Loc.: Malengi, Indonesia. Leg.: J.J. Menden, 29 November 1939. Ex: MZB (MZB 4749; 51/40).

According to Sody (1941) he has eight specimens available, only the holotype is in Naturalis.

***Rattus concolor meringgit*** Sody, 1941: 283.

Holotype, RMNH.MAM.9794, adult male, skin and skull. Loc.: Batoe-Meringgit, Bali, Indonesia. Leg.: P.F. Franck, 9 October 1928. Ex: MZB (MZB 1981).

According to Sody (1941) he has three specimens available, only the holotype is in Naturalis. Batoe-Meringgit cannot be found on any map, but refers possibly to Baturinggit.

***Rattus fuscipes*** (Waterhouse, 1839)

***Mus fuscipes*** Waterhouse, 1839: 66, pl. 25.

Although Jentink in his catalogues (Jentink 1887: 213; 1888: 67) lists a specimen in Naturalis (RMNH.MAM.20354, from 'King George Sound' by J. Gould) as the type of *Mus fuscipes*, it is most unlikely. Waterhouse had only one specimen at the time of description (the holotype). This specimen ended up in the British Museum and eventually got lost.

The specimen in Naturalis is most likely not this lost holotype for various reasons. First of all there is a clear difference in colour between RMNH.MAM.20354 and the specimen depicted on the plate. Secondly, on the bottom of the stand is written in Temminck's hand: "Mus", "King Georgsound, Australie"; "Gould" (barely readable). A later author (Jentink?) has added "Mus fuscipes, Waterh. Voy. of the Beagle". The later label adds to this information with: "Albany"; "Voyage of the Beagle", this is the

same data as in the catalogues (Jentink 1887, 1888). Clearly this label and its information is a later addition because in Temminck's days labels were written in French, with expeditions noted as "Voy." or "Voyage". Furthermore, an undated document in the Naturalis archives lists birds and mammals received by Gould in 1840, among which: "Mus fuscipes Waterh. Zool. of Beagle". The reference is clearly to the publication and not to the origin of the specimen. A similar reference is behind more names on this list. This probably is the origin of the misinterpretation by Jentink. It is probable that the location King George Sound is an interpretation of the publication by Waterhouse (the "type locality": probably never visited by Gould, but by Gilbert).

Taylor and Horner (1967) discuss the Naturalis specimen as "a toponotypical mounted specimen". They mention Gould's undated list in archives but miss the name "Gould" on the stand and don't discuss the information on the label. Although they don't exclude the possibility RMNH.MAM.20354 is the lost holotype of *Mus fuscipes*, they designate another specimen in the Western Australian Museum (M6634) as neotype, mainly because of the bad condition of the Naturalis skull.

### ***Rattus hoffmanni*** (Matschie, 1901)

***Rattus biformatus*** Sody, 1941: 306.

Holotype, RMNH.MAM.9797, adult female, skin and skull. Loc.: Malengi, Indonesia. Leg.: J.J. Menden, 14 December 1939. Ex: MZB (MZB 5889; 61/40).

Sody (1941) mentions having seven specimens of this new taxon, but only the holotype is in Naturalis.

### ***Rattus hoogerwerfi*** Chasen, 1939b: 207

Holotype, RMNH.MAM.9824, adult female, skin and skull. Loc.: Blang Kedjeren, Sumatra, Indonesia. Leg.: A. Hoogerwerf, 29 January 1937. Ex: MZB (MZB 4854; 311/37).

Chasen (1939b) refers to four specimens in his description. Of these the holotype is the only specimen in Naturalis.

### ***Rattus leucopus*** (Gray, 1867)

***Mus ratticolor*** Jentink, 1909a: 3, 7.

Holotype by monotypy, RMNH.MAM.25743, semi-adult female, skin and skeleton. Loc.: Van Weel's Kamp, Lorentz River, New Guinea, Indonesia. Leg.: H.A. Lorenz, 18 June 1907, Nieuw Guinea Expeditie 1907 (84).

Some sources (Wilson and Reeder 2005: 1473; Denys et al. 2017: 849) date the publication of this name in 1908, based on the date October 1908 in the header of the article, however the first issue of Nova Guinea 9 was published in 1909.

Denys et al. (2017: 849) consider *Rattus leucopus ratticolor* Jentink, 1908 to be a valid subspecies.

### ***Rattus marmosurus*** Thomas, 1921

#### ***Rattus tondanus*** Sody, 1932b: 158.

Holotype, RMNH.MAM.21234, adult female, skin and skull. Loc.: Tondano, Sulawesi, Indonesia. Leg.: H.J.V. Sody, March 1932.

### ***Rattus nitidus*** (Hodgson, 1845)

#### ***Mus aequicaudalis*** Hodgson, 1849a: 203.

Jentink (1888: 63) lists a specimen in *Naturalis* (RMNH.MAM.19205, from Tibet by B.H. Hodgson) as one of the types. However, Hodgson describes this species based on specimens collected in India, therefore RMNH.MAM.19205 is not a type.

#### ***Mus ruber*** Jentink, 1880c: 18.

Holotype by monotypy, RMNH.MAM.26067 (Jentink 1887: 213 a; 1888: 67 a), adult female, mounted skin and skull. Loc.: Doreh, New Guinea, Indonesia. Leg.: C.B.H. von Rosenberg, January 1869.

For details of this specimen and taxon see Calaby and Taylor (1980).

#### ***Rattus vanheurni*** Sody, 1933: 435.

Holotype, RMNH.MAM.21704, female, skin and skull. Loc.: Manokwari, New Guinea, Indonesia. Leg.: Z.L. Litaay, October 1932. Ex: H.J.V. Sody (N.G.6).  
Paratypes: RMNH.MAM.21705–21710.

Sody (1933) bases his description on seven specimens. There is some confusion about who collected these specimens and when. According to Becking (1989: 68) at least the holotype was collected by Van Heurn during the Memberano Expedition of 1920. Becking was probably misled by the dedication of Sody of this species to Van Heurn, acknowledging Van Heurn's important collecting work during this expedition and referring to duplicates in Sody's own collection. But the original label attached to the specimen is a Sody collection label and the number, N.G.6, is part of the range of specimens collected in October 1932 by Z.L. Litaay in Manokwari (original datasheet by Sody, preserved the archives of *Naturalis*) and received by Sody on 22 November 1932. We follow this.

### ***Rattus pelurus*** Sody, 1941

#### ***Rattus foramineus pelurus*** Sody, 1941: 308.

Holotype, RMNH.MAM.9800, adult female, skin and skull. Loc.: Peleng, Indonesia. Leg.: J.J. Menden, 19 August 1938. Ex: MZB (MZB 5620).

Sody (1941) examines two specimens for his description, only the holotype is in *Naturalis*.

### ***Rattus rattus*** (Linnaeus, 1758)

#### ***Mus erythronotus*** Temminck, 1844: 50.

Lectotype, RMNH.MAM.37249 (Jentink 1888: 64 a), adult [male], mounted skin and damaged skull. [Nagasaki, Kyūshū], Japan, [1840-1841]. Received from P.-M. Diard, 1841.

Temminck (1844: 50) writes he has two specimens preserved in alcohol. Of those, only one, now mounted, is still present in Naturalis. The specimens must have been among the material obtained by two unknown Javan taxidermists of the museum in Batavia (Jakarta). These had been sent to Japan by Diard, to stay for a year at what he calls "Mangazaka", no doubt meaning Nagasaki, the port in which the Dutch settlement of Deshima was situated. The shipment was forwarded to Leiden in May 1841 (see Diard's letter to Temminck of 25 May 1841 in the Naturalis archives), so the animals were most likely collected in 1840. Temminck suspects that the species had been introduced from China.

Tate (1940: 6), probably unaware of the fact that Temminck had two animals before him, refers to the Naturalis specimen as "Type", thereby designating it the lectotype of *Mus erythronotus* Temminck, 1844. He regards it to be a male.

***Mus albiventer*** Jentink, 1909b: 240.

***Mus albiventris*** Jentink, 1909b: 247.

Holotype by monotypy, RMNH.MAM.27426, adult female, skull and alcohol. Loc.: Mosselbaai, South Africa. Leg.: M. Weber (184), [1894-1895].

Jentink (1909b) describes this species as *Mus albiventer*, but later in the text spells the name as *albiventris*.

### ***Rattus sordidus*** (Gould, 1858)

***Mus gestri*** Thomas, 1897: 611.

Thomas (1897) refers to two syntypes in his article. In the introduction (p. 607) he specifically mentions that one of the types is deposited in Genua, the other in the NHM. He states having a larger series available at the time of description and he calls those the "paratypes". However this is not in accordance with the ICZN and we don't consider them part of the type series. This also excludes RMNH.MAM.26701 (adult male in alcohol from Kapa Kapa, New Guinea collected by L. Loria on 6 July 1891). Rümmler (1938: 208) selected one of the syntypes as the lectotype.

### ***Rattus steini*** Rümmler, 1935

***Stenomys verecundus försteri*** Rümmler, 1935: 117.

Holotype, RMNH.MAM.54930, adult female, skin and skull. Loc.: Bulung River (source area), Papua New Guinea (1800-2000m). Leg.: F. Förster (292/2), 22 February 1913. Ex: Zoologisches Museum Berlin.

Paratype: RMNH.MAM.54931.

### ***Rattus tanezumi*** (Temminck, 1844)

***Mus tanezumi*** Temminck, 1844: 51, pl. 15 figs 5-7.

Lectotype, RMNH.MAM.24207 (Jentink 1887: 210 *b*; 1888: 63 *b*), juvenile, sex unknown, mounted skin and damaged skull. Loc.: Japan. Leg.: [Ph.F.B. von Siebold or H. Bürger, 1823-1831]. Figured in Temminck (1844: pl. 15 figs 5-7).

Paralectotypes: RMNH.MAM.24206, 27421.

Jentink (1887; 1888) has catalogued two skulls *a* and *b* as belonging to the respective skins. The identity of skull *a* (RMNH.MAM.27421), however is unknown; it cannot have belonged with the above skin *a* (RMNH.MAM.24206), the skull of which was extracted recently.

Jentink attributes both specimens to Von Siebold. However, the label and pedestal of skin *b* (RMNH.MAM.24207) mention Bürger, whereas those of skin *a* (RMNH.MAM.24206) do not mention the collector. In the archives of Naturalis two consignments by Bürger are described (from 20 December 1831 and 31 December 1831) containing three specimens of this species. At least RMNH.MAM.24206 must have been one of those three. The exact provenance of the material cannot be traced either.

The lectotype has been designated by Tate (1940: 6). *Rattus tanezumi* appears to be paraphyletic, representing two different lineages. It probably needs to be divided into several separate species or lumped with *Rattus rattus* as subspecies (Denys et al. 2017: 831).

***Mus diardii*** Jentink, 1880c: 13.

Holotype by monotypy, RMNH.MAM.22891 (Jentink 1887: 211 *a*; 1888: 65 *a*), , adult, sex unknown, mounted skin and skull. Loc.: W. Java, Indonesia. Leg.: P. Diard, 1864.

***Mus neglectus*** Jentink, 1880c: 14.

Syntype, RMNH.MAM.39365 (Jentink 1887: 211 *a*; 1888: 65 *a*), adult female, mounted skin and skull. Loc.: Batjan, Indonesia. Leg.: H.A. Bernstein, 1861.

Syntype, RMNH.MAM.39366 (Jentink 1887: 211 *b*; 1888: 65 *b*), adult, sex unknown, mounted skin and skull. Loc.: Borneo, Indonesia. Leg.: S. Müller, [28 July - 17 December 1836]..

In the manuscript by Smeenk, RMNH.MAM.39366 was listed as a lectotype designated by Chasen (1940b). However we have not been able to find any lectotype designation in this publication or elsewhere., so we list the two specimens mentioned by Jentink (1880c: 14) as syntypes.

***Rattus rattus samati*** Sody, 1932b: 159.

Holotype, RMNH.MAM.22215, adult male, skin and skull. Loc.: Buleleng, Bali, Indonesia. Leg.: A. Samat, 6 August 1932. Ex: H.J.V. Sody (E.123).  
Paratypes: RMNH.MAM.22216–22231.

Sody (1932b) mentions having examined 19 specimens, of which the specimens listed above are in Naturalis.

***Rattus rattus santalum*** Sody, 1932b: 159.

Holotype, RMNH.MAM.22568, adult male, skin and skull. Loc.: Waingapoe, Soemba, Indonesia. Leg.: H.J.V. Sody, 01 February 1932.

Sody (1932b) has only one specimen of this taxon in his collection, but also refers to four other specimens in the MZB listed in Dammerman (1928: 309).

***Rattus masaretes*** Sody, 1937: 217.

Holotype, RMNH.MAM.22446, adult male, skin and skull. Loc.: Buru, Molukken (Moluccas), Indonesia. Leg.: December 1932. Ex: H.J.V. Sody (Boeroe 10).

***Rattus rattus moluccarius*** Sody, 1933: 437.

Holotype, RMNH.MAM.22439, adult male, skin and skull. Loc.: Buru, Molukken (Moluccas), Indonesia. Leg.: December 1932. Ex: H.J.V. Sody (Boeroe 9).  
Paratypes: RMNH.MAM.22440–22445.

Sody (1933) has seven specimens from the type-locality and twenty-four specimens from other Moluccan islands; unclear from his description is whether the

latter are included in this new subspecies. The specimens were probably collected by a local government officer.

***Rattus rattus septicus*** Sody, 1933: 437.

Holotype, RMNH.MAM.22409, adult female, skin and skull. Loc.: Banda-Neira, Indonesia. Leg.: November 1932. Ex: H.J.V. Sody (Banda-Neira 1).  
Paratypes: RMNH.MAM.22410–22416.

Sody (1933) examined eight specimens from the type locality and sixteen from neighbouring islands. The specimens were probably collected by a local government officer. Only the specimens listed above are in Naturalis.

***Rattus rattus aureus*** Sody, 1941: 264, 266.

Holotype, RMNH.MAM.9810, adult female, skin and skull. Loc.: North Pagoi, Indonesia. Leg.: J.J. Menden, 16 January 1935. Ex: MZB (MZB 47/35, MZB 5236), 12 January 1950.

***Rattus rattus makassarius*** Sody, 1941: 264, 266.

Holotype, RMNH.MAM.9813, adult female, skin and skull. Loc.: Macassar [Ujung Pandang], Sulawesi, Indonesia. Leg.: Eykman Institute (668), 1940. Ex: MZB (MZB 447/40, MZB 4222), 12 January 1950.

***Rattus rattus pelengensis*** Sody, 1941: 264, 267.

Holotype, RMNH.MAM.9819, adult female, skin and skull. Loc.: Peleng, Sulawesi, Indonesia. Leg.: J.J. Menden, 19 July 1938. Ex: MZB (MZB 147/38, MZB 4158), 12 January 1950.

***Rattus rattus obiensis*** Sody, 1941: 264, 268.

Holotype, RMNH.MAM.23179, adult female, skin and skull. Loc.: Laiwui, Obi Island, Molukken (Moluccas), Indonesia. Leg.: C. Limaheluw, November 1932. Ex: H.J.V. Sody. (Obi 7).  
Paratypes: RMNH.MAM.23180–23211.

Sody (1941) bases his description on a single specimen, the type, but refers to material from Ternate. In his collection is a large series of specimens labelled *Rattus rattus obiensis* from the Obi islands and Ternate we list here as paratypes.

***Rattus rattus argyraceus*** Sody, 1941: 270.

Holotype, RMNH.MAM.9816, adult female, skin and skull. Loc.: Mapanget, Sulawesi, Indonesia. Leg.: Klapperproefstation (18), 15 July 1939. Ex: MZB (MZB 350/39, MZB 4045), 12 January 1950.

Sody (1941) bases his description on eight specimens, only the holotype is in Naturalis.

***Rattus rattus talaudensis*** Sody, 1941: 275.

Holotype, RMNH.MAM.9814, adult female, skin and skull. Loc.: Lirung, Talaud isl., Indonesia. Leg.: Eri, 29 May 1926. Ex: MZB (MZB 1488), 12 January 1950.

Sody (1941) refers to six specimens in his description, only the holotype is in Naturalis.

***Rattus rattus barussanoides*** Sody, 1941: 276.

Holotype, RMNH.MAM.9807, adult female, skin and skull. Loc.: Macassar (Ujung Pandang), Sulawesi, Indonesia. Leg.: Eykman Institute (39), 1940. Ex: MZB (MZB 376/40; 4039), 12 January 1950.

Sody (1941) has three specimens available, only the holotype is Naturalis.

***Rattus sapoensis* Sody, 1941: 306.**

Holotype, RMNH.MAM.9790, adult male, skin and skull. Loc.: Malengi Island, Togian Islands, Indonesia. Leg.: J.J. Menden, 02 December 1939. Ex: MZB (MZB 50/40; 5624), 12 January 1950.

Sody (1941) has three specimens available, only the holotype is Naturalis.

***Rattus toxi* Sody, 1941: 309.**

Holotype, RMNH.MAM.9802, adult female, skin and skull. Loc.: Wadjo, Sulawesi, Indonesia. Leg.: "controleur", 12 April 1915. Ex: MZB (MZB 95/41; 5632), 12 January 1950.

***Rattus tiomanicus* (Miller, 1900)**

***Rattus rattus roquei* Sody, 1929a: 163.**

Lectotype, RMNH.MAM.21403, adult male, skin and skull. Loc.: Gedangan, Semarang, Java, Indonesia. Leg.: F.A.Th.A. Verbeek, 16 August 1928. Ex: H.J.V. Sody. Paralectotypes, 21480–21486, 21492, 21530–21545, 21547–21549.

The very short first publication of this name is in a footnote to a list of mammals of Java, where Sody (1929a) does not mention any specimens. This was followed by an extensive description in 1930 (Sody 1930a), wherein he makes clear to have 29 specimens in his own collection and refers to many more in several other collections. He designates however a type specimen, which according to the code should be considered the lectotype. Sody fails to give a collection number of this specimen and later (Sody 1941: 273) writes that the type was unfindable. RMNH.MAM.21403 is probably the lectotype, as geographic data agrees with the description of 1930 and the measurements agree very well with Sody's lectotype (Musser in litt., 1969, verified by the authors).

However there remains some uncertainty, as the collecting date on the label is 16 August 1928, while Sody's lectotype was collected on 16 August 1924 (Sody 1930a: 97). Furthermore, the collector is not mentioned by Sody, but an original label by Verbeek is associated with the skull. Becking (1989: 65) adds to the confusion by listing RMNH.MAM.21548 (Sody's number "III" collected by Verbeek on 16 August 1924 on same locality as RMNH.MAM.21403) as the holotype. However there is no information on its label supporting this assumption (except for Sody's number and the locality Semarang) and the measurements do not agree with those given by Sody (1930a: 97).

***Rattus rattus vernalis* Sody, 1940: 395.**

Holotype, RMNH.MAM.9818, adult female, skin and skull. Loc.: Kayaapu, Enggano Island, Sumatra, Indonesia. Leg.: J.K. de Jong, July 1936. Ex: MZB (MZB 316/36; 4130), 12 January 1950.

Sody (1940) bases his description on six specimens, only the holotype is in Naturalis.

***Rattus rattus delirius* Sody, 1941: 270, 274.**

Holotype, RMNH.MAM.9817, adult male, skin and skull. Loc.: Bantam, Java, Indonesia. Leg.: V. von Plessen, 20 February 1932. Ex: MZB (MZB 5/32; 4114), 12 January 1950.

***Rattus rattus generatius* Sody, 1941: 270, 274.**

Holotype, RMNH.MAM.9812, adult male, skin and skull. Loc.: Noesa Kambangan, Java, Indonesia. Leg.: Eykman Institute (8), 1940. Ex: MZB (MZB 294/40; 5846), 12 January 1950.

Sody (1941) bases his description on thirty specimens, only the holotype is in Naturalis.

***Rattus rattus larusius*** Sody, 1941: 270, 274.

Holotype, RMNH.MAM.9809, adult male, skin and skull. Loc.: Meeuweneiland (Pulau Peucang), Bantam, Indonesia. Leg.: P.F. Frank, 04 August 1932. Ex: MZB (MZB 12/32; 4120), 12 January 1950.

Sody (1941) bases his description on three specimens, only the holotype is in Naturalis.

***Rattus rattus sebastianus*** Sody, 1941: 270, 273.

Holotype, RMNH.MAM.9815, adult male, skin and skull. Loc.: Sebesi, Indonesia. Leg.: K.W. Dammerman, 28 April 1921. Ex: MZB (MZB 60), 12 January 1950.

Sody (1941) bases his description on two specimens, only the holotype is in Naturalis.

***Rattus xanthurus*** (Gray, 1867)

***Mus faberi*** Jentink, 1883b: 176.

Holotype by monotypy, RMNH.MAM.18300 (Jentink 1887: 212 a; 1888: 66 a), adult, sex unknown, mounted skin and skull. Loc.: Menado, Sulawesi, Indonesia. Leg.: F. von Faber, 1883.

***Taeromys paraxanthus*** Sody, 1941: 313.

Lectotype, RMNH.MAM.60471 (formerly 9822), adult male, skin. Loc.: Toelap, Sulawesi, Indonesia. Leg.: J.W. van Braekel, August 1938. Ex: MZB (MZB 341/38; 4043), 12 January 1950. (= *Rattus xanthurus*).  
Paralectotype: RMNH.MAM.60472 (= *Taeromys callitrichus*).

This name is based on a composite specimen. The skull belongs to *Taeromys callitrichus* and the skin belongs to *Rattus xanthurus*. Musser (1971a) designates the skin as the lectotype.

***Sundamys maxi*** (Sody, 1932)

***Rattus maxi*** Sody, 1932b: 157.

Holotype, RMNH.MAM.21477, adult male, skin and skull. Loc.: Mt. Patuha, 1350 m., Tjiboeni (Cibuni), Bandung, Java, Indonesia. Leg.: M. Bartels Jr., 09 August 1932. Ex: H.J.V. Sody (Tjib.13).  
Paratype: RMNH.MAM.21478.

***Sundamys muelleri*** (Jentink, 1880)

***Mus mülleri*** Jentink, 1880c: 16.

Holotype by monotypy, RMNH.MAM.18347 (Jentink 1887: 211 a; 1888: 64 a), semi-adult female, relaxed mount and skull. Loc.: Batang Singalang, Sumatra, Indonesia. Leg.: S. Müller, [May-July 1834].

Müller was between May and November 1834 on a collecting trip in the area of Mount Singgalang. This is also the type species for the genus *Sundamys* Musser & Newcomb, 1983.

***Rattus muelleri waringensis*** Sody, 1941: 289.

Holotype, RMNH.MAM.9796, adult male, skin and skull. Loc.: Kp. Riam, Borneo, Indonesia. Leg.: J.J. Menden, 04 November 1935. Ex: MZB (MZB 52/36; 5002), 12 January 1950.

Sody (1941) gives measurements for six specimens of this new taxon, only the holotype is in Naturalis.

### ***Taeromys callitrichus*** (Jentink, 1879)

***Mus callitrichus*** Jentink, 1879a: 12.

Lectotype, RMNH.MAM.21275 (Jentink 1887: 212 a; 1888: 65 a), adult, sex unknown, mounted skin and cranium. Loc.: Menado-Kakas, Sulawesi, Indonesia. Leg.: S.C.J.W. van Musschenbroek, September 1875.

Paralectotypes: RMNH.MAM.21276–21277 (= *Taeromys callitrichus*), 21278–21281 (= *Bunomys fratrorum*), 21282 (= *Paruromys dominator*), 21283–21285 (= *Rattus chrysocomys*), 21286 (= *Rattus hoffmanni*).

Several species are represented in the typeseries of *Mus callitrichus* (see Musser 1969). Musser (1969: 6) designates RMNH.MAM.21275 the lectotype.

### ***Taeromys taerae*** (Sody, 1932)

***Rattus taerae*** Sody, 1932b: 158.

Holotype, RMNH.MAM.22569, adult male, skin and skull. Loc.: Lemboan, Sulawesi, Indonesia. Leg.: Corinus Deeng, March 1932 via H. Witkamp. Ex: H.J.V. Sody (P 72).

Paratypes: RMNH.MAM.22570–22571.

Sody (1932b) uses five specimens for his description, only three are in Naturalis. According to Becking (1989: 89) the specimens were collected in the Lembean Forest reserve, East of Tondano.

***Taeromys tatei*** Sody, 1941: 313.

Lectotype, RMNH.MAM.54934 (9821), adult male, skin. Loc.: Toelap, Sulawesi, Indonesia. Leg.: J.W. van Braekel, 25 August 1938. Ex: MZB (MZB 340/38, MZB 5814), 12 January 1950.

Paralectotype: RMNH.MAM.54933 (= *Bunomys fratrorum*).

This name is based on a composite specimen. Musser (1971a: 135) designates the skin the lectotype. Sody (1941) also gives measurements of a female specimen; its whereabouts are unknown.

### ***Thallomys nigricaudus*** (Thomas, 1882)

***Mus nigricauda*** Thomas, 1882: 266.

According to Jentink (1888: 71) RMNH.MAM.26488 (female from Hountop River, South Africa collected by Andersson in 1862) is one of the types for *Mus nigricauda* Thomas, 1882. However, according to Thomas (1882) he has only one specimen of this new species at his disposal. The online database of the NHM lists a specimen (NHMUK 1881.3.8.7) that agrees with the data given by Thomas, it has however been identified as *Thallomys paedulcus* Sundevall, 1846 and its type status is not indicated.

### ***Thallomys paedulcus*** (Sundevall, 1846)

***Mus paedulcus*** Sundevall, 1846: 120.

Syntype, RMNH.MAM.26489 (Jentink 1887: 214 b; 1888: 71 b), semi-adult female, mounted skin and skull. Loc.: 'Caffraria interior' [South Africa]. Leg.: [J. Wahlberg]. Ex: NRM, C.J. Sundevall.

Syntype, RMNH.MAM.26490 (Jentink 1888: 71 c), juvenile, sex unknown, mounted skin, skull in situ. Loc.: 'Caffraria interior' [South Africa]. Leg.: [J. Wahlberg]. Ex: NRM, C.J. Sundevall.

### ***Uromys caudimaculatus* (Krefft, 1867)**

***Pogonomys multiplicatus*** Jentink, 1907a: 367.

Holotype by monotypy, RMNH.MAM.29315, adult male, flat skin and skeleton. Loc.: Sentani meer, New Guinea, Indonesia. Leg.: A. Wichmann, 18 April 1903, Noord Nieuw-Guinea Expeditie (1903) (Humboldt Bay Expedition).

Denys et al. (2017: 717) list *Uromys caudimaculatus multiplicatus* Jentink, 1907 as a valid subspecies.

## **Anomaluridae Gervais, 1849**

### ***Anomalurus beecrofti* Fraser, 1853**

***Anomalurus laniger*** Temminck, 1853: 149.

Holotype by monotypy, RMNH.MAM.26757 (Jentink 1887: 180 a; 1888: 1 a), semi-adult female, relaxed mount and skull. Loc.: Guinea coast (coastal Ghana). Leg.: H.S. Pel.

### ***Anomalurus pelii* (Schlegel & Müller, 1845)**

***Pteromys (Anomalurus) pelii*** Schlegel & Müller, 1845a: 109.

Lectotype, RMNH.MAM.26761 (Jentink 1888: 1 a), adult male, mounted skin and skeleton. Loc.: Dabocrom, Côte d'Or [Ghana]. Leg.: H.S. Pel [February 1843].  
Paralectotype: RMNH.MAM.26762.

According to Schlegel and Müller (1845a) Naturalis received three specimens from Pel, only two are still present. Schunke and Hutterer (2005: 326) designate the lectotype.

***Anomalurus pelii peralbus*** Schunke & Hutterer, 2005: 327.

Holotype, ZMA.MAM.21275, adult female, skin and skull. Loc.: Gueboua (5°59'N, 5°41'W), Ivory Coast. Leg.: L.J.R. Bellier (A9013), 20 October 1970.  
Paratypes: ZMA.MAM.21264–21270, 21272–21274, 21276–21289, 21293–21315.

Jackson (2016: 278) considers *Anomalurus pelii peralbus* Schunke & Hutterer, 2005 to be a valid subspecies.

## **Bathyergidae Waterhouse, 1841**

### ***Heliophobius argentocinereus* Peters, 1846**

***Heliophobius argento-cinereus*** Peters, 1846: 259.

Syntype, RMNH.MAM.26672 (Jentink 1888: 93 a), sex unknown, mounted skin and skull. Loc.: Boror, Mozambique. Leg.: W.C.H. Peters, [1846]. Ex: MfN, W.C.H. Peters, 25 May 1951.

This species was first described in a preliminary publication, read in August 1846 on behalf of Peters for the Royal Prussian Academy of Sciences in Berlin. It precedes the extensive description in his definitive work (Peters 1852: 140-145, Taf.

XXXI, XXXV). In neither publication it is specified how many animals Peters had before him, but both from the 1846 publication and in 1852 it is clear he collected several specimens.

Peters arrived in Mozambique in 1843 and returned to Germany in 1848 (Peters 1852: viii-ix); on p. 47 he writes that he was in Boror “etwa 12 Meilen nordwestlich von Quellimane” in March 1846, but does not say how long he stayed in the area. In the absence of more exact data, it seems best to regard all specimens collected by Peters as belonging in the type series. RMNH.MAM.26672 is mentioned in a list of specimens received from Peters on 25 May 1851, preserved in the archives of Naturalis, as “1 *Heliophobius* (*Bathyergus*) *cinereus* Jeune indiv”, though the animal looks quite adult.

This is also the type species for the genus *Heliophobius* Peters, 1846.

## **Hystriidae Fischer, 1817**

### ***Atherurus macrourus* (Linnaeus, 1758)**

***Atherurus retardatus* Mohr, 1964: 105.**

Paratype, RMNH.MAM.19420, adult male, skin and skull. Loc.: imported from Singapore on 20 September 1959, died 12 January 1967. Ex: Rotterdam Zoo.  
Paratypes: RMNH.MAM.19897, 20782; ZMA.MAM.5092.

Mohr (1964) mentions having seen six specimens, all imported by the Rotterdam Zoo, of which one specimen was sent through to Antwerp Zoo and another to NAM. The holotype is in the KBIN (the animal from Antwerp Zoo). ZMA.MAM.5092 is erroneously listed as “*Mus*. Amsterdam 5292” by Mohr (1964).

### ***Hystrix brachyura* Linnaeus, 1758**

***Hystrix mülleri* Marshall, 1871: 235 (footnote).**

Syntype, RMNH.MAM.19964 (Jentink 1888: 104 a), adult female, mounted skin and skull. Loc.: Padang Bessie, Sumatra, Indonesia. Leg.: S. Müller, [1833-1835].  
Syntype, RMNH.MAM.19966 (Jentink 1888: 104 c), semi-adult, sex unknown, mounted skin and skull.  
Syntype, RMNH.MAM.19993 (Jentink 1887: 232 a), adult, sex unknown, skeleton. Loc.: Padang Bessie, Sumatra, Indonesia. Leg.: S. Müller, [1833-1835].

Marshall (1871) publishes this name as a synonym for *Hystrix longicauda* in a footnote in an article by Sclater. Later Jentink (1879g: 87) fully describes the species and thereby validates the name. Jentink assumes the specimens mentioned by Marshall are all from Naturalis. However, Marshall refers to specimens in “our gallery”, which is in London, and to the specimens in Naturalis collected in Sumatra under the name *H. mülleri*.

***Acanthion Sumatrense* Ludeking, 1862: 40.**

Ludeking describes this form without referring to any collected material. No specimens collected by Ludeking are present in Naturalis.

### ***Hystrix javanica* Cuvier, 1823**

***Hystrix ecaudata* van der Hoeven & de Vriese, 1836: 110.**

Holotype by monotypy, RMNH.MAM.19962 (Jentink 1888: 103 c), juvenile, mounted skin, skull in situ. Loc.: Java [Indonesia]. Leg.: H. Boie and H.C. Macklot [June 1826 - September 1827].

Van der Hoeven and De Vriese (1836) base their description on a single specimen, and don't provide a valid description. However, Wilson and Reeder (2005: 1544) list *ecaudata* in the synonymy of *H. javanica*.

***Hystrix torquata*** van der Hoeven & de Vriese, 1836: 110.

Syntype, RMNH.MAM.19963 (Jentink 1888: 104. d) juvenile, sex unknown, mounted skin, skull in situ. Loc.: Java [Indonesia]. Leg.: H. Kuhl and J.C. van Hasselt [December 1820 - September 1821 ]. Syntype, RMNH.MAM.19989 (Jentink 1887: 232 g) adult, sex unknown, skull. Loc.: Java [Indonesia]. Leg.: G. van Raalten [December 1820 - 1829].

Van der Hoeven and De Vriese (1836) base their description on four specimens in Naturalis. We only list the two specimens in the type series which were with certainty present in Naturalis when this name was published. Wilson and Reeder (2005: 1544) list *torquata* in the synonymy of *H. javanica*.

## Thryonomyidae Pocock, 1922

### ***Thryonomys swinderianus*** (Temminck, 1827)

***Aulacodus swinderianus*** Temminck, 1827b: 248.

Holotype by monotypy, RMNH.MAM.25764 (Jentink 1887: 230 a; 1888: 102 c), juvenile, sex unknown, skin in alcohol and skeleton. Ex: Academy Groningen, T. van Swinderen.

This is also the type species for the genus name *Thryonomys* Fitzinger, 1867.

## Erethizontidae Bonaparte, 1845

### ***Coendou prehensilis*** (Linnaeus, 1758)

***Hystrix brandtii*** Jentink, 1879c: 96.

Lectotype, RMNH.MAM.19642 (Jentink 1887: 231 b; 1888: 103 b), adult female, mounted skin and skull. Loc.: Suriname. Leg.: H.H. Dieperink, 1835. Paralectotype: RMNH.MAM.19643.

Jentink bases his description on three specimens of which two are in Naturalis. The third specimen is the skull figured by Brandt (1835: pl. 9, figs. 5-9), collected by Von Langsdorff in Brazil. According to Abramov and Baranova (2008: 47) his specimen is kept in the Zoological Institute of St. Petersburg, Russia (O.6593), they erroneously list it as the holotype for *Hystrix brandtii*. The lectotype was selected by Husson (1978: 484) and the type locality for *Hystrix brandtii* is thereby restricted to Suriname.

## Chinchillidae Bennett, 1833

### *Chinchilla chinchilla* (Lichtenstein, 1829)

#### *Chinchilla brevicaudata* Waterhouse, 1848: 241.

Syntype, RMNH.MAM.54935 (formerly 39393) (Jentink 1887: 233 a; 1888: 104 a), sex unknown, mounted skin and skull. Loc.: La Paz, Bolivia. Leg.: A. Dessalines d'Orbigny, [April-June 1833].  
Syntype, RMNH.MAM.54936 (formerly 39394) (Jentink 1888: 105 b), female, mounted skin, skull extracted but not in collection. Loc.: Chile, no further documentation. Ex: F. Prévost.

The description by Waterhouse (1848) is based on three specimens identified as *Eriomys chinchilla*, one in the MfN (not seen by him) and two in Naturalis, which he measured himself. The spelling *brevicauda* as quoted by Woods and Kilpatrick (2005: 1550) and several earlier authors, is incorrect.

D'Orbigny collected in Bolivia between July 1830 and June 1833. He stayed in La Paz from 19 April to 27 June 1833. Here he arranged and packed his collections amassed during his various expeditions in the country and he also made some trips in the environment (Papavero 1971: 139-143). Although the label (not original) of the skull of RMNH.MAM.54935 specifies "de la Paix" (from La Paz), that of the accompanying skin only reads "Bolivie". Quite possibly, La Paz therefore indicates the town of acquisition or shipment rather than the collecting locality.

The animal obtained in or from Chile by Prévost is not further documented. Prévost was a dealer based in Paris. Naturalis acquired some mammals from him in 1835 and 1839.

### *Chinchilla lanigera* Bennett, 1829

#### *Eriomys pellionum* van der Hoeven, 1830: 613.

Syntype, RMNH.MAM.63728 (Jentink, 1887: 233 b), juvenile, sex unknown, cranium. Loc.: Chili. No further data.

Van der Hoeven (1830) does not specify any specimens in his description, but he refers to a skull, later to be depicted (Van der Hoeven 1831, pl. 2). He mentions the skull lacks its mandibles, as does RMNH.MAM.63728.

### *Lagostomus maximus maximus* (Desmarest, 1817)

#### *Dipus maximus* "Blainville" Desmarest, 1817a: 117.

#### *Lagostomus trichodactylus* Brookes, 1828: 102 (nomen novum).

Holotype by monotypy, RMNH.MAM.63731, (Jentink 1887: 233 a), sex unknown, skeleton. Loc.: "Chili". Ex: Brookes Museum.

Desmarest (1817a) bases his new species on an account by De Blainville of a living animal in a London menagerie. After its death the remains of this animal ended up in the Brookes collection (Brookes 1828: 102). Desmarest gives Australia as the provenance of this specimen, later changed to Chili by Brookes.

Brookes (1828) introduces the new genus *Lagostomus* and a new name for *Dipus maximus*, also based on this specimen. In his opinion the epithet *maximus* is unjustified in a monotypic genus as there is no comparison in size to other species.

This is also the type species for the genus name *Lagostomus* Brookes, 1828.

***Callomys viscacia*** d'Orbigny & I. Geoffroy, 1830: 289.

Syntype, RMNH.MAM.64139, (Jentink 1887: 233 c; 1888: 105 b), juvenile male, mounted skin and skull. Loc.: Patagonia, Chile. Leg.: A. d'Orbigny, January - September 1829.

Wilson and Reeder (2005: 1552) erroneously spell this name as *viscaccia*. The locality and collecting date are from Vénec-Peyré (2002: 317).

This is the type species for the genus *Callomys* d'Orbigny & Geoffroy, 1830.

## **Caviidae** Fischer de Waldheim, 1817

***Kerodon rupestris*** (Wied, 1820)

***Cavia rupestris*** Wied, 1820b: 43.

Syntype, RMNH.MAM.17928 (Jentink 1888: 107 b), semi-adult male, mounted skin, skull in situ. Loc.: Brazil. Leg.: M. Prinz von Neuwied zu Wied, [1815-1817].

## **Dasyproctidae** (Bonaparte, 1838)

***Dasyprocta leporina*** (Linnaeus, 1758)

***Mus leporinus*** Linnaeus, 1758: 1: 59.

Neotype, RMNH.MAM.20752, adult female, skin and skull. Forest near the Peninika boarding-school near the confluence of the Peninika Creek and the upper Commewijne River, Suriname. Leg.: A. M. Husson and P. Staffeleu, 6 May 1963.

Husson (1978: 462-463) explains the priority of *Mus leporinus* (Linnaeus, 1758) over *Dasyprocta aguti* (Linnaeus, 1776) and selects the neotype. See also Voss et al. (2001).

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