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TAXONOMICALLY AND HISTORICALLY SIGNIFICANT SPECIMENS OF MAMMALS IN THE MERSEYSIDE COUNTY MUSEUMS, LIVERPOOL

M. J. LARGEN

Merseyside County Museums, William Brown Street, Liverpool L3 8EN, England.

An institution, which eventually developed into the Merseyside County Museums, was founded in 1851 when the bird and mammal collections amassed by the 13th Earl of Derby at Knowsley passed by bequest to the City of Liverpool. In later years, the holdings of the Liverpool Museum were enhanced by the acquisition of further mammalian specimens, most notably during the period 1894–1911 under the directorship of Henry Ogg Forbes, but a considerable amount of valuable mounted material was lost in 1941 when an entire gallery of the Museum was destroyed by bombs.

The present work documents some of the taxonomically and historically significant items among approximately 2,000 specimens of mammals that survive, excluding only those from the Australasian region to be reported on elsewhere by C. T. Fisher. Nomenclature and taxonomic sequence follow Honacki et al. (1982).

MARSUPIALIA: DIDELPHIDAE

Caluromys derbianus (Waterhouse)

Didelphys Derbiana Waterhouse, 1841. Jardine's Natur. Libr., 11:97, pl. 2. No locality, but Cauca Valley, Colombia, designated by Cabrera (1957) following J. A. Allen (1904).

Holotype: LIVCM-D.194 (♀, skin and skull).

Waterhouse described this species from a mounted specimen in the collection of the 13th Earl of Derby, but the mount was reduced to a cabinet skin and the skull extracted in 1897. Although the skin is relatively unfaded it is now distinctly fragile, with one forefoot lost and the other, together with one hindfoot, detatched. The braincase is missing from the skull.

CARNIVORA: HERPESTIDAE

Herpestes sanguineus cauui (A. Smith)

Ichneumon Cauui A. Smith, 1836. Rept. Exped. Expl. Central Africa, app.:42. "Kurrichane" = Zeerust, NW Transvaal, South Africa.

Holotype: LIVCM-D.120 (♂, mount).

The name *cauui* usually is considered a synonym of *Herpestes sanguineus* (Rüppell, 1835), a form whose taxonomy is much in need of revision (Coetzee, 1977). Because Smith's name was the earliest applied to a

TABLE 1.—*Data relating to the type series of* Ratufa bicolor penangensis *Robinson and Kloss, 1911.*

Selangor mus. no.	Collected	Sex	Length of head and body	Length of tail	Length of hindfoot	Length of ear	Present location
1339/11	28.3.1911	♀	325	403	76	31	London (BMNH 55.1707)
1340/11	26.3.1911	♀	324	413	76	30	Singapore University
1341/11	8.3.1911	♀	310	325	71	30	Singapore University
1342/11	16.3.1911	♂	331	422	76	31	Washington, U.S. Natl. Mus. (exchanged 15.6.1911, but not listed by Poole and Schantz, 1942)
1343/11	12.3.1911	♀	325	433	74	34	
1344/11	13.3.1911	♀	320	412	73	32	
1345/11	12.3.1911	♂	315	424	76	32	
1346/11	15.3.1911	♂	305	425	75	32	London (BMNH 55.1705)
1347/11	10.3.1911	♂	325	400	72	32	Singapore University
1348/11 (holotype)	21.3.1911	♂	322	372	76	30	London (BMNH 21.11.8.29)
1349/11	14.3.1911	♂	322	384	74	30	Singapore University
1350/11	11.3.1911	♂	319	402	72	30	Calcutta Museum (presented 25.9.1916)
1351/11	28.3.1911	♂	310	415	76	31	Liverpool (A31.12.14.8)
1352/11	11.3.1911	♀	321	435	73	31	Liverpool (A31.12.14.8a)
1353/11	13.3.1911	♀	279	404	74	30	Singapore University
1354/11	9.3.1911	♂	346	431	73	31	formerly Liverpool (lost)
1355/11	29.3.1911	♀	315	409	75	31	London (BMNH 55.1708)
1356/11	29.3.1911	♂	312	387	75	30	London (BMNH 55.1706)
1357/11	30.3.1911	♀	321	415	75	30	Liverpool (A31.12.14.8b)
1380/11	11.3.1911	♂	322	383	72	31	Singapore University

South African representative of this complex, it seems probable that it eventually will prove to be valid, at least at the subspecific level.

During 1834–35, Sir Andrew Smith led an expedition into the interior of South Africa and later published descriptions of the species collected, many of which were mounted by Jules and Alexis Verreaux. On his return to England, Smith's collections were sold at auction by J. C. & S. Stevens of London. The British Museum (Natural History) acquired most of the types, but a few passed into private hands (Thomas, 1906). Lot 310 in this sale was the type of *Ichneumon cauut*, and was purchased by the dealer Leadbeater on behalf of the 13th Earl of Derby on 7 June 1838.

This specimen, still mounted on its original base, lacks the skull and extreme tip of the tail but otherwise is in excellent condition.

ARTIODACTYLA: BOVIDAE

Sylvicapra grimmia coronata (Gray)

Cephalophora coronata Gray, 1842. Ann. Mag. Nat. Hist., (1) 10:266. West Africa.

Holotype: LIVCM-D.57 (♀, skin).

The type of *S. g. coronata* was brought from West Africa by Thomas Whitfield, who obtained many of his specimens in Gambia, and was still alive in the Knowsley Menagerie at the time of its description by Gray. It died in January 1843 and originally was mounted for display, although later remade into a cabinet skin. No skull of this specimen has survived.

RODENTIA: SCIURIDAE

Sciurus granatensis splendidus Gray

Sciurus splendidus Gray, 1842. Ann. Mag. Nat. Hist., (1) 10:263. No locality, but Río Cesar, near its confluence with the Magdalena, Colombia, designated by Hershkovitz (1947).

Holotype: LIVCM-D.47 (mount, including skull).

This specimen, of unknown provenance, died in the Knowsley Menagerie on 13 November 1840. The mounted animal is still on its original base and, apart from some minor damage to the tip of the tail and the ears, it remains in excellent and unfaded condition.

Ratufa bicolor penangensis Robinson and Kloss

Ratufa melanopepla penangensis Robinson and Kloss, 1911. J. Fed. Malay States Mus., 4:242. Telok Bahang, Penang, Malaysia.

Paratypes: LIVCM-A31.12.14.8 (♂, skin and skull), 8a (♀, skin), 8b (♀, skin and skull).

Herbert C. Robinson was a member of the Liverpool Museum staff who, following his departure from this post, undertook extensive exploration in the Malay Peninsula and eventually was appointed director of the State Museum of Selangor. It was in this capacity that Robinson donated 57 mammal specimens to the Liverpool Museum on 31 December 1914, including four examples of *Ratufa bicolor penangensis* from the type series of 20 specimens collected by E. Seimund. Unfortunately, one of these paratypes is no longer present in the Liverpool collections, and of a second only the skin survives.

The former collections of the Selangor Museum are now housed in the National University of Singapore, together with accession cards from which data pertaining to the type series of *R. b. penangensis* have been extracted (Table 1).

Nannosciurus melanotis (Müller and Schlegel)

Sciurus melanotis Müller and Schlegel, 1844. *In* Verhandl. Nat. Gesch. Nederland. Overz. Bezitt., Zool. (C. J. Temminck):87. Java, Sumatra and Borneo.

? Syntype: LIVCM-D.392 (skin).

During the mid-nineteenth century, a leading natural history agency in London was the firm of Leadbeater & Son, which served as one of many outlets for the distribution of duplicate specimens from the Rijksmuseum van Natuurlijke Histoire, Leiden, while under the directorship of C. J. Temminck. On 6 January 1842, Lord Derby purchased from Leadbeater specimens of *Nannosciurus* and *Pteromys* which clearly originated from Leiden and which still carry labels, written by G. A. Frank of Amsterdam, indicating

that they represented new species. Both were subsequently described in Temminck's publications of 1844. The question of whether duplicate specimens from Leiden would have been disposed of prior to preparation of the type descriptions, or whether they might have been before the authors at the time when these were written and so represent syntypes, is likely to remain unanswerable.

The name *Sciurus melanotis* was based upon a large series of specimens, most of which, like the one now in Liverpool, had been collected in Borneo. Müller and Schlegel themselves noted that specimens with this provenance differed from those obtained elsewhere, but it was Lyon (1906) who restricted the typical form to Java and named the population in Borneo *Nannosciurus melanotis borneanus*.

Pteromys momonga (Temminck)

Sciuropterus momonga Temminck, 1844. Faun. Japon., 1 (Mamm.):47, pl. 14. Kyushu, Japan.

? Syntype: LIVCM-D.305 (skin and skull).

This specimen from the Leiden Museum was purchased by Lord Derby from Leadbeater on 6 January 1842, but the first description of the species was not published until December 1844. In his account, Temminck mentioned one adult example and an unspecified number of juveniles, and an adult and three juveniles from the type series are still present in Leiden (C. Smeenk, in litt.). The Liverpool specimen is clearly an immature animal, but the question of whether this too was one of Temminck's syntypes cannot now be resolved.

RODENTIA: ANOMALURIDAE

Anomalurus peli (Schlegel and Müller)

Pteromys (Anomalurus) pelii Schlegel and Müller, 1845. *In* Verhandl. Nat. Gesch. Nederland. Overz. Bezitt., Zool. (C. J. Temminck):109. "Daboeram" = Dabacrom, Ghana.

? Syntype: LIVCM 1981.270 (♀, skin and skull).

G. A. Frank was a natural history dealer based in Amsterdam, who received duplicate material from the Rijksmuseum in Leiden and, in 1850, sold an example of *Anomalurus peli* obtained from this source to Lord Derby. This specimen was undoubtedly collected by H. S. Pel, who worked in Ghana during the period 1840–50 and provided the material from which the species was first described. It seems very likely that Pel obtained additional examples of this taxon subsequent to its description, but the Liverpool specimen still carries a label, in Frank's handwriting, stating "*Anomalurus Pelii* new sp.," which suggests that its collection predates the first published account.

The type description mentions just three examples of *A. peli*, but five specimens collected by Pel are known to exist at the present time. Two are still in Leiden and are "generally regarded as syntypes," although this is unsubstantiated by either original labels or contemporary documentation (C. Smeenk, in litt.). A third Pel specimen was purchased from Leiden by Verreaux and then sold to the Muséum National d'Histoire Naturelle, Paris, in July 1847, but this is not considered to have type significance (M. Tranier, in litt.). In contrast, a skin in the British Museum (Natural History) which, like the Liverpool example, was purchased from Frank in 1850, has for many years been treated as a syntype and was formally designated as such by Rosevear (1969). It is perhaps debatable whether Rosevear's action was justified, but there seems little doubt that the specimen in Liverpool has the same history and status as that in London.

The former animal was originally prepared as an exhibition mount, but has since been converted to a cabinet skin and the skull extracted. The skin, though somewhat faded, remains in fine condition, but the skull lacks palate, toothrows and one zygomatic arch.

Anomalurus derbianus (Gray)

Pteromys Derbianus Gray, 1842. Ann. Mag. Nat. Hist., (1) 10:262. Sierra Leone.

Holotype: LIVCM-D.302 (skin).

Gray based his description of this species upon an example in the collection of the 13th Earl of Derby, which had been obtained by Thomas Whitfield and arrived at Knowsley in May 1841. When seen by Gray, the specimen must have been mounted, but it is now a flat, unstuffed skin in very poor condition, both right limbs and membrane having been torn away and lost. No skull can be found.

Rosevear (1969) provided detailed comments on this specimen in relation to the taxonomy and geographical distribution of *A. derbianus derbianus*.

RODENTIA: CRICETIDAE

Gymnuromys roberti Forsyth Major

Gymnuromys Roberti Forsyth Major, 1896. Ann. Mag. Nat. Hist., (6) 18:324. Ampitambe Forest, SE of Fadriana, Betsileo region, Malagasy.

Paratype: LIVCM-A19.4.98.27 (♀, skin, skull and skeleton).

Brachyuromys ramirohitra Forsyth Major

Brachyuromys ramirohitra Forsyth Major, 1896. Ann. Mag. Nat. Hist., (6) 18:323. Ampitambe Forest, SE of Fadriana, Betsileo region, Malagasy.

? Paratype: LIVCM-A19.4.98.24 (♂, skin, skull and skeleton).

C. I. Forsyth Major obtained a large and important series of mammals during his 1894–96 expedition in Malagasy. At least 14 new species were later described from this material, mostly by Forsyth Major himself, and the collection was then dispersed by the sale of specimens, many of which should be regarded as types. Some passed to the British Museum (Natural History), others to the Royal College of Surgeons in London and the Rothschild Collection at Tring (P. D. Jenkins, in litt.), and the Liverpool Museum purchased 18 specimens on 19 April 1898.

Gymnuromys roberti was described from an unspecified number of examples, of which only five are clearly identified; namely, the female holotype (having the collector's number M.446), two males (M.510, M.729), and two "pregnant females obtained on June 24th and July 17th." The holotype and two females collected on 17 July 1895 are in the British Museum (Natural History). The specimen in Liverpool is the pregnant female captured on 24 June 1895 (M.432) and its status is confirmed by the appearance of the word "type" on the labels of both skin and skull. The whereabouts of other paratypes remain unknown.

Only four specimens are clearly identified in Forsyth Major's description of *Brachyuromys ramirohitra* and none of these can now be traced; even the holotype, formerly in the collections of the British Museum (Natural History), has been lost. The series was, however, considerably larger than indicated by Forsyth Major and six other paratypes do still survive in the British Museum. There is no conclusive evidence that the specimen now in Liverpool was a part of this series, merely the reasonable assumption that the author would have had this and all other available material before him at the time the type description was prepared.

Other cricetid rodents obtained by Forsyth Major in Malagasy and still present in the Liverpool collections include *Brachyuromys betsiloensis* (Bartlett, 1879), *Nesomys rufus rufus* Peters, 1870, and *Eliurus myoxinus major* Thomas, 1895. The remainder of the collection is composed of insectivores and primates.

Meriones sacramenti Thomas

Meriones sacramenti Thomas, 1922. Ann. Mag. Nat. Hist., (9) 10:552. 10 miles S of Beersheba, Israel.

Paratype: LIVCM 52.89.1 (♂, skin).

Three examples of a new species of *Meriones* were collected in southern Palestine (now Israel) by P. A. Buxton during July 1922 and sent to the British Museum (Natural History), where they were described by Oldfield Thomas. The holotype and one paratype remain intact in the national collections, but of the third specimen only the skull (BMNH 22.10.4.3) was retained, the skin being returned to the collector. This remained in the possession of Prof. Buxton until August 1952, when it was donated, along with some bird skins, to the Liverpool Museum. It was collected on 17 July 1922 and the label carries Buxton's number 528.

Auliscomys sublimis (Thomas)

Phyllotis sublimis Thomas, 1900. Ann. Mag. Nat. Hist., (7) 6:467. Rinconado Malo Pass, between Caylloma (Cailloma) and Callula, Arequipa Province, Peru, 5,500 m.

Paratypes: LIVCM-A28.11.1900.7 (♀, skin and skull), 7a (imm. ♀, skin and skull), 7b (imm. ♀, skin and skull).

On 28 November 1900, the Liverpool Museum received in exchange from the Museum of Science and Art in Dublin (forerunner of the National Museum of Ireland) a collection of 58 mammals. These included some obtained by R. Miketta and G. Flemming in northern Ecuador during 1898–1900, a very early example of *Nesoryzomys indefessus* (Thomas, 1899) from the Galapagos Islands, and specimens collected in Peru

by P. O. Simons during May–June 1900. This was clearly duplicate material disposed of by Oldfield Thomas, although the Duplicates and Exchange Register of the British Museum (Natural History) makes no mention of specimens being sent to Ireland at this time; neither does the National Museum of Ireland have any record of its passage through that institution.

Between 1898 and his death in January 1902, Perry O. Simons collected extensively in the Andes during the course of an expedition from Ecuador to Argentina. He obtained over 60 new species of mammals (Thomas, 1906), including the nine specimens upon which Thomas based his description of *Phyllotis sublimis*. The holotype and five paratypes are still present in the British Museum (Natural History), where the three remaining paratypes are listed as duplicates having collector's numbers P.O.S. 1105, 1106 and 1085. These three specimens, still carrying their original labels, are among the 32 mammals collected by Simons which the Liverpool Museum received from Dublin in 1900.

Although Thomas' description claims that the type specimens were "all dug from one burrow" (above Cailloma at 5,500 m on 18 June 1900), the adult female in Liverpool (P.O.S.1085) was actually obtained, according to the collector's label, from Cailloma at 4,400 m on 16 June 1900.

RODENTIA: MURIDAE

Chrotomys whiteheadi Thomas

Chrotomys whiteheadi Thomas, 1895. Ann. Mag. Nat. Hist., (6) 16:161. Mt. Data, Lepanto Province, N Luzon, Philippines, 8,000 ft.

LIVCM 14.12.97.57 (♂, skin).

Rhynchomys soricoides Thomas

Rhynchomys soricoides Thomas, 1895. Ann. Mag. Nat. Hist., (6) 16:160. Mt. Data, Lepanto Province, N Luzon, Philippines, 8,000 ft.

LIVCM 14.12.97.63 (♀, skin).

Carpomys phaeurus Thomas

Carpomys phaeurus Thomas, 1895. Ann. Mag. Nat. Hist., (6) 16:162. Mt. Data, Lepanto Province, N Luzon, Philippines.

LIVCM 14.12.97.56 (♂, skin and skull).

Carpomys melanurus Thomas

Carpomys melanurus Thomas, 1895. Ann. Mag. Nat. Hist., (6) 16:162. Mt. Data, Lepanto Province, N Luzon, Philippines, 7,000–8,000 ft.

LIVCM 14.12.97.54 (♂, skin and skull), 55 (♀, skin and skull).

Bullimus luzonicus (Thomas)

Mus luzonicus Thomas, 1895. Ann. Mag. Nat. Hist., (6) 16:163. Mt. Data, Benguet, N Luzon, Philippines.

LIVCM 14.12.97.60 (imm. ♂, skin and skull), 62 (imm. ♀, skin and skull).

John Whitehead was one of the most successful of early collectors in the Philippines, an area in which he worked from 1894–96, and particularly notable was his visit to the Data Plateau of northern Luzon in February 1895, where he obtained no fewer than seven new species of endemic rodents. A representative collection of Whitehead's Philippine material was donated to the British Museum (Natural History) and the new taxa from the Luzon highlands were then described by Thomas, each on the basis of two examples. Whitehead sold his remaining specimens to various institutions, employing as his agent London natural history dealer O. E. Janson. As a result, the national collections received supplementary material in May 1897 and the Liverpool Museum was able to purchase 23 of Whitehead's specimens on 14 December 1897. These included examples of *Chrotomys whiteheadi*, one of which can no longer be found, *Rhynchomys soricoides*, *Carpomys phaeurus*, *C. melanurus*, and *Bullimus luzonicus*.

Although Whitehead's collection has since been augmented, most significantly by material obtained in 1946–47 by the Philippine Zoological Expedition (Sanborn, 1952) and now housed in the Field Museum of Natural History, Chicago, and the American Museum of Natural History, New York, all five of these species

remain very poorly represented in museum collections, in most cases by fewer than a dozen specimens (Taylor, 1934; Walker et al., 1975; Musser et al., 1982).

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