Date of Publication: 30 October 2015 © National University of Singapore

## THE AUTHORSHIP AND TYPE LOCALITY OF THE BANDED LEAF MONKEY, PRESBYTIS FEMORALIS

## Martyn E. Y. Low\* and Kelvin K. P. Lim

Lee Kong Chian Natural History Museum, 2 Conservatory Drive Singapore 117377, Republic of Singapore (\*Corresponding author: m.low@me.com)

**ABSTRACT.** — The history of the description of the name *Semnopithecus femoralis* (currently *Presbytis femoralis*) is revisited to highlight the nomenclatural issues relating to the authorship, date, and type locality of this taxon. The author is Martin and the year of publication is 1838, hence, *Presbytis femoralis* (Martin, 1838). Although the species was originally described from several localities, the type locality has been determined to be restricted to Singapore.

KEY WORDS. — Presbytis, Semnopithecus, femoralis, leaf monkey, Raffles, Horsfield, syntype, Singapore, type locality

Presbytis femoralis is a species of colobine (Old World) monkey that was first described as Semnopithecus femoralis. It is commonly known as the banded leaf monkey, banded langur, or Raffles's surili (Baker & Lim, 2012: 135). The authorship of the scientific name is widely credited to W. C. L. Martin, and the type locality is recognised as Singapore (Corbet & Hill, 1992: 172; Brandon-Jones et al., 2004: 123; Groves, 2005: 171; Meyer et al., 2011: 317; Roos et al., 2014: 10). However, in the original article by Martin (1838: 436, reproduced as Fig. 1 herein), the authorship of the name is attributed to "Horsf." (i.e., Thomas Horsfield), and the type localities (i.e., "Habitat") are given as "Sumatra, &c.".

Thomas Stamford Raffles (1821: 247) tentatively identified the "Lotong of the Malays" as found at "Singapore and Penang" as "Simia maura?". Martin (1838: 436) considered the taxon tentatively identified by Thomas Stamford Raffles (1821: 247) as Simia maura to be different from the original Simia maura of Schreiber (1775). He identified Raffles' material to be Semnopithecus femoralis, a name he likely obtained from a book entitled 'Memoir of the Life and Public Services of Sir Thomas Stamford Raffles' by Sophia Raffles, the widow of Raffles. In the appendix accompanying this work, the following entry is made: "Semn[nopithecus] femoralis, Horsf. Habitat in Sumatrâ et Javâ. In Musaeis Socc. Zool. et Ind. Orient." (S. Raffles, 1830: 642). As no diagnosis, description, illustration, or bibliographic reference to such information accompanies the name, it is a nomen nudum under Article 12 of the 'International Code of Zoological Nomenclature' (hereafter the Code, ICZN, 1999: 16, 17). Therefore, the name Semnopithecus femoralis as published by Sophia Raffles (1830: 642) is neither available nor valid. The same applies to

## S. femoralis, Horsf. White-thighed Monkey.

Top of the head and occipital tuft of hair, back, and shoulders to the elbows, dusky greyish brown; the frontal hairs, which diverge forwards, the sides of the head and body, the fore arms and outside of the thighs, the legs, hands, feet, and tail, black, slightly grizzled, especially the fore arms, with white; the chin white; as is also a line down the chest and abdomen to the lower part, which is all white; the inside of the humerus from the axilla, and the inside of the thighs, white, with an abrupt margin. No tuft on the sides of the face; a line of short black hairs on the molar bones.

Length 19 inches; tail 22½ inches.

Habitat Sumatra, &c.

Syn.—" Simia Maura?" of Sir S. Raffles, in Linn. Trans. vol. xiii. but not the S. Maura of Schreber.

Lotong of the Malays.

Cercopithecus albo-cinereus, Desm.?

Fig. 1. The original description of *Semnopithecus femoralis* in Martin (1838: 436). From a work no longer in copyright and digitised by the Biodiversity Heritage Library (<a href="http://biodiversitylibrary.org/page/2297142">http://biodiversitylibrary.org/page/2297142</a>).

the name "Semnopithecus femoralis. Horsf." as used by Waterhouse (1838: 5) in a catalogue of mammals in the collections of the East India Company.

The attribution of the name to Thomas Horsfield is likely then to have been a result of the use of one or more manuscripts of Thomas Horsfield which came into the hands of Sophia Raffles (1830: 642) and Waterhouse (1838: 5). Elsewhere, there is no description of *Semnopithecus femoralis* published by Horsfield. Martin (1838: 436), therefore, becomes the author of *Semnopithecus femoralis* as his is the first publication to use the name and fulfil all criteria for making the name available (Articles 10–12 of the Code, ICZN, 1999: 8–17). The above was also noted by Pocock (1928: 675 as *Pithecus femoralis*), but subsequently not mentioned by later authors such as Corbet & Hill (1992: 172), Brandon-Jones et al. (2004: 123), Groves (2001: 277; 2005: 171), Meyer et al. (2011: 317), and Roos et al. (2014: 10).

According to Martin (1838: 436), the geographic distribution of *Semnopithecus femoralis* is "Sumatra, &c.". It includes all the source localities of the material referred to by him which, apart from Sumatra, would also include Singapore and Penang (Raffles, 1821: 247 as *Simia maura*?). These discrepancies in the type localities given for *Semnopithecus femoralis* have led to confusion. Raffles (1821: 247 as *Simia maura*?) gives "Singapore and Penang", Martin (1838: 436 as *Semnopithecus femoralis*) and Horsfield (1851: 10 as *Semnopithecus femoralis*) both give "Sumatra", Martin (1841: 480) gives "Borneo, Java (?), Sumatra (?)", while Thomas (1886: 66 as *Semnopithecus femoralis*) and Eliot (1912: 45 as *Pygathrix femoralis*) both give "Bankasun".

As noted by Pocock (1935: 901, footnote), the matter of the type locality was finally resolved by Miller (1913: 28, 29) who clearly considered the Sumatran locality to be erroneous and restricted the type locality of *Semnopithecus femoralis* to "Singapore". Miller (1913: 28, 29) stated that "[i]n the original description of *Presbytis femoralis*, supposed to equal '*Simia maura*?' of Raffles, the type-locality is said to be 'Sumatra, etc.' As the carefully written account of the animal's color is not appropriate to any of the known Sumatran forms of the group, while it exactly applies to the one occurring on Singapore Island, where Raffles obtained much of his material, I have no hesitation in regarding Singapore as the true type-locality". His action is in agreement with Recommendation 76A.2 of the Code (ICZN, 1999: 87) which states that "[a] statement of type locality that is found to be erroneous should be corrected".

The correction of type locality by Miller (1913: 28, 29) was also recognised by Pocock (1935: 901, 902) and Napier (1985: 41). Miller (1934: 130) later provided an additional discussion on the justification for the restriction of type locality. Thomas (1886: 66) and Pocock (1928: 675; 1935: 901, 902) stated that the type of *Semnopithecus femoralis* Martin, 1838, is in the British Museum (Natural History) (now the Natural History Museum). Napier (1985: 43) correctly stated that this is a syntype of *Semnopithecus femoralis* Martin, 1838, and is comprised of a skull and skin from a juvenile male and is accessioned as NHMUK 1879.11.21.594. It was previously held in the collections of the East India Company and was presented by Thomas Stamford Raffles (see Waterhouse, 1838: 5).

It must be noted that the blackish langurs (the *Simia maura*? of Raffles, 1821: 247) of Singapore and Penang are not conspecific at both localities. The nominate subspecies of *Presbytis femoralis*, occurs in Singapore, while Penang is inhabited by *Trachypithecus obscurus halonifer* (see Roos et al., 2014: 10, 13). While both species are sympatric on the mainland of the Malay Peninsula, they do not occur together on either Singapore or Penang (see Medway, 1983: 49, 50, as *Presbytis obscura halonifer* and *Presbytis melalophos femoralis*).

## LITERATURE CITED

- Baker, N. & K. K. P. Lim, 2012. Wild Animals of Singapore. A Photographic Guide to Mammals, Reptiles, Amphibians and Freshwater Fishes. Updated Edition. Draco Publishing and Distribution Pte. Ltd. and Nature Society (Singapore). 180 pp.
- Brandon-Jones, D., A. A. Eudey, T. Geissmann, C. P. Groves, D. J. Melnick, J. C. Morales, M. Shekelle & C.-B. Steward, 2004. Asian primate classification. *International Journal of Primatology*, **25**: 122–129.
- Corbet, G. B. & J. E. Hill, 1992. *The Mammals of the Indomalayan Region: A Systematic Review*. Natural History Museum Publications, Oxford University Press, Oxford. viii + 488 pp.
- Eliot, D. R., 1912. *A Review of the Primates. Monograph Series. Volume III. Anthropoidea.* Miopithecus *to* Pan. American Museum of Natural History, New York. xiv + 262 + clxviii pp., 39 pls.
- Groves, C., 2001. *Primate Taxonomy*. Smithsonian Institution Press, Washington & London. viii + 350 pp.
- Groves, C. P., 2005. Order Primates. *In*: Wilson, D. E. & D. M. Reeder (eds.), *Mammal Species of the World. A Taxonomic and Geographic Reference*. Johns Hopkins University Press, Baltimore. Pp. 111–184.
- Horsfield, T., 1838. A Catalogue of the Mammalia in the Museum of the Hon. East-India Company. J. & H. Cox, London. vi + 212 pp.
- ICZN (International Commission on Zoological Nomenclature), 1999. *International Code of Zoological Nomenclature.* Fourth Edition. The International Trust for Zoological Nomenclature, London. xxix + 306 pp.
- Medway, Lord. 1983. *The Wild Mammals of Malaya (Peninsular Malaysia) and Singapore. Second Edition Reprinted with Corrections.* Oxford University Press, Oxford. xxiii + 131 pp., 11 figs., 15 pl.

- Miller, G. S., 1913. Fifty-one new Malayan mammals. *Smithsonian Miscellaneous Collections*, **61**(21): 1–30. [Published 29 Dec.1913 (issue title-page)].
- Miller, G. S., 1934. The langurs of the *Presbytis femoralis* group. *Journal of Mammalogy*, **15**: 124–137. [15 May 1934 (*verso* of volume title-page)].
- Martin, W. C. L., 1838. A monograph of the genus *Semnopithecus* (continued from page 326). *Magazine of Natural History*, new ser., **2**: 434–441. [Published 1 Aug.1838 (Evenhuis, 2003: 12)].
- Martin, W. C. L., 1841. A General Introduction to the Natural History of Mammiferous Animals, with a Particular View of the Physical History of Man and the More Closely Allied Genera of the Order Quadrumana, or Monkeys. Illustrated with 296 Anatomical, Osteological, and other Incidental Engravings on Wood and 12 Full Plate Representations of Animals, Drawn by William Harvey. Wright and Co., London. 545 pp.
- Meyer, D., I. D. Rinaldi, H. Ramlee, D. Perwitasari-Farajallah, J. K. Hodges & C. Roos, 2011. Mitochondrial phylogeny of leaf monkeys (genus *Presbytis*, Eschscholtz, 1821) with implications for taxonomy and conservation. *Molecular Phylogenetics and Evolution*, **59**: 311–319.
- Napier, P. H., 1985. Catalogue of Primates in the British Museum (Natural History) and elsewhere in the British Isles. Part III: Family Cercopithecidae, Subfamily Colobinae. British Museum (Natural History), London. x + 111 pp.
- Pocock, R. I., 1928. The langurs, or leaf monkeys, of British India. *The Journal of the Bombay Natural History Society*, **32**: 660–677.
- Pocock, R. I., 1935 The monkeys of the genus *Pithecus* (or *Presbylis*) and *Pygathrix* found to the east of the Bay of Bengal. *Proceedings of the Zoological Society of London*, **1934**: 895–961, 2 pls.
- Roos, C., R. Boonratana, J. Supriatna, J. R. Fellowes, C. P. Groves, S. D. Nash, A. B. Rylands & R. A. Mittermeier, 2014. An updated taxonomy and conservation status review of Asian primates. *Asian Primates Journal*, 4: 2–38.
- Raffles, T. S., 1821. Descriptive catalogue of a zoological collection, made on account of the Honourable East India Company, in the island of Sumatra and its vicinity, under the direction of Sir Thomas Stamford Raffles, Lieutenant-Governor of Fort Marlborough; with additional notices illustrative of the natural history of those countries. *Transactions of the Linnean Society of London*, **13**: 239–274.
- Raffles, S., 1830. Memoir of the Life and Public Services of Sir Thomas Stamford Raffles, F.R.S. &c. &c. Particularly in the Government of Java, 1811–1816, and of Bencoolen and its Dependencies, 1817–1824; With Details of the Commerce and Resources of the Eastern Archipelago, and Selections From His Correspondence. John Murray, London. xvi + 437 pp.
- Schreiber, J. C. D., 1775. Die Säugethiere in Abbildungen nach der Natur mit Beschreibungen. Erster Theil. Der Mensch. Der Affe. Der Maki. Die Fledermaus. Walther, Erlangen. [5] + 190 pp. Pls. 1–62.
- Thomas, O., 1886. On the mammals presented by Allan O. Hume, Esq., C.B., to the Natural History Museum. *Proceedings of the Zoological Society of London*, **1886**: 54–79, pls. 5–6.
- Waterhouse, G. R., 1838. Catalogue of the Mammalia Preserved in the Museum of the Zoological Society of London. Second Edition. Richard and John E. Taylor, London. 68 pp.