

NOTES ON THE SYSTEMATICS OF THREE LEAF MONKEYS IN
THE COLLECTION OF THE INDIAN MUSEUM (ZOOLOG. SURV.)

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(PLATE I.)

While going through the collection of mammals in the Indian Museum in connection with the preparation of a Catalogue, I had an opportunity of studying the types of three leaf monkeys (Colobidae), namely, *Presbytis barbei* Blyth, *Semnopithecus rutledgei* Anderson and *Semnopithecus holotephreus* Anderson. The systematic position of these three forms is far from clear because, while the types (syntypes) of *P. barbei* have been incorrectly reported upon by a number of authors giving rise to a great confusion with regard to the identity of the species, the types of the other two have been considered to be lost so that their systematic positions have also been rendered liable to confusion.

Since the type specimens, as found out now, are all well-labelled and fairly well-preserved, except that most of the hairs on the lips of the syntypes of *P. barbei* have fallen off, it has been considered worth while to examine them anew in an attempt to clarify the positions regarding their respective identities.

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***Presbytis barbei* Blyth.**

1847. *Presbytis barbei*, Blyth, *J. Asiat. Soc. Bangal*, XVI, p. 734 (Ye, Tenasserim).
1863. *Presbytis barbei*, Blyth, *Cat. Mam. Mus. Asiat. Soc. Bangal*, p. 14 (Tippera Hills, East Pakistan).
1875. *Presbytis barbei*, Blyth, *J. Asiat. Soc. Bangal*, XLIV, Ex. No., p. 11.
1878. *Semnopithecus barbei*, Anderson, *Anat. zool. Resch.*, I, p. 12.
1881. *Semnopithecus barbei*, Anderson, *Cat. Mam. Indian Mus.*, I, p. 48.
1888. *Semnopithecus barbei*, Blanford, *Faun. Brit. India, Mammalia*, p. 39.
1894. *Semnopithecus barbei*, Forbes, *Handbk. Primat.*, II, p. 102.
1913. *Pygathrix barbei*, Elliot, *Rev. Primat.*, III, p. 48.
1928. *Pithecus pyrrhus barbei*, *Pithecus pyrrhus atrior*, Pocock, *J. Bombay nat. Hist. Soc.*, XXXII, pp. 668 and 673.
1934. *Trachypithecus obscurus barbei*, *Trachypithecus phayrei atrior*, Pocock, *Proc. zool. Soc. London*, pp. 949 and 952.
1936. *Trachypithecus barbei*, Hill, *Ibid.*, p. 105.
1939. *Trachypithecus phayrei phayrei*, *Trachypithecus pyrrhus atrior*, Pocock, *Faun. Brit. India, Mammalia*, I, pp. 130 and 143.
1951. *Presbytis cristatus atrior*, Ellerman and Morrison-Scott, *Checklist Pal. Indian Mam.*, p. 208.

Labels on the syntypes read as follows :—Types of *Presbytis barbei* Blyth, presented by Rev. J. Barbe (1845) Tippera, East Bangal. Indian

Museum Catalogue Nos. 19a and 19b (=36A and 36B respectively of A. S. B. Catalogue).

This leaf monkey has been the subject of great controversy. Blyth (1847, p. 734) in his original description based on an adult male and an adult female specimens collected from Ye, Tenasserim, stated that the pale markings of the face (pale eyelids and lips) resembled those of *Presbytis obscurus* Reid. However, some years later, he (Blyth, 1863, p. 14) not only changed the type locality from Ye, Tenasserim, to the interior of Tippera Hills, East Pakistan, but also surprisingly made the statement that *P. barbei* differed from *P. obscurus* and *Presbytis phayrei* Blyth in having the face black. Apparently in conformity with these views, he (Blyth, 1863, 1875) also suggested that *P. barbei* may be identical with *Presbytis femoralis* (Horsfield). The change of the type locality is perhaps acceptable, because it was based on the information supplied by the collector of the specimens, Rev. J. Barbe who, as stated by Pocock (1928, p. 668) did collect specimens in Tippera. But the question of the colour of the face remained unexplained even by Anderson (1878, 1881), Blanford (1888) and Elliot (1913) who examined or had the facility of examining the syntypes of *P. barbei*.

Although the specimens which Anderson (1881) included under *P. barbei* greatly differ from those which he considered as *P. phayrei*, yet he much confused the issue by stating that *P. barbei* 'appears to be very closely allied to the next¹ and a larger series of specimens than is at my disposal will probably prove their identity'. Perhaps in this he followed, but apparently without argument, Blyth (1847, p. 734) who favoured the consideration of *P. barbei* as a subspecies *P. phayrei*. Anderson (1878) further complicated the matter when he stated that there was no sexual difference as regards colouration in the syntypes of *P. barbei*, although, as given in the original description, the female specimen markedly differs from the male in having paler areas on the inner side of the bases of the thighs.² Hill (1936) borrowed these specimens from the Indian Museum and published a detailed description and a photograph of the male skin. He pointed out that, though the skin of the lips was black yet there were white hairs on the lip margins.³

The confusion caused by the foregoing statements can better be judged from the writings of an authority of Pocock's standing who was obliged to change his opinions thrice regarding the identity of this form (*vide* Pocock, 1928, p. 668; 1934, p. 949; 1939, pp. 130 and 143). While discussing the question at some length, he (Pocock, 1939, pp. 130-131) concluded that Blyth's (1847) original description was not based on the specimens which Blyth later (1863) described as having black faces.

On examination of these much discussed specimens, I find that the last opinion given about them by Pocock (1939) was rather unjustified,

¹ *P. phayrei*.

² This character is reported to be present in almost all adult females of the genus *Trachypithecus* as recognised by Pocock (1934). But it is not clear why Pocock (1939) did not consider this character as occurring in the Indian species of this genus, except *T. pyrrhus* (Horsfield); and even used this as a key character to distinguish Indian form of *pyrrhus* from the species *obscurus* and *phayrei*.

³ A similar statement was also made by Anderson (1878) and Forbes (1894).

as they appear to me to be the same specimens on which Blyth originally based his description. In the first place the specimens under report were presented to the Asiatic Society of Bangal in 1845 by Rev. J. Barbe and so, even assuming that they are not the syntypes of *P. barbei*, Blyth, then Curator of the Museum of Asiatic Society of Bangal, who identified them as true *barbei* must have taken cognisance of their characters when he described this leaf monkey in 1847. Secondly, excepting the doubtful point about the pale face markings, these two specimens resemble so closely Blyth's original description, based on two specimens of the same sex and age that one who has an opportunity of examining them cannot but believe that they represent the syntypes of the species.¹ Regarding the pale face markings the position appears to me as follows:—The pallor of the eyelids is quite pronounced in the female specimen but not so in the male, apparently due to the long exposure and deposition of dirt during exhibition in the galleries of the Museum of Asiatic Society of Bangal. Moreover, this character is of little interest as it is not a distinguishing character, and it may be present even in *Presbytis pyrrhus atrior* Pocock of which Pocock considered *barbei* as a synonym. The only confusing point is the paleness of the skin of the lips which in these skins is black and not pale as may appear from the original description. This colour cannot be attributed to exposure or the deposition of dirt.

There appears to be only one explanation of this puzzle. As stated by Anderson (1878), Forbes (1894) and Hill (1936), the lips are covered with white hairs. Most of these white hairs have now fallen off from the upper lip in the male specimen and from both lips in the female specimen. I suspect that Blyth wrongly compared the presence of white hairs on the lips to the pale lips of *P. obscurus*. In 1863 his statement that the skin of the face was black appears to be based on the fact that most of the hairs on the upper lip had fallen off by that time. This supposition is further strengthened by the presence of a skin, identified as *P. barbei* by Anderson (1881, 19*d*), in this collection in which the whiteness of the hairs on the lips is so pronounced as to appear by a superficial observation as resembling the condition found in *P. obscurus*. Perhaps still more convincing may be found the writings of Blyth (1875, p. 11) himself when he apparently concurred with Cantor (quoted by Blyth, *loc. cit.*) according to whom the face of this species 'during life is intense black, except the white-haired lips and chin which are of milk white colour.'

The skull without lower jaw (Plate I, figs. 1 and 2) of the male specimen and the lower jaw (Plate I, fig. 3) of the female specimen are present in this collection.² They were described but not figured by Anderson (1878).

¹ It may also be pointed out that Blyth (1863) listed only these two specimens as sole representatives of *P. barbei* in the collection of the Asiatic Society of Bangal.

² The presence of the well-labelled skulls of these specimens in this collection is a further proof that Blyth was rather inaccurate in his statements about this monkey as according to him (Blyth, 1875) these skins were not provided with skulls.

It thus appears certain that the specimens at present in the collection of the Zoological Survey of India are the syntypes of *P. barbei* (Blyth, 1847). The description of *P. pyrrhus atrior* (Pocock, 1928) is precisely applicable to them and thus *atrior* must be considered as a synonym of *P. barbei*. The form is evidently a well-defined race of *P. cristatus* (Raffles).

Diagnostic characters.—*P. cristatus barbei* may be distinguished from all other races of *P. cristatus* by the general absence of silvering of the pelage which at the most is very faintly visible towards the foreparts of the dorsal surface in some skins, by the tail (especially towards the tip) being appreciably paler than the dorsal surface, and also by the general colour being somewhat paler.

Distribution.—As far as at present ascertainable, the form is found from Tippera, East Pakistan, to Tennasserim and adjoining parts of Siam.

***Semnopithecus rutledgei* Anderson.**

1878. *Semnopithecus rutledgei*, Anderson, *Anat. zool. Resch.*, I, p. 12 (No locality).
 1881. *Semnopithecus cristatus*, Anderson, *Cat. Mam. Indian Mus.*, I, p. 51.
 1894. *Semnopithecus rutledgei*, Forbes, *Handbk. Primat.*, II, p. 133.
 1910. (?) *Presbytis ultimus* Elliot, *Proc. U. S. natl. Mus.*, XXXIII, p. 351.
 1913. *Pygathrix cristatus*, (?) *Pygathrix ultimus*, Elliot, *Rev. Primat.*, III, pp. 79 and 81.
 1940. (?) *Pithecus pyrrhus ultimus*, Chasen, *Bull. Raffl. Mus. Singapore*, XV, p. 82.

The label on the type specimen reads as follows :—Type of *Semnopithecus rutledgei* Anderson, presented by W. Rutledge, Esq., 18-9-1871. Indian Museum Catalogue No. 22b.

Elliot (1913, pp. 79-80) considered this leaf monkey as a synonym of *Pygathrix* (= *Presbytis*) *cristatus* (Raffles) and stated that the type could not be traced. The skin of the type has now been found; and on comparing this skin with those of *Presbytis cristatus* in this collection from one of which Elliot (*loc. cit.*) also drew up the description of *P. cristatus* in his monograph, I find that there is a marked difference in colouration. The general colour in the original description (Anderson, 1878, p. 12) was described as black, but it is much paler than the skins of *P. cristatus*. Also the hairs are much more extensively silvered at the tips all over the body, and the black hands and feet are well contrasted with the frosted forearms and legs. Chason (1940, p. 82) assigned exactly the same characters to *P. ultimus* (Elliot, 1910), and, thus, *rutledgei* should replace *ultimus*. However, it still appears somewhat doubtful whether *ultimus* is distinguishable from *cristatus* particularly on account of the curious distribution assigned to it, *i.e.*, Malaya States, Borneo, and Sumatra (part.); and unfortunately, or fortunately, *rutledgei* is without a locality.

The skull of *P. rutledgei* was described by Anderson (*loc. cit.*) as like that of *P. maura* (= *cristatus*) but with gradually expanding extremities. *P. rutledgei*, if revived, should evidently be considered as a race of *P. cristatus*.

Diagnostic characters.—*P. cristatus rutledgei* is distinguished from all other races of *P. cristatus* by much more extensive silvering of hairs all over the body, and by its quite paler ground colour.

***Semnopithecus holotephreus* Anderson.**

1878. *Semnopithecus holotephreus* Anderson, *Anat. zool. Resch.*, I, p. 27 (No locality).
1881. *Semnopithecus holotephreus*, Anderson, *Cat. Mam. Indian Mus.*, I, p. 50.
1894. *Semnopithecus holotephreus*, Forbes, *Handbk. Primat.*, II, p. 124.
1913. *Pygathrix holotephreus*, Elliot, *Rev. Primat.* III p. 42.

The label on the type specimen reads as below :—Type of *Semnopithecus holotephreus* Anderson, presented by W. Rutledge, Esq., 29-10-1872. Indian Museum Catalogue No. 21a.

Elliot (1913) who thought this species as a synonym of *P. barbei* could not trace out the type specimen. The skull of the type specimen is now available in this collection. Although nothing final can be said about the identity of this species on the basis of the skull alone, yet a reference may be made to some remarks made about it by Anderson. He (Anderson, 1878, p. 27) in his original description described this leaf monkey as having the areas around eyes and lips white, and some years later he (Anderson, 1881) again repeated the same description for this species. Although, while describing *P. barbei* in 1878 and 1881, he did not mention the areas around eyes and lips as white, yet in 1881 he suggested that *P. holotephreus* may be a synonym of *P. barbei*. Elliot supported his views, but apparently without argument. As *P. holotephreus* differs from *P. barbei* in very important characters of the colour of the lips and the eyelids, there appears to be no justification in considering the former as a synonym of the latter. As far as it can be judged from the original description of the skin, the species should be relegated to the synonymy of *P. phayrei* Blyth.

As the skull of this species has not been figured so far, photographs are now being published (Plate I, figs. 4-6).