

Article V.—THE PROPER GENERIC NAME OF THE MACAQUES.

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Recently in the 'Proceedings' of the Biological Society of Washington¹ Dr. M. W. Lyon, Jr., showed conclusively that the name *Pithecus* Geoffroy and Cuvier (1795), adopted by the late Dr. D. G. Elliot in his 'Review of the Primates'² was untenable as a generic name, being indeterminate. Lyon concludes with the statement: "Hence *Pithecus* must be dropped as the technical name of the macaques and the more familiar *Macaca* be restored."

For nearly a century *Macaca* Lacépède, 1799, has been the commonly recognized name of the macaques, usually taken, however, from Desmarest (1820) with the original spelling modified to *Macacus*. In early days the Barbary ape (*Simia sylvanus* Linné, 1758 = *Simia inuus* Linné, 1766) was included in *Macacu*, and some taxonomers still question the necessity of separating it generically from the other macaques. It happens that the Barbary ape (*Simia inuus* Linné, 1766) was the only species mentioned under *Macaca* by the founders of the genus, and this species is therefore the genotype of *Macaca*.

It has recently been decided, on the principle of tautonymy,³ that the type of the Linnean genus *Simia* is *Simia sylvanus* Linné, an earlier name for *Simia inuus*, the type of *Macaca*. It becomes necessary, therefore, to determine which name among the score of generic and subgeneric names that have been bestowed upon the various species of the genus *Macaca* is tenable to replace *Macaca* as usually accepted. The Barbary ape proves to be the type of many of them, as shown by the following summary:

1758. *Simia* Linné, Syst. Nat., 10th ed., I, 1758, p. 25.
Type, by tautonymy, *Simia sylvanus* Linné, 1758 = *Simia inuus* Linné, 1766. Cf. Thomas, Proc. Zool. Soc. London, 1911, p. 125.
1799. *Macaca* Lacépède, Tabl. Mamm., 1799, p. 4.
Type, by monotypy, *Simia inuus* Linné = *Simia sylvanus* Linné.
1812. *Inuus* Geoffroy, Ann. Mus. Hist. Nat. Paris, XIX, 1812, p. 100.
Type, *Inuus ecaudatus* Geoffroy = *Simia inuus* Linné.
1816. *Sylvanus* Oken, Lehrb. Naturg., Theil 3, Zool., Abth. 2, 1816, p. 1223.
New name to replace *Inuus* Geoffroy. Also preoccupied by *Sylvanus* Latreille, 1807, for a genus of insects.

¹ Proc. Biol. Soc. Washington, XXVIII, p. 179, Nov. 29, 1915.

² Review of the Primates, II, pp. xxxii, 176, 1912 (June, 1913).

³ Cf. Thomas, Proc. Zool. Soc. London, 1911, p. 125, March, 1911.

1820. *Macacus* Desmarest, Mamm., I, 1820, p. 63.
Emendation of *Macaca* Lacépède, 1799.
1827. *Magus* Lesson, Man. Mamm., 1827, p. 43.
Contained originally two species, *Magus sylvanus* (Linné) and *M. maurus* (F. Cuvier), but in 1840 Lesson himself removed *M. maurus* to his new genus *Rhesus*, leaving in *Magus* only *Simia sylvanus* Linné, which thus became the type. *Gymnopyga* Gray, 1866, is available for *Magus* Elliot (nec Lesson), as noted below.
1828. "*Pithes* Burnett, Quart. Journ. Sci. Litt. and Art. XXVI, p. 307, Oct.-Dec., 1828.
"Type: *Pithes*? *sylvanus* (= *Simia sylvanus* Linnæus, from northern Africa.) (Not seen; from Palmer, Index Gen. Mamm., 1904, p. 540.)
1841. *Salmacis* Gloger, Hand-u. Hilfsb. Naturg., I, 1841, p. 35.
New name to replace *Macaca* Lacépède, 1799, apud Palmer, Index Gen. Mamm., 1904, p. 617. (Gloger's work not seen.)

The foregoing eight names are synonyms of *Simia* and need not be further considered. The following eleven names have been used for species of the restricted group "*Macacus*," and it is from this series a substitute for *Macaca* must be selected.

1795. *Pithecus* Geoffroy & Cuvier, Mag. Encyclop., III, 1795, p. 462.
Originally contained 5 species, without designation of type.
Type, by subsequent designation (Thomas, 1894), *Simia veter* Linné, an indeterminate species, selected with the express purpose of consigning *Pithecus* "to the limbo of unrecognizable names." In 1913 Elliot,¹ unaware of what Thomas had done in the case, substituted *Pithecus* for *Macacus*, on the basis of priority, and designated *Simia sinica* Linné as the type, an invalid act.
1820. *Silenus* Goldfuss, Handbuch Zool., II, 1820, p. 479.
Subgenus of *Cynocephalus* Illiger.
Type, by monotypy and tautonymy, *Simia silenus* Schreber (nec *Simia silenus* Linné, indeterminable) = *Pithecus albibarbatus* Elliot, ex *Simia (Cercopithecus) silenus albibarbatus* Kerr = *Ouandern* Buffon, Hist. Nat., XIV, 1776, pp. 169, 174, pl. xviii.
1839. *Maimon* Wagner, Suppl. Schreber's Säug., I, 1840 (Oct. 1839), pp. iv^{bis}, 141.
As a subgenus of *Inuus*, with 6 species, and without designation of type; 4 of the 6 species are included by Elliot in *Pithecus*. As no type appears to have been indicated I here designate *Inuus erythreus* (F. Cuvier) as the type (= *Simia rhesus* Audebert).
1840. *Rhesus* Lesson, Sp. Mamm., 1840, pp. 49, 95. (Dedication dated Oct., 1840.)
As a subgenus of *Macacus*. Type, by tautonymy, *Macacus rhesus* Desmarest = *Simia rhesus* Audebert.
1840. *Pithex* Hodgson, Journ. Asiat. Soc. Bengal, IX, 1840, p. 1212.
Two species, without designation of type. Type, by present designation, *Pithex oinops* Hodgson = *Simia rhesus* Audebert, apud Elliot.

¹ Review of the Primates, II, p. 176, June, 1913.

1848. *Lyssodes* Gistel, *Naturgesch. Thierreichs f. höhere Schulen*, 1848, p. ix.
 "Type, *Macacus arctoides* I. Geoffroy" = *Macacus speciosus* F. Cuvier, 1825, apud Palmer, *Index Gen. Mamm.*, 1904, p. 390. (Gistel's work not seen.)
1862. *Vetulus* Reichenbach, *Völlständ. Naturg. Affen*, 1862, p. 125, pl. xxii, figs. 321-326. Wrongly given to replace *Silenus* Lesson, 1840 (= *Silenus* Goldfuss, 1820).
1862. *Cynamolgus* Reichenbach, *Völlständ. Naturg. Affen*, 1862, p. 130.
 Includes two subgenera (*Zati* and *Cynamolgus*) and 9 species, without designation of types.
 Type of *Cynamolgus*, by present designation, *Macacus irus* F. Cuvier (= *Cynamolgus cynocephalus* Reichenbach).
1862. *Zati* Reichenbach, *Völlständ. Naturg. Affen*, 1862, pp. 130-133, pl. xxiii, figs. 327-331.
 Type, by designation of Elliot (*Primates*, I, p. xxxviii), *Simia sinica* Linné = *Zati sinicus* Reichenbach).
1862. *Nemestrinus* Reichenbach, *Völlständ. Naturg. Affen*, 1862, pp. 130-140, pl. xxiv, figs. 349-353, 359-363.
 Type, by monotypy and tautonymy, *Simia nemestrinus* Linné. Pre-occupied for a genus of Diptera.
1866. *Gymnopyga* Gray, *Proc. Zool. Soc. London*, 1866, p. 202, pl. xix.
 Type, by monotypy, *Macacus innominata* Gray (= *Macacus maurus* F. Cuvier, apud Elliot). Hence not a true macaque. The name should replace Elliot's *Magus* (nec *Magus* Lesson).

From the above it is evident that not only is Elliot's use of *Pithecus* untenable but that all but one of the names he adopted for his subgenera of *Pithecus* are also untenable.

The available name to replace *Macaca* Lacépède (*Macacus auctorum*) is *Silenus* Goldfuss, 1820. Owing to the confusion that has always attended the identification of *Simia silenus* Linné, *Silenus* is not an ideal substitute for *Macacus*, the genotype for *Silenus* being *Simia silenus* Schreber (nec Linné) = *Silenus albibarbatu*s (Kerr), primarily the *Ouanderou* of Buffon.

Maimon Wagner, 1839, the next name in order, with *Simia rhesus* Audebert as genotype (here designated), is involved with *Mormon*, both *mormon* and *maimon* having been used specifically for the same species (*Simia sphinx* Linné), as well as for different genera of Primates.¹

Rhesus Lesson (1840), type *Simia rhesus* Audebert, fills every qualification except that of priority, it being one year later than *Maimon* and twenty years later than *Silenus*, and is of course therefore unavailable. For these reasons *Silenus* seems the necessary choice as the name of the group of late commonly known as "*Macacus*."

¹ Trouessart (*Cat. Mamm.*, Suppl., 1904, p. 21) used *Maimon* as a "nom. nov." for a subgenus of *Papio*, to replace *Mormon* Lesson, nec Illiger.

It happens that Dr. Elliot was not only unfortunate in his selection of a generic name for the macaques, but also in selecting names for the subgeneric divisions of the genus, of which there are five.¹ The first is without name and may be supposed to represent a subgenus *Pithecus*. But this is not really the case, since his type of *Pithecus* is the sole species of his subgenus *Vetulus*, which is a pure synonym of *Silenus*.

For his second subgenus the name *Nemestrinus* is used, which is pre-occupied by *Nemestrinus* Latreille, 1802, for a genus of Diptera.

His third subgenus, as stated above, is *Vetulus* Reichenbach, 1862, a name given to replace *Silenus*, and as *Vetulus* has the same type as *Silenus*, the latter becomes the typical subgenus of *Pithecus* Elliot.

His fourth subgenus bears the name *Zati* Reichenbach, 1862, with *Simia sinica* Linné as type by designation of Elliot, and requires no change.

His fifth and much the largest subgenus is designated *Macacus*, now shown to be unavailable. For this *Cynamolgus* Reichenbach may be substituted, with *Macacus irus* F. Cuvier as type, as above designated.

The generic and subgeneric names of the macaques, as now determined, may be shown in comparison with Elliot's, as follows:

ELLIOT, 1913.	ALLEN, 1916.
Genus <i>Pithecus</i> Erxleben, 1777.	Genus <i>Silenus</i> Goldfuss, 1820.
Subgenera.	Subgenera.
1. _____	<i>Lyssodes</i> Gistel, 1848.
2. <i>Nemestrinus</i> Reich., 1862.	<i>Rhesus</i> Lesson, 1840.
3. <i>Vetulus</i> Reich., 1862.	<i>Silenus</i> Goldfuss, 1820.
4. <i>Zati</i> Reich., 1862.	<i>Zati</i> Reich., 1862.
5. " <i>Macacus</i> " Lacépède, 1799.	<i>Cynamolgus</i> Reich., 1862.

¹ Subgenus *Neocebus* in Vol. II, p. 224, is a duplication, by error in make-up, of *Neocebus*, a subgenus of *Lasiopyga*, on p. 319 of the same volume. Cf. Elliot, Primates, Vol. I, p. xl. and Vol. II, p. 319. See also Vol. I, p. lx, where *Neopithecus* appears in error for *Neocebus*!