

Phylogenetic relationships of leaf monkeys (*Presbytis*; Colobinae) based on cytochrome *b* and 12S rRNA genes

V.F. Vun¹, M.C. Mahani¹, M. Lakim², A. Ampeng^{1,3} and B.M. Md-Zain¹

¹School of Environmental and Natural Resource Sciences,
Faculty of Science and Technology, Universiti Kebangsaan Malaysia,
Bangi, Selangor, Malaysia

²The Broad of Trustee of Sabah Parks, Sabah, Malaysia

³Sarawak Forestry Department, Kuching, Sarawak, Malaysia

Corresponding author: B.M. Md-Zain

E-mail: abgbadd@ukm.my/abgbadd1966@yahoo.com

Genet. Mol. Res. 10 (1): 368-381 (2011)

Received September 1, 2010

Accepted December 10, 2010

Published March 1, 2011

DOI 10.4238/vol10-1gmr1048

ABSTRACT. Little is known about the classification and phylogenetic relationships of the leaf monkeys (*Presbytis*). We analyzed mitochondrial DNA sequences of cytochrome *b* (Cyt *b*) and 12S rRNA to determine the phylogenetic relationships of the genus *Presbytis*. Gene fragments of 388 and 371 bp of Cyt *b* and 12S rRNA, respectively, were sequenced from samples of *Presbytis melalophos* (subspecies *femoralis*, *siamensis*, *robinsoni*, and *chrysomelas*), *P. rubicunda* and *P. hosei*. The genus *Trachypithecus* (Cercopithecidae) was used as an outgroup. The Cyt *b* NJ and MP phylogeny trees showed *P. m. chrysomelas* to be the most primitive, followed by *P. hosei*, whereas 12S rRNA tree topology only indicated that these two species have close relationships with the other members of the genus. In our analysis, *chrysomelas*, previously classified as a subspecies of *P. melalophos*, was not included in either the *P. m. femoralis* clade or the *P. m. siamensis* clade. Whether or not there should be a separation at the species level remains to be clarified. The tree topologies also showed that *P. m. siamensis* is paraphyletic with *P. m. robinsoni*, and *P. m. femoralis* with *P. rubicunda*, in two different