

Looking out for the Myanmar snub-nosed monkey

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A new genetic study has shed light on how the newly discovered Myanmar snub-nosed monkey evolved.

The study, published in the journal [PLoS One](#), brought together researchers from Burma/Myanmar, China, Germany, Switzerland, the United States and Vietnam, and was funded by the EU's 'Non-state actors and [local authorities](#) in development' programme. It presents findings from [genetic studies](#) on all five snub-nosed monkey [species](#), providing crucial information for the conservation of these rare [primates](#).

The Myanmar snub-nosed monkey was first discovered in 2010 by a team from [Fauna & Flora International \(FFI\)](#), the Biodiversity and Nature Conservation Association (BANCA) and the People Resources and Conservation Foundation (PRCF). Since then, considerable efforts have been made to develop protected areas within Burma/Myanmar to ensure the survival of the species.

The Myanmar snub-nosed monkey, or as it is known binomially, the *Rhinopithecus strykeri*, is now confirmed as a species in its own right.

In this latest study, the international team analyzed the DNA of all five snub-nosed monkey species currently known to scientists. The genetic material was isolated from fecal samples and skin fragments that were cut out from museum exhibits.

Christian Roos from the German Primate Center says that the team's findings confirm that Myanmar snub-nosed monkey is indeed a new species.

"Even more exciting, however, is the information we gained about the evolutionary history of the species, as it allows us insights into primate evolution and speciation," he says.

Biogeographic processes such as the raising of the Himalayas altered the landscape profoundly, creating new physical and climatic barriers that certain species could not cross anymore, and resulting in a hampering of gene flow and the development of new species. However, these barriers were not constant over different geological periods, and species soon started to mix again, resulting in hybridisation - the production of offspring between separate species.

Christian Roos says that hybridisation is 'much more frequent than generally thought,' implying that it is necessary to adjust the concept we have of species entirely.

Now it is essential that measures are put in place to protect the monkey, and the new government of Burma/Myanmar has now agreed to implement protected areas, and to carry out research that had been blocked for years under the old regime. They also plan to protect the species under of law of Burma/Myanmar and to protect its habitat by creating a new national park in the Imawbum mountain range.

However, although the current political situation in Burma/Myanmar represents a unique opportunity to get conservation on the political agenda, it is also a

time of uncertainty, where any push for accelerating economic growth could result in an increase in roads being built and more forests being cleared. This could cause irreparable destruction to the Myanmar snub-nosed monkey's natural habitat.

Although it has yet to be classified on the International Union for Conservation of Nature (IUCN) Red List, it is expected the Myanmar snub-nosed monkey will be listed as Critically Endangered. There are only an estimated 260 to 330 of the species left in existence, and all closely related [monkeys](#) are already classified by the IUCN as Endangered or Critically Endangered.

This new study also comes as evidence of the primate's existence in China is uncovered. Previously thought to only inhabit areas of north-eastern Burma/Myanmar, recent evidence has shown that the species also exists in China.

More information: Liedigk, R. et al., 'Evolutionary History of the Odd-Nosed Monkeys and the Phylogenetic Position of the Newly Described Myanmar Snub-Nosed Monkey *Rhinopithecus strykeri*', *PLoS ONE* 7(5): e37418, 2012.
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