

on 07 September 2012



Malay Archipelago Bat not One, but Two Species

Selangor, Malaysia, Sept 6, 2012 – (ACN Newswire) – Genetic studies of *Myotis muricola*, otherwise known as the Wall-roosting Mouse-eared bat or Nepalese Whiskered Myotis, suggest that it consists of not one, but two distinct species.

M. muricola is widespread on the Malay Archipelago, a region with an island geography that provides natural boundaries and as a result displays some of the richest biodiversity in the world. Until now scientists had compared the shape and size of *Myotis* bats across the Archipelago and conducted only limited DNA analysis. As a result the *Myotis* family tree has remained in disarray with often contradictory lines of evidence confusing matters.

To resolve these taxonomic difficulties, a team from the Universiti Malaysia Sarawak and the Indonesian Institute of Sciences launched the first in-depth genetic study on *M. muricola* and its sister taxa, *M. mystacinus*. Writing in the *Pertanika Journal of Tropical Agricultural Science*, the team describe how they examined the bats in two regions, West and East of Wallace's line. Using a genetic analysis technique known as 'DNA cytochrome b sequencing', they found that the Western and Eastern groups had a genetic distance of between 26 and 39 per cent.

Based on this high genetic distance they argue that *M. muricola* Eastern and *M. muricola* Western should be considered as two distinct species. The data also suggest that the Eastern bat started to diversify in the western region during the Pliocene (5 to 2.5 million years ago). They became fully diverged within the western region during the Pleistocene (2.5 million to 11,000 years ago) under the influence of ancient Sunda River systems that had produced gallery forest corridors which functioned as safe havens for the bats as the climate and geography around them changed.

The authors stress that as a result of these findings an official revision of the taxonomic status of *M. muricola* is urgently needed. In addition, more samples from throughout the geographic range are required to firmly establish these findings.

Full press release: <http://www.acnnewswire.com/clientreports/1019/906.pdf>

About *Pertanika Journal of Tropical Agricultural Science* (JTAS)

Pertanika Journal of Tropical Agricultural Science (JTAS) is published by Universiti Putra Malaysia in English and is open to authors around the world regardless of nationality. It currently publishes four times a year in February, May, August and November. Other Pertanika series include Pertanika Journal of Science & Technology (JST), and Pertanika Journal of Social Sciences & Humanities (JSSH).

JTAS aims to provide a forum for high quality research related to tropical agricultural research. Areas relevant to the scope of the journal include: agricultural biotechnology, biochemistry, biology, ecology, fisheries, forestry, food sciences, entomology, genetics, microbiology, pathology and management, physiology, plant and animal sciences, production of plants and animals of economic importance, and veterinary medicine. The journal publishes original academic articles dealing with research on issues of worldwide relevance. Website:
<http://www.pertanika.upm.edu.my/home.php>

For more information on the research, contact:

E-mail: wiantoro@gmail.com

For more information about the journal, contact:

Email: ndeeps@admin.upm.edu.my

Source : redorbit.com