Scientists Discover New Family Of Legless Amphibians, Chikilidae

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AsianScientist (Mar. 5, 2012) - An Indo-European team of scientists has discovered a new family of legless amphibians which they called Chikilidae, adding a major branch to the amphibian tree of life.

Commonly known as tailless-burrowing caecelians, the Chikilidae is a legless, snake-like caecilian, the most primitive of three amphibian groups that also include salamanders and frogs. All 180 species of caecelians are restricted to the wet tropics of the world.

Led by Dr. S. D. Biju of the University of Delhi - also fondly known as India's Frogman - the team explored more than 250 locations in Northeast India, leading to the discovery of the new amphibians described in the journal, *Proceedings of the Royal Society B, London*.

YouTube Video

According to relaxed molecular clock analyses, the lineage of Chikilidae diverged in the Early Cretaceous, about 140 million years ago.

Unexpected to many, molecular phylogenetic analyses of DNA (mitochondrial and nuclear) and comparative cranial anatomy showed a sister-group relationship with the Herpelidae, African relatives found more than 7,000 miles away from the Chikilidae.

This surprising ancient geographical link to Africa adds to growing evidence of how continental movements have affected the geographical distribution of floral and fauna, the authors say in the *YouTube* video.

> "For the last four or five years, we have extensively studied all kinds of habitats. We have received tremendous support from the local people. We found a group of animals; we gave them a new family status, and we named it Chikilidae," said lead author Rachunliu G. Kamei.

Chikilidae is the Latin version of the word Chikilid, which originates from the Garo language, Kamei said. The Garo language is used in the Indian state of Meghalaya, as well as in neighboring Bangladesh.

An interesting factoid about Chikilids: In a wonderful show of parental care, the Chikilid mother lays transparent eggs and guards her egg clutch constantly without feeding for up to 70 days.

The article can be found at: Kamei RG et al. (2012) Discovery of a new family of amphibians from

northeast India with ancient links to Africa.

Source: Systematics Lab, University of Delhi.
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