

New family of gecko discovered

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Researchers at the University of Minnesota's Bell Museum of Natural History and Pennsylvania's Villanova University have discovered a new family of gecko, the charismatic large-eyed lizard popularized by car insurance commercials.

Scientists have long been interested in geckos and their evolution because they are key biodiversity indicators and are found on nearly every continent. Researchers are also interested in the gecko because of the animal's sticky toe pads, which allow them to scale rough and smooth surfaces -- a characteristic that may have human application in medicine, emergency rescue service and military industries.

Graduate students Tony Gamble from the University of Minnesota and Aaron Bauer from Villanova sequenced DNA from 44 species of gecko and used this genetic data to reconstruct the animals' family tree. The resulting new classification is different from previous classifications, which are based solely on foot structure.

"A classification based solely on foot structure will track selective pressure on the feet and not represent actual evolutionary history," said Gamble, who believes his discovery will add to a more accurate gecko family tree that, in turn, will allow scientists to better understand how sticky toe pads have evolved.

The researchers have named the new family "Phyllodactylidae," referring to the leaf-shaped toes of many of the species in this group (phyllo meaning "leaf;" dactyl meaning "toe"). The new family consists of 103 species found in semiarid and tropical regions of North Africa, the Middle East, North and South America and the Caribbean.

Source: University of Minnesota

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