New Genus Created for Toads Discovered in Indonesia

An article published in the current issue of Herpetologica reports on the discovery of a new genus of toads, featuring two new species. The researchers used nuclear and mitochondrial data to describe toad species, making their results unique among recent studies that used such technologies to reclassify previously known species.

Lawrence, Kansas (PRWEB) March 13, 2017 -- Herpetologica – New technologies have prompted species reclassifications among many organisms. However, discoveries of brand-new vertebrate species remain rare, particularly among small, elusive toads. Those who search Earth’s remaining undeveloped locations for these species are feeling the press of time, as some of the world’s most biodiverse countries are experiencing the highest rates of habitat alteration and development.

The current issue of the journal Herpetologica reports on the discovery of a new genus of toads, featuring two new species. It is only the second such discovery in Asia since the 1800s. The researchers used nuclear and mitochondrial data to describe toad species “from scratch,” making their results unique among recent studies that used such technologies to reclassify previously known species.

For this study, the researchers spent eight months in 2013 and early 2014 conducting an inventory of toads in the Sumatra highlands. During their trips, they discovered several specimens of an unusual toad. They continued their survey work until August 2015 and then analyzed the physical and genetic characteristics of the unique specimens in comparison to other species known from that region. The results of their analyses showed two previously undescribed species of Southeast Asian toads. These toads are of medium size with gangly limbs. Like similar toads, they live in forested areas or caves, but their physical features differ. They also appear to have mating calls that are unlike those of other amphibians on the Sunda Shelf.

The authors propose that their two newly discovered species be classified under a new genus, Sigalegalephrynus. The name is inspired by their resemblance to wooden puppets used in native ceremonies in the region, giving them the common name of “puppet toads.”

Their discovery comes as researchers feel increasing urgency to find and classify species in Indonesia, where lands are being rapidly cleared of forests and other habitats needed to sustain the species endemic to the area. “With more thorough exploration like ours, Indonesia will probably rank as the most biodiverse country in the world in terms of herpetofauna,” said author Utpal Smart. However, he added that the rate of deforestation in Indonesia “now surpasses that of Brazil, which until recently was the country with the highest deforestation rate in the world.”

Smart noted that this rapid deforestation is particularly crucial because almost half of all amphibians in Indonesia are not found anywhere else in the world. “We hope that our efforts will eventually educate and alert people to the massive yet understated ecological crisis that is playing out in the islands of Sumatra and Java,” he said.

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Herpetologica is a quarterly journal of The Herpetologists’ League, containing original research articles on the biology of amphibians and reptiles. The journal serves herpetologists, biologists, ecologists, conservationists, researchers, and others interested in furthering knowledge of the biology of amphibians and reptiles. To learn more about the society, please visit [www.herpetologistsleague.org](http://www.herpetologistsleague.org).
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