

Press release

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OVER 40 UNDESCRIBED REPTILE SPECIES REPORTED IN A GENETIC STUDY ON MADAGASCAR

Barcodes in supermarkets are used to identify goods quickly and unambiguously. A similar idea has been introduced with the so-called DNA barcoding for animals. Based on specific, standardized gene fragments, known as DNA barcodes, one can reliably distinguish most species, even if they look confusingly similar.

A research team from Brussels, Munich and Brunswick now reported on the largest DNA barcoding study of reptiles so far in the open-access journal [PLoS ONE](#). The biologists compared gene sequences of around 250 reptile species from Madagascar, and identified over 40 new, undescribed species of snakes, skinks, chameleons and geckos. At present, around 400 species of reptiles are known occurring on this East African island that is famous for its unique flora and fauna.

"The large number of newly identified reptile species was striking, because the reptiles of Madagascar have been intensively studied during the last 20 years" comments Zoltán T. Nagy, the lead researcher of the study, who is working in the Royal Belgian Institute of Natural Sciences in Brussels. "This surprisingly high number of reptiles new to science represents more than 10% of the presently known diversity of reptiles on the island, and highlights Madagascar's importance as being one of the 'hottest hotspots' of biodiversity on Earth" adds Zoltán T. Nagy. "In the future, these unknown species will have to be studied morphologically before they can be described and named formally" adds Frank Glaw, a co-author of the study, working as taxonomist in Munich.

Importantly, the database provides DNA barcodes for about 110 of the 140 Madagascan reptiles included in CITES (the *Convention on International Trade in Endangered Species* of Wild Fauna and Flora, also known as the Washington Convention), and thereby provides a solid basis for future controls of the trade via molecular identification methods. "DNA barcoding will facilitate rapid and minimally invasive identification of animals—a clear advantage also in conservational context" comments Gontran Sonet, co-author of the paper, also working in Brussels.

This research project was initiated by the Joint Experimental Molecular Unit (JEMU), which is an integrated research infrastructure financed by the Belgian Science Policy Office and supported by the Royal Belgian Institute of Natural Sciences and the Royal Museum for Central Africa. JEMU conducts research on natural history collections in the fields of molecular systematics, DNA barcoding, biological classification and archiving biological specimens and samples.

Article: NAGY, Z.T., SONET, G., GLAW, F. & VENCES, M. (2012): First large-scale DNA barcoding assessment of reptiles in the biodiversity hotspot of Madagascar, based on newly designed COI primers. – *PloS ONE* **7**: e34506.

Link of the paper:

<http://dx.plos.org/10.1371/journal.pone.0034506>

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