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Museum Koenig Bonn

Verified after two decades: the fourth anaconda species

Nowadays, the discovery of new species is for the taxonomically working zoologist not very unusual, as long as these new species are small and inconspicuous. In contrast, the discovery of big-growing, conspicuous new vertebrate species is much rarer and attracts the attention not only of specialists, but also of a broader public. Two decades after having described the at this time new Anaconda species *Eunectes beniensis* based on morphological characteristics, a team guided by the former Georgian Humboldt fellow at the Research Museum Koenig, David Tarknishvili, meanwhile professor and Institute Director at Ilia State University in Tbilissi, succeeded in extracting DNA from some old, so far unevaluated, still existing tissue samples and to substantiate and verify the specific status of the new species also genetically.

Also in our days undiscovered big-growing reptiles can be found, as has been shown by more than a dozen of new monitor lizard species which have been described as new by members of the herpetological section of the Museum Koenig in Bonn since 1988. But also the giant snakes had some surprises ready for the researchers from Bonn. Apart from two new insular subspecies of the Reticulated Python – with up to nine meters in length together with the Green Anaconda the longest snake on earth – which were discovered by Museum Koenig's former PhD student Mark Auliya, his former fellow PhD candidate Lutz Dirksen managed to find a new, fourth anaconda species in the Beni region of Bolivia which he introduced to science as *Eunectes beniensis*. First erroneously regarded as a hybrid between the big Green Anaconda and the smaller Yellow or Paraguay Anaconda, the morphological analysis strongly suggested its status as an own, independent species, the fourth of its genus and growing at least up to 4 m in length.

Two decades later, a team guided by the former Georgian Humboldt fellow at the Research Museum Koenig, David Tarknishvili, meanwhile professor in Tbilissi, succeeded in extracting DNA from some old, so far unevaluated, still existing tissue samples and to substantiate and verify the specific status of the Beni Anaconda also genetically. Also, the former staff member of the Museum Koenig, Dr. Axel Hille, and the museum's senior herpetologist Prof. Wolfgang Böhme were part of the team, the latter was also the doctoral supervisor of the two above-mentioned PhD students. The new findings have been published in the leading European journal of its discipline, „Amphibia-Reptilia“, which has been founded, together with the society on which it is based, also at the Museum Alexander Koenig in Bonn.

Source

David Tarknishvili, Axel Hille, Thomas Waller, Mariam Todua, Marine Murtskhvaladze, Wolfgang Böhme: Morphological trends and genetic divergence in anacondas, genus *Eunectes* Wagler, 1830 (Serpentes: Boidae), in Amphibia-Reptilia, Online-Publikationsdatum: 02 Nov 2022, <https://brill.com/view/journals/amre/aop/article-10.1163-15685381-bja10114/article-10.1163-15685381-bja10114.xml>

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About the LIB

The LIB is dedicated to researching biodiversity and its changes, the results of which are disseminated to the wider society in an educational manner. In order to better understand the current mass extinction of flora and fauna, researchers are looking for connections and causes of – often – man-made changes. The goal is to develop solutions for the preservation of ecosystems and species in order to maintain the basis of current life.

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Caption: The fourth Anaconda species *Eunectes beniensis*.

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