Psychedelic rock gecko among dozens of species in need of further conservation protection in Vietnam

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Endangered psychedelic rock gecko (Cnemaspis psychedelica). Credit: Thomas Ziegler

Further conservation measures are required to protect Vietnamese reptiles, such as the psychedelic rock gecko (Cnemaspis psychedelica), from habitat loss and overharvesting, concludes a report, published in the journal *Nature Conservation*.

Having identified areas of high reptile diversity and large numbers of endangered species, the study provides a list of the 50 most threatened species as a guide for further research and conservation action in Vietnam.

The study, based on the bachelor thesis of Lilli Stenger (University of Cologne, Germany), recommends IUCN CPSG's One Plan Approach to Conservation measures, which, next to improved habitat conservation, also involves increasing the number of threatened species in breeding stations and zoos to maintain populations suitable for restocking.

"Modern zoos, as well as local facilities, can play a crucial role in not only conducting or financially supporting in situ conservation projects, that is to say in nature, but also by protecting species from extinction through maintaining ex situ assurance colonies to reinforce in situ conservation programs," said Prof. Dr. Thomas Ziegler, Vietnam conservation team member and coordinator from Cologne Zoo, Germany.

The scientists identified 484 reptile species known to Vietnam, aiming to provide a baseline to authorities, conservationists, rescue centers, and zoos, so they can follow up with appropriate conservation measures for endangered species. They note that the number is likely to go up, as the country is regarded as a top biodiversity hotspot, and the rate of new reptile species discoveries remains high.

According to the IUCN Red List, 74 of the identified species are considered threatened with extinction, including 34 endemic species. For

more than half of Vietnam's endemic reptiles (85 of 159), the IUCN Red List status is either missing or outdated, and further research is imperative for these species, the researchers say.

Vietnam has a high level of reptile diversity and an outstanding number of endemic species. The species richness maps in the study revealed the Central Annamites in central Vietnam to harbor the highest endemic species diversity (32 species), which highlights it as a site of particular importance for reptile conservation. Alarmingly, a protected area analysis showed that 53 of the 159 endemic species (33.2%) including 17 threatened species, have been recorded exclusively from unprotected areas, such as the Psychedelic Rock Gecko.

Endangered psychedelic rock gecko (Cnemaspis psychedelica). Credit: Thomas Ziegler

Endangered Truong Son pit viper or Quang Binh pit viper (Trimeresurus truongsonensis). Credit: Thomas Ziegler

In General, Vietnam is considered a country with high conservation priority due to habitat loss and overharvesting for trade, traditional medicine and food.

Globally, reptiles are considered a group of special conservation concern, as they play an important role in almost all ecosystems and often have relatively small distribution ranges, making them especially vulnerable to human threats.

More information: Lilli Stenger et al, Assessment of the threat status of reptile species from Vietnam—Implementation of the One Plan Approach to Conservation, *Nature Conservation* (2023). DOI: 10.3897/natureconservation.53.106923

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