

Filling in knowledge gaps new reports on distribution and ecological requirements for two Data Deficient East African bat species.

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Abstract

Efforts to sample bat biodiversity in Africa have been patchy, as reflected on the assessments of the IUCN, reporting 22% of the bat species in sub-Saharan Africa as Data Deficient. This is also due to limited funding targeting these species since such projects retain relatively high risk of failure connected with field challenges and difficulties in locating the species. However, Data Deficient species are also claimed to be on average more threatened than fully assessed ones[2,3]. Therefore, accumulation of knowledge and its prompt sharing is critical for the implementation of conservation measures where needed.

Here we report new records for two extremely rare and poorly known African bat species, Macinnes's Mouse-Tailed bat *Rhinopoma macinnesi* and Hamilton's Tomb Bat *Taphozous Hamiltoni* (both Data Deficient). These species are historically known only from very few locations in East Africa and their actual distribution, population abundances and ecological requirements are still unknown. We recorded the presence of these species using mist-nets during three field expeditions conducted in 2016-2018 in Sibiloi National Park, norther Kenya, and its surroundings. We provide a description of habitat in the foraging sites for the two species. Additionally, we carried out further sampling of *T. hamiltoni* in 2018, recording echolocation calls and employing radio-tracking to identify roosting sites and estimate distance commuted between roost and foraging ground.

Given the lack of recent reports of these species elsewhere, their presence in this area is of great relevance. However, despite the presence of Sibiloi National Park, these populations will likely be threatened in the future by rapid change in local climate, determined by anthropogenic exploitation of local water resources. We therefore recommend periodical monitoring to guarantee their persistence.