Conservation news

Uplisting a threatened small mammal: the Nimba otter-shrew of West Africa

The Nimba otter-shrew *Micropotamogale lamottei* is one of three semi-aquatic mammal species in the family Potamogalidae (Supercohort Afrotheria, Order Afrosoricida). Closely related to the tenrecs of Madagascar, otter-shrews resemble small otters. They occur in rivers, streams and pools in the forests of central and western Africa where they feed on aquatic invertebrates, fish and amphibians. However, as with most small mammal species, their ecology, abundance and distribution are poorly known.

The Nimba otter-shrew is endemic to a small part of the Upper Guinea Region of West Africa: the Nimba mountains of Liberia, Guinea and Côte d'Ivoire and the Putu mountains of Liberia. Both areas are exploited for mining and agriculture yet, until recently, little information was available on the distribution of the otter-shrew, hindering assessment of its conservation status. The last IUCN Red List of Threatened Species categorized the otter-shrew as Near Threatened but in urgent need of further study (Stephenson, 2016, *The IUCN Red List of Threatened Species 2016: e.T13393A21287657*).

Recent studies focusing on the Putu range in east-central Liberia (Decher et al., 2016, *Journal of Contemporary Water Research & Education,* 157, 46–57) and the Nimba range in northern Liberia (Monadjem et al., 2018, *Mammalia,* https://doi.org/10.1515/mammalia-2017-0144) have shed light on this elusive small mammal and confirmed that it is under threat. Otter-shrews were found to be confined to freshwater habitats in severely fragmented mid-elevation forest, where they are largely solitary, occurring at low population densities. The core population at Mount Nimba is under severe threat from iron ore mining in both Liberia and Guinea, as is its habitat in the satellite population in the Putu range. The Nimba study provides evidence that mining has a direct impact on otter-shrews, probably as a result of an increase in siltation of their aquatic habitat. Other threats to the species include conversion of forests into rice paddies and incidental capture and drowning in fish traps.

These new studies suggest the extent of occurrence (EOO) of the Nimba otter-shrew is 14,725 km² (Monadjem et al., 2018, op. cit.). As the EOO is $< 20{,}000$ km² and thought to be decreasing, and as the extent and quality of the habitat are deteriorating as a result of mining and agricultural activity, the species has been uplisted from Near Threatened to Vulnerable based on criteria B1ab(i,ii,iii) (Stephenson et al., in press, *Micropotamogale lamottei. The IUCN Red List of Threatened Species 2018*). This demonstrates the value and importance of using field data to revise conservation status assessments, especially for overlooked small mammal species.

The main opportunity for conserving the Nimba otter-shrew is the effective management of two protected areas within its range. The 17,540 ha Mount Nimba Strict Nature Reserve is a UNESCO World Heritage site in Guinea and Côte d'Ivoire that is also home to Critically Endangered species such as the Mount Nimba viviparous toad *Nimbaphrynoides occidentalis,* Lamotte's roundleaf bat *Hipposideros lamottei* and western chimpanzee *Pan troglodytes verus.* The Reserve is threatened by a mining enclave, as well as by poaching and fires (Monadjem et al., 2016, *Acta Chiropterologica*, 18, 359–375), and is currently a World Heritage Site in Danger. Otter-shrews have also recently been recorded in East Nimba Nature Reserve on the eastern side of the mountain (Monadjem et al., 2018, op. cit.), which is currently co-managed by ArcelorMittal Liberia to offset biodiversity losses from its mining activities. Only improved management of these two protected areas, and further investigation of protection options in the Putu range, will ensure the survival of the Nimba otter-shrew, but the lack of interest from international conservation agencies in this species, and this region, is of concern.

Despite these recent studies, the full impact of mining, habitat conversion and bycatch on the ottershrew remains unclear and requires investigation. Further research on the species' distribution, status, habitat requirements, and threats would help determine which conservation measures could be appropriate in addition to enhancing protected area management. In the meantime, we hope the conservation community finally pays some attention to this unique Afrotherian and its Mount Nimba home, before it is too late.

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