



## CONSERVATION FACTS, PRIORITIES, AND ACTIONS

### Tenrecs and Otter Shrews

Taxonomy and common name		Red List status (2018)
<b>POTAMO GALIDAE</b>	<b>Otter Shrews</b>	
<i>Potamogale velox</i>	Giant Otter Shrew	<a href="#">Least Concern</a>
<i>Micropotamogale lamottei</i>	Nimba Otter Shrew	<a href="#">Near Threatened</a>
<i>M. ruwenzorii</i>	Ruwenzori Otter Shrew	<a href="#">Least Concern</a>
<b>TENRECIDAE</b>	<b>Tenrecs</b>	
<b>Tenrecinae</b>	<b>Spiny tenrecs</b>	
<i>Echinops telfairi</i>	Lesser Hedgehog Tenrec	<a href="#">Least Concern</a>
<i>Hemicentetes nigriceps</i>	Highland Streaked Tenrec	<a href="#">Least Concern</a>
<i>H. semispinosus</i>	Lowland Streaked Tenrec	<a href="#">Least Concern</a>
<i>Setifer setosus</i>	Greater Hedgehog Tenrec	<a href="#">Least Concern</a>
<i>Tenrec ecaudatus</i>	Tailless Tenrec	<a href="#">Least Concern</a>
<b>Geogalinae</b>		
<i>Geogale aurita</i>	Large-eared Tenrec	<a href="#">Least Concern</a>
<b>Oryzoricinae</b>	<b>Furred tenrecs</b>	
<i>Microgale brevicaudata</i>	Short-tailed Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. cowani</i>	Cowan's Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. drouhardi</i>	Drouhard's Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. dryas</i>	Dryad Shrew Tenrec	<a href="#">Vulnerable</a>
<i>M. fotsifotsy</i>	Pale Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. gracilis</i>	Gracile Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. grandidieri</i>	Grandidier's Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. gymnorrhyncha</i>	Naked-nosed Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. jenkinsae</i>	Jenkins' Shrew Tenrec	<a href="#">Endangered</a>
<i>M. jobihely</i>	Northern Shrew Tenrec	<a href="#">Endangered</a>
<i>M. longicaudata</i>	Lesser long-tailed Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. majori</i>	Major's long-tailed tenrec	<a href="#">Least Concern</a>
<i>M. mergulus</i>	Web-footed tenrec	<a href="#">Vulnerable</a>
<i>M. monticola</i>	Montane Shrew Tenrec	<a href="#">Vulnerable</a>
<i>M. nasoloi</i>	Nasolo's Shrew Tenrec	<a href="#">Vulnerable</a>
<i>M. parvula</i>	Pygmy Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. principula</i>	Greater Long-tailed Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. pusilla</i>	Least Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. soricoides</i>	Shrew-toothed Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. taiva</i>	Taiva Shrew Tenrec	<a href="#">Least Concern</a>
<i>M. thomasi</i>	Thomas's Shrew Tenrec	<a href="#">Least Concern</a>
<i>Nesogale dobsoni</i>	Dobson's Shrew Tenrec	<a href="#">Least Concern</a>
<i>N. talazaci</i>	Talazac's Shrew Tenrec	<a href="#">Least Concern</a>
<i>Oryzorictes hova</i>	Mole-like Rice Tenrec	<a href="#">Least Concern</a>
<i>O. tetradactylus</i>	Four-toed Rice Tenrec	<a href="#">Data Deficient</a>

Taxonomy follows Everson et al. (2016)

<b>Main threats and pressures</b>
Anthropogenic loss of forest habitat (most, if not all, species)
Encroachment of fires into forest set for cattle pasture and alteration of forest habitat by introduced species such as wild bush pigs (most, if not all, species).
Hunting for bushmeat (larger tenrecine species)
Incidental capture in fish traps (web-footed tenrec, otter shrews)
Climate change (Madagascar is ranked third in the world for extreme climate risk).

<b>Priority conservation and research actions</b>	
<b>Actions</b>	<b>Details/Locations</b>
Conduct taxonomic and systematic studies to determine species diversity and geographic and elevational distributions of tenrecs, especially oryzorictines	Employ modern methods of phylogenetic and phylogeographic inference and integrative species delimitation using multiple sources of data (molecular, morphological, etc.).
Continue standardized small-mammal inventories to determine species occurrence, track trends over time, and produce more data for Red List assessments.	Utilize field methods developed and employed to survey small-mammal diversity over the past three decades across Madagascar (reviewed in Goodman et al. 2013), especially in areas representing significant gaps in geographic sampling and/or dispersal corridors connecting existing or proposed protected areas.
Determine the distribution and abundance of the four-toed rice tenrec ( <i>Oryzorictes tetradactylus</i> )	Andringitra Massif and Central Highlands
Integrate the monitoring of tenrecs into the management of key protected areas housing threatened or near-threatened species to track their status and threats and identify key conservation actions.	<p><b>Priority sites in Madagascar:</b>            Ambatovaky Special Reserve (<i>M. dryas</i>)            Analandraza-Analavelo Sacred Forest Natural Monument (<i>M. nasoloi</i>)            Andringitra National Park (<i>M. mergulus</i>)            Ambositra-Vondrozo sacred forest (<i>M. mergulus</i>)            Anjanaharibe-Sud Special Reserve and neighboring massif (<i>M. dryas</i>, <i>M. monticola</i>)            Ankeniheny-Zahamena Corridor (<i>M. dryas</i>, <i>M. jobihely</i>)            Bemanevika (CAPAM) (<i>M. jobihely</i>)            Menabe Antimena (<i>M. nasoloi</i>).            Makira Natural Park (<i>M. dryas</i>, <i>M. monticola</i>)            Marotandrano Special Reserve (<i>M. dryas</i>)            Marojejy National Park (<i>M. monticola</i>)            Mikea National Park (<i>M. jenkinsae</i>)            Nosy Volo drainage (<i>M. mergulus</i>)            Ranomafana National Park (<i>M. mergulus</i>)            Zombitse-Vohibasia National Park (<i>M. nasoloi</i>)</p> <p><b>5 key sites in Africa:</b>            Kahuzi-Biega NP, DRC (<i>Micropotamogale ruwenzorii</i>)            Mount Nimba Strict Nature Reserve, Guinea and Cote d'Ivoire (<i>Micropotamogale lamottei</i>)            Nyungwe Forest NP, Rwanda (<i>M. ruwenzorii</i>)            Pic de Fon classified forest, Guinea (<i>M. lamottei</i>)            Virunga NP, DRC (<i>M. ruwenzorii</i>).</p>

<b>Priority conservation and research actions</b>	
<b>Actions</b>	<b>Details/Locations</b>
Assess impact of hunting on spiny tenrecs (especially <i>T. ecaudatus</i> and <i>S. setosus</i> ) in key protected areas	Identify key protected areas (interviews with staff) and conduct research into hunting levels.
Assess impact of fishing on web-footed tenrecs and identify potential mitigation measures.	Key <i>M. mergulus</i> sites such as Andringitra and Ranomafana.

### **References**

Goodman S.M., V. Soarimalala, M. Raheriarisena, and D. Rakotondravony. 2013. Small mammals or tenrecs (Tenrecidae) and rodents (Nesomyidae). *In*: S.M. Goodman S.M. and M. Raherilalao (eds.), Atlas of selected land vertebrates of Madagascar. Antananarivo, Madagascar: Association Vahatra. p. 211–269.

Everson K.M., V. Soarimalala, S.M. Goodman, and L.E. Olson. 2016. Multiple loci and complete taxonomic sampling resolve the phylogeny and biogeographic history of tenrecs (Mammalia: Tenrecidae) and reveal higher speciation rates in Madagascar's humid forests. *Systematic Biology* 65: 890-909

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