NOTE

NEW DISTRIBUTION RECORDS OF ELEGANT WATER SHREW

*Nectogale elegans* Milne-Edwards, 1870 (Mammalia: Eulipotyphla: Soricidae) FROM THE WESTERN HIMALAYA, UTTARAKHAND, INDIA

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NEW DISTRIBUTION RECORDS OF
ELEGANT WATER SHREW NECTOGALE ELEGANS
MILNE-EDWARDS, 1870 (MAMMALIA: 
EULIPOTYPHLA: SORICIDAE) FROM THE 
WESTERN HIMALAYA, UTTARAKHAND, INDIA

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The smallest of amphibious mammals, the water shrew has currently 13 known species in the world (Churchfield 1998). They belong to four genera, viz.: Sorex, Neomys, Chimmarogale, and Nectogale (Hutterer 1993). Of these, Himalaya is abode to two species of Chimmarogale and one species of Nectogale but the Indian Himalayan region harbours one species each of genus Chimmarogale and Nectogale. Distribution records, habitat and population status of all known water shrews are presented in Table 1. The Elegant Water Shrew Nectogale elegans, which is monotypic to its genera, has been reported in the northern part of South Asia, central and southern part of China, and the north of Southeast Asia. In South Asia, it has been recorded in India (North Sikkim and Arunachal Pradesh) and eastern Nepal (Mitchell 1975; Choudhury 2003; Molur et al. 2005; Srinivasulu & Srinivasulu 2012; Menon 2014). Rarely caught in the fishing nets, whenever reported, these elusive shrews are even tougher to be captured on cameras or visually encountered due to their tendency to hide underwater or river bank vegetation and debris while foraging (IUCN 1995; Menon 2014). Although there have been many surveys conducted by various ichthyologists and naturalists in the western Himalaya, there have been no scientific reports of this species till date, which might be due to lesser interest in its distribution and rare sightings of the same.

During our investigations on the streams for fish and other aquatic fauna, the Elegant Water Shrews were recorded at three different locations in the Uttarakhand State of the western Himalayan region of India for three consecutive years (Fig. 1). The first observation was made in September 2014, at Jari Stream near Jarajibli Village of Askot (29.91819 N & 80.34419 E) at an altitude of 1,627m (Image 1). The depth of the stream ranged from 10–30 cm. The shrew was observed diving into the water under the submerged rocks and boulders in search of food. Another individual, in November 2015, was recorded in Jamak Stream, near Maneri Village, Uttarkashi District, Uttarakhand (30.73193 N & 78.52813 E) at an altitude of 1,345m and water depth of 20cm (Image 2). This shrew was observed moving underwater between submerged boulders interspersed with short bouts of 5–10 seconds


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New distribution records of Elegant Water Shrew

Table 1. Distribution, habitat and population status of the water shrews in the Himalayan region.

<table>
<thead>
<tr>
<th>Species</th>
<th>Distribution</th>
<th>Habitat</th>
<th>Population Status</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styan’s Water Shrew Chimarrogale styanii</td>
<td>Southeast Asia: Northeastern Myanmar, southwestern &amp; southeastern China</td>
<td>Small forest streams at an altitude between 1,500–3,100 m</td>
<td>Poorly known ecology and distribution, currently not at risk</td>
<td>Francis (2008), Johnsingh &amp; Manjrekar (2013)</td>
</tr>
<tr>
<td>Himalayan Water Shrew Chimarrogale himalayiaca</td>
<td>South East Asia: Northern Myanmar, northern Laos, northern Vietnam, Nepal, India (Kashmir, Himalachal Pradesh, Assam, Sikkim, West Bengal), China and Taiwan</td>
<td>Small forest streams, feeds on aquatic insects and other invertebrates</td>
<td>Thrive in relatively clean mountain streams, vulnerable to forest loss and pollution, currently not at risk</td>
<td>Molur et al. (2005), Francis (2008), Johnsingh &amp; Manjrekar (2013)</td>
</tr>
</tbody>
</table>

of foraging for snow trout fingerlings. The third record was made in June 2016, at a stream near Bewara Chatti, Uttrakhand (30.85427 N and 78.49019 E) at an altitude of 2,220m (images 3, 4). This shrew was observed to be foraging against the flow of the water current at water depth of 40cm. Its activities were video recorded for future studies.

The Elegant Water Shrew, also called the Tibetan Water Shrew, has been listed as Least Concern by the IUCN (Molur 2016). In comparison to other shrews, *N. elegans* is larger in size with its length ranging from 90–128 mm and weight ranging from 25–45 g (Parker 1990). It is diurnal and aquatic, with a streamlined body, reduced pinna and webbed feet adapted to aid in swimming and underwater foraging. The shrew inhabits creeks and turbulent cold waters of rivers from altitudes between 900–2,270 m (Molur et al. 2005). It is known to swim upstream, against the current, and often forages under sticks, rocks and stream bank vegetation before swimming downstream with the current (Molur 2008), which is its diagnostic behavioural feature vis-à-vis *Chimarrogale* which does not forage against the water current.

The present study is the first distribution record of this species in the western Himalayan region. Prior to this, the species in India has been reported only from Sikkim and Arunachal Pradesh, (Choudhury 2003) with no individual records elsewhere in the country (IUCN 1995; Choudhury 2003; Menon 2014). In addition, no
New distribution records of Elegant Water Shrew

record of this species has been reported from this area in the Indian Himalaya since 1841 till date (Pal et al. 2016). These new range extension records would be of immense use in refining the distribution range of this lesser-known species. Nevertheless, more work needs to be done to better explore the habitat and current distribution of this species. This would also aid in investigating and justifying its current conservation status. As such, efforts need to be put for better field studies and devising methodologies to capture their activities and study in vivo, which would also provide a better insight into the ecology and population, which is not clearly known to science.

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