

SHORT COMMUNICATION

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# Rediscovery of an 'extinct' endemic mammal Sonnerat's Shrew (*Diplomesodon sonnerati* Cheke, 2012) in Nilgiris, Tamil Nadu, India

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## Abstract

The family Soricidae comprises 385 species in 26 genera, including the monotypic genus *Diplomesodon*, previously thought to contain only the Central Asian Piebald Shrew *D. pulchellum*. The enigmatic Sonnerat's Shrew *D. sonnerati*, described over 200 years ago from Pondicherry, India, was long considered possibly extinct due to the absence of confirmed specimens. On 1 October 2022, we photographed a dead shrew in Udthagamandalam (Nilgiris, Tamil Nadu) exhibiting distinctive grey pelage with a transverse white band and a stout tail, consistent with historical descriptions of *D. sonnerati*. The specimen measured 143 mm (head–body) and 26 mm (tail). Despite extensive live-trapping (15 traps, October–December, winter season), no additional individuals were detected. The Nilgiri record lies ~350 km from the type locality, indicating a notable biogeographic disjunction that may represent either a relict population or part of a wider, under-documented range. Targeted surveys in intervening habitats, coupled with genetic analyses, are urgently needed to assess distribution, population connectivity, and taxonomic validity, and to inform conservation strategies for this potentially rare and evolutionarily distinct shrew.

**Keywords:** Biogeographic disjunction, *Diplomesodon sonnerati*, India, Nilgiris, Rediscovery, Small mammal survey

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The family Soricidae comprises 385 shrew species in 26 genera (Wilson & Reeder, 2011), classified into three extant subfamilies: Crocidurinae (white-toothed shrews), Myosoricinae (African shrews), and Soricinae (red-toothed shrews). Members of Crocidurinae are further divided into 11 genera (*Crocidura*, *Diplomesodon*, *Feroculus*, *Myosorex*, *Paracrocidura*, *Ruwenzorisorex*, *Scutisorex*, *Solisorex*, *Suncus*, *Surdisorex*, and *Sylvisorex*). Current generic boundaries within this subfamily are based on limited morphological characters, and the delimitation of some genera remains the focus of ongoing genetic and morphological studies.

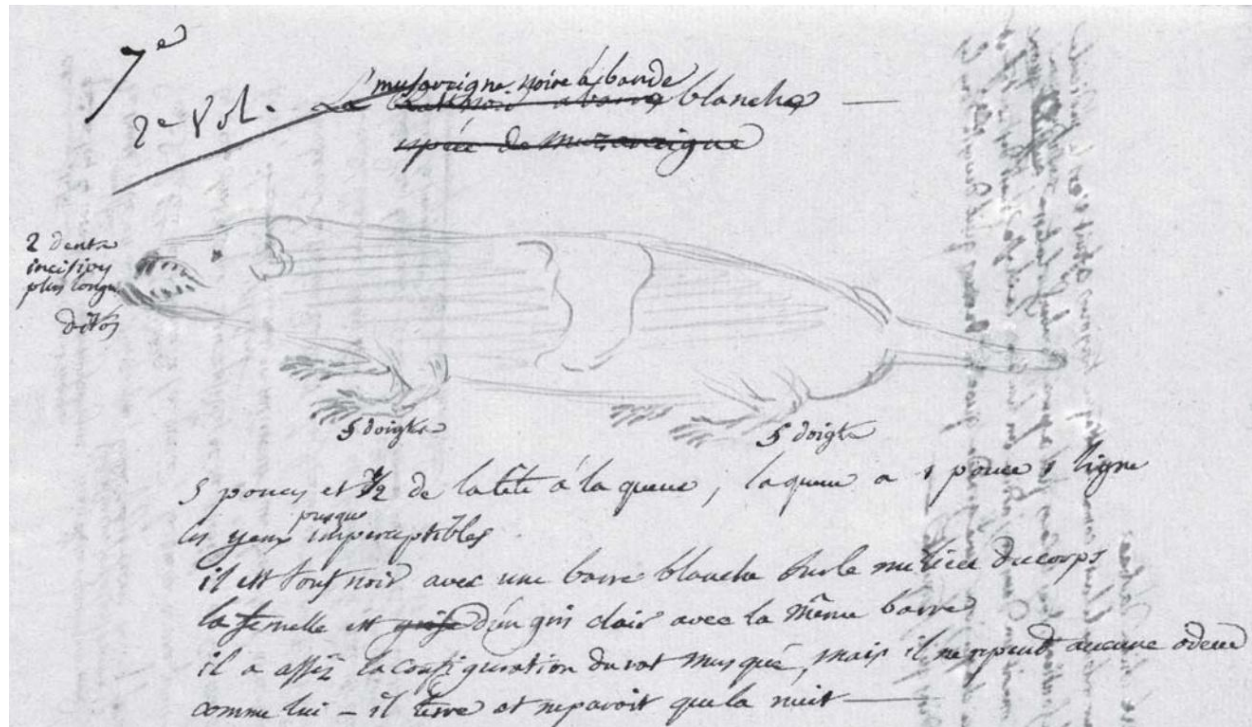
*Diplomesodon* is a monotypic genus containing the extant Piebald Shrew *Diplomesodon pulchellum* (Nowak, 1999). An extinct species, *D. fossorius*, is known from the Early Pleistocene of South Africa, far removed from the present Caspian region distribution of *D. pulchellum* (Repenning, 1965). A third

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**FIGURE 1.** Pen-sketch representation by Pierre Sonnerat of the holotype of *Diplomesodon sonnerati* (from Cheke 2012, Published with permission of the New South Wales State Library). The original is Item No. PX\*D83 p.32 in the Mitchell Library, Melbourne, Australia; The vertical writing is show-through from the other side of the paper).

putative member of the genus is the enigmatic Sonnerat's Shrew *Diplomesodon sonnerati* (Cheke), an Indian species previously considered possibly extinct. It was originally described only from an old written account and a crude pen-sketch of the holotype (Figure 1) (Cheke, 2011; Cheke & Hume, 2018). Its generic assignment is tentative, based primarily on pelage similarity with *D. pulchellum*. Sonnerat's Shrew is reported to be approximately twice as long as the Central Asian species (head + body 54–76 mm; Nowak, 1999). If indeed regularly larger than *Suncus murinus*, as noted by Sonnerat, it would be among the largest shrews globally. *S. murinus* reaches 150 mm (Nowak, 1999) or 160 mm (Alfred et al., 2006) in head-body length—comparable to the size described for *D. sonnerati*. Molecular phylogenetic analysis by Dubey et al. (2008) nested *Diplomesodon* within *Crociodura*, but the authors retained it as a distinct genus due to its morphological distinctiveness, despite this rendering *Crociodura* paraphyletic. Cheke (2011) suggested that Sonnerat's Shrew might still persist in southern India and recommended that voucher specimens of each sex be collected if rediscovered, with one designated as a neotype.

On 1 October 2022, we photographed a dead shrew in Udhagamandalam (Ooty), Nilgiris District, Tamil Nadu, India, that was morphologically distinct from other shrews regularly encountered in the region (*Suncus dayi*, *S. montanus*, *S. murinus*, *S. niger*, and *Feroculus feroculus*). Although the specimen was not collected, photographs were taken for subsequent examination. The individual exhibited silky grey fur with a transverse white band across the mid-body (Figure 2) and a stout, stubby tail features consistent with the description of female *D. sonnerati* (males reportedly being black where females are grey). The measured head-body length was 143 mm and tail length 26 mm. The specimen was located beside a railway line, adjacent to a small wetland patch dominated by *Juncus inflexus*, near Ooty Lake.

Photographs were shared with shrew specialists in India and abroad, including Anthony Cheke, who originally described the taxon. He noted that the pelage patterning was almost unique among shrews and sought expert opinion from Paula Jenkins (UK Natural History Museum), who confirmed that such a pattern was highly unlikely to represent partial leucism.





**FIGURE 2.** Photograph of Sonnerat's shrew (*Diplomesodon sonnerati*) in Nilgiris, Tamil Nadu India, 22 October 2022 (Photo Courtesy: Sirajudeen Mohammed Shahir).

Sonnerat's Shrew was first documented by Pierre Sonnerat during his stay in southern India between 1786 and 1813 (Deloche & Ly-Tio-Fane, 2010). Sonnerat reported the species from lowland agricultural landscapes near Pondicherry, approximately 350 km (aerial distance) from the Nilgiri locality reported here. His account included both a general description of southern Indian fauna and a specific diagnosis with an accompanying sketch (Figure 1). The absence of physical type material and the reliance on historical description had cast doubt on its validity, leading to the assumption that it was extinct (Cheke, 2012; Cheke & Hume, 2018). Our photographic evidence, matching Sonnerat's original description and sketch, demonstrates that the taxon persists in the wild.

Given that the Nilgiri specimen was discovered in an atypical location adjacent to a railway, and despite extensive trapping (15 traps operated from October to December during the winter season) no additional specimens were captured, accidental transport from lowland areas cannot be ruled out. Consequently, surveys should be extended to Sonnerat's type locality and intervening habitats.

The rediscovery of *D. sonnerati* in the Nilgiris highlights a significant biogeographic disjunction relative to its type locality. This distributional gap may indicate either a broader, under-documented range reflecting the cryptic habits of shrews and the scarcity of targeted small-mammal surveys or a relictual population persisting in ecological refugia following historical range contraction. Suitable habitats occur along the Eastern Ghats and Nilgiri foothills, suggesting potential dispersal corridors. Focused trapping efforts in these regions, across multiple seasons, combined with genetic analyses, are needed to assess connectivity between populations and clarify the taxonomic and conservation status of this species.

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