

Ecology of the Daurian Hedgehog (*Hemiechinus dauuricus*) in Ikh Nart Nature Reserve, Mongolia: Preliminary Findings

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ABSTRACT

The Daurian hedgehog ranges across northern Mongolia, southern Siberia, and northern China. However, few details of the species' behavior, ecology, or distribution are known. We conducted a pilot study of the ranging behavior and diet of Daurian hedgehogs in Ikh Nart Nature Reserve, Mongolia. We captured and radio-tagged eight hedgehogs (six males/two females) between June and September 2006. We tracked their movements until hibernation to estimate home range sizes and daytime nest characteristics. We also analyzed scats ($N = 38$) to gain a preliminary understanding of the food habits of the species. During the study, we collected 237 hedgehog locations, including 91 night, 141 day, and five hibernation sites. Hedgehogs were followed a mean of 53.43 ± 4.35 SE days from capture before entering hibernation. Mean home range size for seven hedgehogs was 422.72 ± 94.07 SE ha. Daytime nest sites had one, rarely two entrances, and usually occurred in rocky outcrops or at the base of shrubs. The most frequently occurring prey groups in scats included beetles (47%), cockroaches (28%), and grasshoppers (20%). Scats also included bird (3%), reptile (1%), and rodent (1%) remains. Daurian hedgehogs in Ikh Nart were generally larger in size, occupied larger home ranges, and ate similar foods compared to Daurian hedgehogs in other regions. The presence of Daurian hedgehogs in Ikh Nart also represents a range extension for the species.

Key words: Daurian hedgehog, diet, ecology, *Hemiechinus dauuricus*, home range, Ikh Nart

Introduction

Two species of hedgehog inhabit Mongolia: Daurian (*Hemiechinus dauuricus*) and long-eared (*H. auritus*) (Mallon, 1985). The long-eared hedgehog has been well-studied in other parts of Asia, but details of the fundamental behavior and ecology of the Daurian hedgehog remains largely unknown. To our knowledge, there have been no previous ecological studies of Daurian hedgehogs in the wild.

Long-eared hedgehogs, which share a close taxonomic relationship with Daurians, generally range over relatively small areas. Studies in Israel, for example, indicated that long-eared hedgehogs occupied home ranges from 0.17 to 9.97 ha, with males using larger ranges than females (Schoenfeld & Yom-Tov, 1985; Harrison & Bates, 1991). Long-eared and other hedgehog

species also rely mainly on insects for food, but reportedly consume a variety of foods including other invertebrates like spiders, worms, and mollusks; small vertebrates, such as birds and lizards; and occasionally plant material (Krishna, 1956; Ognev, 1962; Schoenfeld & Yom-Tov, 1985; Corbet, 1988; Dickman, 1988; Reeve, 1994; Jones *et al.*, 2006; Morris, 2006).

We inadvertently captured Daurian hedgehogs while trapping small carnivores for a different study in 2006. This provided us with an opportunity to explore the ecology of this mostly unstudied species. We conducted a pilot study of Daurian hedgehog ranging behavior and diet during the summer of 2006 to spring 2007 and report our results here. We hope to expand our work to include a comparative study of sympatric long-eared and Daurian hedgehogs in 2008.