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## Original article

## Diet composition of lesser kestrels in Ikh Nart Nature Reserve, Mongolia

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## ABSTRACT

The lesser kestrel is recognized as “Least Concern” in the International Union for Conservation of Nature (IUCN) Red List since 2011. So far, all available diet studies on the lesser kestrel were conducted in its European range or in partial African breeding and nonbreeding range. In particular, little is known about the feeding behavior of this small falcon in Asian ranges. Thus, this study can be considered as the first to examine the diet composition of the central Asian breeding populations of lesser kestrels. This study aims to provide some information about the diet composition of this species among Asian populations through biological and ecological investigations. Pellets ( $n = 762$ ) dropped by lesser kestrel (*Falco naumanni*) were collected during their breeding season from nine to 10 colony sites in Ikh Nart, between June and September of 2009 and 2010, and analyzed. A total of 1,484 prey items were identified in the pellets collected. After a measure of their weight (g) and length and width (mm), we carefully examined each pellet and separated all prey remains using tweezers. Our results indicated that insects (including orthopterans and coleopterans) were dominant in lesser kestrel’s diets. We found that the lesser kestrel’s diet mainly consisted of insects (69.7%), lizards (17.4%), small mammals (10%), small birds (2%), and other food (1%).

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## Introduction

Numbers of lesser kestrels (*Falco naumanni*) have been declining throughout much of the species’ range (Biber 1996) during the second half of the 20<sup>th</sup> century. Indeed, intensification of agriculture is one of the main threats to biodiversity in Europe (Donald et al 2002). Fortunately, the population of the species appears to be stable or increasing slightly in many parts of its range, including Europe, and its overall population trend is considered to have been stable during the last three generations (BirdLife International 2013). Therefore, the lesser kestrel’s status changed from “Vulnerable” to “Least Concern” in the International Union for Conservation of Nature (IUCN) Red List of 2011 (IUCN 2011).

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Unfortunately, a majority of the population is distributed in the Asian continent, with only a minor population of the species distributed in Southern Europe. In addition, Africa is considered a main wintering range for this species.

In Mongolia, lesser kestrels are faring well and inhabit the arid steppe regions where they build nests in areas with rocky outcrops or talus slopes. To our knowledge, this is the first biological and ecological study on the species in Asia. This study aims to provide some information about the diet composition of this species among Asian populations through biological and ecological investigations.

## Materials and methods

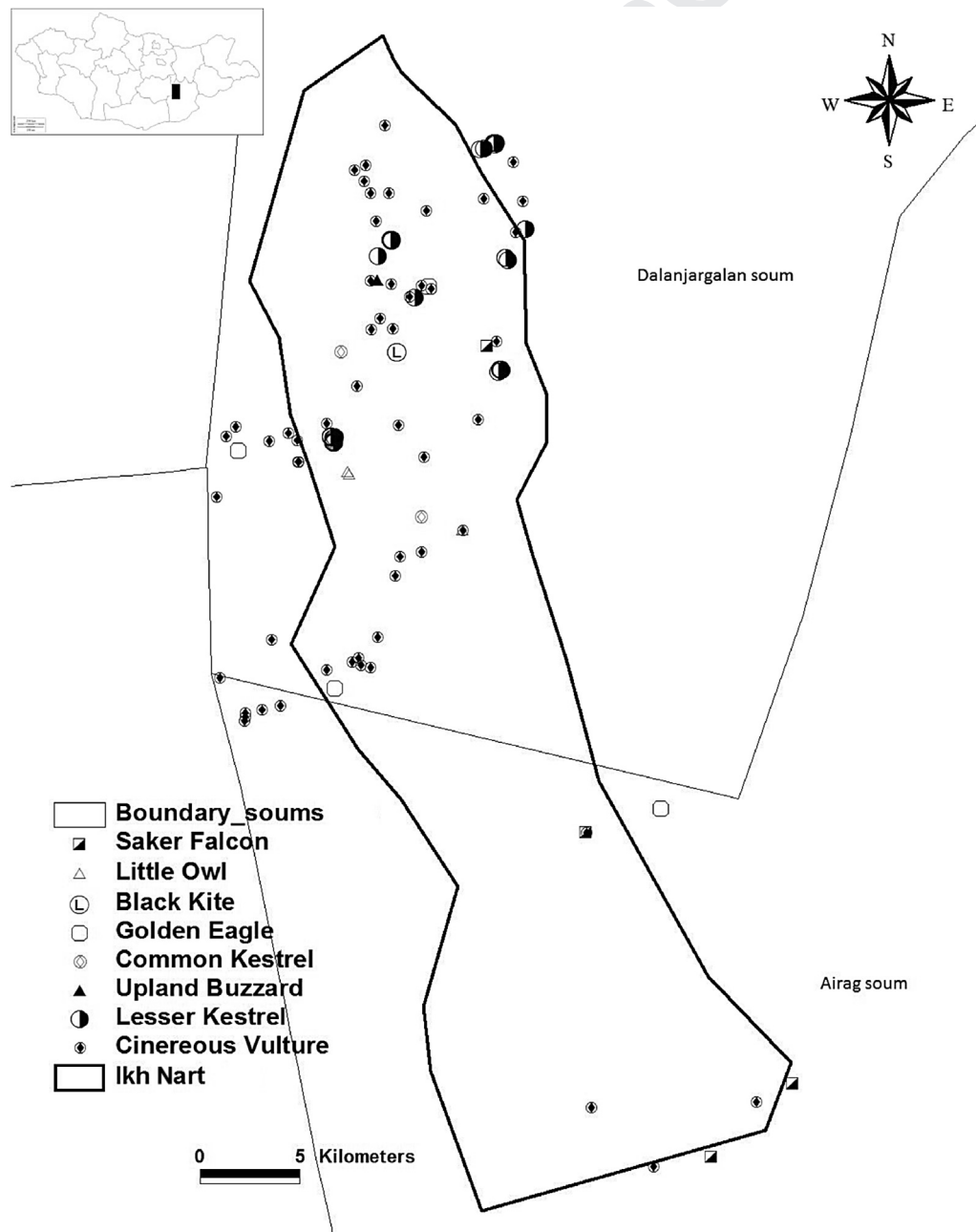
### Study area

Data on the species were collected from the Ikh Nart Nature Reserve of southeastern Mongolia in 2009 and 2010 (Figure 1;

N45.72 and E108.64, average elevation: 1,200 m). Ikh Nart supports a relatively diverse assemblage of raptors and large mammals, because it lies at the transition between the dry steppe and semi-arid desert of Mongolia. In addition, a large proportion of the park contains rocky outcrops, an important raptor nesting habitat. Ikh Nart was established as a Nature Reserve within the Mongolian Protected Area System in 1996, and as an International Important Bird Area in 2009. For a more complete description of the study area, see Reading et al (2011).

### Methods

We collected 762 (1,484 prey items) lesser kestrel pellets from their nests, near nest sites, and roosts between June and September of 2009 and 2010. We gathered the pellets two or three times a month at every single selected nesting colony. We placed these pellets in bags and stored them in boxes, both of which were



**Figure 1.** Raptor nests discovered in Ikh Nart Natural Reserve, Mongolia. Symbols for lesser kestrel represent nesting colonies. Photo by: Onolragchaa Ganbold.

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