



A Spotlight on Mustelids of the Southern Mongolian Forest



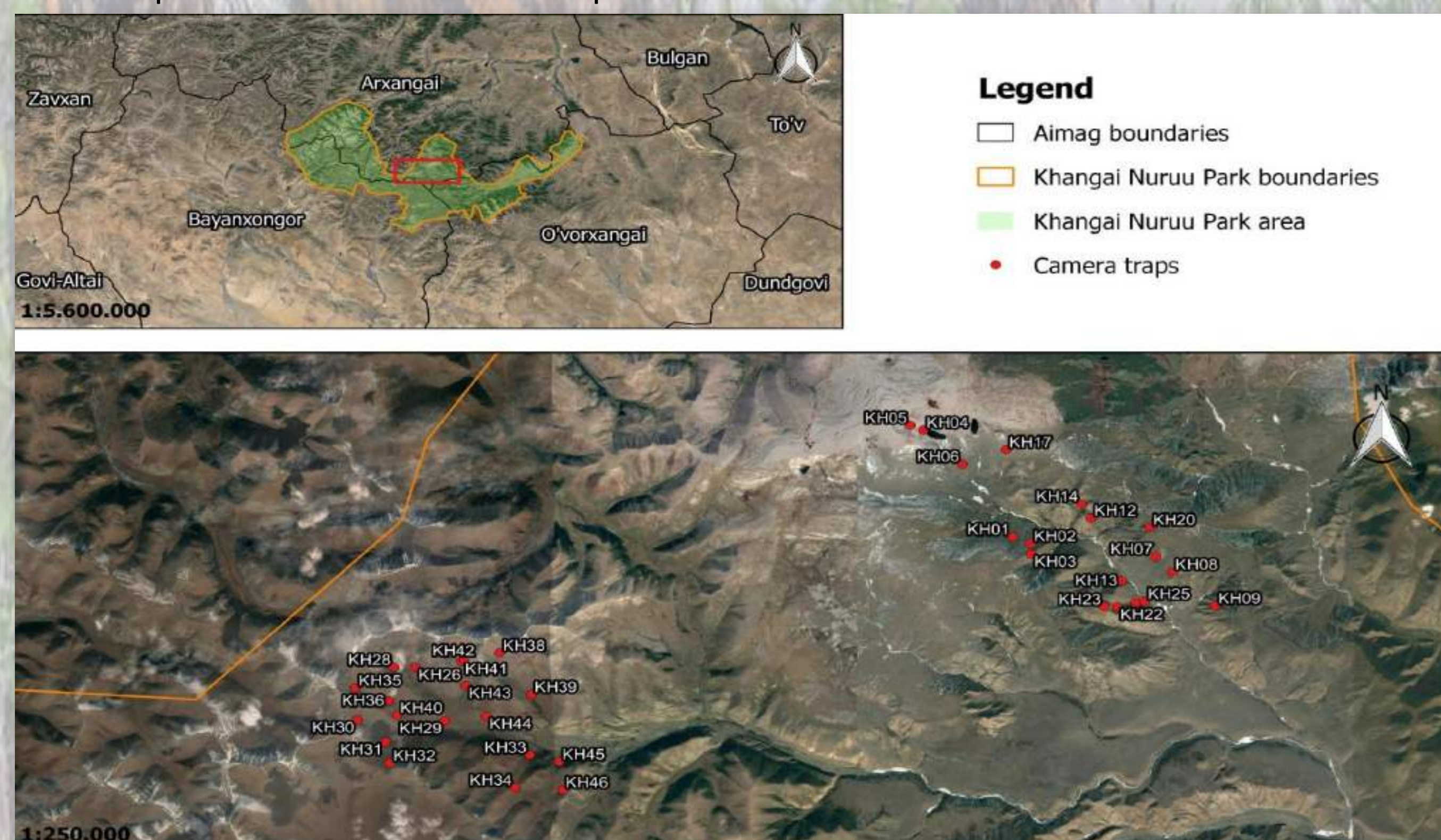
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Figure 1 Research area: the Khangai Nuruu National Park and inset map with a view of camera traps



Introduction

The study area, located in central Mongolia, host a variety of habitats dominated by alpine landscapes and above forest patches, mainly of *Larix sibirica* and *Pinus sibirica*, and steppe dominated by *Festuca spp.*, *Artemisia spp.* and *Euphorbia spp.* The low human pressure and the extent of the areas left to natural evolution enables the survival of a complex and well-structured animal community.



Figure 2 The study area includes forest patches, grassland and alpine vegetation above the trees line. In the photo a patch characterized by Siberian larch (*Larix sibirica*).

Methods

We deployed 45 camera traps, in front of mid-large carnivores marking points and animal trails, keeping a minimum linear distance between cameras of 800 m. We clustered the cameras in two areas (i.e. 24 cameras in area 1 and 21 cameras in area 2) sampling approximately 60 km². The cameras were left unattended between 5th of August and 20th of October 2018 cumulating an effort of approximately 2000 camera nights-trap.

Independent Detection Events of Mustelids

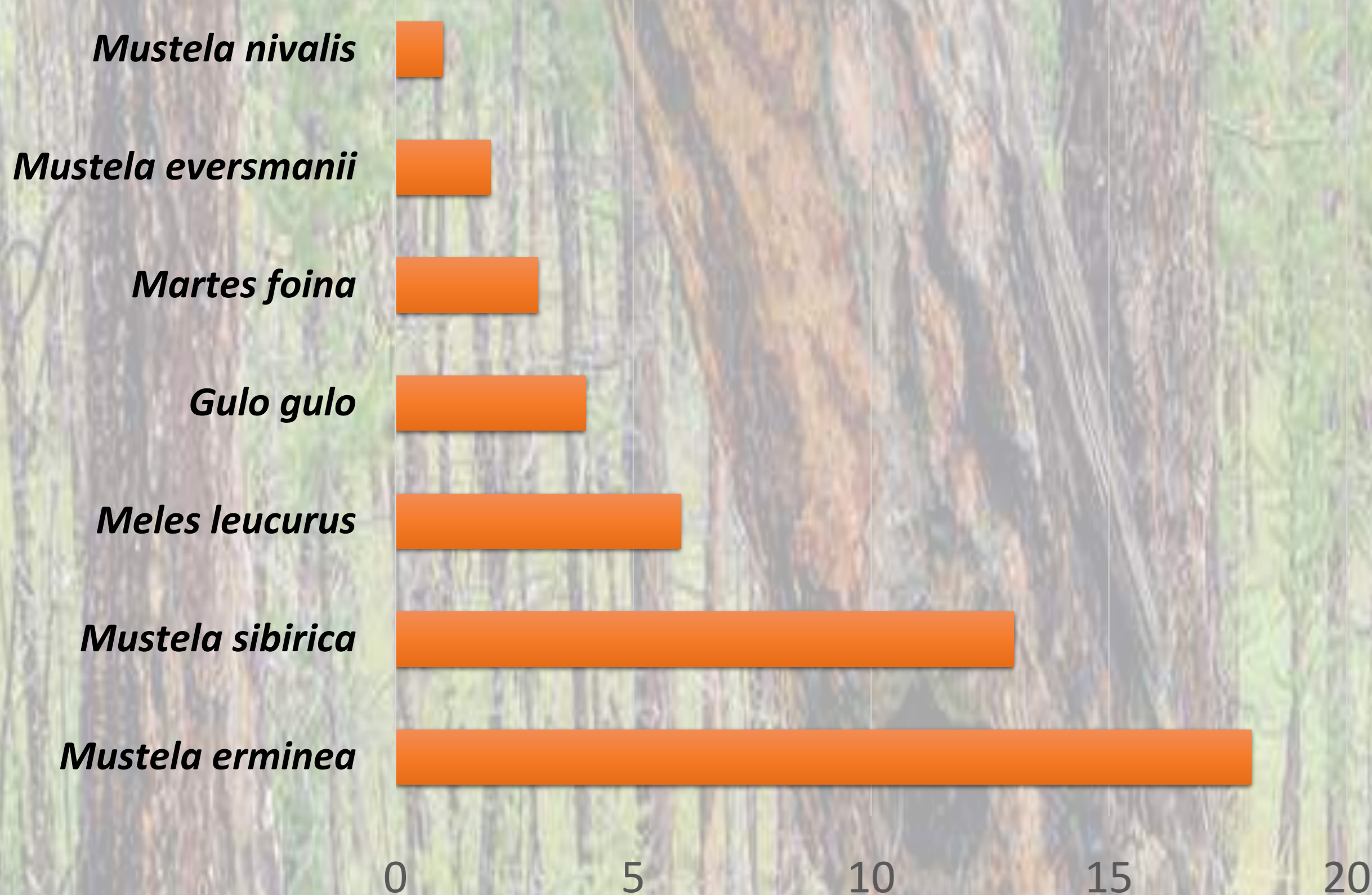


Figure 3 The graphic shows the detection of the 7 species of Mustelids caught by camera traps.



Figure 4 *Mustela erminea* under its winter camouflage, caught by our camera traps.



Figure 3 *Gulo gulo* caught by our camera traps.

Results

The results demonstrated the area provide a rich carnivore guild with a surprisingly high density of mustelids species, other than canids and felids (5 other species). In fact, on a minimum radius of 15 km, 7 mustelid species were detected, the 58.3% of those occurring in the country. The species list includes: *Gulo gulo*, *Martes foina*, *Mustela eversmanii*, *Meles leucurus*, *Mustela sibirica*, *Mustela erminea* and *Mustela nivalis*.

Detections

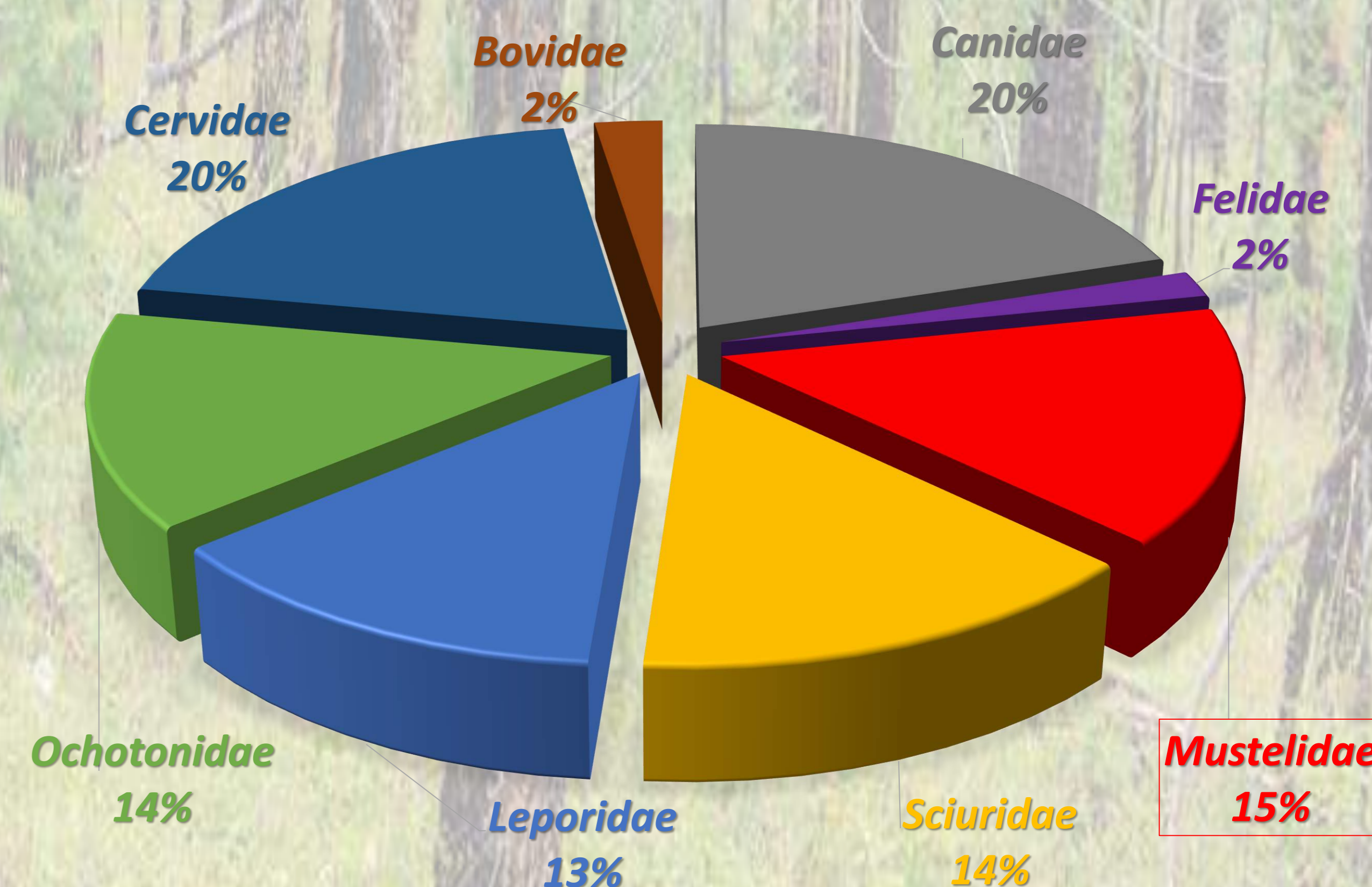


Figure 5 The pie chart shows the 8 family of wild mammals detected by camera traps.

Conclusion

The study area can be considered a mustelids hotspot considering the high density of species in a such limited area. Furs from all of them have been found in the herders houses, as well as in markets and shopping malls in Ulaanbaatar, underlying the strong hunting pressure still present. The high variety of mustelid species could let infer an intraguild low competition, probably related to the differences in body size, food specialization and largely differentiated prey availability. We strongly encourage a study aimed to assess the status and the conservation effectiveness of mustelids in the central Mongolia, to address local institutions towards the proper protection actions.



Figure 6 *Mustela sibirica* detected by our camera