Effects of free-ranging livestock on occurrence and inter-specific interactions of a mammalian community

Ecological Applications

Appendix S1 – Sampling effort and resulting detections

Table S1. Summary of the sampling design and effort of systematic camera-trapping surveys in four areas of western Mongolia. Effort is expressed as mean number of sampling days per camera ± standard deviation. The area sampled is calculated as the minimum convex polygon around the camera-trap sites.

| Area          | Year | Protection status | Area sampled (km²) | Elevation range sampled (m a.s.l.) | No of camera-trapping sites | Survey period | Effort (camera days) |
|---------------|------|-------------------|--------------------|-----------------------------------|-----------------------------|---------------|----------------------|
| Siilkhem-B    | 2015 | National Park     | 513                | 2231-3123                         | 48                          | 19/03 – 23/06 | 46.5 ± 6.6          |
|               |      |                   |                    |                                   |                             |               | (760 km²)            |
| Tavan Bogd    | 2017 | National Park     | 720                | 2488-3489                         | 44                          | 07/04 – 2/06   | 48.2 ± 1.6          |
|               |      |                   |                    |                                   |                             |               | (3600 km²)          |
| Khork         | 2018 | Strictly Protected| 1110               | 1965-3072                         | 63                          | 18/03 – 20/06  | 65.2 ± 5.8          |
| Serkhe        |      | Area (750 km²)    |                    |                                   |                             |               |                     |
| Sutai         | 2019 | Not protected     | 843                | 2115-3527                         | 61                          | 18/03 – 29/06  | 92.1 ± 15.3         |
Table S2. Checklist of wild and domestic species of mammals detected by area. Values are detections at the resolution of 1 day. Asterisks indicate species not included in the analysis because of a low number of detections and NAs indicate areas outside the distribution range of that species. The two species of *Lepus* and of *Marmota* were merged for statistical analyses.

| Order     | Species                | Siilkhem-B | Tavan Bogd | Khork Serkhe | Sutai |
|-----------|------------------------|------------|------------|--------------|-------|
| Carnivora | *Canis lupus*          | 9          | 16         | 21           | 44    |
| Artiodactyla | *Capra sibirica*     | 27         | 21         | 51           | 43    |
| Carnivora | *Gulo gulo*            | 6          | 44         | 4            | NA    |
| Lagomorpha | *Lepus timidus*       | 15         | 34         | NA           | NA    |
| Lagomorpha | *Lepus tolai*         | NA         | NA         | 27           | 52    |
| Carnivora | *Lynx lynx*           | 0          | 0          | 1            | 0     |
| Rodentia  | *Marmota baibacina*   | 0          | 238        | NA           | NA    |
| Rodentia  | *Marmota sibirica*    | 207        | NA         | 370          | 846   |
| Carnivora | *Martes foina*        | 10         | 30         | 7            | 65    |
| Carnivora | *Mustela erminea*     | 0          | 0          | 4            | 1     |
| Carnivora | *Mustela eversmanii*  | 22         | 9          | 17           | 7     |
| Lagomorpha | *Ochotona spp.*      | 0          | 4          | 119          | 43    |
| Carnivora | *Otocolobus manul*    | 11         | 10         | 62           | 24    |
| Artiodactyla | *Ovis ammon*       | 0          | 7          | 18           | NA    |
| Carnivora | *Panthera uncia*      | 14         | 2          | 39           | 224   |
| Rodentia  | *Sciurus vulgaris*    | 1          | 0          | NA           | NA    |
| Rodentia  | *Spermophilus spp.*   | 0          | 54         | 13           | 92    |
| Carnivora | *Ursus arctos*       | NA         | 2          | NA           | NA    |
| Order       | Genus   | Species     | 75 | 61 | 191 | 288 |
|-------------|---------|-------------|----|----|-----|-----|
| Carnivora   | Vulpes  | vulpes     |    |    |     |     |
| Domestic    | species: |            |    |    |     |     |
|             | Small-sized livestock | 134 | 45 | 140 | 144 |
|             | Large-sized livestock  | 106 | 74 | 239 | 65  |