



CHECKLIST OF MAMMALS IN THE SOUTH-WESTERN MONGOLIAN- MANCHURIAN GRASSLAND ECOREGION

MID-TERM REPORT
September 13, 2017



MID-TERM ACTIVITY REPORT

BIFA2_02: Checklist of Mammals in the South-Western Mongolian-Manchurian Grassland Ecoregion

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Executive summary

Provide a brief explanation of the context and the approach taken for the mid-term evaluation, and a summary of the main conclusions, lessons learned and recommendations for the remaining project period.

The current project is being implemented after the Green Initiative NGO team have made a preliminary survey. A large part of the area we sampled during the first period of the project implementation, it was known, while we explored the new areas for further sampling with transects and camera trapping. The effort we spent to build an efficient sampling design, ensured the implementation of a complete range of methodologies that were well applied for our research purpose, enabling us to collect a good amount of data. We referred to the book *Mammals of Mongolia* (Batsaikhan *et al.*, 2014), and the IUCN red list, to get information about the species distribution. We compared and matched our recorded points with the existing references as we mentioned. This study could be highlighted as a new contribution from the current data regarding the species occurrence and distribution in Mongolia.

We can say that our achieved results are satisfactory, the sampling effort is well distributed between the various methodologies adopted: camera trapping, linear transects, opportunistic observation, and live trapping. We ascertain that rarely more than two methodologies (plus the opportunistic observation) have been conducted in a same day, without affecting the results. In the remaining project period, it is advisable to schedule the camera trapping arraying and the live trapping sampling, in different days.

Contact information

Please provide the name, institutional affiliation, role in the project and contact details of the author(s) of the report.

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Introduction

This section should explain to readers what they will find in this report. It should include:

- *A description of how the evaluation has been carried out (e.g. consultation or surveys with project partners and participants). Please refer to the description of monitoring and evaluation plans in the original project proposal.*
- *A description of how the project partners will use the evaluation results.*

The evaluation to our work, during the first period, can be easily done since the results can be presented clearly and can be counted. The precise sampling design, has been important to apply specific methodology and fulfill the expectation. We and our partner recorded our data in CSV format in order to explore the data in R and Excel. The presence points have been already recorded in GIS environment using QGIS program. Once the project will be ultimate, all the data already collected with added to those data we will collect within the project term, will be published on GBIF.org. The first output of our work will be a mammal checklist, occurring in the project area.

The project and its objectives

A brief summary of the project to help readers understand its objectives, including, for example:

- *The project's start date and expected duration*
- *A list of project participants and description of the main stakeholders*
- *The targeted capacity needs as outlined in the project proposal*
- *The project objectives and expected deliverables as included in the project proposal*

The project has been started on 1st April 2017 and its duration was established to be 1 year, in order to cover all the seasons and record also the migratory species presence.

The project has been proposed by Green Initiative NGO, which is responsible for the project implementation. The Bayan-Onjuul local government is participating and contributing with the logistic, which is a critical point to the project success, and giving field work assistants, very helpful since they know very well the area and have excellent skills to spot animals. The local governments and the local community are the main stakeholders, since their awareness about the biodiversity richness in their living area, will increase thanks to the project implementation, and it should have implication to the conservation action.

Based on a preliminary survey conducted by Green Initiative NGO, in the project area, to conduct a systematic survey appears very relevant to fill a gap concerning the knowledge about the species occurring in the area. In the first instance, the results of the project will produce a mammal check-list. The species occurrence in the area, will help to increase the knowledge about the species distribution. It is very relevant since the study area can be deemed as a “crossroad” region where data is very scarce. Furthermore, the results will be a first reliable tool, to address the central and local authority toward appropriate conservation measures, once the biodiversity hotspot will be identified.

As planned, during the first part of the project we had chance to collect qualitative data and also quantitative data, using the live-trapping for <1 kg mammals, and camera trapping for the larger species. We gathered 35 independent events images of mammals during the first 400 nights-trap, being close to the average of 600 images we expect to collect in 7000 nights-trap at the end of the project. Other 86 presence points (data update to mid-August 2017) were gathered through direct observation, by transects, live-traps and mist nets (only for bats).

The quality of the data we collected are likely worth of to be published in a peer reviewed journal.

Project activities completed by mid-term

This section should summarize the project activities completed by the mid-term, with a description of the associated outputs and deliverables. You can present this as a list, table, descriptive text, or any other format that you find useful. Please highlight any changes from the original plans provided in the full project proposal.

The following table (table 1) describes the activities already realized. All the following activities will be repeated every 60 days until the end of the project, in March 2018.

The camera trapping will be done throughout the year for a total of 7000 nights-trap circa.

It was planned that the camera trapping sampling would cover around 7600 nights-trap, but our camera supplier delivered the cameras with 30 days delay, where we used 10 cameras instead than 30. We believe the 600 nights-traps less, will not affect significantly our results.

On the other hand, we used a higher number of live traps. At the begin we planned to sample for 100 days-trap during this first sampling period. But using 30 Sherman traps a day (instead than 10) + 10 pitfall traps, we sampled for 420 days-trap.

Tab.-1

Activity	Starting period	Ending period	Duration (days)	number of species recorded	Number of records
Elaborating sampling design	Apr-17	May-17	20	-	-
Linear transects	May-17	Aug-17	40	8	19
Opportunistic observation	May-17	Aug-17	40	12	23
Camera trapping	May (10 cameras) and July (30 cameras) 2017	ongoing	2200 (at 30 September)	8	35 (400 traps night)
Mist nets	Jul-17	Jul-17	3	1	4
Live trapping	Jun-17	Aug-17	420	9	36

The table 2 shows a list of the mammal species we recorded during this first period. We recorded a total of 25 mammal species (three more than our previous preliminary study) belong to 12 families. Four of these species, are not recorded in this area according to the IUCN distribution maps and the Mongolian mammals book. These species are: Siberian ibex (*Capra sibirica*), the wapiti (*Cervus canadensis*), the northern three-toed jerboa (*Dipus sagitta*), and the Rborovskii hamster (*Phodopus roborovskii*). All these four species are recorded hundreds km

from the southern distribution area reported (wapiti), and from the northern distribution area reported (Siberian ibex, northern three-toed jerboa and the Roborovskii hamster).

Tab.-2 List of the mammal species recorded from May to August 2017.

Order	Fammily	Sub-Family	Genus and Species	English name	Photo
Artiodactyla	Bovidae	Antilopinae	<i>Procapra gutturosa</i>	Mongolian gazelle	Y
Artiodactyla	Bovidae	Caprinae	<i>Capra sibirica</i>	Siberian Ibex	Y
Artiodactyla	Bovidae	Caprinae	<i>Ovis ammon</i>	Argali	Y
Artiodactyla	Cervidae	Cervinae	<i>Cervus canadiensis</i>	Red Deer	Y
Carnivorae	Canidae	Caninae	<i>Canis lupus</i>	Grey Wolf	Y
Carnivorae	Canidae	Caninae	<i>Vulpes corsac</i>	Corsac Fox	Y
Carnivorae	Canidae	Caninae	<i>Vulpes vulpes</i>	Red Fox	Y
Carnivorae	Mustelidae	Mustelinae	<i>Martes foina</i>	beech marten	Y
Lagomorpha	Leporidae	-	<i>Lepust tolai</i>	Tolai Hare	Y
Lagomorpha	Ochotonidae	-	<i>Ochotona daaurica</i>	Pika	Y
Rodentia	Cricetidae	Cricetinae	<i>Phodopus roborovskii</i>	Desert hamster	Y
Rodentia	Cricetidae	Arvicolinae	<i>Lasiopodomys brandtii</i>	Brandt's Vole	Y
Rodentia	Cricetidae	Cricetinae	<i>Allocricetulus curtatus</i>	Mongolian Hamster	Y
Rodentia	Cricetidae	Cricetinae	<i>Cricetulus barabensis</i>	Chinese Striped Hamster	Y
Rodentia	Cricetidae	Cricetinae	<i>Cricetulus longicaudatus</i>	Long-tailed Dwarf Hamster	Y
Rodentia	Cricetidae	Cricetinae	<i>Alticola semicanus</i>	Mongolian mountain vole	Y
Rodentia	Dipodidae	Allactaginae	<i>Allactaga sibirica</i>	Mongolian Five-toed Jerboa	Y
Rodentia	Dipodidae	Dipodinae	<i>Dipus sagitta</i>	Mongolian three-toed Jerboa	Y
Rodentia	Muridae	Gerbillinae	<i>Meriones unguiculatus</i>	Mongolian gerbil	Y
Rodentia	Muridae	Murinae	<i>Apodemus peninsulae</i>	Korean field mouse	Y
Rodentia	Muridae	Murinae	<i>Mus musculus</i>	House mouse	N
Rodentia	Sciuridae	Xerinae	<i>Marmota sibirica</i>	Siberian Marmot	Y
Rodentia	Sciuridae	Sciurinae	<i>Citellus undulatus</i>	Long-tailed ground squirrel	Y
Eulipotyphla	Erinaceidae	-	<i>Mesechinus dauuricus</i>	Daurian hedgehog	Y
Chiroptera	Vespertillonidae	Myotinae	<i>Myotis aurascens</i>	Steppe Whiskered	N

Project communications

Describe the plans to communicate and share the results of your project with the project stakeholders and broader GBIF community. Please also review the page describing your project available from <https://www.gbif.org/project/83223/checklist-of-mammals-in-the-southwestern-mongolian-manchurian-ecoregion>. Highlight any additional documents, events, news items or links that you would like to add to your page.

The project will be promoted in a specific Web Page, created for this purpose in our Web Site www.greeninitiativengo.org, once the multimedia available will increase (especially after the data collected at the end of October from the 30 camera traps we installed in July-August 2017).

The project activity and a description of the results, will be published in the GEF-NGO's Network Newsletter, once the project will be completed.

To increase the awareness of local community we are planning a photo exhibition in each of the 5 district (soum) involved in the project and a related workshop.

As previously planned, we will store our data into the preconfigured Excel spreadsheet template, which will includes the required DwC fields and recommended DwC fields. The data will be shared with GBIF through an Integrated Publishing Toolkit.

Mid-term evaluation findings and recommendations for the remaining project implementation period

This should be the main section of the report, covering for example:

- *An evaluation of the project activities by the mid-term and their outputs/deliverables*
- *Any feedback on the project's relevance from the partners and stakeholders*
- *Comments on the project implementation, its efficiency and effectiveness*
- *The management arrangements for the project, including support from the GBIF Secretariat*
- *Any reflection on the mid-term evaluation itself that could help inform the project's final evaluation and final report*
- *Areas of success to build on during the remainder of the project implementation*

This section is also an opportunity to draw out the main lessons from the project experience that could be applied in other contexts, including any best practice that others in the GBIF community could apply.

Try to clearly document any changes to the project plans that will be made based on the findings of the mid-term evaluation. Please discuss any substantial changes with the GBIF Secretariat (bifa@gbif.org). In addition, please outline any recommendations for the GBIF Secretariat or the community to reinforce the initial successes of the project.

During the first period of the project implementation, all the goals have been achieved relatively to the time past from the project start. We spent the first month to draft an appropriate sampling design in GIS environment. We selected the rock mountainous areas in five soums, to array our 30 camera traps, of which 10 were placed in May (Mongolian administrative unit), while in July we add other 20 cameras arrayed in an area we spotted as a potential biodiversity hotspot for medium-large mammals. We will collect the data from these cameras at the end of October and the data will be useful to both, an occupancy analysis of the mammal community, as well as the collection of the species presence as novel data for a checklist. The data we collected during the first 400 nights-trap, confirmed that our study area includes the four medium-large wild ungulates as the Mongolian gazelle (*Procapra gutturosa*), the argali sheep (*Ovis ammon*), the Siberian ibex (*Capra sibirica*) and the wapiti deer (*Cervus canadensis*). Particularly interesting is the presence of the wapiti deer in Adaatsag Province, where it occurs in a semi-desert area, characterized by bare rocks and very low vegetation. From October to March we will explore mainly the Southern and Eastern zone of our study area. All the large ungulate species mentioned above are regionally threatened according to the Mongolian Mammals Red List: the wapiti deer is Critically Endangered, the argali sheep is Endangered, as well as the Mongolian gazelle, while the Siberian ibex is near threatened. The study area represents the North-Western area of global distribution for the Siberian Ibex and the Argali sheep. The study area, represents the Southern distribution of wapiti deer, relatively to the Mongolian Manchurian Grassland Ecoregion.

Other interesting result regard the rodents. Particularly the desert hamster and the Northern three-toed jerboa, has been recorded here hundreds km above their historical distribution area.

The first step of this research added significant data about the mentioned species range extension for future studies on biogeography, taxonomy, and conservation biology.

In term of the stakeholders represented by the local community and the local biologist, as well as the project partners, highlighted the importance of the research and participated with enthusiasm, sharing their knowledge and our results.

The first results are encouraging, and validate the management arrangements, in terms of study sampling design, logistic and funding. The support from GBIF has been necessary to cover around half of the total cost. Furthermore, the “supervision” of the project from GBIF, address to a better management of the data, especially concerning their publication and mobilization.

The quality and quantity of data collected, suggest keeping the project implementation as designed in the project proposal.