

Mongolian Red List of Mammals

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The Mongolian Biodiversity Databank holds further details on all the species listed in this book. It is available to the public and can be accessed through:

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Because only a limited number of hard copies will be produced, electronic versions of this report will be available through the ZSL library (<http://library.zsl.org>) and www.regionalredlist.com.

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FOREWORD

Nature conservation originated from industrialised nations during the early 19th Century, when people could see how animals, plants, and soils were being affected by economic growth. Conservation was put into action through a sense of compassion for the natural richness of fauna and flora, and as industrialisation increases in the 21st Century, conservation needs and actions have also increased.

E. O. Wilson introduced the term ‘biodiversity’ to the general public in his 1988 bestseller of this name. This term does not just refer to local biological diversity, but implies gaining a wider understanding of global environmental problems, which requires people from around the world to work together to develop and integrate an approach to resolving these issues. This was, in part, the aim of the Convention on Biological Diversity, adopted in Rio de Janeiro, Brazil in 1992. As a result of this convention, countries with differing social and economic structures have agreed that human development needs to be related to biodiversity conservation.

The slow development of industry in Mongolia has enabled it to retain large areas of pristine landscape, with ancient traditions of nomadic pastoralism still being followed to date. However, the number of livestock in Mongolia has dramatically increased over the past century; at the beginning of the 20th Century there were less than ten million registered livestock, but following privatisation numbers reached 33.6 million during the late 1990s. This has resulted in overgrazing of many areas; of 58.2 million hectares of pasture land assessed during 2001-2002, it was estimated that 44.7% of the land was degraded (Tserendash, 2005), and 46.5% of the 1.2 million hectares of arable fields under use had become barren (Avaadorj, 2005). In Mongolia, pasture degradation leads to poor vegetation cover and a reduction in soil quality, resulting in desertification. It is commonly believed that the source of these negative changes is the influence of natural environmental change, or outbreaks of Brandt’s voles and locusts destroying all vegetation in an area. However, anthropogenic sources have been identified as a major cause of irreparable damage to the environment through poor management of livestock, inappropriate crop harvesting, unregulated natural resource use, and mineral extraction. Industrialisation, utilisation of man-made products, and use of chemicals has de-forested thousands of hectares of land, resulting in large, newly open areas.

A large portion of Mongolia is an arid climatic zone, therefore water resources are particularly important for human and animal life. Human populations, thus livestock numbers, are becoming increasingly abundant near water sources, resulting in soil erosion of banks, reduced vegetation cover, and compaction of soil. This leads to reduced absorption of water and a decline in the soil moisture ratio, in turn causing drying and disappearance of steppe rivers, streams and springs.

Human exploitation is a major cause of species extinction. The effects can be direct, e.g. harvesting animals or plants for consumption, or indirect, e.g. through habitat degradation reducing available resources and altering species interactions. Indirect impacts can be particularly destructive, as they can affect entire communities. Monitoring the status of living organisms and the effect of these impacts plays an important role in nature conservation. In Mongolia, information has been gathered on population sizes, distributions, and life histories

of many vascular plant and vertebrate species. However, native micro-organisms, lower plants, and invertebrates have been less studied, with some species yet to be discovered. Economically valuable plant and animal species can be used as key indicators to develop conservation policies and to monitor and constrain environmental changes.

Evolution is a long, slow process, occurring over millions of years, yet extinction can happen very quickly. In Mongolia this was illustrated by the sad example of Przewalski's horse. This species was first discovered in Mongolia during the late 19th Century, but by the mid-20th Century it was categorised as Extinct in the Wild. Reintroduction of this species to Mongolia was only possible due to the effort and support of many governments, NGOs, and individuals from around the world. The success of this reintroduction has greatly contributed to global nature conservation.

Other countries have developed their own national biodiversity programmes, focusing on developing conservation measures using a scientific approach. This had not previously been conducted in Mongolia, so there was a need to establish and maintain a biodiversity databank, apply the 'IUCN Red List Categories and Criteria' (IUCN, 2001) to the major taxonomic groups of plants and animals to evaluate their threat status, and to develop summary conservation action plans for threatened species. Within the framework of the Mongolian Biodiversity Databank Project, funded by the World Bank, these objectives were carried out. The results of the assessment of extinction risks for all Mongolian species are presented here, and should be useful to develop conservation measures to ensure the persistence of all Mongolian mammals.

Professor R. Samiya
National University of Mongolia

PREFACE

There are at least 128 native mammal species in Mongolia, ranging from large carnivores and ungulates to bats and rodents, many of which are globally threatened or endemic to Central Asia. Since ancient times, Mongolians have upheld a culture of nomadic animal husbandry and hunting, and 45% of Mongolia's fauna are of value in traditional subsistence hunting. As part of this culture, conservation and the appropriate use of natural resources are strongly encouraged. As early as 1206, the first law on nature conservation was adopted by Chinggis Khan's Ikh Zasag Khuul (the Law of Great Assembly), and in the late 13th Century Mongolia established its first sacred protected area, Bogd-Khan Mountain, which received official governmental protection in 1778 and is one of the world's oldest protected natural sites. There are now 56 protected areas in Mongolia, encompassing all of the country's ecological zones and representing 13.5% of its total area, and a wide network of environmental government agencies and non-governmental organisations have been established.

Mongolia has played an active role in global conservation and policy-making. In 1962, the Mongolian government initiated the General Assembly of the United Nations to pass a draft resolution on economic development and the environment, focusing on the importance of conserving biodiversity. In 1993, Mongolia's vice-president participated in the UN conference entitled 'Environment and Nature', proposing that 30% of Mongolia's territory should fall under state protection and that the country should be made an internationally protected biosphere zone. Mongolia is also a member of a number of international conventions including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on Biological Diversity (CBD), and the Convention on Migratory Species (CMS). However, the adoption of a new economic system in 1990 heralded significant changes to Mongolian society and generated large-scale problems for conservation of biodiversity. Increased illegal hunting and trade in animal trophies have led to population declines and range contractions for many mammals. It is therefore essential to establish regulations to conserve Mongolia's mammals in order to halt observed declines.

Representatives from many universities and organisations participated in the Mongolian Biodiversity Databank Workshop, resulting in a databank containing information on all mammals occurring within Mongolia, summary conservation action plans for threatened species, and the production of the Mongolian Red List of Mammals. Unlike previous Mongolian Red Lists, these assessments have been conducted using the internationally recognised 'IUCN Red List Categories and Criteria' (IUCN, 2001), enabling comparisons of the conservation status of Mongolian mammals with other regions for the first time. Although much remains to be done to conserve Mongolia's biodiversity, this work has established a baseline to determine the changing status of Mongolian mammals over time, which we hope can be extended to include all Mongolian vertebrates in the future.

Professor S. Dulamtseren
Mongolian Academy of Sciences

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This book is one of the outputs of the Mongolian Biodiversity Databank Project, which was initiated and funded by the World Bank and implemented by the Zoological Society of London (ZSL) (regionally represented by the Steppe Forward Programme) and the National University of Mongolia, in collaboration with the Mongolian Academy of Sciences, the Ministry of Nature and Environment, the World Conservation Union (IUCN), and many other regional and international organisations. We would like to specifically highlight the following organisations which played an important role in the Mongolian Biodiversity Databank Project:

The World Bank (with funding from the Royal Netherlands Embassy, Beijing) initiated the Mongolian Biodiversity Databank Project, and provided generous financial support, without which production of the Mongolian Red List of Mammals would not have been possible. Special thanks are extended to Tony Whitten, who has guided this project at every stage of its development.

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The Zoological Society of London (ZSL) led the implementation of the Mongolian Biodiversity Databank Project. Jonathan Baillie (project leader), Emma Clark (project co-ordinator), Joanne Ocock (project co-ordinator) and Ben Collen (technical advisor) are all based at ZSL. Special thanks are extended to Glyn Davies, Director of Conservation Programmes, for leadership and guidance throughout the project.

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INTRODUCTION

Mongolia's vast and diverse landscape has traditionally been a refuge for a rich and unique assemblage of mammals. However, over the past two decades Mongolia has undergone significant social and economic change, and during this time period many of Mongolia's mammals, such as argali (*Ovis ammon*), red deer (*Cervus elaphus*), and Siberian marmot (*Marmota sibirica*) have experienced rapid declines. These declines have been relatively well documented for a few species, although prior to this Red List, the overall conservation status of Mongolian mammals was poorly understood.

This Red List contains all known native Mongolian mammals and highlights their status within Mongolia, accompanied by other information such as their global and regional distribution, legal status, and dominant threats. Species have been assessed using the 'IUCN Red List Categories and Criteria' (IUCN, 2001), which incorporate quantitative thresholds to categorise species in terms of their risk of extinction (Least Concern, Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild, and Extinct). These assessments were carried out by over 70 of the world's leading experts on Mongolian mammals at the Mongolian Biodiversity Databank workshop from October 31st to November 4th 2005.

Both threatened and non-threatened Mongolian mammals are presented in this document, in order to clearly identify all species that have been assessed and to provide an indication of the overall status of the country's mammals. It also provides an excellent field guide of all mammals found in Mongolia. However, only those species listed as Vulnerable, Endangered, or Critically Endangered are considered to be threatened with extinction, and are designated as official Red List species.

The specialists involved in the production of this Red List also helped to develop the Mongolian Biodiversity Databank for mammals, available from the Department of Zoology at the National University of Mongolia, which contains detailed information on species distributions, ecology, habitat preferences, threats, and conservation measures. This databank also contains information on all Mongolian fishes and will, in the near future, contain data for all Mongolian vertebrates. Summary conservation action plans were also composed, providing detailed information on all threatened mammals and actions necessary to ensure their future survival. These summary conservation action plans are published in a separate document, and electronic versions will be available through the Zoological Society of London library (<http://library.zsl.org>) and www.regionalredlist.com.

The production of the Mongolian Red List of Mammals is a milestone for conservation in Mongolia, as it sets the first baseline from which it will be possible to assess whether conditions are improving. It also provides policy makers with the most up-to-date information on threatened mammals, allowing informed decisions to be made, and gives conservationists essential information required to develop detailed conservation action plans and set priorities.

The Red List demonstrates that a large number of species have recently become threatened with extinction. This highlights the importance of conducting regular monitoring and conservation assessments, to ensure that species do not move toward extinction unnoticed.

The Red List also highlights the importance of addressing the dominant threats to Mongolian mammals, overexploitation (for trade) and habitat degradation due to overgrazing. These are fortunately reversible threats that can be addressed through legislation, economic incentives, and education. The emerging potential threat of climate change will be much more difficult to address. Finally, by defining the current state of knowledge, the Red List helps to identify where future research is most needed. This document is only the first step, and it is hoped that it will encourage research and conservation of what is a very poorly known, but extremely interesting group of mammals.

APPLICATION OF THE IUCN RED LIST CATEGORIES AND CRITERIA AT A REGIONAL LEVEL

Red Lists, or lists that highlight threatened species, have been in existence for nearly 60 years (Baillie and Groombridge, 1996). They have become an important tool in assessing extinction risk for widely different taxa, and are often considered the first step in setting priorities for conservation actions and focussing attention on threatened species (Lamoreux *et al.*, 2003). The initial, relatively subjective method of defining species conservation status was replaced in 1994 by a set of more objective, quantitative criteria, which has helped to standardise the way in which species are classified according to their global extinction risk (Mace, 1994). These new criteria were applied for the first time in the '1996 IUCN Red List of Threatened Species' (Baillie and Groombridge, 1996). The 'IUCN Red List Categories and Criteria' (IUCN, 2001) are now recognised as an international standard, and used by many countries and organisations throughout the world.

The Red List of Mongolian Mammals, compiled at the Mongolian Biodiversity Databank Workshop, follows the 'Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0' (IUCN, 2003). These guidelines assess the risk of regional extinction, and therefore address a number of issues not encountered when conducting assessments on a global scale. For example, a regional assessment has to take into account species that migrate between countries, or populations that are restricted to one country but dependent on immigration from another country. To ensure a reliable assessment of the risk of regional extinction, the guidelines have two important features. First, they include two new categories: Regionally Extinct (RE) and Not Applicable (NA) (Table 1). RE describes species that remain globally extant, but are no longer found within the specific region; NA describes species are deemed ineligible for assessment. At the Mongolian Biodiversity Databank Workshop, NA species were defined as taxa that are known to have less than 1% of their global population in Mongolia, and have regional distributions that cover less than 1% of the area of Mongolia. Second, the guidelines prescribe a two-step process. The 'IUCN Red List Categories and Criteria' (IUCN, 2001) are first applied to regional population data as though they represent the global population (see Annex I for summarised details). This assessment is then adjusted based on the influence of populations outside the region. For example, if a taxon is threatened regionally, but immigration taking place from outside the region constitutes a 'rescue' effect, this decreases the risk of regional extinction and the assessment can be downgraded accordingly. An assessment can be upgraded to a higher category of threat if the regional population is declining or is a 'sink' population, with no possibility of 'rescue' from outside. If there is no information on the effects of populations surrounding the region, no alteration is made (see IUCN (2003) for further details). This provides the taxon with a Red List assessment that better reflects the risk of extinction within the defined region.

At the Mongolian Biodiversity Databank Workshop, none of the mammal regional assessments were up or downgraded, because there was little evidence for significant immigration, and it was not known whether a 'rescue' effect from external populations was likely.

Table 1. Definition of the categories used in the Red List (see IUCN, 2001 and 2003).

Extinct (EX)	A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
Extinct in the Wild (EW)	A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
Regionally Extinct (RE)	A taxon is Regionally Extinct when there is no reasonable doubt that the last individual potentially capable of reproduction within the region has died or disappeared from the region; in the case of a former visiting taxon, individuals no longer visit the region. It is not possible to set general rules for a time period before a species is classified as RE. This will depend on how much effort has been devoted to searches for the species.
Critically Endangered (CR)	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild.
Endangered (EN)	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered and it is therefore considered to be facing a very high risk of extinction in the wild.
Vulnerable (VU)	A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable and it is therefore considered to be facing a high risk of extinction in the wild.
Near Threatened (NT)	A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
Least Concern (LC)	A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.
Data Deficient (DD)	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.
Not Applicable (NA)	Taxon deemed ineligible for assessment at a regional level.

TECHNICAL NOTES

Nomenclature and taxonomy

The species list used in this document is the result of a series of meetings involving local and international Mongolian mammal experts. A draft list was developed at the first of these meetings in Ulaanbaatar, based on earlier lists compiled by Dulamtseren (1968), Mallon (1985), Wilson and Reeder (1993), Tinnin *et al.* (2002), and the IUCN Global Mammal Assessment (IUCN-GMA, in prep.). Taxonomic issues raised during the Mongolian Biodiversity Databank Workshop were discussed in a meeting after all assessments were completed, chaired by M. Stubbe and attended by twenty participants. The final meeting after the workshop confirmed the list upon which the Mongolian Biodiversity Databank and the Red List is based.

The ‘IUCN Red List Categories and Criteria’ (IUCN, 2001) were only applied to wild populations in their native range, and to populations established by conservation reintroduction programmes within former natural ranges (e.g. reintroductions of Przewalski’s horse), and so four **non-native mammal species that are found in Mongolia but were deliberately introduced are excluded from the Mongolian Red List of Mammals:**

American mink *Mustela vison* Schreber, 1777

Brown rat *Rattus norvegicus* (Berkenhout, 1769)

Muskrat *Ondatra zibethicus* (Linnaeus, 1766)

House mouse *Mus musculus* Linnaeus, 1758

Although the taxonomic status of the Gobi bear *Ursus arctos gobiensis* Sokolov and Orlov, 1992, requires further clarification, it has been assessed here as a distinct subspecies of the brown bear *Ursus arctos* Linnaeus, 1758. Despite unresolved taxonomy, this subspecies has been assessed as it is viewed as distinct and of great conservation importance in Mongolia. Using recent genetic data Oakenfull *et al.* (2000) concluded that although Przewalski’s horses have interbred with domestic horses in the past and they are closely related, they should still be interpreted as distinct species. However, here we refer to it as *Equus ferus przewalskii* (Groves, 1986) to clarify that only wild populations are included in this assessment. Confusion also exists over the relationship between wild and domestic populations of Bactrian camels, with modern genetic evidence suggesting that they may be distinct species (Han *et al.*, 2002). This Red List and associated documents assesses only wild populations of this species, which are referred to here as *Camelus bactrianus ferus* Przewalski, 1878. Many other mammal species included in the Red List have one or more distinct subspecies occurring within Mongolia, which are listed with each account, such as the Mongolian saiga *Saiga tatarica mongolica* Bannikov, 1946, however, all assessments other than those noted here have been conducted at the species level.

The Red List of Mongolian Mammals and its associated documents contain species that are on the agreed list for the Mongolian Biodiversity Databank Workshop, i.e. those that were known to occur in Mongolia in 2005 (List 1, Annex II). Subsequent to the workshop, several additional species have been suggested to occur in Mongolia, based on recent range expansions or their occurrence close to the Mongolian border. Those which are likely to occur

in Mongolia have been added to List 1, but are marked with a plus sign (+) to indicate that they were added to the species list after the workshop, and therefore were not assessed during the workshop. Species which possibly occur within Mongolia but have not yet been confirmed are included in a possible species list until further evidence is obtained (List 2, Annex II).

Regional distribution

Each species account includes a description of its regional distribution within Mongolia. This follows a standard regional geographic subdivision of Mongolia (Figure 1), based on a geo-botanical map of the plants of Mongolia (Tsegmid, 1969) with further details from Grubov (1982), Rachkovskaya (1993) and Bannikov (1954), and a recent review by Batsaikhan (unpubl. data). This geo-botanical map enables the regional distribution of mammals to be shown clearly, as it is divided into 16 regions.

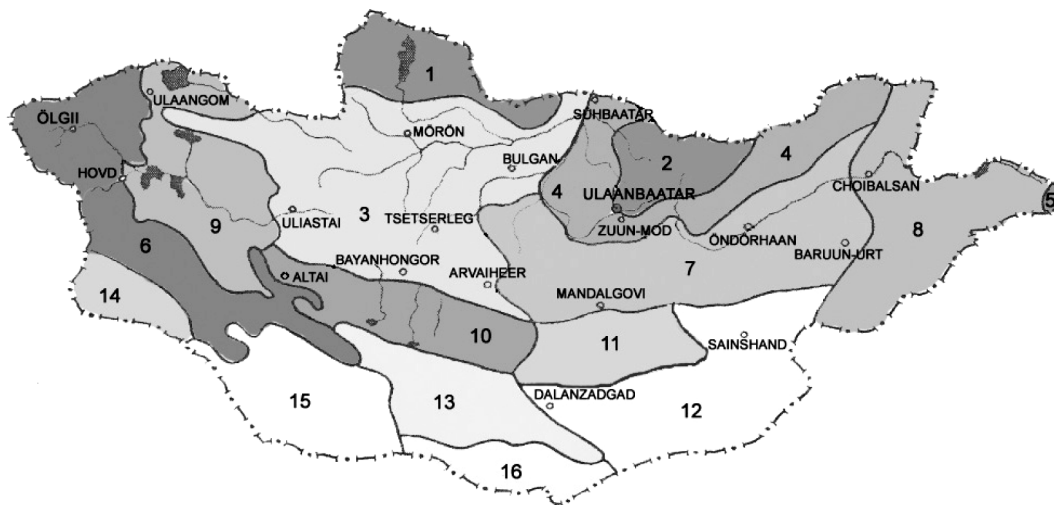


Figure 1. Standard geographic subdivision of Mongolia used to describe the regional distribution of Mongolian mammals (Based on Tsegmid, 1969). 1 = Hövsgöl Mountain Range, 2 = Hentii Mountain Range, 3 = Hangai Mountain Range, 4 = Mongol Daguur Steppe, 5 = Ikh Hyangan Mountain Range, 6 = Mongol Altai Mountain Range, 7 = Middle Halh Steppe, 8 = Eastern Mongolia, 9 = Great Lakes Depression, 10 = Valley of the Lakes, 11 = Northern Govi, 12 = Eastern Govi, 13 = Govi Altai Mountain Range, 14 = Dzungarian Govi Desert, 15 = Trans Altai Govi Desert, 16 = Alashan Govi Desert.

Species distribution maps

Digitised maps of the current distributions of Mongolian mammals were provided by the IUCN Global Mammal Assessment (IUCN-GMA, in prep.). These maps were reviewed and modified during the Mongolian Biodiversity Databank Workshop, justification for all changes was documented and is available with the Mongolian Biodiversity Databank. The maps also include data on distributions around Mongolia's borders, but this information could not be verified or revised during the workshop, and is only included here to illustrate the wider distribution of each species. The distribution maps developed at the workshop were overlaid using ArcView version 3.0 software to explore patterns of species richness, threatened species richness, and areas with high concentrations of poorly known species. For each species, range maps were overlaid with a protected area map of Mongolia in order to estimate the percentage of its range occurring within protected areas. The map of protected areas was created using the UNEP-WCMC World Database on Protected Areas (<http://sea.unep-wcmc.org/wdpa/>),

which is in accordance with the six protected area management categories defined by IUCN, for further details please refer to the 'Guidelines for Protected Areas Management Categories' (IUCN, 1994).

Illustrations

Illustrations of each species are included in the Mongolian Red List of Mammals, drawn from specimens at the Natural History Museum of Mongolia and the following sources: Ognev (1948), Bobrinskii *et al.* (1965), Corbet and Ovenden (1982), Görner and Hackethal (1988), Macdonald and Barrett (1993), Shenbrot *et al.* (1995), Sokolov *et al.* (1996), Schober and Grimmberger (1998), and Pavlinov *et al.* (2002). Illustrations have been drawn to the best quality possible, however in the case of many small rodent species, identification in the field may be difficult due to the size of the pictures and the similarity amongst species. For more detailed identification guides, please refer to Sokolov and Orlov (1980) and Dulamtseren (1970).

FORMAT OF SPECIES ACCOUNTS

Higher-level taxonomy follows Wilson and Reeder (1993), and the Red List of Mongolian Mammals follows the format outlined below:

Species name and taxonomic authority

Common names (English and Mongolian)

Subspecies in Mongolia (if applicable)

Synonyms (if applicable)

Global status (global risk of extinction)

IUCN global population assessment for each species given in the ‘2004 IUCN Red List of Threatened Species’ (IUCN, 2004). Alteration of an existing global assessment during the Mongolian Biodiversity Databank Workshop is denoted by a single black circle symbol (●). If this was the first assessment for the species using the ‘IUCN Red List Categories and Criteria’ (IUCN, 2001) and it is pending evaluation by IUCN Red List Authorities, this is denoted with two black circle symbols (●●).

Regional status (risk of extinction within Mongolia)

Regional assessments conducted for the first time for Mongolian mammals using the ‘IUCN Red List Categories and Criteria: Version 3.1’ (IUCN, 2001) (see Table 1 for categories and their definitions) and the ‘Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0’ (IUCN, 2003). Conservation assessments are identical to global status if endemic to Mongolia.

Rationale for assessment

Rationale for the application of ‘IUCN Red List Categories and Criteria’ (IUCN, 2001) to each species assessed at the Mongolian Biodiversity Databank Workshop. This section should be read in conjunction with the ‘Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0’ (IUCN, 2003) and the Mongolian Biodiversity Databank.

Legal status

Existing protective legislature for Mongolian mammals, including both Mongolian laws (e.g. Hunting Laws and the Law on Fauna) and international laws (e.g. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): see UNEP-WCMC (2006)). Legislated hunting seasons and details of permits and quotas for foreign hunters have been included where appropriate. For each species, the percentage of the Mongolian range occurring within protected areas has been estimated. Within protected areas, species are conserved under Mongolian Laws of Protected Areas.

Global distribution

Listed from west to east and based largely on IUCN (2004); additional references given in relevant species accounts. Current distributions that include introductions into countries outside the native global range, or reintroductions following regional extinction, are indicated by [int] or [re-int] respectively.

Regional distribution

Accompanied by a distribution map for Mongolia. These maps were updated during the Mongolian Biodiversity Databank Workshop, based on IUCN Global Mammal Assessment maps (IUCN-GMA, in prep.), new information from the scientific literature, museum

records, government and conservation organisation documents, and expert observations. Although these are as accurate and up-to-date as possible, it should be noted that many species are lacking in distribution data. As further research is conducted, changes to these maps are likely to occur. Distributions outside Mongolia were not updated.

Dominant threats

Brief outline of dominant threats and their causes, identified as being of immediate and primary concern by participants during the Mongolian Biodiversity Databank Workshop. Threat processes can be complex and reflect multiple factors; for more detailed information please refer to the Mongolian Biodiversity Databank.

STATUS OF MONGOLIAN MAMMALS

Of the 128 native Mongolian mammal species that were assessed, 16% are categorised as regionally threatened, of which 2% are Critically Endangered (CR), 11% Endangered (EN) and 3% Vulnerable (VU) (Figure 2). A further 6% are categorised as Near Threatened (NT). Thirty-seven percent of the mammals of Mongolia are categorised as Data Deficient (DD). Only one species, the Asiatic wild dog (*Cuon alpinus*), is categorised as Regionally Extinct (RE) in Mongolia.

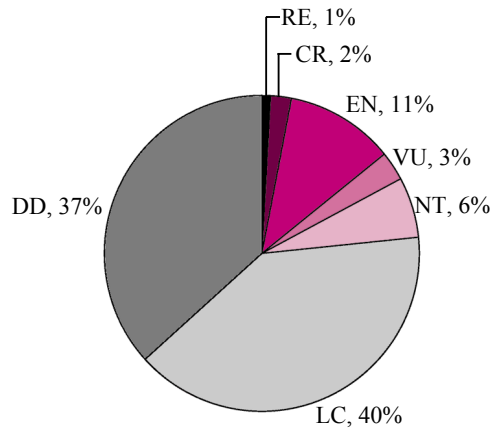
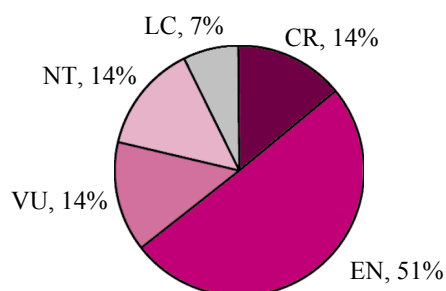


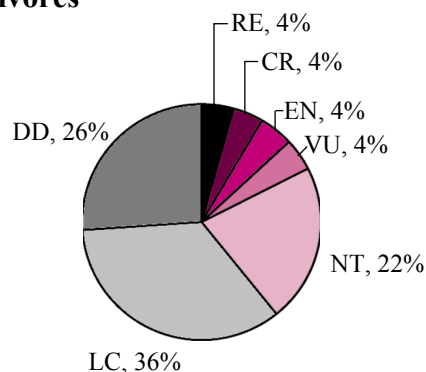
Figure 2. Regional conservation status of the 128 native Mongolian mammals according to the IUCN Red List Categories and Criteria. RE = Regionally Extinct, CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Data Deficient.

Threat status varies between different Mongolian mammal groups (Figure 3). The majority (11/14 or 79%) of Mongolia's ungulate species (Artiodactyla and Perissodactyla) are categorised as regionally threatened, and two of the remaining three species are categorised as NT. Twelve percent of Mongolian carnivores, including the snow leopard (*Uncia uncia*), sable (*Martes zibellina*) and Gobi bear (*Ursus arctos gobiensis*), are categorised as threatened; a further 22% are NT and 36% are Least Concern (LC). Twelve percent of rodents are also threatened, 2% are NT, and 45% are DD. None of the small (non-rodent) mammals (Lagomorpha, Chiroptera, Erinaceomorpha and Soricomorpha) are categorised as threatened, but many of these species are listed as DD (43%). These results highlight a lack of research on small mammals, and further research may reveal that a number of these species are also threatened.

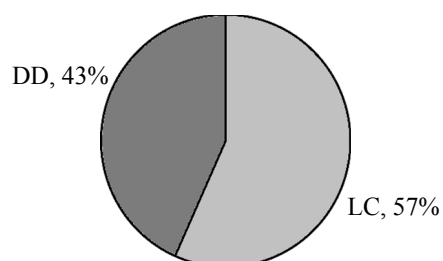
Ungulates



Carnivores



Small mammals (non-rodent)



Rodents

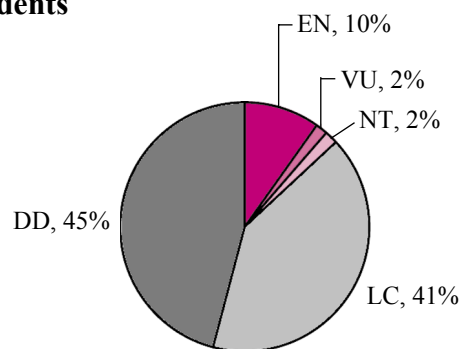


Figure 3. Comparison of the conservation status of four Mongolian mammal groups. RE = Regionally Extinct, CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Data Deficient.

Twenty-one species are categorised as threatened in Mongolia and a further eight are listed as NT (Table 2). In many cases, subspecies of these species are endemic to Central Asia, and therefore significant for the conservation of mammalian biodiversity. Twelve of these regionally threatened mammals are also threatened or NT on a global scale, including the long eared jerboa (*Euchoreutes naso*), Asiatic wild ass (*Equus hemionus*), Bactrian camel (*Camelus bactrianus ferus*), saiga antelope (*Saiga tatarica*), and snow leopard (*Uncia uncia*).

Table 2. Mammals categorised as regionally threatened (Critically Endangered, Endangered and Vulnerable) and Near Threatened in Mongolia.

Critically Endangered	Endangered	Vulnerable	Near Threatened
Gobi bear <i>Ursus arctos gobiensis</i>	Siberian marmot <i>Marmota sibirica</i>	Long-eared jerboa <i>Euchoreutes naso</i>	Eurasian red squirrel <i>Sciurus vulgaris</i>
Przewalski's horse <i>Equus ferus przewalskii</i>	Alashan ground squirrel <i>Spermophilus alashanicus</i>	Sable <i>Martes zibellina</i>	Eurasian lynx <i>Lynx lynx</i>
Red deer <i>Cervus elaphus</i>	Eurasian beaver <i>Castor fiber</i>	Goitered gazelle <i>Gazella subgutturosa</i>	Pallas's cat <i>Otocolobus manul</i>
	Small five-toed jerboa <i>Allactaga elater</i>	Reindeer <i>Rangifer tarandus</i>	Grey wolf <i>Canis lupus</i>
	Mongolian three-toed jerboa <i>Stylodipus sungorus</i>		Corsac fox <i>Vulpes corsac</i>
	Tamarisk jird <i>Meriones tamariscinus</i>		Red fox <i>Vulpes vulpes</i>
	Snow leopard <i>Uncia uncia</i>		Wild boar <i>Sus scrofa</i>
	Asiatic wild ass <i>Equus hemionus</i>		Siberian ibex <i>Capra sibirica</i>
	Bactrian camel <i>Camelus bactrianus ferus</i>		
	Argali <i>Ovis ammon</i>		
	Mongolian gazelle <i>Procapra gutturosa</i>		
	Saiga antelope <i>Saiga tatarica</i>		
	Siberian musk deer <i>Moschus moschiferus</i>		
	Elk <i>Alces alces</i>		

DISTRIBUTION OF MONGOLIAN MAMMALS

Mammalian species richness is highest in Mongolia's northern regions, with recorded numbers of species exceeding 60 in Hövsgöl and Hentii mountain ranges, and northern parts of Hangai Mountain Range (Figure 4). Species richness shows a trend within Mongolia to decrease from north to south, with lowest species richness in southern and south-eastern Mongolia, particularly Gobi Altai Mountain Range, Alashan' Gobi Desert, Eastern Gobi, and southern parts of Eastern Mongolia.

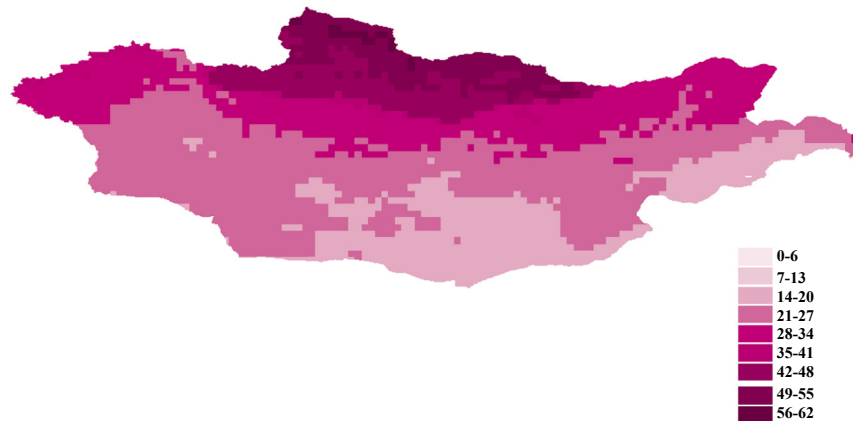


Figure 4. Mongolian mammal species richness. Darker colours represent areas with higher species richness.

Density of threatened species is highest in northern Mongolia, co-inciding with areas of highest species richness, particularly northern Hangai Mountain Range (Figure 5). South-eastern and eastern parts of Mongolia contain low numbers of threatened species, possibly because these areas contain a lower overall species richness. However, south-western areas such as Dzungarian Gobi Desert and Trans Altai Gobi Desert have high numbers of threatened species, despite a lower overall species richness. Middle Halh Steppe in central Mongolia also contains a relatively high number of threatened species in relation to the number of species recorded in this region, this may be due to the increasing growth and development of the nearby capital city of Ulaanbaatar.

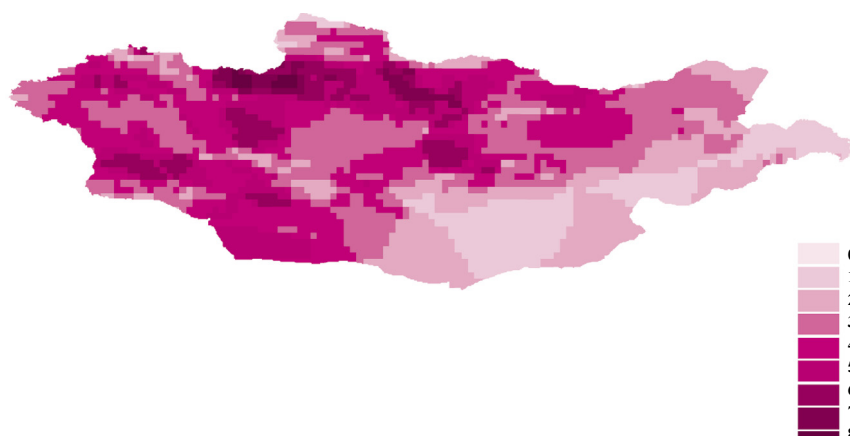


Figure 5. Threatened Mongolian mammal species richness. Darker colours represent areas with higher numbers of threatened species.

Species are categorised as Data Deficient (DD) where there is insufficient information to confidently assess extinction risk. Many regions with high species richness have a high number of DD species, illustrated by the similarity between the species richness map and the map of DD species (Figure 6). Areas with high species richness such as northern Hangai Mountain Range, and Hövsgöl and Hentii mountain ranges contain the most DD species. Regions with lower species richness tend to have lower numbers of DD species, such as Alashan' Gobi Desert (Figure 6). Trans Altai Gobi Desert displayed relatively low species richness, but contained a large number of threatened species and few DD species, this may be a reflection of the many studies conducted in this region, in Great Gobi Section A Strictly Protected Area, designated for desert and semi-desert species.

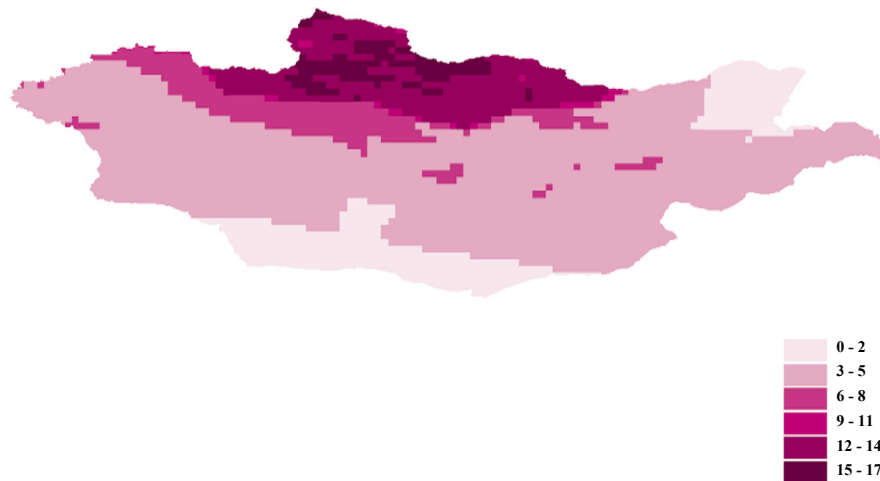


Figure 6. Data Deficient Mongolian mammal species richness. Darker colours represent areas with higher numbers of Data Deficient species.

THREATS TO MONGOLIAN MAMMALS

The assessment process identified the main activities or processes driving the decline of species (e.g. resource extraction or hunting), and the direct threats causing these declines (e.g. loss of habitat or intentional mortality). Where applicable, the primary, secondary and tertiary direct threats were ranked for each species.

Intentional mortality caused by hunting is the primary threat identified for more than half of Mongolia's threatened mammals (57%; see Table 3). This is a particularly serious threat for ungulates such as red deer (*Cervus elaphus*), argali (*Ovis ammon*), Mongolian gazelle (*Procapra gutturosa*), and musk deer (*Moschus moschiferus*), as well as species hunted for their fur, such as Siberian marmot (*Marmota sibirica*) and snow leopard (*Uncia uncia*).

Habitat degradation is the primary threat to one species, tamarisk jird (*Meriones tamariscinus*) and a secondary threat to five species, all of which are ungulates. In most cases, habitat degradation is believed to be resulting from increasing numbers of livestock grazing. When combined, habitat loss, fragmentation and degradation constitute a secondary threat to more than half of Mongolia's threatened mammals (52%). Habitat loss is a secondary threat to five species, including three artiodactyls, commonly caused by increasing resource extraction such as mining. Other forms of resource extraction, such as logging and clear-felling of forests also threaten species such as Eurasian beaver (*Castor fiber*) and sable (*Martes zibellina*). Habitat fragmentation is a secondary or tertiary threat to four species, all of which are ungulates with large range sizes.

Climate change represents a threat to several species, including rodents, artiodactyls and carnivores, and is highlighted as an important threat for the future. Many of these species occur in southern Mongolia, where droughts and dry conditions commonly occur. However, it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. Other tertiary threats are more varied, and include pollution, disease, and competition for resources (often with increasing numbers of livestock).

Table 3. Summary of direct threats facing threatened Mongolian mammals, as identified by participants at the Mongolian Biodiversity Databank Workshop. Primary threat represented in black, secondary threat in mid grey, and tertiary threat in light grey.

Category of threat	Species	Habitat degradation	Habitat fragmentation	Habitat loss	Pollution	Disease	Parasites	Predation	Hybridisation	Competitors	Intentional mortality	Accidental mortality	Climate change	Other	Not known
CR	<i>Ursus arctos gobiensis</i>												Mid grey	Black	
	<i>Equus ferus przewalskii</i>					Mid grey			Black	Mid grey					
	<i>Cervus elaphus</i>		Mid grey	Mid grey							Black				
EN	<i>Marmota sibirica</i>					Mid grey					Black				
	<i>Spermophilus alashanicus</i>														Black
	<i>Castor fiber</i>			Mid grey	Mid grey						Black				
	<i>Allactaga elater</i>												Black		
	<i>Stylodipus sungorus</i>												Black		
	<i>Meriones tamariscinus</i>	Black								Mid grey					Mid grey
	<i>Uncia uncia</i>										Black				Mid grey
	<i>Equus hemionus</i>	Mid grey	Mid grey								Black				
	<i>Camelus bactrianus ferus</i>			Mid grey					Black				Mid grey		
	<i>Ovis ammon</i>	Mid grey								Mid grey	Black				
	<i>Procapra gutturosa</i>		Mid grey								Black				Mid grey
	<i>Saiga tatarica</i>	Mid grey								Mid grey					Black
	<i>Moschus moschiferus</i>		Mid grey								Black				Mid grey
	<i>Alces alces</i>			Mid grey	Mid grey						Black				
VU	<i>Euchoreutes naso</i>												Mid grey	Black	
	<i>Martes zibellina</i>			Mid grey							Black				Mid grey
	<i>Gazella subgutturosa</i>	Mid grey									Black				Mid grey
	<i>Rangifer tarandus</i>	Mid grey				Mid grey					Black				

SPECIES ACCOUNTS

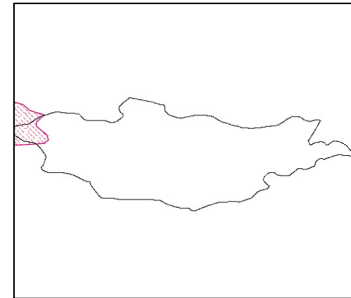
Order Rodentia

Family Sciuridae

1. *Marmota baibacina* Kastschenko, 1899

Common names: Grey marmot or Altai marmot (English), altain tarvaga (Mongolian)

Synonyms: Including *M. altaica*, *M. centralis*, *M. kastschenkoi*, *M. ognevi* (see Wilson and Reeder (1993) for further details)

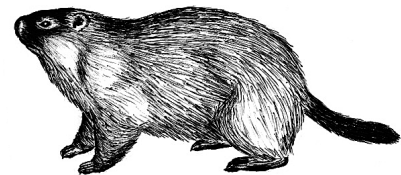


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Hunting is permitted between August 11th and October 15th (MNE, 2005). Approximately 16% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, China (Xinjiang), Kyrgyzstan, Mongolia.

Regional distribution: Alpine meadows in Hovd Province in northern Mongol Altai Mountain Range in western Mongolia. Also occurs along Bulgan and Buyant rivers in western Mongol Altai Mountain Range (Adiya, 2000).

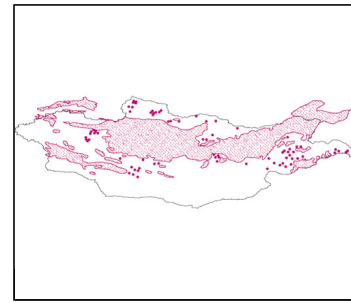
Dominant threats: Unsustainable hunting for meat and skins for international trade, with an estimated off-take of 66,000 individuals in 2004 (Wingard and Zahler, 2006). Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required).

2. *Marmota sibirica* (Radde, 1862)

Common names: Siberian marmot, Mongolian marmot, tarbagan marmot or Transbaikial marmot (English), Mongol tarvaga (Mongolian)

Subspecies in Mongolia: *M. s. sibiricus*, *M. s. caliginosus*

Synonyms: *M. caliginosus*, *M. dahurica* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Endangered, A2ad

Rationale for assessment: Over the past 60 years, this species has experienced an ongoing decline in population size. In 1990 the population was estimated to consist of 20 million individuals (Wingard and Zahler, 2006), falling to five million by the most recent assessment in 2001, indicating a 75% decline (Batbold, 2002). It is estimated that more than 1.2 million skins per year have been traded since the late 1800s, with as many as three million individuals removed from the population in 2004 (Wingard and Zahler, 2006). Generation length has been estimated as six years based on data from Nowak (1991). This species qualifies as Endangered under Criterion A2ad, based on observed declines of greater than 50% over the past three generations primarily due to exploitation and disease. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: Hunting was completely banned during 2005 and 2006 by the Ministry of Nature and Environment. Prior to this ban, hunting was permitted between August 10th and October 15th, depending on population size (MNE, 2005). Local governments are required by law to conduct population surveys every four years, and have the authority to close areas for the protection of the species. In areas where industrial hunting takes place (when permitted), surveys must be completed on an annual basis and be funded by the hunting company (Wingard and Zahler, 2006). Approximately 6% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, China, Mongolia.

Regional distribution: *M. s. sibiricus* inhabits steppe and grassland habitats, from the extreme east to the Altai Mountains of the west (Wingard and Zahler, 2006). *M. s. caliginosus* inhabits higher mountains and ranges in northern, western and central Mongolia, including Hangai, Hövsgöl and Mongol Altai mountain ranges (Adiya, 2000).

Dominant threats: Hunting for skins, traditional medicines, and meat for local, national, and international trade. Marmot oil contains naturally high levels of corticosterone² and has several traditional uses in Mongolia, including as a leather conditioner, to treat burns, frostbite, anaemia and tuberculosis, and as a dietary supplement for animals and children (Adiya, 2000; Wingard and Zahler, 2006). At least 104.2 million marmot skins were prepared in Mongolia between 1906 and 1994 (Batbold, 1996). Recent surveys estimate that actual trading numbers presently exceed hunting quotas by more than three times, in 2004 more than 117,000 illegally traded marmot skins were confiscated (Zahler *et al.*, 2004). Outbreaks

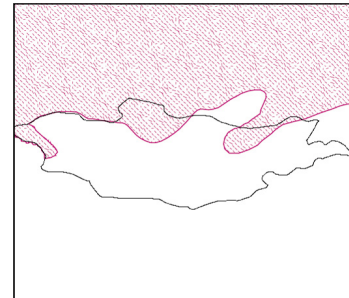
of plague also constitutes a threat and human plague cases are known to have occurred as a result of marmot hunting, prompting extermination campaigns (Batbold, 2002). However, outbreaks are becoming less frequent as the population size declines.

3. *Pteromys volans* (Linnaeus, 1758)

Common names: Russian flying squirrel or Siberian flying squirrel (English), khovkhor olbi (Mongolian)

Subspecies in Mongolia: *P. v. turovi*

Synonyms: Including *P. ognevi*, *P. russicus*, *P. sibiricus* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.



Global distribution: Finland, Latvia, Estonia, Belarus, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan.

Regional distribution: Forest habitats including Hövsgöl, Hangai, Hentii, and north-western Mongol Altai mountain ranges, and Mongol Daguur Steppe (Dulamtsere *et al.*, 1989).

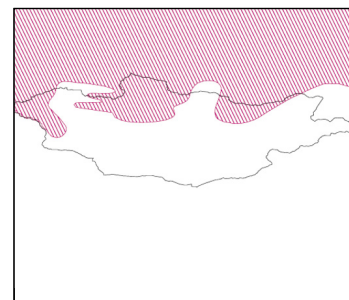
Dominant threats: Habitat loss caused by selective logging, and human-caused and natural wildfires in some parts of its range.

4. *Sciurus vulgaris* Linnaeus, 1758

Common names: Eurasian red squirrel (English), baraan herem (Mongolian)

Subspecies in Mongolia: *S. v. fusconigricans*, *S. v. altaicus*, *S. v. mantchuricus*. Further research on subspecies designation within Mongolia is required.

Synonyms: Including *S. mantchuricus*, *S. ognevi*, *S. orientis* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Near Threatened

Rationale for assessment: There is very little information available on population trends for this species in Mongolia. However, exploitation is believed to be occurring at high levels throughout its range. When population data becomes available, this species may be re-categorised as threatened



under Criterion A if conservation actions are not implemented. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Approximately 14% of the species' range in Mongolia occurs within protected areas.

Global distribution: Saint Kitts and Nevis [int], Republic of Ireland, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Norway, Switzerland, Italy, Denmark, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Finland, Romania, the former Yugoslav Republic of Macedonia, Ukraine, Bulgaria, Russian Federation, Kazakhstan [int], China, Kyrgyzstan [int], Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan; possibly also introduced in Georgia, Armenia, Azerbaijan.

Regional distribution: Forest habitats in Mongol Altai, Hövsgöl, Hangai, Hentii and Ikh Hyangan mountain ranges (Dulamtsere, 1970; Sokolov and Orlov, 1980; Mallon, 1985).

Dominant threats: Unsustainable hunting for skins, for international trade. Skins are of particular value for Chinese trade, although current hunting levels have not been established. Habitat loss and degradation through human-caused and natural wildfires, logging, and collection of non-woody materials such as pine nuts is a threat to this species in parts of its range.

5. *Spermophilus alashanicus* Büchner, 1888

Common names: Alashan ground squirrel (English), gozooroi zuram (Mongolian)

Subspecies in Mongolia: *S. a. dilutus*

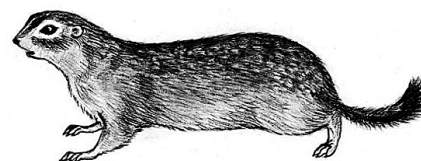
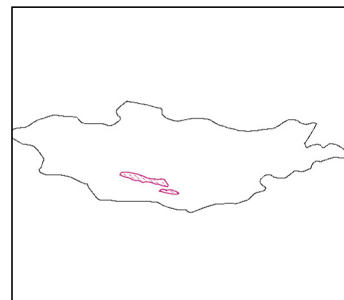
Synonyms: *S. dilutus*, *S. obscurus*, *S. siccus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Endangered, A3c

Rationale for assessment: This species has been experiencing a continuing decline in habitat extent and quality, through habitat degradation. Generation length has been estimated as two to three years based on data from Macdonald (2004). A population decline of at least 50% over the ten years is expected, qualifying it as Endangered under Criterion A3c. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Protected as Rare under the 2001 revision (Mongolian Government Act. No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Listed as Rare under the 1995 Mongolian Hunting Law (MNE, 1996), and included as Rare in the 1997 'Mongolian Red Book' (Shiirevdamba *et al.*, 1997). Approximately 13% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

Regional distribution: Occurs around Ikh, Baga Bogd, Gurvansaikhan and Öshög mountains in Govi Altai Mountain Range (Bannikov, 1954; Dawaa, 1972).

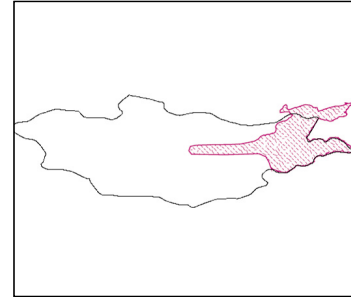
Dominant threats: Habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Habitat loss due to resource extraction (mining) is also a threat to this species.

6. *Spermophilus dauricus* Brandt, 1843

Common names: Daurian ground squirrel (English),
daguur zuram or zumbaraa zuram (Mongolian)

Subspecies in Mongolia: *S. d. alashanicus*

Synonyms: *S. mongolicus*, *S. ramosus*, *S. umbratus*, *S. yamashinae* (see Wilson and Reeder (1993) for further details)

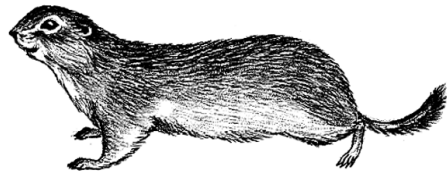


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 7% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Steppe habitats in eastern Mongolia, including along Herlen River (Sokolov and Orlov, 1980), and also occurs in Tuul River basin in Middle Halh Steppe (Batsaikhan, unpubl. data).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required).

7. *Spermophilus erythrogenys* Brandt, 1841

Common names: Red-cheeked ground squirrel (English), haltar zuram or bozlog zuram (Mongolian)

Subspecies in Mongolia: *S. e. pallidicauda*, *S. e. brevicauda*

Synonyms: Including *S. brevicauda*, *S. pallidicauda*, *S. selevini* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

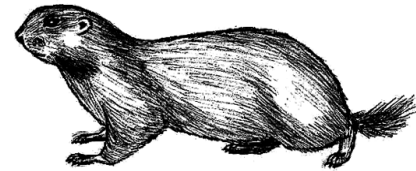
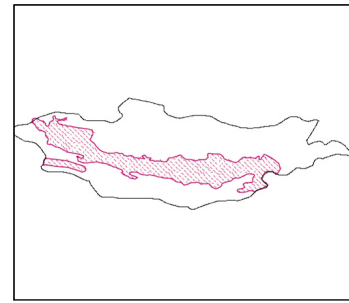
Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 5% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, China, Mongolia.

Regional distribution: Desert and semi-desert habitats from Uvs Lake Depression in northern Great Lakes Depression, to Dariganga in Eastern Gobi (Dawaa, 1972).

Dominant threats: Unsustainable hunting for meat and skins, for local trade. Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.



8. *Spermophilus undulatus* (Pallas, 1778)

Common names: Long-tailed ground squirrel (English), suulerheg zuram or urt-suult zuram (Mongolian)

Subspecies in Mongolia: *S. u. undulatus*, *S. u. stramineus*

Synonyms: Including *S. altaicus*, *S. evermanni*, *S. transbaikalicus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

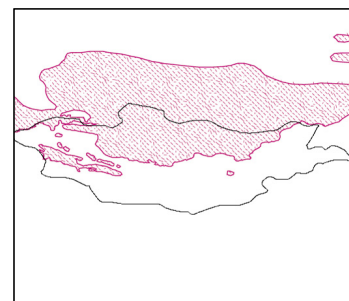
Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, China (Heilongjiang; Xinjiang), Mongolia.

Regional distribution: Common in steppe habitats in Mongol Altai, Hangai, Hövsgöl and



Hentii mountain ranges, as far south as Aj Bogd Massif in Mongol Altai Mountain Range (Sokolov and Orlov, 1980). Recently recorded in northern Ikh Nartiin Chuluu Nature Reserve in Eastern Govi (Reading *et al.*, 2006).

Dominant threats: Hunting for international trade in skins once occurred at high levels, between 1958 and 1960 it was estimated that as many as 418,400-551,000 individuals were removed annually (Stubbe, 1965). This activity is now believed to have ceased and no other threats are known to be impacting upon this species at present.

9. *Tamias sibiricus* (Laxmann, 1769)

Common names: Siberian chipmunk (English), zamba jirkh (Mongolian)

Subspecies in Mongolia: *T. s. sibiricus*

Synonyms: Including *T. altaicus*, *T. orientalis*, *T. pallasii* (see Wilson and Reeder (1993) for further details)

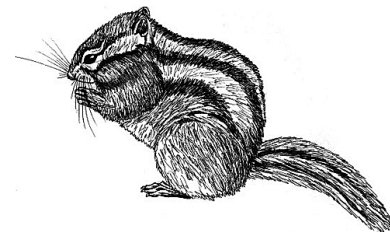


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 15% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan.

Regional distribution: Forested areas of northern Mongolia, including Hangai, Hovsgol, Hentii and Mongol Altai mountain ranges (Dulamtsereen, 1970; Sokolov and Orlov, 1980; Mallon, 1985).

Dominant threats: Hunting for skins, for international trade. Between 1958 and 1960, it was estimated that 2,600-4,400 individuals were removed annually (Stubbe, 1965). This activity continues at relatively low levels. Habitat degradation through human-caused and natural wildfires also constitute threats in some areas of its range.

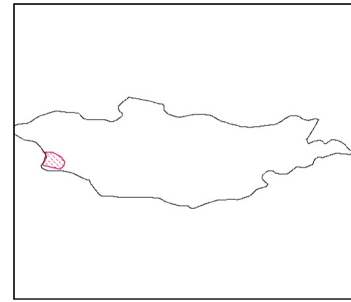
Family Gliridae

10. *Dryomys nitedula* (Pallas, 1778)

Common names: Forest dormouse (English), oin untaakhai (Mongolian)

Subspecies in Mongolia: *D. n. angelus*

Synonyms: Including *D. obolenskii*, *D. ognevi*, *D. pallidus* (see Wilson and Reeder (1993) for further details)

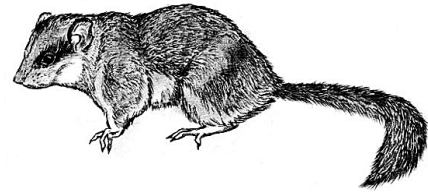


Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Listed as Rare in the ‘Mongolian Red Book’ of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 8% of the species’ range in Mongolia occurs within protected areas.



Global distribution: Germany, Liechtenstein, Switzerland, Italy, Austria, Czech Republic, Slovenia, Croatia, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Greece, Romania, the former Yugoslav Republic of Macedonia, Latvia, Lithuania, Ukraine, Bulgaria, Belarus, Turkey, Russian Federation, Republic of Moldova, Israel, Syrian Arab Republic, Islamic Republic of Iran, Iraq, Georgia, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, Mongolia, Kyrgyzstan; possibly also occurs in Lebanon.

Regional distribution: Stubbe *et al.* (1986a) recorded a large population along Bulgan River in northern Dzungarian Gobi Desert, representing the eastern limit of its global range.

Dominant threats: Habitat loss through selective logging of willow.

Family Castoridae

11. *Castor fiber* Linnaeus, 1758

Common names: Eurasian beaver (English), Evrazi minj (Mongolian)

Subspecies in Mongolia: *C. f. birulai*. Recent molecular analyses on relict Eurasian beaver populations confirmed the taxonomic status of this subspecies to be genuine (Ducroz *et al.*, 2003; Durka *et al.*, 2005).

Synonyms: Including *C. birulai*, *C. bindai*, *C. flavus* (see Wilson and Reeder (1993) for further details)

Global status: Near Threatened. *C. f. birulai* has been infraspecifically assessed as Vulnerable, D1.

Regional status: Endangered, B1ab(iii)

Rationale for assessment: Threatened by exploitation and habitat loss through increasing resource extraction.

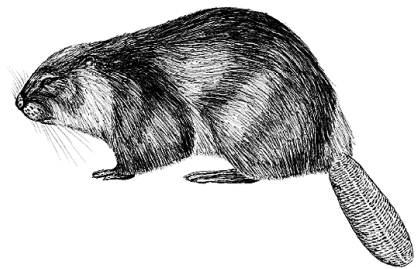
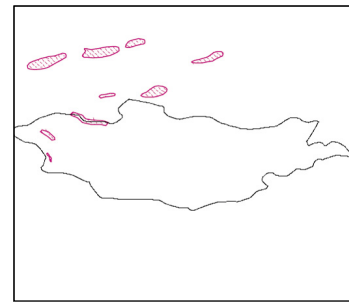
This species has an extent of occurrence of less than 5,000 km² (approximately 2,000 km²), is restricted to three locations (two of which are sites of conservation introductions into areas outside of its historic range), and is experiencing a continuing decline in habitat extent and quality, qualifying it as Endangered under Criterion B1ab(iii). The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: *C. f. birulai* is protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005) and under the 1995 Mongolian Hunting Law (MNE, 1996). This species is included as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 11% of the species' range in Mongolia occurs within protected areas.

Global distribution: France, Netherlands, Germany, Liechtenstein, Switzerland [int], Norway, Austria [int], Czech Republic, Croatia, Sweden, Poland, Hungary, Slovakia, Finland, Latvia, Lithuania, Estonia, Ukraine, Belarus, Russian Federation, Republic of Moldova, China, Mongolia. *C. f. birulai* is found in China and Mongolia.

Regional distribution: A small population exists along Bulgan River in northern Dzungarian Gobi Desert, in the south-western corner of Mongolia. Mongolian-German Biological Expeditions carried out conservation introductions along Hovd River in Mongol Altai Mountain Range in 1974, 1975, and 1978, and along Tes River in northern Hangai Mountain Range in 1985, 1988 and 2002. In all cases Mongolian beavers from Bulgan River were used in order to protect the gene pool in the central Asiatic hydro-geographic basin (Stubbe and Dawaa, 1982; Stubbe and Dawaa, 1986b; Stubbe *et al.*, 1991; Stubbe *et al.*, 2005a). A separate attempt to reintroduce beavers from Voronezh Reserve (Russian Federation) to Eröö River was unsuccessful (M. Stubbe, pers. comm.).

Dominant threats: Illegal hunting for skins, meat, and castoreum (used in perfume production) still occurs in some areas such as along Tes River. Habitat loss through selective clear-cutting of willow, upon which this species relies for food and shelter is a threat; this is



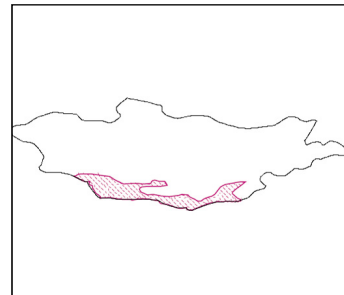
known to be occurring along Bulgan River and is leading to isolation of small populations and inbreeding. Pollution of water systems is also a threat. A hydroelectric dam in the Chinese section of Bulgan River prevents migrations in this area, fragmenting the habitat (M. Stubbe, pers. comm.).

Family Dipodidae

12. *Allactaga balikunica* Hsia and Fang, 1964

Common names: Balikun jerboa (English), omnogoviin alagdaaga (Mongolian)

Synonyms: *A. nataliae* (see Wilson and Reeder (1993) for further details)

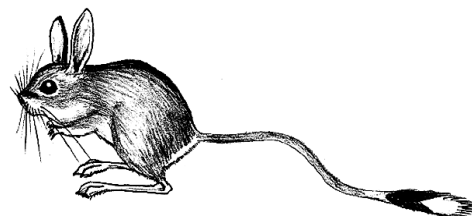


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 43% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

Regional distribution: Trans Altai Govi Desert, Alashan' Govi Desert, and eastern parts of Eastern Govi. Closely associated with *A. bullata*, with which it is sympatric in Mongolia (Wilson and Reeder, 1993).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

13. *Allactaga bullata* Allen, 1925

Common names: Gobi jerboa (English), gobiin alagdaaga (Mongolian)

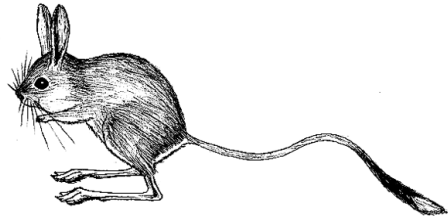


Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 21% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

Regional distribution: Great Lakes Depression, Valley of the Lakes, Northern Gobi, Dzungarian Gobi Desert, Trans Altai Gobi Desert, and Alashan' Gobi Desert (Sokolov *et al.*, 1998). Closely related to *A. balikunica*, with which it is sympatric in southern Mongolia (Wilson and Reeder, 1993).

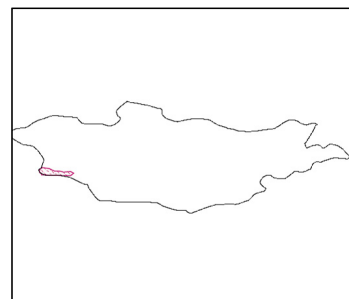
Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

14. *Allactaga elater* (Lichtenstein, 1828)

Common names: Small five-toed jerboa (English), davjaa alagdaaga (Mongolian)

Subspecies in Mongolia: *A. e. dzungariae*

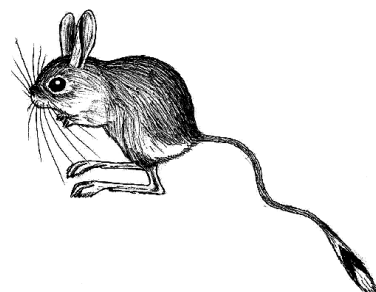
Synonyms: Including *A. bactriana*, *A. dzungariae*, *A. strandi* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Endangered, B1ab(iii)

Rationale for assessment: *Allactaga elater* is threatened by habitat degradation and severe weather conditions. This species has an extent of occurrence of less than 5,000 km² (approximately 2,000 km²), is restricted to fewer than five locations, and is experiencing a continuing decline in habitat extent and quality, qualifying it as Endangered under Criterion B1ab(iii). The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: Approximately 54% of the species' range in Mongolia occurs within protected areas.

Global distribution: Turkey, Russian Federation, Georgia, Armenia, Islamic Republic of Iran, Azerbaijan, Afghanistan, Pakistan, Kazakhstan, Turkmenistan, Kyrgyzstan, Tajikistan, Uzbekistan, China, Mongolia (G. Shenbrot, pers. comm.).

Regional distribution: Recorded in the extreme south-west of the country, along Bodonch River in Dzungarian Gobi Desert (Stubbe and Chotolchu, 1968). Later recorded in Khonin Usni Gobi in Dzungarian Gobi Desert (Sokolov *et al.*, 1998).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

15. *Allactaga sibirica* (Forster, 1778)

Common names: Siberian jerboa or Mongolian five-toed jerboa (English), Shiver alagdaaga or Sibiri alagdaaga (Mongolian)

Subspecies in Mongolia: *A. s. saltator* (also known as *A. s. semideserta*), *A. s. sibirica*, *A. s. bulganensis* (see Shenbrot (1991a); Shenbrot *et al.* (1995); Sokolov *et al.* (1998) for further details)

Synonyms: Including *A. alactaga*, *A. mongolica*, *A. semideserta* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

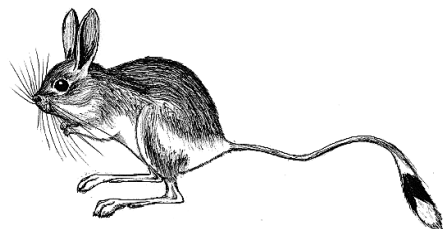
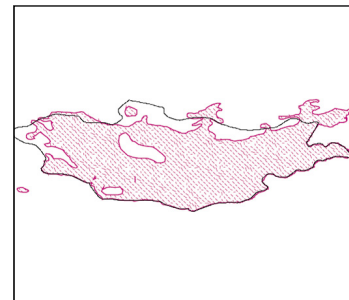
Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 10% of the species' range in Mongolia occurs within protected areas.

Global distribution: Kazakhstan, Turkmenistan, China, Mongolia.

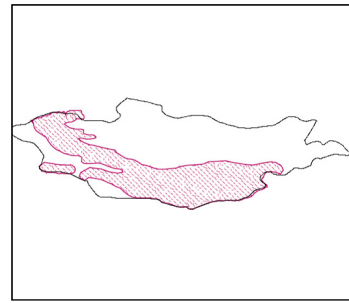
Regional distribution: Distributed in forest-steppe, steppe, and semi-desert habitats across Mongolia (Mallon, 1985). *A. s. sibirica* is distributed in eastern and northern Mongolia, particularly Selenge River Basin in north-eastern Hangai Mountain Range. *A. s. saltator* (including *A. s. semideserta*) occurs in north-western, western and southern Mongolia. *A. s. bulganensis* is found in Dzungarian Gobi Desert in south-western Mongolia (G. Shenbrot, pers. comm.).

Dominant threats: No available data.



16. *Cardiocranius paradoxus* Satunin, 1903

Common names: Five-toed pygmy jerboa (English),
tarvuu atigdaahai or tavan-huruut atigdaahai (Mongolian)

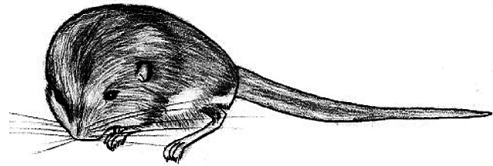


Global status: Vulnerable, A1c

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Listed as Rare in the ‘Mongolian Red Book’ of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 13% of the species’ range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, China, Mongolia.

Regional distribution: Recorded from 52 localities in desert and semi-desert habitats (Sokolov *et al.*, 1996), rising to 60 localities including recent observations (G. Shenbrot, pers. comm.). Distributed from close to the northern border of Mongolia in Great Lakes Depression, through Valley of the Lakes, Dzungarian Gobi Desert, Northern Gobi, and south to Eastern Gobi, Trans Altai Gobi Desert, and Alashan’ Gobi Desert.

Dominant threats: Natural disasters such as drought or heavy rainfall constitute threats to this species.

17. *Dipus sagitta* (Pallas, 1773)

Common names: Northern three-toed jerboa or hairy-footed jerboa (English),
elsch savgadaakhai (Mongolian)

Subspecies in Mongolia: *D. s. sowerbyi* (also known as *D. s. ubsanensis*), *D. s. halli*, *D. s. bulganensis* (see Shenbrot (1991b); Shenbrot *et al.* (1995); Sokolov *et al.* (1998) for further details)

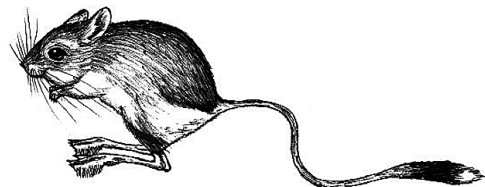
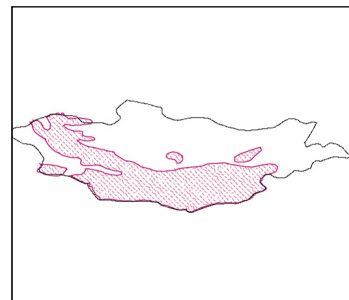
Synonyms: Including *D. halli*, *D. lagopus*, *D. zaissanensis* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 17% of the species’ range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Islamic Republic of Iran, Kazakhstan, Turkmenistan, Kyrgyzstan, Uzbekistan, China, Mongolia (G. Shenbrot, pers. comm.).

Regional distribution: Common in desert and semi-desert habitats, including Great Lakes Depression, Valley of the Lakes, Northern Gobi, and Alashan' Gobi Desert (Sokolov *et al.*, 1996). Also distributed in Eastern Gobi, Gobi Altai Mountain Range, Trans Altai Gobi Desert, Dzungarian Gobi Desert, and Middle Halh Steppe. *D. s. sowerbyi* (including *D. s. ubsanensis*) is found in north-western, central, and southern Mongolia, *D. s. halli* is distributed in south-eastern Mongolia, and *D. s. bulganensis* occurs in south-western Mongolia, including Dzungarian Gobi Desert (G. Shenbrot, pers. comm.).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

18. *Euchoreutes naso* Sclater, 1891

Common names: Long-eared jerboa (English), sooton alagdaakhai or sooton alagdai (Mongolian)

Synonyms: *E. alashanicus*, *E. yiwuensis* (see Wilson and Reeder (1993) for further details)



Global status: Endangered, A1c

Regional status: Vulnerable, A3c

Rationale for assessment: This species has been experiencing a continuing decline in habitat extent and quality, through habitat degradation, and human disturbance. Generation length has been estimated as two to three years based on data from Macdonald (2004). A population decline of at least 30% over the next ten years is expected, qualifying it as Vulnerable under Criterion A3c. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 44% of the species' range in Mongolia occurs within protected areas.

Global distribution: China, Mongolia.

Regional distribution: Sokolov *et al.* (1996) reported this species from ten localities in desert habitats of Trans Altai Gobi Desert and Alashan' Gobi Desert. Mongolia represents the northern limit of its global distribution.

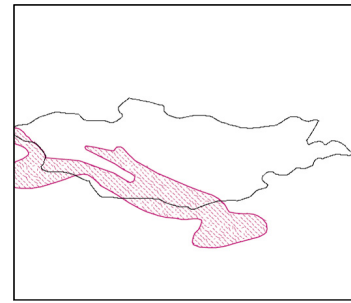
Dominant threats: Habitat degradation, possibly through grazing by increasing numbers of livestock (further evidence is required). Human disturbance may also constitute a minor threat. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

19. *Pygeretmus pumilio* (Kerr, 1792)

Common names: Dwarf fat-tailed jerboa (English), zegel alagdaagantsar (Mongolian)

Subspecies in Mongolia: *P. p. potanini*, *P. p. bulatoides*

Synonyms: Including *P. aralensis*, *P. minutus*, *P. sibiricus* (see Wilson and Reeder (1993) for further details)

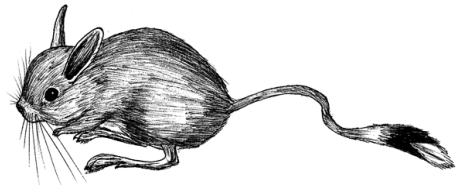


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 26% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Islamic Republic of Iran, Kazakhstan, China, Mongolia.

Regional distribution: Dzungarian Gobi Desert, Great Lakes Depression, Valley of the Lakes, Northern Gobi, Trans Altai Gobi Desert, and Alashan' Gobi Desert (Sokolov *et al.*, 1998). Stubbe and Chotolchu (1968) recorded two localities just across the southern border of Mongolia.

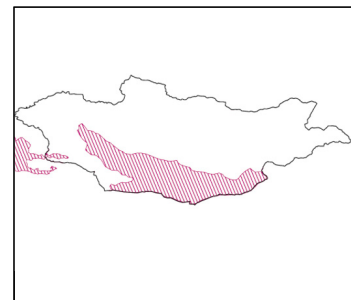
Dominant threats: Other rodent species occurring within its range may be a cause of competition for resources. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

20. *Salpingotus crassicauda* Vinogradov, 1924

Common names: Thick-tailed pygmy jerboa (English), öökhön suult atigdaakhai or öökhlög tajigdaakhai (Mongolian)

Subspecies in Mongolia: *S. c. crassicauda*, *S. c. gobicus*

Synonyms: *S. gobicus* (see Wilson and Reeder (1993) for further details)



Global status: Vulnerable, A1c

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 19% of the species' range in Mongolia occurs within protected areas.



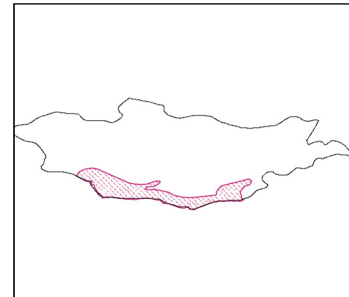
Global distribution: Kazakhstan, China, Mongolia.

Regional distribution: Sokolov *et al.* (1996) mapped 31 localities in desert and semi-desert habitats. Distributed in Great Lakes Depression, Valley of the Lakes, Dzungarian Gobi Desert, Trans Altai Gobi Desert, Alashan' Gobi Desert, Northern Gobi, and Eastern Gobi.

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

21. *Salpingotus kozlovi* Vinogradov, 1922

Common names: Kozlov's pygmy jerboa (English), Kozlovyn atigdaakhai or elsnii tajigdaakhai (Mongolian)

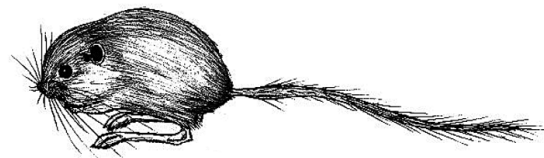


Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 37% of the species' range in Mongolia occurs within protected areas.



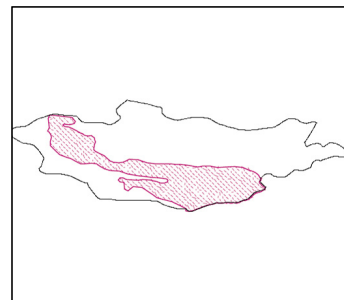
Global distribution: China (Inner Mongolia, Xinjiang, Gansu, north Shaanxi, Ningxia), Mongolia.

Regional distribution: Little known in Mongolia, but reported in 16 localities in the Trans Altai Gobi Desert, Alashan' Gobi Desert, and Eastern Gobi (Sokolov *et al.*, 1996).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

22. *Stylodipus andrewsi* Allen, 1925

Common names: Andrews's three-toed jerboa or Mongolian jerboa (English), Mongoljin daakhai (Mongolian)

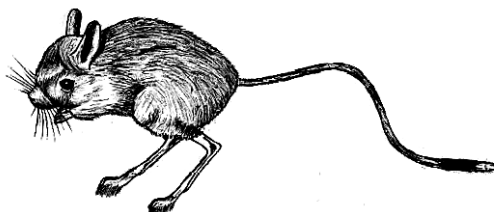


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 13% of the species' range in Mongolia occurs within protected areas.



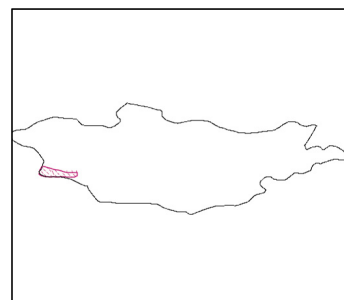
Global distribution: China, Mongolia.

Regional distribution: Great Lakes Depression, Valley of the Lakes, Northern Govi, Eastern Govi, and Alashan' Govi Desert (Sokolov *et al.*, 1998).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

23. *Stylodipus sungorus* Sokolov and Shenbrot, 1987

Common names: Mongolian three-toed jerboa (English), Dzungarian daakhai (Mongolian)

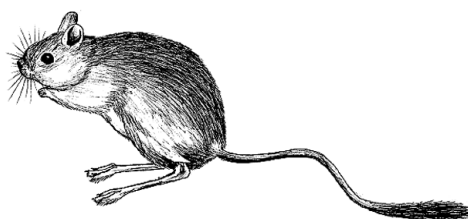


Global status: Endangered, A3c•, all or most of its range is believed to occur within Mongolia.

Regional status: Endangered, A3c

Rationale for assessment: This species has been experiencing a continuing decline in habitat extent and quality, through environmental changes and habitat degradation. Generation length has been estimated as two to three years based on data from Macdonald (2004). A population decline of at least 50% over the next ten years is expected, qualifying it as Endangered under Criterion A3c. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Approximately 41% of the species' range in Mongolia occurs within protected areas.



Global distribution: Mongolia, possibly China

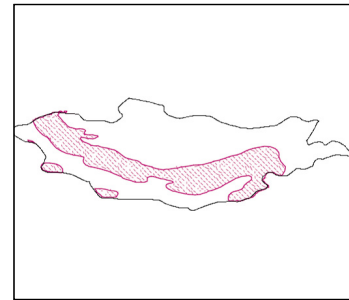
Regional distribution: Dzungarian Gobi Desert including Great Gobi Section B Strictly Protected Area (Sokolov and Shenbrot, 1987; Sokolov *et al.*, 1998).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. Habitat degradation through grazing by increasing numbers of livestock (further evidence is required).

Family Cricetidae

24. *Allocricetulus curtatus* (Allen, 1925)

Common names: Mongolian hamster (English), tsoch shishuuhei or tsoch shishuu (Mongolian)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 9% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

Regional distribution: Great Lakes Depression, Valley of the Lakes, Northern Gobi, Gobi Altai Mountain Range, Middle Halh Steppe, Eastern Gobi, Dzungarian Gobi Desert, and Trans Altai Gobi Desert (Dulamtsere *et al.*, 1989).

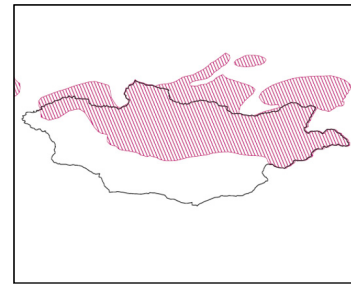
Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

25. *Cricetulus barabensis* (Pallas, 1773)

Common names: Striped dwarf hamster (English), hökh shishuukhei (Mongolian)

Subspecies in Mongolia: *C. b. griseus*, *C. b. obscurus*

Synonyms: Including *C. manchuricus*, *C. mongolicus*, *C. obscurus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 9% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea.

Regional distribution: Northern and eastern parts of the country, it does not occur in southern Mongolia, where *C. sokolovi* occurs (G. Shenbrot, pers. comm.).

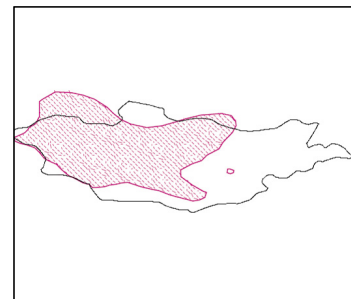
Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Habitat degradation through human-caused and natural wildfires may also constitute threats.

26. *Cricetulus longicaudatus* (Milne-Edwards, 1867)

Common names: Long-tailed dwarf hamster (English), suulleg shishuukhei (Mongolian)

Subspecies in Mongolia: *C. l. longicaudatus*

Synonyms: Including *C. andersoni*, *C. kozhantschikovi*, *C. nigrescens* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, China, Mongolia.

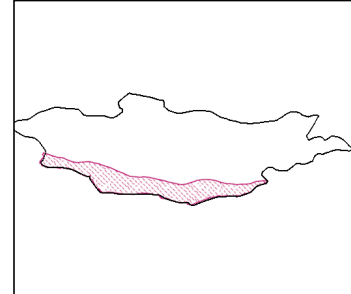
Regional distribution: Western and central Mongolia, east to approximately 104° E longitude (Dulamtsere *et al.*, 1989). Recently recorded in northern Ikh Nartiin Chuluu Nature Reserve in Eastern Govi (Reading *et al.*, 2006).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). In some areas, other rodent species may cause competition for resources. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

27. *Cricetulus migratorius* (Pallas, 1773)

Common names: Grey hamster or grey dwarf hamster (English), borduu shishuukhei (Mongolian)

Synonyms: Including *C. isabellinus*, *C. murinus*, *C. ognevi* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 33% of the species' range in Mongolia occurs within protected areas.



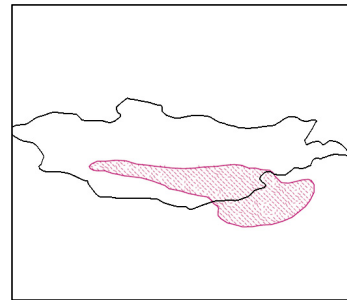
Global distribution: Greece, Romania, Ukraine, Bulgaria, Turkey, Russian Federation, Republic of Moldova, Israel, Lebanon, Jordan, Iraq, Islamic Republic of Iran, Kazakhstan, Afghanistan, Pakistan, China, Mongolia.

Regional distribution: Found in several localities in Dzungarian Gobi Desert, Trans Altai Gobi Desert, Alashan' Gobi Desert and Eastern Gobi (Sokolov and Orlov, 1980).

Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

28. *Cricetulus sokolovi* Orlov and Malygin, 1988

Common names: Sokolov's dwarf hamster (English), burdiin shishuukhei (Mongolian)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 6% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

Regional distribution: Valley of the Lakes, Great Lakes Depression, Alashan' Govi Desert, Northern Govi, and Eastern Govi (Orlov and Malygin, 1988), although there is little data available on the distribution of this species within Mongolia.

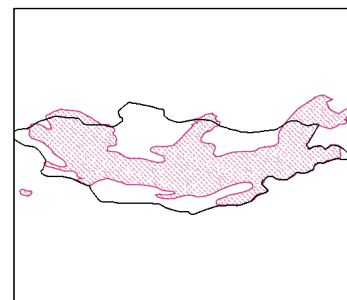
Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

29. *Phodopus campbelli* (Thomas, 1905)

Common names: Campbell's hamster (English), orog zusag or orog zuzga (Mongolian)

Subspecies in Mongolia: *P. c. campbelli*

Synonyms: *P. crepidatus*, *P. tuvinicus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 6% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Steppe and semi-desert habitats in eastern, western, and central Mongolia (Dulamtsereen *et al.*, 1989).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

30. *Phodopus roborovskii* (Satunin, 1903)

Common names: Desert hamster or Roborowski's hamster (English), elsnii zusag or elsnii zuzga (Mongolian).

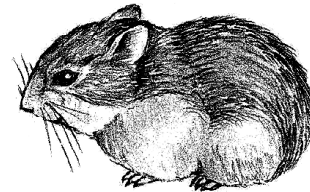
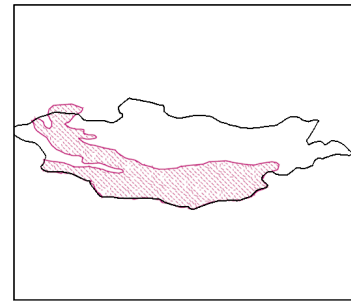
Synonyms: *P. bedfordiae*, *P. praedilectus*, *P. przewalskii* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 18% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, China, Mongolia.

Regional distribution: Semi-desert and desert habitats in Govi Altai Mountain Range, Great Lakes Depression, Valley of the Lakes, Northern Govi, Eastern Govi, Dzungarian Govi Desert, Trans Altai Govi Desert, and Alashan' Govi Desert (Sokolov and Orlov, 1980).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

Family Arvicolidae

31. *Alticola barakshin* Bannikov, 1947

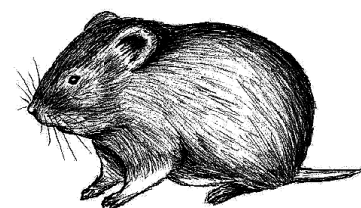
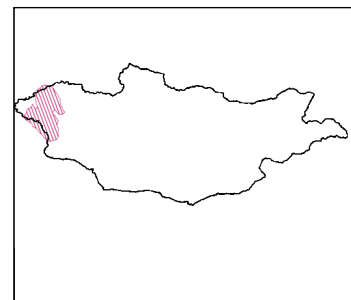
Common names: Govi Altai mountain vole (English), Govi Altain baragchin or khumj baragchin (Mongolian)

Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 20% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Mongolia, China (Hou *et al.*, 1995).

Regional distribution: North-western Mongol Altai Mountain Range (Pavlinov *et al.*, 2002).

Dominant threats: No available data.

32. *Alticola macrotis* (Radde, 1862)

Common names: Large-eared vole (English), Soyon baragchin (Mongolian)

Subspecies in Mongolia: *A. m. vinogradovi*, *A. m. macrotis*. Further research on the designation of subspecies within Mongolia is required.

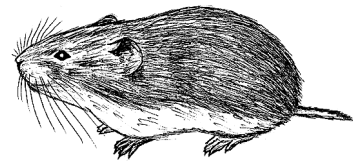
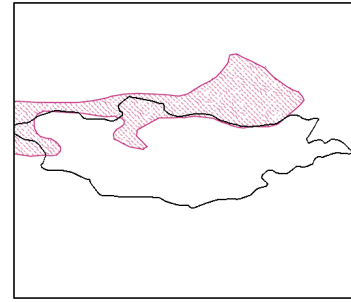
Synonyms: *A. altaica*, *A. fetisovi*, *A. vicina*, *A. vinogradovi* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 15% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Mongolia.

Regional distribution: Rocky fields of alpine and sub-alpine habitats around Munkhkhairkhan Mountain in Mongol Altai Mountain Range, Tarvagatai Mountain in Hangai Mountain Range (Sokolov and Orlov, 1980), and Munkh Saridag Mountain in Hövsgöl Mountain Range (Litvinov, 1982; Litvinov and Bazardorj, 1992).

Dominant threats: No available data

33. *Alticola semicanus* (Allen, 1924)

Common names: Mongolian silver vole or Royle's mountain vole (English), khadnii baragchin (Mongolian)

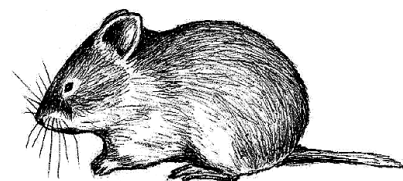
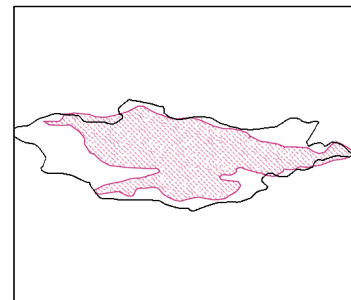
Synonyms: *A. argentatus*, which was later split into two separate species, *A. tuvinicus* Ognev, 1950 and *A. semicanus* (Allen, 1924). Wilson and Reeder (1993) list *A. alleni* as a synonym.

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 10% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Throughout Mongolia, with the exception of western and north-eastern parts of the country.

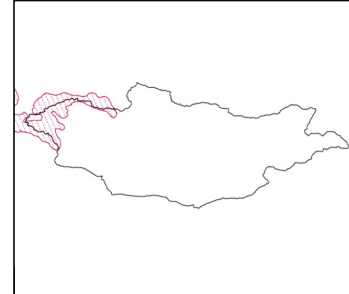
Dominant threats: No available data.

34. *Alticola strelzowi* (Kastschenko, 1899)

Common names: Flat-headed vole (English), tavshgar baragchin (Mongolian)

Subspecies in Mongolia: *A. s. depressus*

Synonyms: *A. depressus*, *A. desertorum* (see Wilson and Reeder (1993) for further details)

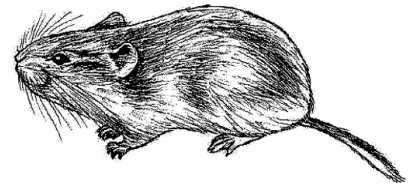


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 15% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, China (Xinjiang), Mongolia.

Regional distribution: Hovd in Mongol Altai Mountain Range in the north-western corner of Mongolia (Sokolov and Orlov, 1980).

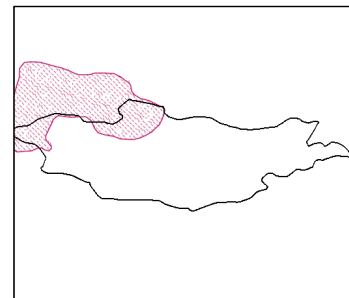
Dominant threats: No available data.

35. *Alticola tuvinicus* Ognev, 1950

Common names: Tuva silver vole (English), Tuva baragchin (Mongolian)

Subspecies in Mongolia: *A. t. kosogol*. Further research on the designation of subspecies within Mongolia is required.

Synonyms: *A. argentatus*, which was split into two separate species, *A. tuvinicus* Ognev, 1950 and *A. semicanus* (Allen, 1924). Wilson and Reeder (1993) list *A. baicalensis*, *A. khubsugulensis*, *A. kosogol* and *A. olchonensis* as synonyms.



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 25% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Mongolia.

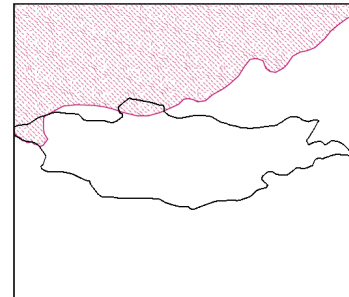
Regional distribution: North-western Mongol Altai Mountain Range, Hövsgöl Mountain Range and northern Hangai Mountain Range (Litvinov and Bazardorj, 1992).

Dominant threats: No available data.

36. *Arvicola terrestris* (Linnaeus, 1758)

Common names: European water vole (English), usch ogotno or usch böröm (Mongolian)

Synonyms: Including *A. barabensis*, *A. ognevi*, *A. pallasii* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 20% of the species' range in Mongolia occurs within protected areas.



Global distribution: Portugal, Andorra, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Liechtenstein, Norway, Switzerland, Luxembourg, Italy, Holy See, Denmark, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Bosnia and Herzegovina, Hungary, Slovakia, Serbia and Montenegro, Albania, Finland, Greece, Romania, Macedonia, the former Yugoslav Republic of, Latvia, Lithuania, Estonia, Bulgaria, Ukraine, Belarus, Turkey, Russian Federation, Israel, Islamic Republic of Iran, China, Mongolia.

Regional distribution: Bannikov (1954) recorded three specimens in Hövsgöl Mountain Range and Dulamtseren (1970) later confirmed localities in that area, and recorded additional localities in Hovd in Mongol Altai Mountain Range.

Dominant threats: No available data.

37. *Clethrionomys rufocanus* (Sundevall, 1846)

Common names: Grey red-backed vole (English), oin khuren ogotno (Mongolian)

Subspecies in Mongolia: *C. r. irkutensis*

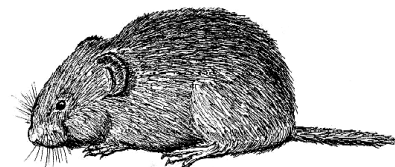
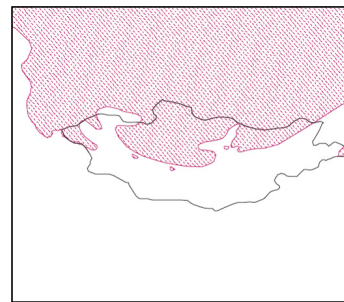
Synonyms: Including *C. kamtschaticus*, *C. latastei*, *C. sibirica* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.



Global distribution: Norway, Sweden, Finland, Russian Federation, China (Heilongjiang; Xinjiang), Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan (Hokkaido).

Regional distribution: Woodland habitats in Hangai, Hentii, Hövsgöl, Mongol Altai and Ikh Hyangan mountain ranges, and Mongol Daguur Steppe. Recently recorded around Ikh Bogd Mountain in Govi Altai Mountain Range (Lkhagvasuren and Samiya, 2004)

Dominant threats: No available data, although habitat degradation due to human-caused and natural wildfires may constitute a threat.

38. *Clethrionomys rutilus* (Pallas, 1779)

Common names: Northern red-backed vole (English), oin ulaan ogotno or ulaan oigo (Mongolian)

Subspecies in Mongolia: *C. r. baikalensis*

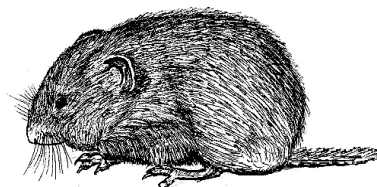
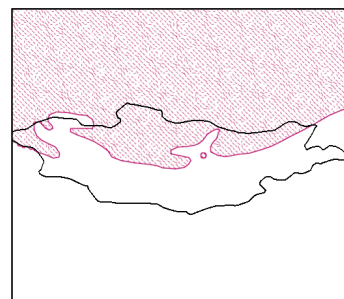
Synonyms: Including *C. alascensis*, *C. tundrensis*, *C. vinogradovi* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.



Global distribution: Canada, USA, Norway, Sweden, Finland, Russian Federation, Kazakhstan, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan.

Regional distribution: Hövsgöl, Mongol Altai, Hangai, and Hentii mountain ranges, and Mongol Daguur Steppe (Dulamtseren *et al.*, 1989).

Dominant threats: No available data, although habitat degradation due to human-caused and natural wildfires may constitute a threat.

39. *Ellobius tancrei* Blasius, 1884

Common names: Zaisan mole vole (English), sokhdoi ogotno or zeerd sokhdoi (Mongolian)

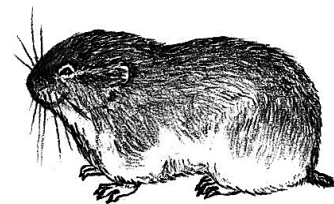
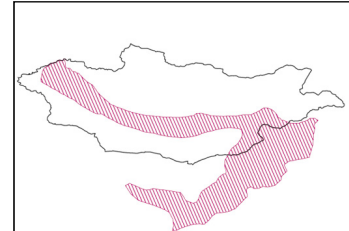
Synonyms: Including *E. kastschenkoi*, *E. ognevi*, *E. ursulus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.



Global distribution: Kazakhstan, Turkmenistan, Uzbekistan, China, Mongolia.

Regional distribution: Stony hillsides, small hills and mountain slopes in semi-desert and desert habitats in Mongolia, including Eastern Govi, Northern Govi, Mongol Altai Mountain Range, Middle Halh Steppe, Valley of the Lakes, and Great Lakes Depression (Sokolov and Orlov, 1980).

Dominant threats: No available data.

40. *Eolagurus luteus* (Eversmann, 1840)

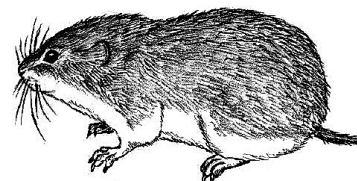
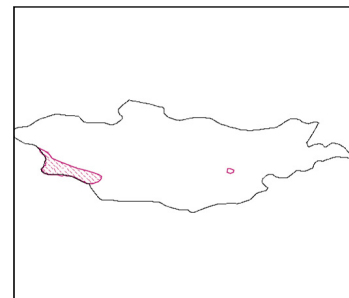
Common names: Yellow steppe lemming (English), oviin shar ogotno or shargal ovol (Mongolian)

Global status: Lower Risk, conservation dependant

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 50% of the species' range in Mongolia occurs within protected areas.



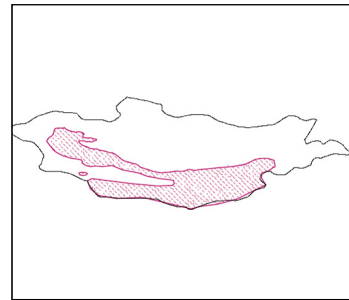
Global distribution: Kazakhstan, China, Mongolia (G. Shenbrot, pers. comm.).

Regional distribution: Dzungarian Gobi Desert and parts of Trans Altai Gobi Desert (Sokolov and Orlov, 1980). Recently recorded in Ikh Nartiin Chuluu Nature Reserve in Eastern Gobi (Reading *et al.*, 2006), although this may represent a misidentification (G. Shenbrot, pers. comm.).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

41. *Eolagurus przewalskii* (Büchner, 1889)

Common names: Przewalski's steppe lemming (English), Tovd ov or tangad ovol (Mongolian)

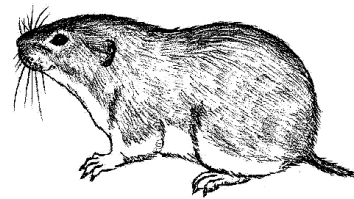


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 19% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

Regional distribution: Great Lakes Depression, Valley of the Lakes, Northern Gobi, Eastern Gobi, Trans Altai Gobi Desert, and Alashan' Gobi Desert (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989).

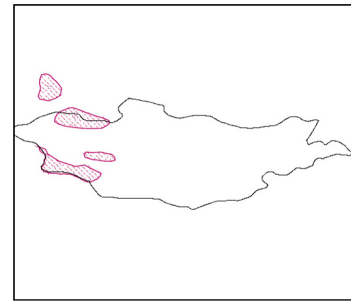
Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. This species is also at risk from population fluctuations.

42. *Lagurus lagurus* (Pallas, 1773)

Common names: Steppe lemming (English), oviin hokh ogotno or hokh ov (Mongolian)

Subspecies in Mongolia: *L. l. altorum*

Synonyms: Including *L. abacanicus*, *L. migratorius*, *L. occidentalis* (see Wilson and Reeder (1993) for further details)

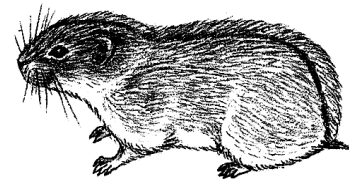


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 17% of the species' range in Mongolia occurs within protected areas.



Global distribution: Ukraine, Russian Federation, Kazakhstan, China, Mongolia.

Regional distribution: Dzungarian Gobi Desert, Shargyn Gobi in Mongol Altai Mountain Range, Trans Altai Gobi Desert, and Uvs Lake Depression in northern Great Lakes Depression (Sokolov and Orlov, 1980).

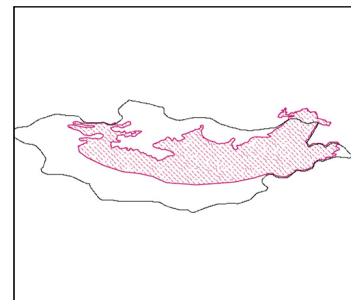
Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required), and possible competition for resources with other rodent species in some areas. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

43. *Lasiopodomys brandti* (Radde, 1861)

Common names: Brandt's vole (English), uliin tsagaan ogotno or tsaivar uliich (Mongolian)

Subspecies in Mongolia: *L. b. brandtii*, *L. b. hangaicus*

Synonyms: Including *L. aga*, *L. hangaicus*, *L. warringtoni* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 4% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

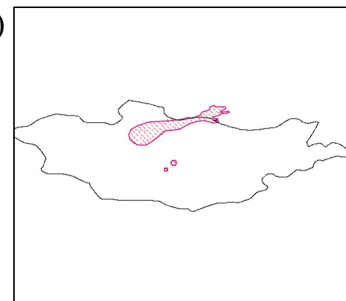
Regional distribution: Steppe habitats in Hangai, and Hentii mountain ranges, Middle Halh Steppe, Eastern Mongolia, Northern Govi, and Great Lakes Depression (Avirmed, 2003).

Dominant threats: Considered a pest as population outbreaks of this species can compete with livestock for resources and spread disease. However, such outbreaks are more likely to occur in overgrazed areas, causing little additional environmental damage. Poisoning campaigns in Mongol Daguur Steppe and Eastern Mongolia in 2001, 2002, and 2003 using Bromadiolone impacted significantly on non-target species, including Pallas's cats (*Otocolobus manul*), red foxes (*Vulpes vulpes*), corsac foxes (*Vulpes corsac*), and raptor species such as steppe eagles (*Aquila nipalensis*), golden eagles (*Aquila chrysaetos*), upland buzzards (*Buteo hemilasius*) and saker falcons (*Falco cherrug*). This activity is currently being phased out as the effects on these species are being realised (N. Batsaikhan, pers. comm.). This species experiences population fluctuations cycling over 9-11 years (Dawaa *et al.*, 2005).

44. *Lasiopodomys mandarinus* (Milne-Edwards, 1871)

Common names: Mandarin vole (English), uliin bor ogotno (Mongolian)

Synonyms: Including *L. kishidai*, *L. pullus*, *L. vinogradovi* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 1% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Republic of Korea.

Regional distribution: Recorded along Orhon and Selenge rivers in north-eastern Hangai Mountain Range, and in parts of Valley of the Lakes (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989).

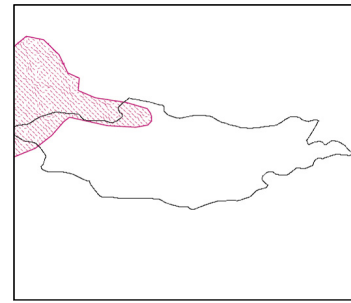
Dominant threats: No available data.

45. *Microtus arvalis* (Pallas, 1778)

Common names: Common vole (English), baraan ogotno (Mongolian)

Subspecies in Mongolia: *M. a. obscurus*

Synonyms: Including *M. arvensis*, *M. meridianus*, *M. terrestris* (see Wilson and Reeder (1993) for further details)

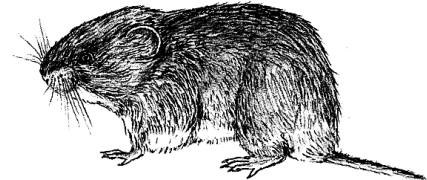


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 14% of the species' range in Mongolia occurs within protected areas.



Global distribution: Andorra, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Croatia, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Albania, Finland, Romania, former Yugoslav Republic of Macedonia, Latvia, Lithuania, Estonia, Ukraine, Bulgaria, Belarus, Russian Federation, Republic of Moldova, Mongolia.

Regional distribution: Very little is known about the distribution of this species, it is believed to be found only in north-western Mongolia in Mongol Altai and Hövsgöl mountain ranges (Sokolov *et al.*, 1985).

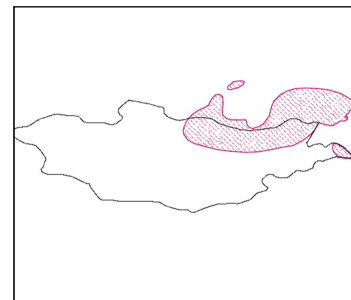
Dominant threats: No available data.

46. *Microtus fortis* Büchner, 1889

Common names: Reed vole (English), orgooch ogotno (Mongolian)

Subspecies in Mongolia: *M. f. michnoi*

Synonyms: Including *M. michnoi*, *M. pelliceus*, *M. uliginosus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 14% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Distributed in north-eastern Mongolia, including Ulz River Basin, Hustai Mountain Range in Mongol Daguur Steppe, Eröö River Basin in western Hentii Mountain Range, Eastern Mongolia, and Ikh Hyangan Mountain Range (Samiya *et al.*, 2002).

Dominant threats: No available data.

47. *Microtus gregalis* (Pallas, 1779)

Common names: Narrow-headed vole (English), hergelzii ogotno (Mongolian)

Subspecies in Mongolia: *M. g. raddei*, *M. g. angustus*, *M. g. gregalis*. Designation of subspecies within Mongolia requires further research.

Synonyms: Including *M. pallasii*, *M. slowzovi*, *M. unguiculatus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

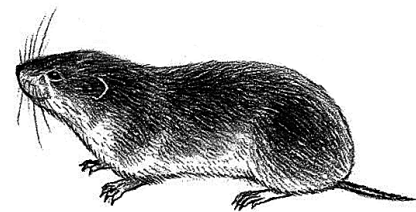
Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 9% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, China, Kyrgyzstan, Mongolia.

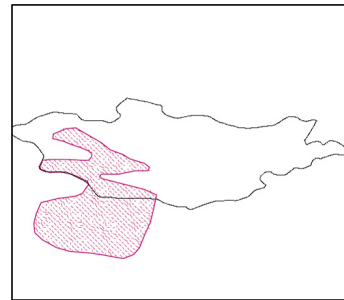
Regional distribution: Western parts of the country, including Mongol Altai Mountain Range, and throughout northern and eastern Mongolia in Hövsgöl, Hangai, and Hentii mountain ranges, Middle Halh Steppe, and Eastern Mongolia.

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.



48. *Microtus limnophilus* Büchner, 1889

Common names: Lacustrine vole (English), zulgiin ogotno (Mongolian)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 24% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, Mongolia.

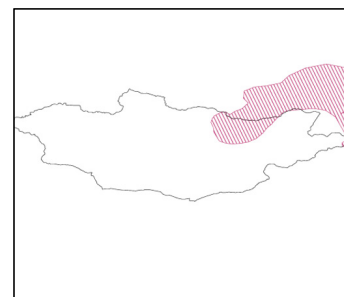
Regional distribution: Mongol Altai Mountain Range, Great Lakes Depression, Valley of the Lakes, Dzungarian Gobi Desert, Gobi Altai Mountain Range, and Trans Altai Gobi Desert (Sokolov and Orlov, 1980).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

49. *Microtus maximowiczii* (Schrenk, 1859)

Common names: Maximowicz's vole (English), shirgiin ogotno (Mongolian)

Synonyms: *M. unguurensis* (see Wilson and Reeder (1993) for further details)

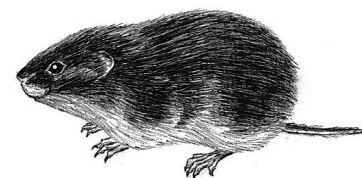


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 38% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

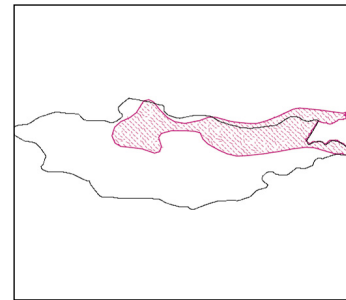
Regional distribution: Forest and steppe habitats in north-eastern Hentii Mountain Range and Ikh Hyangan Mountain Range.

Dominant threats: No available data.

50. *Microtus mongolicus* (Radde, 1861)

Common names: Mongolian vole (English), Mongol ogotno (Mongolian)

Synonyms: *M. baicalensis*, *M. poljakovi*, *M. xerophilus* (see Wilson and Reeder (1993) for further details)

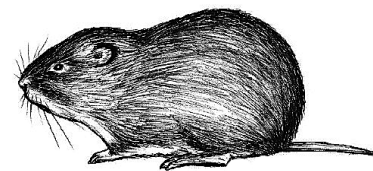


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: River basins in forest-steppe habitats around Mönkh Saridag Mountain in Hövsgöl Mountain Range. Also occurs in Hentii, northern Hangai, and Ikh Hyangan mountain ranges, Mongol Daguur Steppe, Middle Halh Steppe, and Eastern Mongolia (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989).

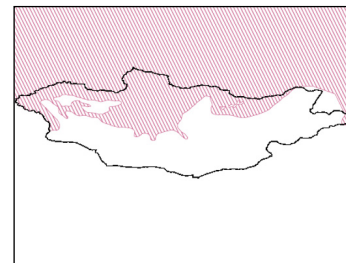
Dominant threats: No available data, although habitat degradation through human-caused and natural wildfires may constitute threats.

51. *Microtus oeconomus* (Pallas, 1776)

Common names: Root vole or tundra vole (English), meheerch ogotno (Mongolian)

Subspecies in Mongolia: *M. o. dauricus*, *M. o. altaicus*

Synonyms: Including *M. altaicus*, *M. dauricus*, *M. koreni* (see Wilson and Reeder (1993) for further details)

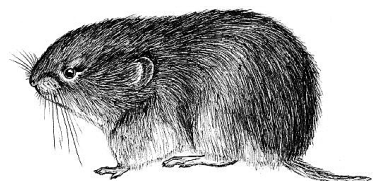


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Canada, USA, Netherlands, Germany, Norway, Austria, Czech Republic, Sweden, Poland, Hungary, Slovakia, Finland, Ukraine, Belarus, Russian Federation, Kazakhstan, Mongolia.

Regional distribution: Distributed throughout northern Mongolia, including Mongol Daguur Steppe, and Mongol Altai, Hangai, Hövsgöl, Hentii and Ikh Hyangan mountain ranges (Sokolov *et al.*, 1985).

Dominant threats: No available data.

52. *Myopus schisticolor* (Lilljeborg, 1844)

Common names: Wood lemming (English), oin hövhöljin or taigyn hövdnii hövhöljin (Mongolian)

Subspecies in Mongolia: *M. s. saianicus*

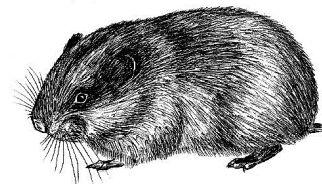
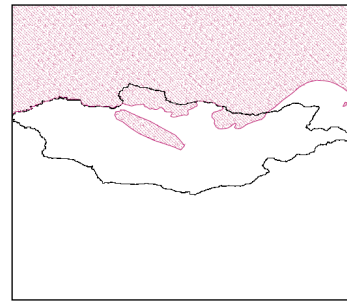
Synonyms: Including *M. middendorfi*, *M. saianicus*, *M. vinogradovi* (see Wilson and Reeder (1993) for further details)

Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 23% of the species' range in Mongolia occurs within protected areas.



Global distribution: Norway, Sweden, Finland, Russian Federation, China, Mongolia.

Regional distribution: Hangai Mountain Range (Stubbe and Chotolchu, 1968), Hentii Mountain Range, and around Mönkh Saridag Mountain in Hövsgöl Mountain Range (Sokolov and Orlov, 1980; Sokolov *et al.*, 1985).

Dominant threats: No available data.

Family Muridae

53. *Apodemus agrarius* (Pallas, 1771)

Common names: Striped field mouse (English), heeriin hulgana or angisny galai (Mongolian)

Subspecies in Mongolia: *A. a. mantchuricus*

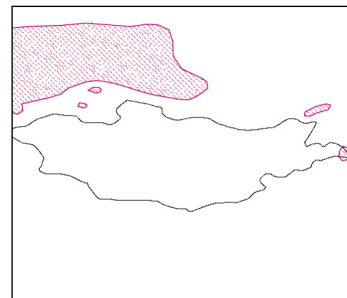
Synonyms: Including *A. coreae*, *A. ognevi*, *A. pallescens* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 52% of the species' range in Mongolia occurs within protected areas.



Global distribution: Germany, Denmark, Austria, Croatia, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Finland, Greece, Romania, Latvia, Lithuania, Estonia, Ukraine, Bulgaria, Belarus, Turkey, Russian Federation, Georgia, Armenia, Azerbaijan, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Taiwan.

Regional distribution: Distributed in the extreme east of Mongolia, along Halh and Nömrög rivers in Ikh Hyangan Mountain Range (Stubbe and Chotolchu, 1968; Dulamtseren, 1970).

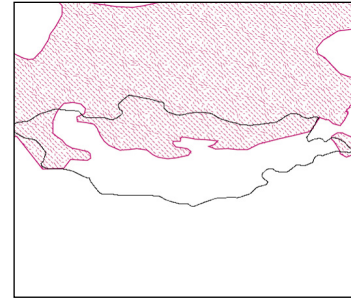
Dominant threats: No available data.

54. *Apodemus peninsulae* (Thomas, 1907)

Common names: Korean field mouse (English), Aziin hulgana or modon galai (Mongolian)

Subspecies in Mongolia: *A. p. praetor*

Synonyms: Including *A. giliacus*, *A. majusculus*, *A. rufulus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan (Hokkaido).

Regional distribution: Forest, forest-steppe and steppe habitats in Mongol Altai, Hövsgöl, Hangai, Hentii, and Ikh Hyangan mountain ranges, Dzungarian Gobi Desert, and Mongol Daguur Steppe (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989).

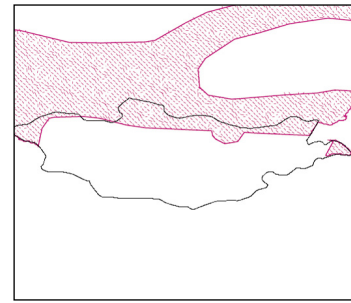
Dominant threats: No available data, although habitat degradation through human-caused and natural wildfires may constitute a threat.

55. *Micromys minutus* (Pallas, 1771)

Common names: Eurasian harvest mouse (English), chigchii hulgana or uran chigchii (Mongolian)

Subspecies in Mongolia: *M. m. ussuricus*

Synonyms: Including *M. minimus*, *M. sorcinus*, *M. ussuricus* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 15% of the species' range in Mongolia occurs within protected areas.



Global distribution: Spain, France, United Kingdom, Belgium, Netherlands, Germany, Switzerland, Italy, Denmark, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Finland, Romania, the former Yugoslav Republic of Macedonia, Latvia, Lithuania, Estonia, Ukraine, Bulgaria, Belarus, Turkey, Russian Federation, Georgia, Armenia, Azerbaijan, China, India, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Taiwan, Japan.

Regional distribution: Restricted to northern parts of Mongolia, including Mongol Altai, Hövsgöl, and Hentii mountain ranges (Sokolov *et al.*, 1985). Also occurs in Ikh Hyangan Mountain Range (Batsaikhan, unpubl. data), Mongol Daguur Steppe, and Eastern Mongolia.

Dominant threats: Habitat loss through harvesting of grass for livestock fodder. Human-caused and natural wildfires constitutes a threat in eastern parts of this species' range.

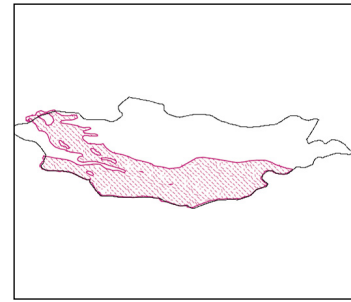
Family Gerbillidae

56. *Meriones meridianus* (Pallas, 1773)

Common names: Mid-day gerbil or mid-day jird (English), shargal chichuul (Mongolian)

Subspecies in Mongolia: *M. m. psammophilus*, *M. m. buechner*

Synonyms: Including *M. heptneri*, *M. roborowskii*, *M. uschtaganicus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 17% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Islamic Republic of Iran, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Tajikistan, China, Kyrgyzstan, Mongolia.

Regional distribution: Occurs throughout southern Mongolia, and in Mongol Altai Mountain Range and Great Lakes Depression in the west of the country (Sokolov and Orlov, 1980).

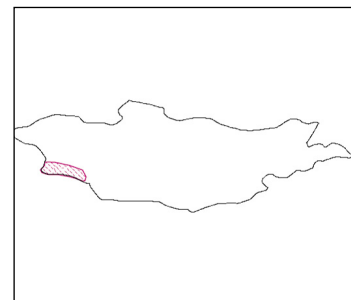
Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

57. *Meriones tamariscinus* (Pallas, 1773)

Common names: Tamarisk gerbil or tamarisk jird (English), sukhnain chichuul (Mongolian)

Subspecies in Mongolia: *M. t. jaxartensis*

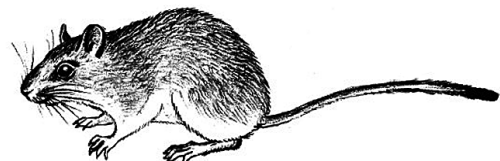
Synonyms: Including *M. kokandicus*, *M. satschouensis* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Endangered, B1ab(iii)

Rationale for assessment: *Meriones tamariscinus* is threatened by habitat degradation and human disturbance. This species has an extent of occurrence of less than 5,000 km², is restricted to fewer than five locations, and is experiencing a



continuing decline in habitat extent and quality, therefore it qualifies as Endangered under Criterion B1ab(iii). The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Listed as Rare in the 1997 'Mongolian Red Book' (Shiirevdamba *et al.*, 1997). Approximately 23% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, Turkmenistan, Uzbekistan, China, Kyrgyzstan, Mongolia.

Regional distribution: Recorded from the lower drainage of Bodonch and Bulgan rivers in Dzungarian Gobi Desert, and north-western Aj Bogd Mountain Range in Trans Altai Gobi Desert (Sokolov and Orlov, 1980).

Dominant threats: Habitat degradation, particularly through trampling and browsing of tamarisk plants (*Tamarix ramosissima*) by domestic camels. Low levels of human disturbance may constitute a threat. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

58. *Meriones unguiculatus* (Milne-Edwards, 1867)

Common names: Mongolian gerbil or Mongolian jird (English), Mongol chichuul or hul chichuul (Mongolian)

Subspecies in Mongolia: *M. u. unguiculatus*, *M. u. kozlovi*, *M. u. selenginus*. Not recognised as separate subspecies by Corbet (1978). Further research on the designation of subspecies within Mongolia is required.

Synonyms: *M. chihfengensis*, *M. koslovi*, *M. kurauchii*, *M. selenginus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

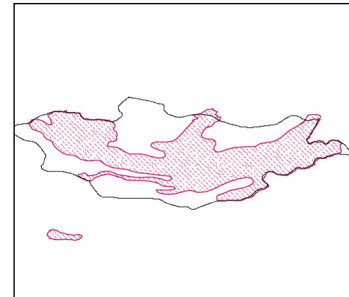
Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 6% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Steppe and dry-steppe habitats throughout Mongolia, including Great Lakes Depression, Valley of the Lakes, southern Hangai Mountain Range, Orhon and Selenge river basins in north-eastern Hangai Mountain Range, Middle Halh Steppe, Northern Gobi, Eastern Gobi, and Eastern Mongolia (Sokolov and Orlov, 1980).

Dominant threats: Habitat degradation through human-caused and natural wildfires, possibly also through grazing by increasing numbers of livestock (further evidence is required).



59. *Rhombomys opimus* (Lichtenstein, 1823)

Common names: Great gerbil (English), morin chichuul or morin tsötsuul (Mongolian)

Subspecies in Mongolia: *R. o. nigrescens*. Recognised by Stubbe and Chotolchu (1968) but not by Corbet (1978); further research on the designation of subspecies within Mongolia is required.

Synonyms: Including *R. alaschanicus*, *R. nigrescens*, *R. pallidus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 35% of the species' range in Mongolia occurs within protected areas.

Global distribution: Islamic Republic of Iran, Kazakhstan, Afghanistan, Pakistan, China, Mongolia.

Regional distribution: Desert and semi-desert habitats across southern Mongolia, including Dzungarian Gobi Desert, Trans Altai Gobi Desert, Alashan' Gobi Desert, Northern Gobi, and Eastern Gobi (Sokolov and Orlov, 1980). Distribution is always associated with the presence of saxaul plants (M. Stubbe, pers. comm.).

Dominant threats: Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

Family Spalacidae

60. *Myospalax aspalax* (Pallas, 1776)

Common names: False zokor (English), sokhor nomin (Mongolian)

Subspecies in Mongolia: *M. a. hangaicus*

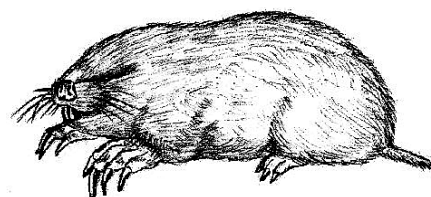
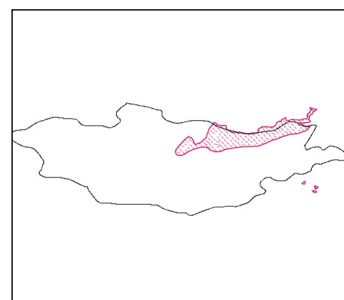
Synonyms: *M. armandii*, *M. dybowski*, *M. talpinus*, *M. zokor* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 18% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

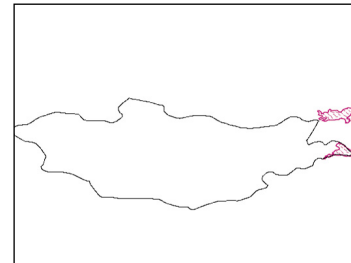
Regional distribution: Distributed in the north-east of the country, in eastern Hangai and Hentii mountain ranges, and Mongol Daguur Steppe (Sokolov and Orlov, 1980).

Dominant threats: No available data.

61. *Myospalax psilurus* (Milne-Edwards, 1874)

Common names: Manchurian zokor or Transbaikal zokor (English), Manjuur nomin or Manj nomin (Mongolian)

Subspecies in Mongolia: *M. p. epsilon*

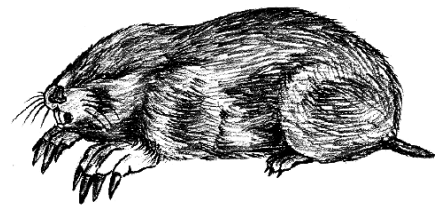


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 31% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Halh River and Nömrög River Basin in Ikh Hyangan Mountain Range (Sokolov and Orlov, 1980).

Dominant threats: No available data.

Order Lagomorpha

Family Ochotonidae

62. *Ochotona alpina* (Pallas, 1773)

Common names: Alpine pika (English), tagiin ogdoi (Mongolian)

Subspecies in Mongolia: *O. a. nitida*, *O. a. changaica*. Gureyev (1964) summarises these subspecies under the form *O. a. alpina*. Further research into the designation of subspecies within Mongolia is required.

Synonyms: Including *O. changaica*, *O. nitida* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

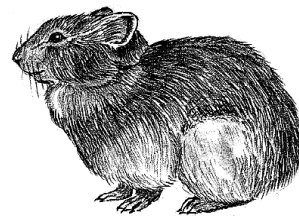
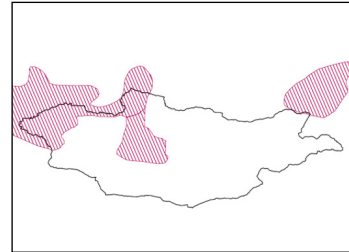
Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, China, Mongolia.

Regional distribution: Mongol Altai, Hangai, and Hövsgöl mountain ranges, northern Great Lakes Depression and northern Valley of the Lakes (Tsevegmid and Tsendjav, 2004).

Dominant threats: Isolated populations on restricted mountain-tops in Mongolia may be at risk, particularly with the possibility of global warming forcing them into untenable situations (A. Smith, pers. comm.). Relatively low levels of hunting occurs for skins, for international trade (Wingard and Zahler, 2006).



63. *Ochotona dauurica* (Pallas, 1776)

Common names: Daurian pika (English), daguur ogdoi (Mongolian)

Subspecies in Mongolia: *O. d. dauurica*, *O. d. altaina*, *O. d. mursaevi*. Further research into the designation of subspecies within Mongolia is required.

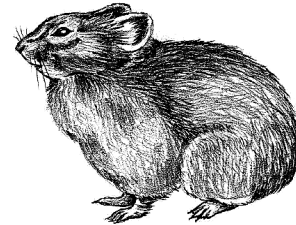
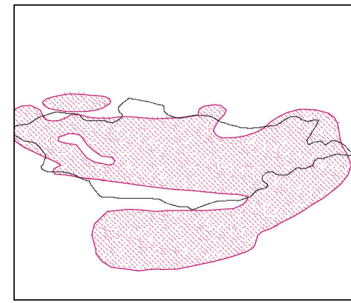
Synonyms: Including *O. altaina*, *O. bedfordi*, *O. mursavi* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 8% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Distributed throughout Mongolia (Sokolov and Orlov, 1980; Tsevegmid and Tsendjav, 2004). *O. d. altaina* is found in western and southern Great Lakes Depression (Stubbe and Chotolchu, 1968).

Dominant threats: The dominant threat was once hunting for skins to be traded with Russia, although at present this activity is believed to have ceased or is occurring at low levels. Possible habitat degradation through grazing by increasing numbers of livestock (further evidence is required). Poisoning campaigns to control Brandt's vole (*Lasiopodomys brandti*) in Mongol Daguur Steppe and Eastern Mongolia in 2001, 2002, and 2003 using Bromadiolone pose a threat to this species, however, this activity is currently being phased out as the effect of this activity on non-target species is being realised (N. Batsaikhan, pers. comm.).

64. *Ochotona hyperborea* (Pallas, 1811)

Common names: Northern pika (English), asganii ogdoi (Mongolian)

Subspecies in Mongolia: *O. h. mantchurica*

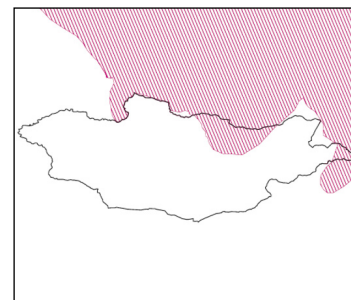
Synonyms: Including *O. mantchurica*, *O. svatoshi* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 40% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Democratic People's Republic of Korea, Japan.

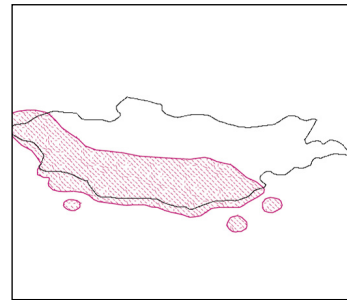
Regional distribution: Forest habitats in Hentii and Ikh Hyangan mountain ranges, and Mongol Daguur Steppe (Bannikov, 1954; Dulamtseren, 1970; Stubbe and Chotolchu, 1971; Sokolov and Orlov, 1980).

Dominant threats: Isolated populations on restricted mountain-tops in Mongolia may be at risk, particularly with the possibility of global warming forcing them into untenable situations (A. Smith, pers. comm.). Relatively low levels of hunting occurs for skins, for international trade (Wingard and Zahler, 2006).

65. *Ochotona pallasii* (Gray, 1867)

Common names: Pallas's pika (English), ukher ogdoi (Mongolian)

Subspecies in Mongolia: *O. p. pricei*

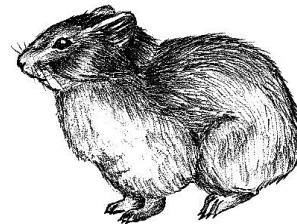


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 17% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Distributed throughout mountain habitats in western and southern Mongolia, particularly Mongol Altai and Govi Altai mountain ranges (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980; Tsevegmid and Tsendjav, 2004).

Dominant threats: No available data.

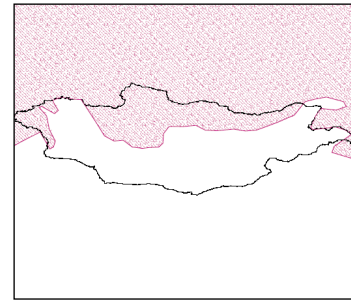
Family Leporidae

66. *Lepus timidus* Linnaeus, 1758

Common names: Arctic hare or mountain hare (English), chandaga tuulai (Mongolian)

Subspecies in Mongolia: *L. t. transbaicalicus*

Synonyms: Including *L. alpinus*, *L. borealis*, *L. transbaicalicus* (see Wilson and Reeder, 1993 for further details)

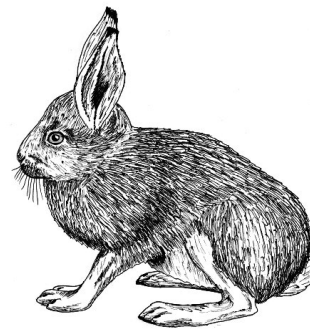


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Canada, Greenland, Iceland, Republic of Ireland, France, United Kingdom, Germany, Norway, Liechtenstein, Switzerland, Italy, Austria, Slovenia, Sweden, Poland, Finland, Latvia, Lithuania, Estonia, Ukraine, Belarus, Russian Federation, China, Mongolia, Japan.

Regional distribution: Coniferous forest and taiga habitats in Mongol Altai, Hangai, Hövsgöl, Hentii, and Ikh Hyangan mountain ranges, and Mongol Daguur Steppe (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980).

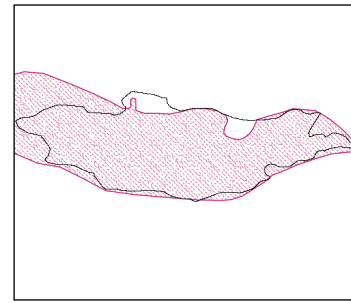
Dominant threats: Hunted for meat and skins, and for traditional medicines, for low levels of international trade.

67. *Lepus tolai* Pallas, 1778

Common names: Tolai hare (English), bor tuulai (Mongolian)

Subspecies in Mongolia: *L. t. tolai*. Further research into the designation of subspecies within Mongolia is required.

Synonyms: Including *L. brevinasus*, *L. gobicus*, *L. zaisanicus* (see Wilson and Reeder (1993) for further details)

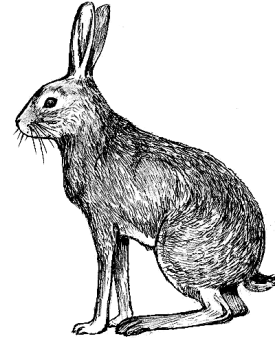


Global status: Not evaluated using the 'IUCN Red List Categories and Criteria' (IUCN, 2001).

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Islamic Republic of Iran, Kazakhstan, Afghanistan, China, Mongolia (Pavlinov *et al.*, 2002).

Regional distribution: Found throughout all open landscapes of Mongolia, except coniferous forest habitats. Most abundant in steppe and semi-desert habitats (Sokolov and Orlov, 1980; Tsevegmid and Tsendjav, 2004).

Dominant threats: Hunted for meat and skins, and for traditional medicines, for low levels of international trade. Occasionally caught in traps intended for other species such as red foxes (*Vulpes vulpes*) and corsac foxes (*Vulpes corsac*).

Order Erinaceomorpha

Family Erinaceidae

68. *Hemiechinus auritus* (Gmelin, 1770)

Common names: Long-eared hedgehog (English), delden zaraa (Mongolian)

Subspecies in Mongolia: *H. a. aegyptius*, *H. a. albulus*, *H. a. holdereri*. Further research into the designation of subspecies within Mongolia is required.

Synonyms: Including *H. alaschanicus*, *H. microtus*, *H. caspicus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

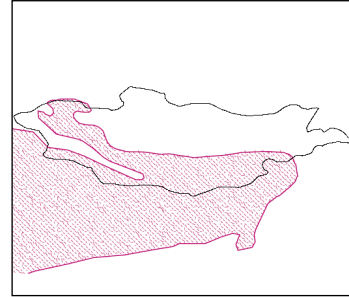
Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 17% of the species' range in Mongolia occurs within protected areas.

Global distribution: Libyan Arab Jamahiriya, Greece, Egypt, Cyprus, Turkey, Israel, Lebanon, Syrian Arab Republic, Iraq, Islamic Republic of Iran, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, Kyrgyzstan, Mongolia.

Regional distribution: Desert and semi-desert habitats of southern, western and north-western Mongolia, including Great Lakes Depression, Valley of the Lakes, Dzungarian Gobi Desert, Gobi Altai Mountain Range, Northern Gobi, Eastern Gobi, Trans Altai Gobi Desert, and Alashan' Gobi Desert (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989).

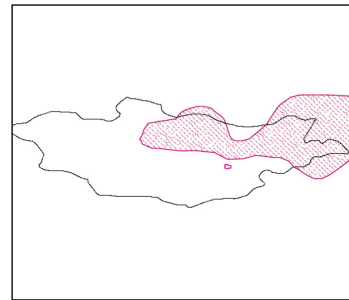
Dominant threats: Habitat loss due to increased resource extraction (mining). Occasional accidental vehicular mortality constitutes a low level threat.



69. *Mesechinus dauuricus* (Sundevall, 1842)

Common names: Daurian hedgehog (English), Daguur zaraa (Mongolian)

Synonyms: *M. manchuricus*, *M. przewalskii*, *M. sibiricus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Listed as Rare in the 1997 'Mongolian Red Book' (Shiirevdamba *et al.*, 1997). Approximately 7% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Steppe and forest-steppe habitats in north-eastern Mongolia, including Orhon and Selenge river basins in north-eastern Hangai Mountain Range, along Halh River in Ikh Hyangan Mountain Range (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989), Mongol Daguur Steppe, and Eastern Mongolia. Recently recorded in northern Ikh Nartiin Chuluu Nature Reserve in Eastern Govi (Reading *et al.*, 2006).

Dominant threats: Hunting for traditional medicines, for local use. Habitat loss through increasing resource extraction (mining) and grazing by increasing livestock numbers may cause habitat degradation (further evidence is required). Occasional accidental vehicular mortality constitutes a low level threat.

Order Soricomorpha

Family Soricidae

70. *Crocidura sibirica* Dukelsky, 1930

Common names: Siberian shrew (English), Sibiri jövvu (Mongolian)

Synonyms: *C. ognevi* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Data Deficient

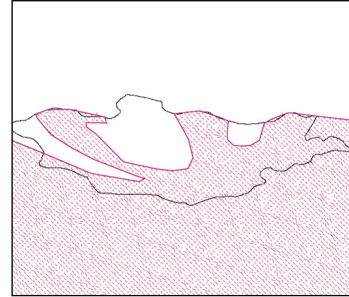
Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 14% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, China, Mongolia.

Regional distribution: This species was previously confused with *C. suaveolens*, and localities were recorded under this name. Known from ten localities associated with water sources in semi-desert, desert, and high mountain habitats between Mongol Altai and Hangai mountain ranges, and also recorded in Trans Altai Gobi Desert (Sokolov and Orlov, 1980). Recently recorded in Alashan' Gobi Desert (recorded in 2004), Eastern Gobi (recorded in 2004), central Mongolia (recorded in 2005), and Valley of the Lakes (recorded in 2005) (Batsaikhan and Stubbe, unpubl. data).

Dominant threats: No available data.

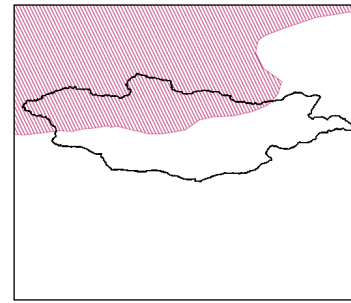


71. *Neomys fodiens* (Pennant, 1771)

Common names: Eurasian water shrew (English), usch gerelzgene (Mongolian)

Subspecies in Mongolia: *N. f. orientis*

Synonyms: Including *N. aquaticus*, *N. daubentonii*, *N. orientalis* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 13% of the species' range in Mongolia occurs within protected areas.



Global distribution: Spain, France, United Kingdom, Belgium, Netherlands, Germany, Norway, Liechtenstein, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Albania, Finland, Greece, Romania, the former Yugoslav Republic of Macedonia, Latvia, Bulgaria, Belarus, Turkey, Russian Federation, Kazakhstan, China, Mongolia, Democratic People's Republic of Korea; possibly also occurs in Kyrgyzstan.

Regional distribution: Abundant along the rivers of northern Mongolia. Occurs along Haraa River in western Hentii Mountain Range, upstream of Hovd River in Mongol Altai Mountain Range (Sokolov and Orlov, 1980), in Tes and Zavhan river basins in western Hangai Mountain Range (Bannikov, 1954; Dulamtseren *et al.*, 1989), and along Orhon and Selenge rivers in north-eastern Hangai Mountain Range (Sokolov *et al.*, 1985). It has also recently been recorded along Chono Haraihyun River in western Great Lakes Depression (Samiya *et al.*, 1993).

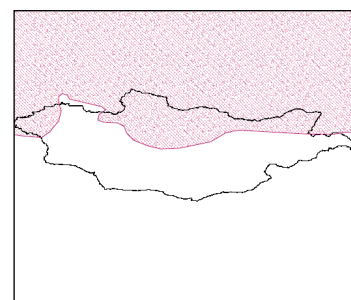
Dominant threats: Habitat loss, water pollution, and human disturbance resulting from increased resource extraction in the form of logging and mining.

72. *Sorex caecutiens* Laxmann, 1788

Common names: Laxmann's shrew (English), daagan ataahai (Mongolian)

Subspecies in Mongolia: *S. c. caecutiens*

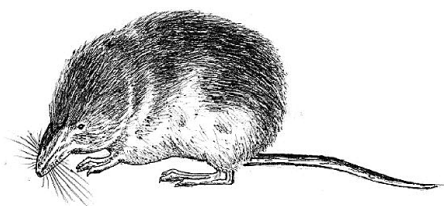
Synonyms: Including *S. altaicus*, *S. karpinskii*, *S. macropygmaeus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.



Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.

Global distribution: Norway, Sweden, Poland, Finland, Latvia, Lithuania, Estonia, Ukraine, Belarus, Russian Federation, Kazakhstan, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea.

Regional distribution: Coniferous forest and forest-steppe habitats in Hövsgöl, Hangai, and Hentii mountain ranges, north-western Mongol Altai Mountain Range, and Mongol Daguur Steppe (Sokolov and Orlov, 1980; Mallon, 1985; Dmitriev *et al.*, 1992).

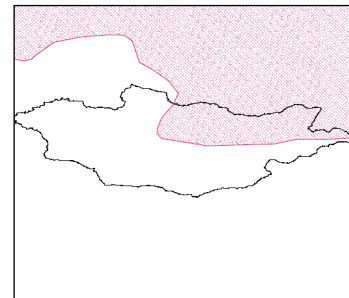
Dominant threats: Habitat loss, water pollution, and human disturbance resulting from increased resource extraction in the form of logging and mining.

73. *Sorex daphaenodon* Thomas, 1907

Common names: Large-toothed Siberian shrew (English), besreg ataahai (Mongolian)

Subspecies in Mongolia: *S. d. scaloni*

Synonyms: *S. orii*, *S. sanguinidens*, *S. scaloni* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 7% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia; possibly also occurs in parts of Europe.

Regional distribution: Orhon and Selenge river basins in north-eastern Hangai Mountain Range (Chotolchu and Stubbe, 1971; Sokolov *et al.*, 1985). Also recorded upstream of and along Herlen River (Samiya *et al.*, 2002), which passes through eastern Hentii Mountain Range, Middle Halh Steppe, Eastern Mongolia, Mongol Daguur Steppe, and Ikh Hyangan Mountain Range (Dmitriev and Tarakanovskii, 1984).

Dominant threats: Resource extraction in the form of logging in some parts of its range may cause human disturbance and habitat loss. Habitat degradation through human-caused and natural wildfires also constitutes a threat.

74. *Sorex isodon* Turov, 1924

Common names: Even-toothed shrew (English), tegsh shudet ataahai or tegsh ataahai (Mongolian)

Synonyms: *S. gravesi*, *S. princeps*, *S. ruthenus* (see Wilson and Reeder (1993) for further details)

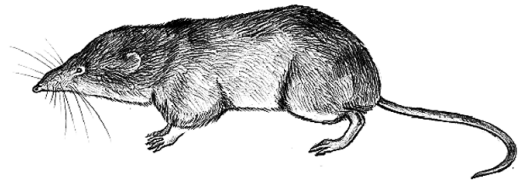


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Norway, Sweden, Finland, Russian Federation, Mongolia, Republic of Korea, Democratic People's Republic of Korea; possibly also occurs in China.

Regional distribution: Occurs along Sögnögör River in south-western Hentii Mountain Range, and in Züünbürkh in eastern Hentii Mountain Range (Shvetsov *et al.*, 1980). Also recorded upstream of Eröö River in western Hentii Mountain Range (Samiya *et al.*, 2002) and in parts of Mongol Daguur Steppe. Mongolia represents the southern limit of its global distribution.

Dominant threats: No available data.

75. *Sorex minutissimus* Zimmermann, 1780

Common names: Least shrew or miniscule shrew (English), öödsön ataahai (Mongolian)

Subspecies in Mongolia: *S. m. tscherskii*, *S. m. caudata*

Synonyms: Including *S. barabensis*, *S. minimus*, *S. ussuriensis* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.



Global distribution: Norway, Sweden, Finland, Estonia, Russian Federation, China, Mongolia, Republic of Korea, Japan.

Regional distribution: Many habitat types, preferably flooded river banks in Mongol Altai Mountain Range, Mongol Daguur Steppe, Great Lakes Depression, and Hövsgöl, Hangai and

Hentii mountain ranges (Sokolov *et al.*, 1985; Dmitriev *et al.*, 1992; Litvinov and Bazardorj, 1992). Also recorded in steppe habitats in Middle Halh Steppe and Ikh Hyangan Mountain Range in eastern Mongolia (Sokolov *et al.*, 1985; Dmitriev *et al.*, 1992; Litvinov and Bazardorj, 1992).

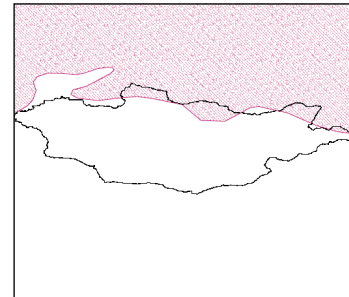
Dominant threats: Resource extraction in the form of mining and logging in some parts of its range may cause human disturbance and habitat loss. Habitat degradation through human-caused and natural wildfires also constitutes a threat.

76. *Sorex roboratus* Hollister, 1913

Common names: Flat-skulled shrew (English), bor ataahai or tavshgar ataahai (Mongolian)

Subspecies in Mongolia: *S. r. roboratus*, *S. r. thomasi*

Synonyms: Including *S. aranoides*, *S. platycranius*, *S. vir* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 10% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia.

Regional distribution: Onon River Basin in Hentii Mountain Range (Chotolchu and Stubbe, 1971), upstream of Eröö River in western Hentii Mountain Range (Samiya *et al.*, 2002), and in Hövsgöl Mountain Range (Dawaa *et al.*, 1973; Litvinov and Bazardorj, 1992).

Dominant threats: Resource extraction in the form of logging in some parts of its range may cause human disturbance and habitat loss. Habitat degradation through human-caused and natural wildfires also constitutes a threat.

77. *Sorex tundrensis* Merriam, 1900

Common names: Tundra shrew (English), tsarmiin ataahai (Mongolian)

Subspecies in Mongolia: *S. t. baikalensis*, *S. t. sibiriensis*

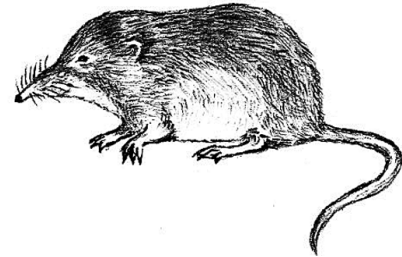
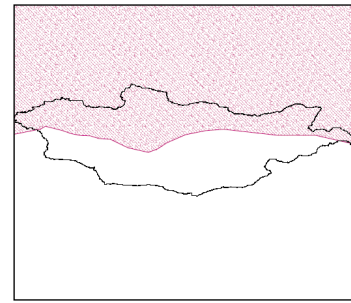
Synonyms: Including *S. baikalensis*, *S. schnitnikovi*, *S. sibiriensis* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Canada, USA, Russian Federation, China, Mongolia.

Regional distribution: Mongol Altai Mountain Range (Sokolov *et al.*, 1985), Great Lakes Depression, Hangai Mountain Range (Dmitriev *et al.*, 1992), and Hövsgöl Mountain Range (Litvinov, 1982; Litvinov and Bazardorj, 1992). Also recorded along Herlen and Onon rivers, which pass through eastern Hentii Mountain Range, Middle Halh Steppe and Eastern Mongolia, and along Ulz River in Mongol Daguur Steppe (Sokolov *et al.*, 1985).

Dominant threats: Resource extraction in the form of logging in some parts of its range may cause human disturbance and habitat loss. Habitat degradation through human-caused and natural wildfires also constitutes a threat.

Family Talpidae

78. *Talpa altaica* Nikolsky, 1883

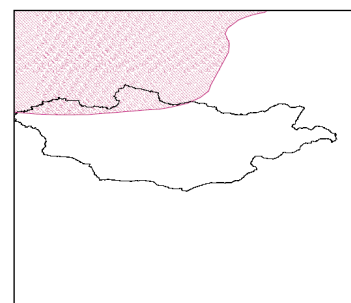
Common names: Siberian mole (English), altain chatsuulin (Mongolian)

Subspecies in Mongolia: *T. a. suschkini*

Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.



Legal status: Listed as Rare in the 1997 ‘Mongolian Red Book’ (Shiirevdamba *et al.*, 1997). Approximately 16% of the species’ range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Mongolia.

Regional distribution: Recorded from two localities in Hövsgöl Mountain Range, and also occurs in northern Great Lakes Depression (Bannikov, 1954). The southern boundary of its Mongolian range is along the mid-course of Tes River in north-eastern Great Lakes Depression and north-western Hangai Mountain Range (Bannikov, 1954).

Dominant threats: No available data.

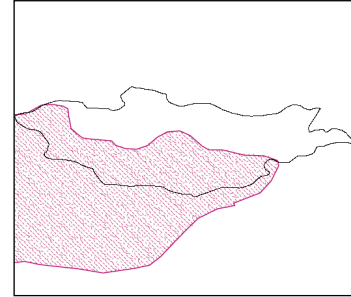
Order Chiroptera

Family Vespertilionidae

79. *Eptesicus gobiensis* Bobrinskii, 1926

Common names: Gobi big brown bat (English), govisog sarmaahai (Mongolian)

Synonyms: *E. centralasiaticus*, *E. kashgaricus*

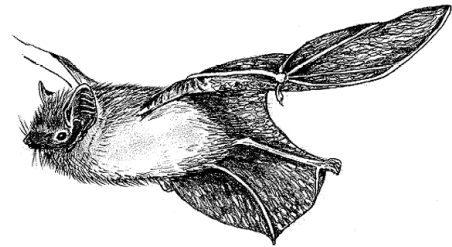


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 17% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Afghanistan, Pakistan, China (Xinjiang and Xizang), India, Mongolia.

Regional distribution: Mongol Altai Mountain Range, Great Lakes Depression, Valley of the Lakes, Gobi Altai Mountain Range, southern Hangai Mountain Range, southern Middle Halh Steppe, Northern Gobi, Eastern Gobi, Dzungarian Gobi Desert, Trans Altai Gobi Desert, and Alashan' Gobi Desert (Dulamtsere *et al.*, 1989).

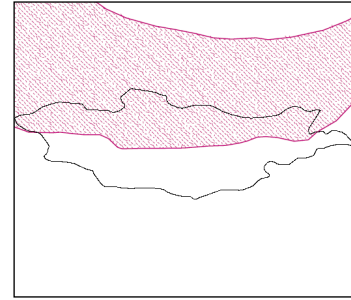
Dominant threats: Drying of water sources and droughts threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. A proposed hydro-electric dam along Chono Haraikh River in Great Lakes Depression will potentially cause habitat loss along the river connecting the lakes. Accidental mortality constitutes a minor threat, as it roosts in livestock pens which are frequently moved.

80. *Eptesicus nilssonii* (Keyserling and Blasius, 1839)

Common names: Northern bat (English), umriin sarmaahai (Mongolian)

Subspecies in Mongolia: *E. n. nilssonii*

Synonyms: *E. japonensis*

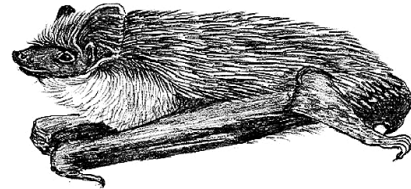


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: France, Belgium, Netherlands, Germany, Norway, Switzerland, Italy, Austria, Czech Republic, Slovenia, Sweden, Poland, Hungary, Slovakia, Finland, Romania, Latvia, Bulgaria, Turkey, Russian Federation, Iraq, Georgia, Islamic Republic of Iran, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea; possibly also occurs in Japan.

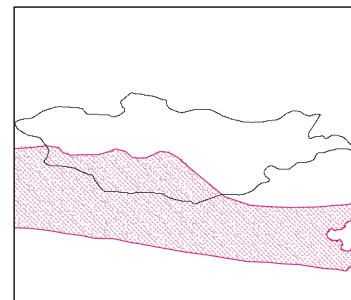
Regional distribution: Found throughout the north of the country in forested areas such as north-western Mongol Altai Mountain Range, Hövsgöl, Hangai and Hentii mountain ranges, Mongol Daguur Steppe and Eastern Mongolia (Sokolov and Orlov, 1980; Dulamtseren *et al.*, 1989). Mongolia represents the southern limit of its global distribution (Strelkov, 1986).

Dominant threats: Habitat loss through increasing infrastructure development and resource extraction (mining) is a potential threat, and possible habitat degradation through grazing by increasing numbers of livestock may be preventing tree regeneration in some areas which could affect roosting activity (further evidence is required). Accidental mortality constitutes a minor threat to this species, through pest control intended for other species.

81. *Hypsugo savii* (Bonaparte, 1837)

Common names: Savi's pipistrelle (English), borhon tursaahai (Mongolian)

Subspecies in Mongolia: *H. s. caucasicus*, *H. s. alaschanicus*. Further research into the designation of subspecies within Mongolia is required.

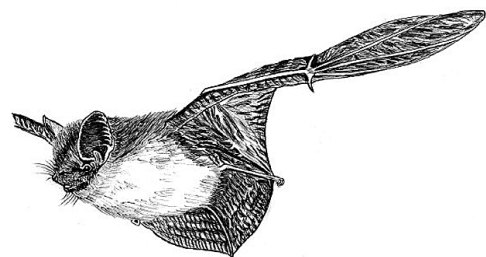


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 23% of the species' range in Mongolia occurs within protected areas.



Global distribution: Morocco, Algeria, Cape Verde, Spain, France, Germany, Italy, Tunisia, Slovenia, Greece, Ukraine, Bulgaria, Turkey, Israel, Lebanon, Georgia, Islamic Republic of Iran, Kazakhstan, Afghanistan, China, India, Mongolia, Myanmar, Republic of Korea, Democratic People's Republic of Korea, Japan.

Regional distribution: South-western parts of the country, including Dzungarian Gobi Desert, Trans Altai Gobi Desert, Valley of the Lakes, Gobi Altai Mountain Range, western parts of Northern Gobi, Eastern Gobi, and Alashan' Gobi Desert.

Dominant threats: No available data.

82. *Murina leucogaster* Milne-Edwards, 1872

Common names: Greater tube-nosed bat (English), atsai or tsorgo hamart bagvaahai (Mongolian)

Subspecies in Mongolia: Designation of subspecies in Mongolia has not yet been investigated.

Synonyms: Including *M. hilgendorfi*, *M. rubex*, *M. sibirica* (see Wilson and Reeder (1993) for further details)

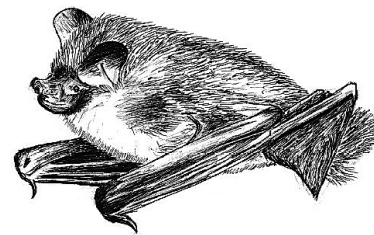


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 8% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan.

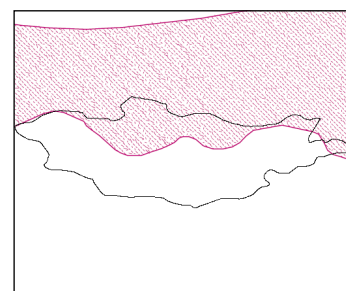
Regional distribution: Coniferous forest habitats in Hövsgöl Mountain Range and north-western Hentii Mountain Range (B. Sheftel, pers. comm.).

Dominant threats: No available data.

83. *Myotis brandti* (Eversmann, 1845)

Common names: Brandt's bat (English), oisog bagvaahai (Mongolian)

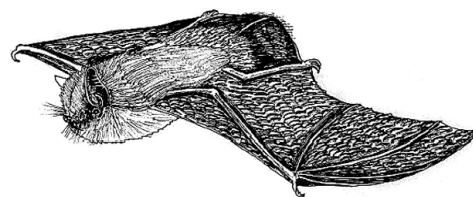
Synonyms: *M. aureus*, *M. fujiensis*, *M. gracilis*, *M. sibiricus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.



Legal status: Approximately 11% of the species' range in Mongolia occurs within protected areas.

Global distribution: Spain, France, United Kingdom, Belgium, Netherlands, Germany, Liechtenstein, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Sweden, Poland, Hungary, Slovakia, Albania, Greece, Romania, Latvia, Bulgaria, Turkey, Russian Federation, Kazakhstan, Mongolia.

Regional distribution: Hövsgöl, Hangai and Hentii mountain ranges, Mongol Daguur Steppe, Eastern Mongolia, and Halh and Nömrög river basins in Ikh Hyangan Mountain Range (Bannikov, 1954; Sokolov and Orlov, 1980; Tinnin *et al.*, 2002).

Dominant threats: No available data.

84. *Myotis daubentonii* (Kuhl, 1817)

Common names: Daubenton's bat (English), ussag bagvaahai (Mongolian)

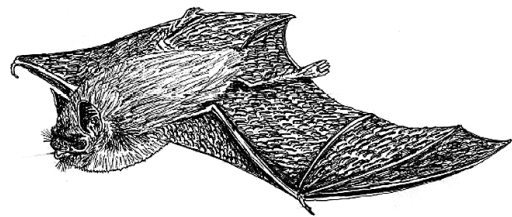
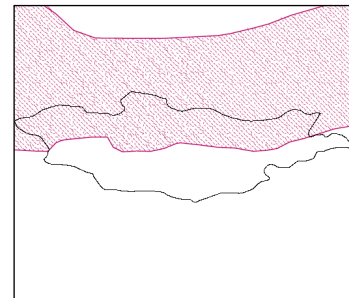
Subspecies in Mongolia: *M. d. volgensis*, *M. d. ussuriensis*. Further research into the designation of subspecies within Mongolia is required.

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



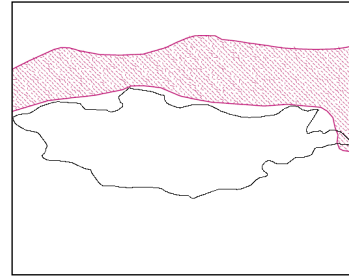
Global distribution: Republic of Ireland, Portugal, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Norway, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Sweden, Poland, Hungary, Slovakia, Finland, Romania, Latvia, Turkey, Russian Federation, China, India, Mongolia, Republic of Korea, Democratic People's Republic of Korea; possibly also occurs in Japan.

Regional distribution: Widespread throughout northern Mongolia, associated with rivers and water sources in Mongol Altai Mountain Range, Great Lakes Depression, Hövsgöl, Hangai and Hentii mountain ranges, Mongol Daguur Steppe, northern Middle Halh Steppe, and northern parts of Eastern Mongolia (Stubbe and Chotolchu, 1968; Dulamtseren, 1970).

Dominant threats: Little is known about this species, but it is dependent upon water sources, and so increased water pollution and habitat fragmentation from proposed dams may constitute threats in the future.

85. *Myotis ikonnikovi* Ognev, 1912

Common names: Ikonnikov's bat (English), Ikonnikoviin bagvaahai (Mongolian)

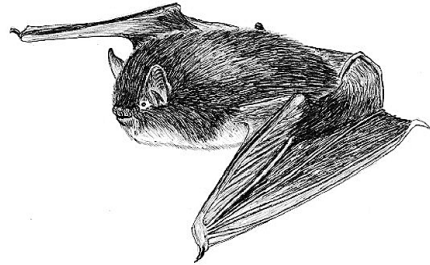


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 36% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Democratic People's Republic of Korea, Japan.

Regional distribution: Mountain habitats in Ikh Hyangan Mountain Range (Bannikov, 1954).

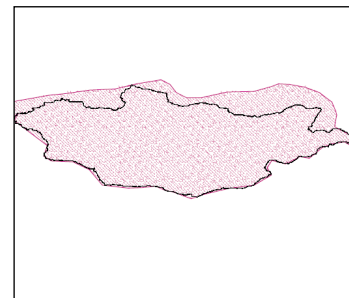
Dominant threats: No available data.

86. *Myotis mystacinus* (Kuhl, 1817)

Common names: Whiskered bat (English), sahalt bagvaahai (Mongolian)

Subspecies in Mongolia: *M. m. mystacinus*, *M. m. przewalskii*. Further research into the designation of subspecies within Mongolia is required.

Synonyms: Including *M. aureus*, *M. collaris*, *M. przewalskii* (see Wilson and Reeder (1993) for further details)

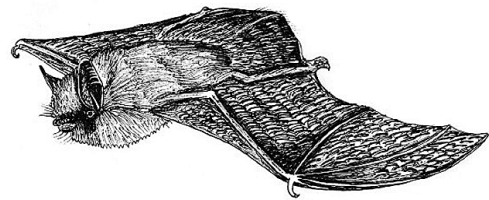


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 13% of the species' range occurs within protected areas.



Global distribution: Republic of Ireland, Portugal, Morocco, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Norway, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Poland, Hungary, Slovakia, Albania, Finland, Greece, Latvia, Bulgaria, Turkey, Russian Federation, Armenia, Islamic Republic of Iran, Afghanistan,

Pakistan, China, India, Nepal, Mongolia, Myanmar, Republic of Korea, Democratic People's Republic of Korea, Malaysia, Singapore, Lao People's Democratic Republic, Japan; possibly also occurs in Lebanon.

Regional distribution: Widespread throughout Mongolia including Hangai, Hövsgöl and Hentii mountain ranges, Great Lakes Depression, Valley of the Lakes (Batsaikhan *et al.*, 2004a), Trans Altai Govi Desert, Alashan' Govi Desert, Dzungarian Govi Desert, Mongol Altai Mountain Range, Govi Altai Mountain Range, and Eastern Govi (Bannikov, 1954; Stubbe and Chotolchu, 1968; Sokolov and Orlov, 1980; Strelkov, 1983).

Dominant threats: Drying of water sources and droughts threaten this species in parts of its range, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. Habitat loss through increasing resource extraction and pollution of water sources may constitute threats in the future.

87. *Nyctalus noctula* (Schreber, 1774)

Common names: Noctule (English), khongor burenhiiivch (Mongolian)

Synonyms: Including *N. magnus*, *N. rufescens*, *N. velutinus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

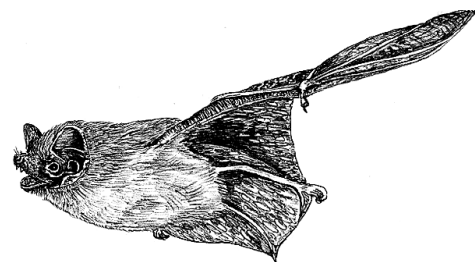
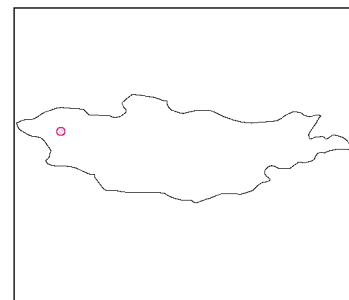
Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Global distribution: Portugal, Morocco, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Luxembourg, Switzerland, Italy, Denmark, Malta, Austria, Czech Republic, Slovenia, Poland, Slovakia, Albania, Greece, Romania, Latvia, Bulgaria, Turkey, Russian Federation, Lebanon, Israel, Islamic Republic of Iran, Kazakhstan, Oman, Pakistan, China, India, Mongolia, Malaysia, Viet Nam, Hong Kong, Taiwan, Japan; possibly also occurs in Mozambique.

Regional distribution: Recorded from one location in Mongolia, close to Ongotsny Ulaan Mountain, near Hovd River Basin in Great Lakes Depression (Samiya *et al.*, 1993).

Dominant threats: No available data.

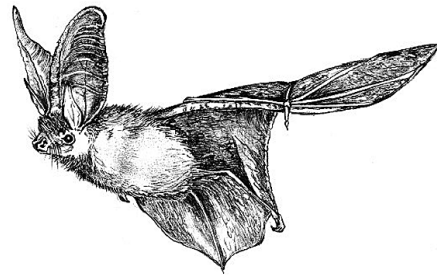
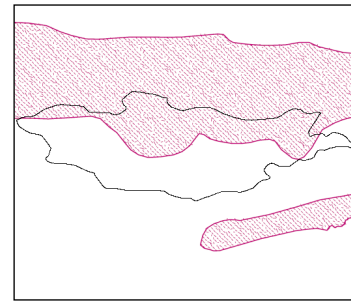


88. *Plecotus auritus* (Linnaeus, 1758)

Common names: Brown long-eared bat or brown big-eared bat (English), jijig sooton bagvaahai, bor sooton bagvaahai or jijig sootgoi (Mongolian)

Subspecies in Mongolia: *P. a. auritus*, *P. a. wardi*, *P. a. sacrimontis*. Further research into designation of subspecies within Mongolia is required.

Synonyms: Including *P. communis*, *P. sacrimontis* (see Wilson and Reeder (1993) for further details). Recent preliminary genetic and morphological evidence suggests that populations of *P. auritus* in Mongolia belong to a distinct species, *P. ognevi*, although further detailed research is required to resolve taxonomic confusion (Spitzenberger *et al.*, 2006).



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 10% of the species' range in Mongolia occurs within protected areas.

Global distribution: Republic of Ireland, Portugal, Spain, France, United Kingdom Belgium, Netherlands, Germany, Norway, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Sweden, Poland, Slovakia, Finland, Romania, Latvia, Ukraine, Bulgaria, Turkey, Russian Federation, Georgia, Islamic Republic of Iran, China, Nepal, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan.

Regional distribution: Distributed throughout northern Mongolia in Great Lakes Depression, and Mongol Altai, Hangai, Hövsgöl, and Hentii mountain ranges (Stubbe and Chotolchu, 1968; Sokolov and Orlov, 1980; Spitzenberger *et al.*, 2006). Also occurs in Mongol Daguur Steppe and Eastern Mongolia (Dorjderem, 2004).

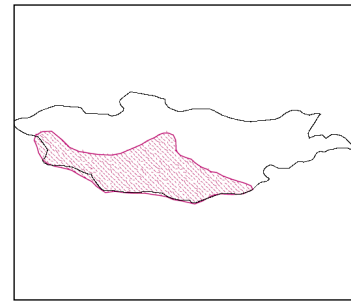
Dominant threats: No available data, although habitat loss through increasing resource extraction and logging may constitute future threats.

89. *Plecotus austriacus* (Fischer, 1829)

Common names: Grey long-eared bat or grey big-eared bat (English), tom sooton bagvaahai (Mongolian)

Subspecies in Mongolia: *P. a. kozlovi*. Further research into designation of subspecies within Mongolia is required.

Synonyms: Including *P. ariel*, *P. wardi* (see Wilson and Reeder (1993) for further details). Recent preliminary genetic and morphological evidence suggests that populations of *P. austriacus* in Mongolia belong to a distinct species, *P. kozlovi*, although further detailed research is required to resolve taxonomic confusion (Spitzenberger *et al.*, 2006)

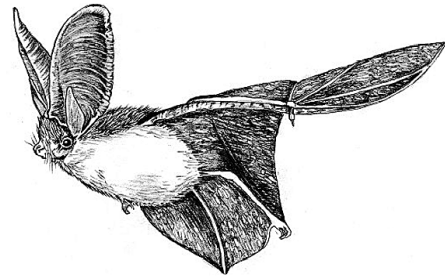


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 21% of the species' range in Mongolia occurs within protected areas.



Global distribution: Republic of Ireland, Portugal, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Norway, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Sweden, Poland, Slovakia, Finland, Romania, Latvia, Ukraine, Bulgaria, Turkey, Russian Federation, Georgia, Islamic Republic of Iran, China, Nepal, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Japan.

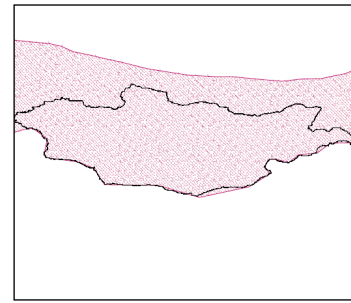
Regional distribution: Mongol Altai Mountain Range, Dzungarian Gobi Desert, Trans Altai Gobi Desert, Gobi Altai Mountain Range, Great Lakes Depression, Valley of the Lakes, Alashan' Gobi Desert (Sokolov and Orlov, 1980), and western parts of Eastern Gobi. Also occurs upstream of Orhon River in eastern Hangai Mountain Range (Stubbe and Chotolchu, 1968).

Dominant threats: Commonly found around human settlements, therefore accidental mortality (accidental trapping, poisoning, and roost destruction) constitutes a threat. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity.

90. *Vespertilio murinus* Linnaeus, 1758

Common names: Particoloured bat (English), buural sarmaahai (Mongolian)

Synonyms: Including *V. discolor*, *V. luteus*, *V. siculus* (see Wilson and Reeder (1993) for further details)

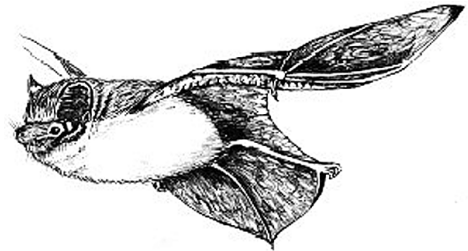


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 13% of the species' range occurs within protected areas.



Global distribution: France, United Kingdom, Netherlands, Germany, Norway, Italy, Denmark, Czech Republic, Slovenia, Sweden, Poland, Slovakia, Finland, Greece, Latvia, Bulgaria, Turkey, Russian Federation, Islamic Republic of Iran, Afghanistan, China, Mongolia, Democratic People's Republic of Korea.

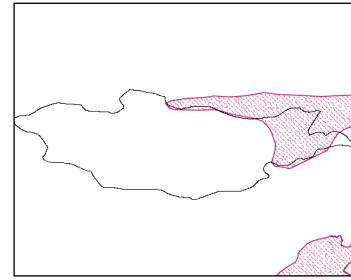
Regional distribution: First recorded in 1964 in Shargyn Govi in Mongol Altai Mountain Range (Stubbe and Chotolchu, 1968), currently distributed throughout Mongolia, including Hentii and Hangai mountain ranges (Tinnin *et al.*, 2002), Valley of the Lakes (Sokolov and Orlov, 1980), Ganga Lake in Eastern Mongolia (Dmitriev and Tarakanovskii, 1984), and Alashan' Govi Desert (Dorjderem, 2004; Batsaikhan unpubl. data). Also found downstream of Uur-Uilgan River in Hövsgöl Mountain Range (Dolch *et al.*, unpubl. data).

Dominant threats: Commonly found around human settlements, therefore accidental mortality (accidental trapping, poisoning, and roost destruction) constitutes a threat. Drying of water sources and droughts also threaten this species, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. Habitat loss through increasing resource extraction (logging) may constitute a threat.

91. *Vespertilio superans* Thomas, 1899

Common names: Asian particolored bat (English),
dorniin sarmaahai (Mongolian)

Synonyms: Including *V. anderssoni*, *V. motoyoshii*, *V. orientalis* (see Wilson and Reeder (1993) for further details)

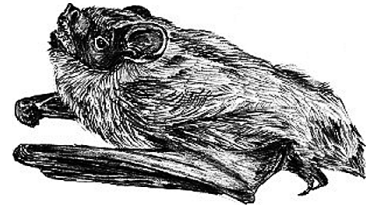


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Included in the 1997 'Mongolian Red Book' (Shiirevdamba *et al.*, 1997). Approximately 8% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea, Taiwan, Japan.

Regional distribution: Recorded in steppe habitats in Eastern Mongolia (Stubbe and Chotolchu, 1968; Sokolov and Orlov, 1980), along Herlen and Halh rivers and close to Buir Lake (Bannikov, 1954; Sokolov and Orlov, 1980; Dorjderem, 2004).

Dominant threats: Commonly found around human settlements, therefore accidental mortality (accidental trapping, poisoning, and roost destruction) constitutes a threat. Habitat loss through increasing resource extraction (logging) may constitute a threat in the future.

Order Carnivora

Family Felidae

92. *Felis silvestris* Schreber, 1775

Common names: Wild cat (English), tsoohondoi (Mongolian)

Subspecies in Mongolia: *F. s. shawiana*

Synonyms: Including *F. ferus*, *F. kozlovi*, *F. libyca* (see Wilson and Reeder (1993) for further details). There is considerable debate over the classification of African and Eurasian populations, and the taxonomy and inter-relationships of *F. silvestris* and *F. libyca* remain unclear.



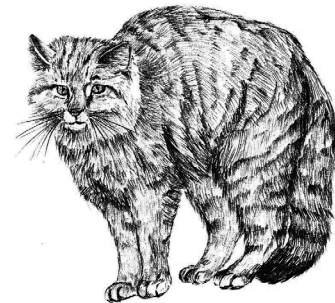
Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Listed under CITES Appendix II (UNEP-WCMC, 2006). Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005).

Listed as Rare under the 1995 Mongolian Hunting Law (MNE, 1996), and in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 19% of the species' range in Mongolia occurs within protected areas.



Global distribution: Occupies most of Europe, Central Asia and Africa (Nowak, 1991).

Regional distribution: Patchy distribution in Dzungarian Gobi Desert, Shargyn Gobi in Mongol Altai Mountain Range, Trans Altai Gobi Desert, and Northern Gobi (Bannikov, 1954). Also occurs in Great Lakes Depression, Valley of the Lakes, Eastern Gobi, and Alashan' Gobi Desert (Dulamtsereen *et al.*, 1989). Mongolia represents the north-eastern limit of its global range.

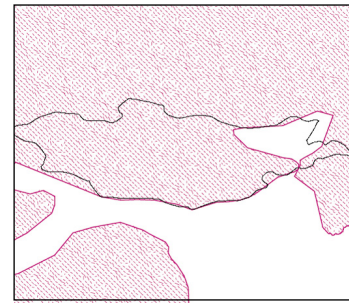
Dominant threats: Hybridization with domestic cats is causing a decline in genetically pure wildcats, and is considered to be the primary threat. Domestic cats also compete with this species for prey and territories, and can transmit diseases. This species is hunted for skins at a low level, and occasionally caught in traps intended for red foxes (*Vulpes vulpes*), corsac foxes (*Vulpes corsac*), and lynx (*Lynx lynx*).

93. *Lynx lynx* (Linnaeus, 1758)

Common names: Eurasian lynx (English), shiluus mii or evroasiin shiluus (Mongolian)

Subspecies in Mongolia: *L. l. isabellina*

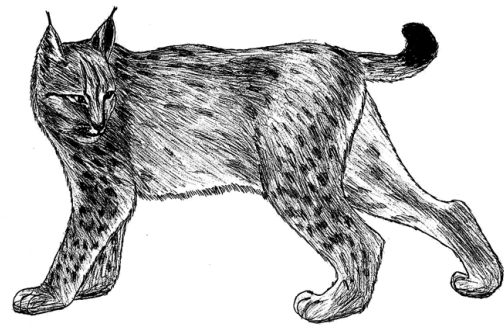
Synonyms: Including *L. isabellina*, *L. kozlovi*, *L. vulgaris* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Near Threatened

Rationale for assessment: There is very little data available on population trends for this species in Mongolia. However, exploitation is believed to be occurring at high levels throughout its range. When population data becomes available, this species may be re-categorised as threatened under Criterion A if conservation actions are not implemented. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: Listed under CITES Appendix II (UNEP-WCMC, 2006). *L. l. isabellina* is protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Listed as Rare under the 1995 Mongolian Hunting Law, which only permits hunting between October 21st and February 16th (MNE, 2005). Trophy hunters can purchase a hunting license to export trophies, from which \$1,800 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 13% of the species' range in Mongolia occurs within protected areas.

Global distribution: Spain, France, Germany, Norway, Switzerland, Italy, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Hungary, Serbia and Montenegro, Slovakia, Albania, Finland, Greece, Romania, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Estonia, Belarus, Turkey, Russian Federation, Republic of Moldova, Iraq, Georgia, Armenia, Islamic Republic of Iran, Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, India, Kyrgyzstan, Nepal, Mongolia, Bhutan, Democratic People's Republic of Korea.

Regional distribution: Widely distributed throughout Mongolia, although frequently undetected. Most commonly encountered in coniferous forest habitats in Darkhad, Chandmani-Öndör, Tsagaan-Üür, Renchinlkhümbe, Ulaan-Uul, and Bayanzürkh villages in Hövsgöl Mountain Range (Dulamtsere, 1970). This is one of the few species in Mongolia known to exist in desert mountain habitats.

Dominant threats: Illegal and unsustainable hunting for skins, for international trade. Between 1958 and 1960, an estimated 350 lynx were removed annually (Stubbe, 1965). Also threatened by a reduction in its prey base, including Siberian ibex (*Capra sibirica*) and

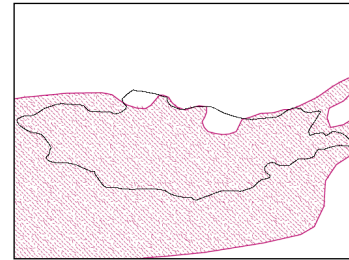
Siberian marmots (*Marmota sibirica*), and occasionally attacked and killed by domestic dogs. Habitat may potentially be lost or degraded due to resource extraction in some parts of its range, particularly clear cutting and logging.

94. *Otocolobus manul* (Pallas, 1776)

Common names: Pallas's cat (English), manuul mii (Mongolian)

Subspecies in Mongolia: *O. m. manul*

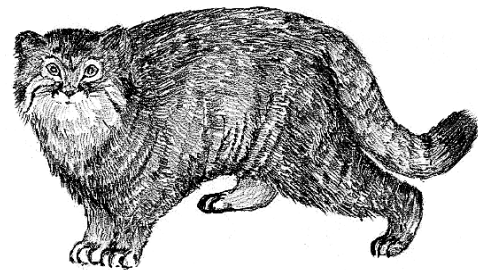
Synonyms: *O. ferrugineus*, *O. mongolicus*, *O. nigripectus*, *O. satuni* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Near Threatened

Rationale for assessment: There is very little data available on population trends for this species in Mongolia. However, exploitation is believed to be occurring at high levels throughout its range. When population data becomes available, this species may be re-categorised as threatened under Criterion A if conservation actions are not implemented.



The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Listed under CITES Appendix II, with an export quota of six live individuals in 2005 (UNEP-WCMC, 2006). Trophy hunters can purchase a hunting license to export trophies, from which \$70 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 12% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Armenia, Islamic Republic of Iran, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, India, Kyrgyzstan, Mongolia.

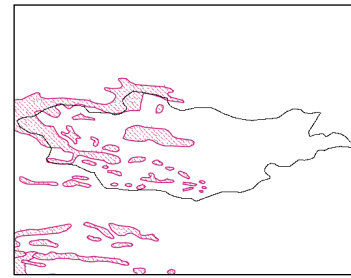
Regional distribution: Occurs throughout Mongolia, except in coniferous forest habitats. This species is occasionally found in alpine and desert habitats (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980).

Dominant threats: Unsustainable hunting for skins and traditional medicines for international trade is believed to be causing a population decline. Hunting records between 1958 and 1960 estimate 5,500 individuals were removed annually (Stubbe, 1965). Poisoning campaigns to control Brandt's vole (*Lasiopodomys brandti*) in Mongol Daguur Steppe and Eastern Mongolia in 2001, 2002, and 2003 using Bromadiolone pose a threat to this species. However, this activity is currently being phased out as the effect of this activity on non-target species is being realised (N. Batsaikhan, pers. comm.). Domestic dogs may occasionally attack and kill this species.

95. *Uncia uncia* (Schreber, 1775)

Common names: Snow leopard or ounce (English), tsoohor irves (Mongolian)

Synonyms: *U. irbis*, *U. schneideri*, *U. uncioides* (see Wilson and Reeder (1993) for further details)



Global status: Endangered, C2a(i)

Regional status: Endangered, C1

Rationale for assessment: In 2000, the Mongolian population was estimated to consist of between 500 and 1,000 individuals (McCarthy and Chapron, 2003). Generation length of *Uncia uncia* is estimated as seven years, based on data from Nowak (1991).



This species qualifies as Endangered

under Criterion C1 as the small population is estimated to decline by 20% over the next two generations, primarily due to exploitation. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Listed under CITES Appendix I (UNEP-WCMC, 2006) and protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1972, and it is currently protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Included as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). At least ten protected areas contain snow leopard populations (McCarthy 2000), which totals approximately 18% of the species' range within Mongolia (McCarthy and Chapron, 2003).

Global distribution: Russian Federation, Kazakhstan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, India, Kyrgyzstan, Nepal, Mongolia, Bhutan.

Regional distribution: Rare in all parts of its range. McCarthy (2000) estimated the total Mongolian range size to be around 103,000 km², with most sightings occurring in central Trans Altai Gobi Desert and northern Gobi Altai Mountain Range. Remnant populations may still occur in Hövsgöl and Hangai mountain ranges, although the last recorded sightings there were during the 1960s (McCarthy and Chapron, 2003). Distribution is closely associated with that of its main prey species Siberian ibex (*Capra sibirica*) and argali (*Ovis ammon*) (Munkhtsog, 2006).

Dominant threats: Illegal hunting for skins and bones, which are used as a substitute for tiger bone in traditional medicines (Liao and Tan, 1988). Its meat is also considered to have medicinal properties. According to sources in Mongolia and China, snow leopard pelts are sold for as much as \$250 USD per metre (Wingard and Zahler, 2006). Increasingly threatened by loss of its prey base, as many large ungulates are now also threatened with extinction. It is also occasionally persecuted in some areas as a pest, as it has been known to prey on livestock.

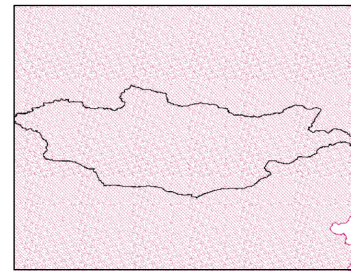
Family Canidae

96. *Canis lupus* Linnaeus, 1758

Common names: Grey wolf or timber wolf (English), saaral chono (Mongolian)

Subspecies in Mongolia: *C. l. lupus*

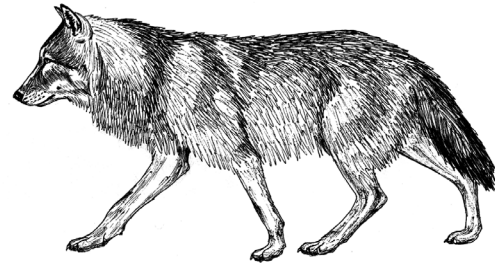
Synonyms: Including *C. albus*, *C. ater*, *C. chanco* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Near Threatened

Rationale for assessment: In 1980 the Mongolian population was estimated at 30,000 individuals by the Mongolian Academy of Sciences. More recent estimates vary greatly, with the most recent figures indicating that there may be fewer than 10,000 individuals remaining in Mongolia (Mech and Boitani, 2004). However, there is great uncertainty associated with these estimates and more extensive surveys are needed to gain insight into the current population size. No population studies have ever been conducted to determine wolf population densities, distribution, pack size, or range (Wingard and Zahler, 2006). Generation length has been estimated as six years, based on data from Nowak (1991). The observed declines in population size are believed to be caused primarily by exploitation, persecution, and disease. It is clear that this species is declining, but the rate of decline is difficult to determine. It is therefore listed as Near Threatened, but further surveys may reveal that it should be listed as Vulnerable or even Endangered under Criterion A. The assessment remains unchanged following application of regional criteria, as there is no significant immigration from adjacent countries.



Legal status: Listed under CITES Appendix II, with an export quota of 150 skins and skulls in 2005 (UNEP-WCMC, 2006). Trophy hunters can purchase a hunting license to export trophies, from which \$225 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). There are no laws to protect this species from household or industrial hunting, no closed seasons and no quota limits. Approximately 13% of the species' range occurs within protected areas, however, wolf protection within protected areas is rarely enforced, and exceptions are made in some areas to protect rare wildlife and livestock.

Global distribution: Distributed primarily in wilderness and remote areas across Canada, Alaska and northern USA, Europe and Asia (Mech and Boitani, 2004).

Regional distribution: Occurs in all habitat types in Mongolia, but not around highly populated human settlements. It is most commonly found in taiga habitats in Hentii and Hövsgöl mountain ranges, where red deer (*Cervus elaphus*) and Siberian roe deer (*Capreolus pygargus*) are present, eastern steppe habitats where Mongolian gazelle (*Procapra gutturosa*) occur, and mountainous areas inhabited by argali (*Ovis ammon*) and Siberian ibex (*Capra sibirica*) (Shagdarsuren, 1966; Dulamtseren, 1970).

Dominant threats: Unsustainable hunting remains the dominant threat, as its skins are of commercial value and all body parts (including the tongue, spleen, ankle bones, and teeth) are used in traditional medicines, and it is also hunted as a sport (Mech and Boitani, 2004; Wingard and Zahler, 2006). Regarded as a pest species as it preys on livestock, and is therefore consequently persecuted. Of a survey of 949 hunters throughout the country, almost 40% (321) claim to hunt wolves (Wingard and Zahler, 2006). Hunting levels are believed to have reached 18,000 individuals in 1933 (Scharf *et al.*, 2003), and between 1942 and 1960 the average number of wolves removed annually was estimated to be 5,827 (Stubbe, 1965). This figure is believed to have remained stable since this time, and surveys of wolf skins sold in Mongolian markets in 2003 estimated the total figure at around 4,900. However, a nationwide survey conducted by the Wildlife Conservation Society in 2004 suggests that Mongolian hunters may have removed at least 20,000-30,000 wolves during 2004, although this cannot be stated with certainty (Wingard and Zahler, 2006). It is also susceptible to mange, canine parvovirus, distemper and rabies (Mech and Boitani, 2004).

97. *Cuon alpinus* (Pallas, 1811)

Common names: Asiatic wild dog (English), shar tsoovor (Mongolian)

Subspecies in Mongolia: *C. a. hesperius*

Synonyms: Including *C. clamitans*, *C. grayiformes*, *C. rutilans* (see Wilson and Reeder (1993) for further details)



Global status: Endangered, C2a(i)

Regional status: Regionally Extinct

Legal status: Listed under CITES Appendix II (UNEP-WCMC, 2006) and protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Listed as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996) and in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Most of the species' former historic range occurs within protected areas.

Global distribution: Turkey, Russian Federation, Kazakhstan, Tajikistan, China, India, Kyrgyzstan, Nepal, Mongolia, Bangladesh, Bhutan, Myanmar, Republic of Korea, Democratic People's Republic of Korea, Thailand, Malaysia, Indonesia, Lao People's Democratic Republic, Cambodia, Viet Nam.

Regional distribution: Considered extinct in Mongolia by the 1930s (Bannikov, 1954). An individual was trapped in 1969 around Zöölön Mountain in Govi Altai Mountain Range. This is the last definite evidence of its presence in Mongolia, although it may still occur in Trans Altai Govi Desert, Hövsgöl Mountain Range, Northern Govi, Alashan' Govi Desert, and Eastern Govi.

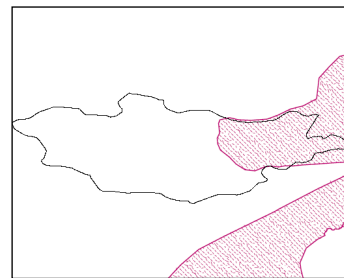
Dominant threats: Regarded as a pest species and consequently persecuted.

98. *Nyctereutes procyonoides* (Gray, 1834)

Common names: Raccoon dog (English), zagal elbinkh (Mongolian)

Subspecies in Mongolia: *N. p. ussuriensis*

Synonyms: *N. albus*, *N. koreensis*, *N. viverrinus* (see Wilson and Reeder (1993) for further details)

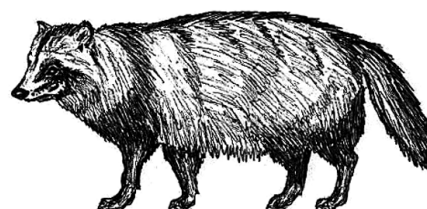


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Trophy hunters can purchase a hunting license, from which \$270 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 10% of the species' range in Mongolia occurs within protected areas.



Global distribution: France [int], Netherlands [int], Germany [int], Norway [int], Switzerland [int], Austria [int], Czech Republic [int], Sweden [int], Poland [int], Hungary [int], Slovakia [int], Finland [int], Romania [int], Latvia [int], Lithuania [int], Estonia [int], Ukraine [int], Russian Federation, Belarus [int], Republic of Moldova [int], Kazakhstan [int], China, Mongolia, Viet Nam, Republic of Korea, Democratic People's Republic of Korea, Japan; possibly also occurs in Uzbekistan.

Regional distribution: Distributed in the east of the country, along Halh River in Ikh Hyangan Mountain Range, and around Ulz, Döch, Herlen and Onon river basins in eastern Hentii Mountain Range, Middle Halh Steppe, and Mongol Daguur Steppe. Also occurs around Hökh Lake in Eastern Mongolia, Ikh Hyangan Mountain Range, and north-eastern parts of Eastern Govi. Its range is believed to be expanding along riparian zones and in marginal habitats associated with willow trees.

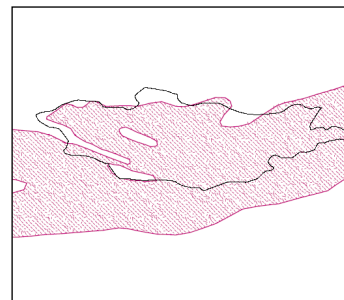
Dominant threats: Unsustainable hunting for meat and skins, although its fur is of little commercial value at present. However, even low levels of hunting can have a large impact as it occurs at low population densities. Domestic dogs attack and kill this species, and it is susceptible to sarcoptic mange (*Sarcoptes scabies*) (Kauhala and Saeki, 2004).

99. *Vulpes corsac* (Linnaeus, 1768)

Common names: Corsac fox (English), khyars uneg, kirsra or kiresa (Mongolian)

Subspecies in Mongolia: *V. c. scorodumovi*

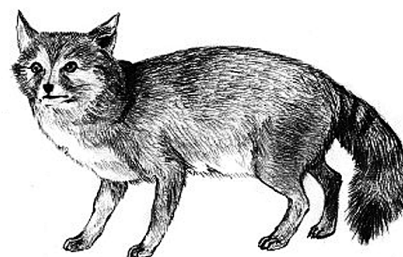
Synonyms: *V. kalmkorum*, *V. nigra*, *V. scorodumovi*, *V. turkmenica* (Wilson and Reeder, 1993)



Global status: Least Concern

Regional status: Near Threatened

Rationale for assessment: Exploitation is known to be occurring at high levels throughout its range (Wingard and Zahler, 2006), although no population data are available at present. When this information becomes available, this species may be re-categorised as threatened under Criterion A. Generation length has been estimated as four years, based on data from Nowak (1991). The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Trophy hunters can purchase a hunting license to export trophies, from which \$55 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 12% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Islamic Republic of Iran, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Tajikistan, China, Kyrgyzstan, Mongolia.

Regional distribution: Occurs throughout Mongolia in steppe and semi-deserts habitats. It is not found in taiga habitats in Hentii and Hövsgöl mountain ranges (Dulamtsere *et al.*, 1989).

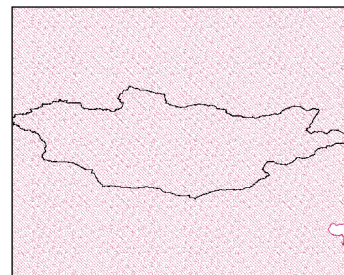
Dominant threats: Unsustainable hunting for meat and skins, and traditional medicines is the primary threat and is believed to be increasing despite the low commercial value of furs at present. Poisoning campaigns to control Brandt's vole (*Lasiopodomys brandti*) in Mongol Daguur Steppe and Eastern Mongolia in 2001, 2002, and 2003 using Bromadiolone pose a threat to this species, however, this activity is currently being phased out as the effect of this activity on non-target species is being realised (N. Batsaikhan, pers. comm.). Habitat loss may constitute a threat through increasing resource extraction (mining). Domestic dogs occasionally attack and kill this species, and it is susceptible to rabies (Geptner *et al.*, 1967).

100. *Vulpes vulpes* (Linnaeus, 1758)

Common names: Red fox (English), shar uneg (Mongolian)

Subspecies in Mongolia: *V. v. daurica*

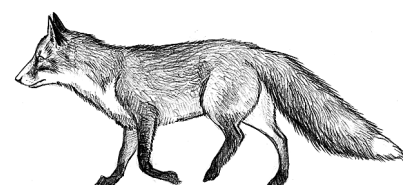
Synonyms: Including *V. alba*, *V. barbarus*, *V. fulvus* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Near Threatened

Rationale for assessment: Exploitation is known to be occurring at high levels throughout its range (Wingard and Zahler, 2006), although no population data are available at present. When this information becomes available, this species may be re-categorised as threatened under Criterion A. Generation length has been estimated as four years, based on data from Nowak (1991). The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Trophy hunters can purchase a hunting license, from which \$70 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 13% of the species' range in Mongolia occurs within protected areas.

Global distribution: Eurasia, except the south-eastern tropical zone, northern Africa, most of Canada, and the United States (Nowak, 1991).

Regional distribution: Throughout Mongolia in all habitat types, but at low densities. Most abundant in mountainous habitats in Hentii and Hövsgöl mountain ranges, but also occurs in Orhon and Selenge river basins in north-eastern Hangai Mountain Range and south-western Hangai Mountain Range. Also occurs in steppe habitats in Eastern Mongolia, Mongol Altai Mountain Range, and Govi Altai Mountain Range (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980; Dawaa *et al.*, 1982).

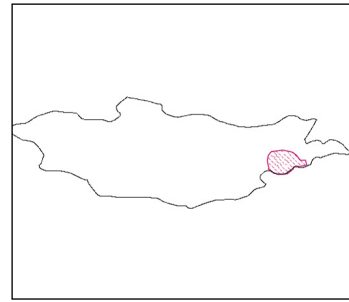
Dominant threats: Unsustainable hunting for skins, for international trade. Poisoning campaigns to control Brandt's vole (*Lasiopodomys brandti*) in Mongol Daguur Steppe and Eastern Mongolia in 2001, 2002, and 2003 using Bromadiolone pose a threat to this species, however, this activity is currently being phased out as the effect of this activity on non-target species is being realised (N. Batsaikhan, pers. comm.). Also susceptible to rabies (Macdonald and Reynolds, 2004) and sarcoptic mange (Newman *et al.*, 2002).

Family Mustelidae

101. *Arctonyx collaris* Cuvier, 1825

Common names: Hog badger (English), mangis dorgo or hums zorh (Mongolian)

Synonyms: Including *A. consul*, *A. obscurus*, *A. taxoides* (see Wilson and Reeder (1993) for further details)

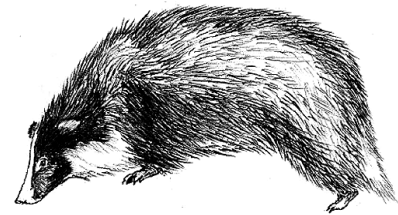


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Approximately 1% of the species' range in Mongolia occurs within protected areas.



Global distribution: China, India, Mongolia, Bhutan, Myanmar, Thailand, Malaysia, Indonesia, Lao People's Democratic Republic, Cambodia, Viet Nam.

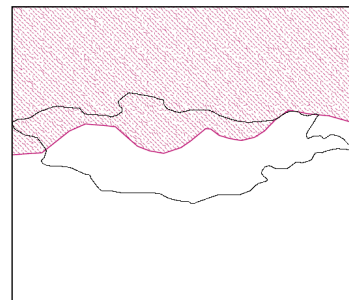
Regional distribution: Only known from one skin found in Eastern Mongolia during the 1980s (Stubbe *et al.*, 1998).

Dominant threats: No available data.

102. *Gulo gulo* (Linnaeus, 1758)

Common names: Wolverine (English), nokhoi zeekh (Mongolian)

Synonyms: Including *G. arctos*, *G. borealis*, *G. luteus* (see Wilson and Reeder (1993) for further details)

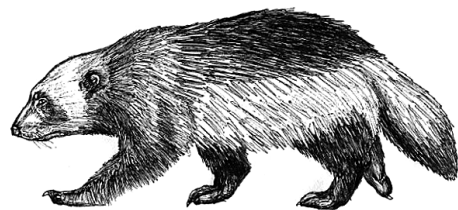


Global status: Vulnerable, A2c

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected. More data on threats and population trends may result in this species being re-categorised as Near Threatened in the near future.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Approximately 14% of the species' range occurs within protected areas.



Global distribution: Canada, USA, Norway, Sweden, Finland, Estonia, Russian Federation, China, Mongolia.

Regional distribution: Northern taiga habitats in Hentii and Hövsgöl mountain ranges (Bannikov, 1954; Dulamtseren, 1970), northern Hangai Mountain Range, Mongol Daguur Steppe, and Mongol Altai Mountain Range (Dulamtseren *et al.*, 1989).

Dominant threats: Preys on livestock and eats animals caught in traps, therefore regarded as a pest species and consequently persecuted.

103. *Lutra lutra* (Linnaeus, 1758)

Common names: Eurasian otter (English), goliin khaliu (Mongolian)

Subspecies in Mongolia: Designation of subspecies within Mongolia has not yet been investigated.

Synonyms: Including *L. indica*, *L. kutab*, *L. splendida* (see Wilson and Reeder (1993) for further details)



Global status: Near Threatened

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats. Further data on population trends may result in this species being re-categorised as threatened in the near future.



Legal status: Listed under CITES Appendix I (UNEP-WCMC, 2006) and protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1930, and it is protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Very Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 12% of the species' range in Mongolia occurs within protected areas.

Global distribution: Historically included most of Eurasia (Nowak, 1991).

Regional distribution: Formerly widespread in the rivers of northern Mongolia including Hövsgöl, Hangai and Hentii mountain ranges (Mallon, 1985), along rivers in north-western parts of Mongol Altai Mountain Range, and along Halh River in Ikh Hyangan Mountain Range (Bannikov, 1954; Dulamtseren, 1970; Tsagaan, 1975; 1977; Sokolov and Orlov, 1980; Stubbe *et al.*, 1989). However, extensive trapping during the nineteenth and twentieth centuries resulted in a major population decline, and by 1995 only a few individuals remained downstream of Tengis River in northern parts of Hövsgöl Mountain Range (Samjaa *et al.*, 1998) and Eröö River Basin in western Hentii Mountain Range (Tsendjav, 2005). Occasionally found along Tes River in northern Hangai Mountain Range, and along Eg and Hurimt rivers in Hövsgöl Mountain Range (Stubbe *et al.*, 1998).

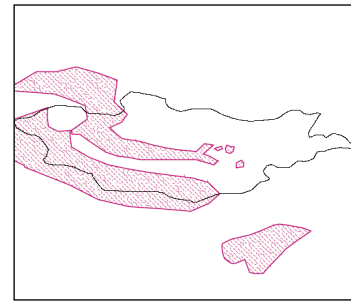
Dominant threats: Illegal hunting for skins, for international trade. Recent increases in resource extraction (mining) is also believed to cause pollution of water systems inhabited by this species.

104. *Martes foina* (Erxleben, 1777)

Common names: Beech marten (English), suusar bulga (Mongolian)

Subspecies in Mongolia: *M. f. intermedia*

Synonyms: Including *M. domestica*, *M. intermedia*, *M. rosanowi* (see Wilson and Reeder (1993) for further details)

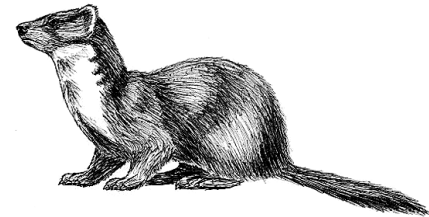


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Listed as Rare under the 1995 Mongolian Hunting Law (MNE, 1996); hunting is permitted only between October 21st and February 16th (MNE, 2005). Approximately 21% of the species' range in Mongolia occurs within protected areas.



Global distribution: Portugal, Spain, France, Netherlands, Germany, Liechtenstein, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Croatia, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Albania, Greece, Romania, the former Yugoslav Republic of Macedonia, Ukraine, Bulgaria, Belarus, Turkey, Russian Federation, Republic of Moldova, Georgia, Armenia, Islamic Republic of Iran, Azerbaijan, Kazakhstan, Turkmenistan, Afghanistan, Pakistan, China, Kyrgyzstan, Nepal, Mongolia.

Regional distribution: Mongol Altai Mountain Range, Dzungarian Gobi Desert, Trans Altai Gobi Desert, Gobi Altai Mountain Range, Alashan' Gobi Desert, Valley of the Lakes, and Northern Gobi (Bannikov, 1954; Dulamtseren, 1970). Also occurs in southern Hangai Mountain Range and northern parts of Eastern Gobi (Bannikov, 1954; Dulamtseren, 1970; Chotolchu *et al.*, 1980).

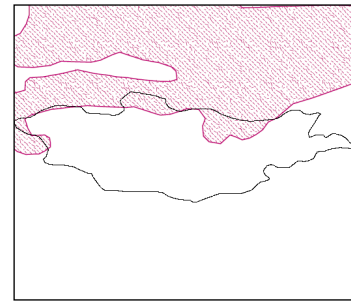
Dominant threats: Illegal and unsustainable hunting for skins, for regional and international trade.

105. *Martes zibellina* (Linnaeus, 1758)

Common names: Sable (English), oin bulga (Mongolian)

Subspecies in Mongolia: *M. z. sajanensis*, *M. z. princeps*, *M. z. averini*. Further research on the designation of subspecies within Mongolia is required.

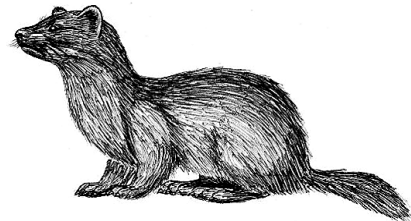
Synonyms: *M. brachyura* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Vulnerable, A3cd

Rationale for assessment: Fur of this species is highly valued, and hunting has caused a decline in the Mongolian population. Very little population data exists for this species in Mongolia, but it is known that between 1966 and 1968, densities were estimated to be 11.7 individuals per 1,000 hectare in central Hentii Mountain Range (Stubbe and Chotolchu, 1968), and during the 1970s, there were estimated to be a total of 10,000 individuals in this region (Chotolchu, 1976). Generation length has been estimated as seven years, based on data from Nowak (1991). As a population reduction of at least 30% over the next three generations is expected to result, *Martes zibellina* qualifies as Vulnerable under Criterion A3cd. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: Hunting was entirely prohibited between 1953 and 2000, but is currently permitted between October 21st and February 16th (MNE, 2005). Approximately 20% of the species' range in Mongolia occurs within protected areas.

Global distribution: Finland, Russian Federation, China, Mongolia, Democratic People's Republic of Korea, Japan.

Regional distribution: Coniferous forest habitats in Hövsgöl and Hentii mountain ranges, and north-western Mongol Altai Mountain Range (Bannikov, 1954; Chotolchu, 1976; Chotolchu, 1980). *M. z. sajanensis* is distributed in Hövsgöl Mountain Range, *M. z. princeps* occurs in Hentii Mountain Range and Mongol Daguur Steppe, and *M. z. averini* is found in Mongol Altai Mountain Range.

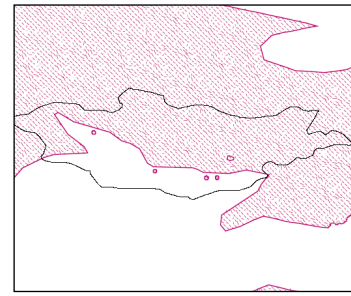
Dominant threats: Illegal and unsustainable hunting for skins and traditional medicines, for international trade. Between 1910 and 1920 an estimated 4,000-5,000 skins were collected from Hövsgöl and Hentii mountain ranges, and Soyon Mountain in northern Hangai Mountain Range (Namnandorj, 1976). The level of hunting declined in accordance with the species decline by the end of the 1920s, between 1927 and 1929 only around 300-500 skins were collected annually (Bannikov, 1954). Habitat loss is an important threat, primarily caused by increasing resource extraction (logging). Habitat degradation through human-caused and natural wildfires also constitutes a threat to this species, particularly during spring when newborns may become trapped in dens (M. Stubbe, pers. comm.).

106. *Meles meles* (Linnaeus, 1758)

Common names: Eurasian badger (English), khalzgai dorgo (Mongolian)

Subspecies in Mongolia: *M. m. leptorhynchus*. Further research on the designation of subspecies within Mongolia is required.

Synonyms: Including *M. alba*, *M. heptneri*, *M. vulgaris* (see Wilson and Reeder (1993) for further details)



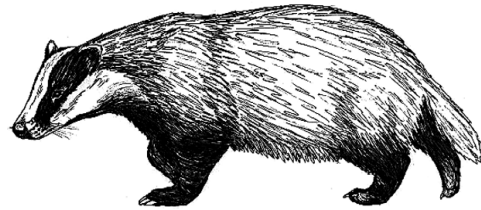
Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Hunting is permitted between September 1st and November 1st (MNE, 2005).

Trophy hunters can purchase hunting licenses from which \$70 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Europe and Asia, as far east as Japan, and as far south as Palestine, Iran, Tibet, and Southern China (Corbet, 1978).

Regional distribution: Coniferous forest, forest-steppe, and steppe habitats of northern and central Mongolia, including Mongol Altai, Hövsgöl, Hangai and Hentii mountain ranges (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980; Stubbe *et al.*, 1998). Small numbers are also present in Eastern Mongolia, Great Lakes Depression, Valley of the Lakes, Eastern Govi, and Northern Govi, although the southern distribution in Mongolia is unclear.

Dominant threats: Illegal and unsustainable hunting for skins, and all body parts are used for traditional medicines. Records of hunting levels between 1958 and 1960 estimate that 1,500-1,800 individuals were removed annually (Stubbe, 1965). At present, hunting occurs at a regional level with low levels of international trade occurring (Wingard and Zahler, 2006). Domestic dogs may occasionally attack and kill this species.

107. *Mustela altaica* Pallas, 1811

Common names: Alpine weasel or mountain weasel (English), solongo uen (Mongolian)

Subspecies in Mongolia: *M. a. raddei*

Synonyms: Including *M. alpina*, *M. birulai*, *M. raddei* (see Wilson and Reeder (1993) for further details)

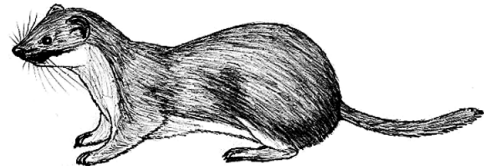


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Hunting is permitted between October 21st and February 16th (MNE, 2005). Approximately 9% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Kazakhstan, Pakistan, China, India, Mongolia, Republic of Korea, Democratic People's Republic of Korea.

Regional distribution: Most abundant in steppe and forest habitats in central and eastern Mongolia (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980), but is occasionally encountered in Mongol Altai, Hangai, and Hövsgöl mountain ranges.

Dominant threats: Accidental mortality is the primary threat, through traps intended for other species such as muskrats (*Ondatra zibethicus*). Hunting for skins also constitutes a threat, an estimated 1,000 individuals were removed between 1959 and 1960 (Stubbe, 1965). The current level of hunting is decreasing, although limited international trade still occurs (Wingard and Zahler, 2006).

108. *Mustela erminea* Linnaeus, 1758

Common names: Stoat or ermine (English), tsagaan uen (Mongolian)

Subspecies in Mongolia: *M. e. lymani*, *M. e. mongolica*

Synonyms: Including *M. alascensis*, *M. herminea*, *M. vulgaris* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 10% of the species' range in Mongolia occurs within protected areas.



Global distribution: Canada, USA, Republic of Ireland, Portugal, Spain, France, United Kingdom, Belgium, Netherlands, Germany, Norway, Liechtenstein, Switzerland, Luxembourg, Italy, Denmark, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Bosnia and Herzegovina, Hungary, Serbia and Montenegro, Slovakia, Albania, Finland, Greece, Romania, the former Yugoslav Republic of Macedonia, Latvia, Lithuania, Estonia, Ukraine, Bulgaria, Belarus, Turkey, Russian Federation, Republic of Moldova, Georgia, Azerbaijan, Kazakhstan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, India, Kyrgyzstan, Mongolia, Japan, New Zealand [int].

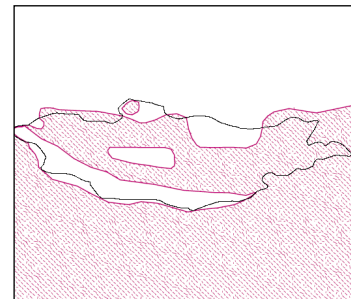
Regional distribution: Abundant in north-western and central Mongolia, but rare in the eastern plains (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980).

Dominant threats: Hunting for skins for local and international trade. Between 1958 and 1960 it was estimated that 860-1,750 individuals were removed annually (Stubbe, 1965). International trade in skins is believed to still be occurring, although at relatively low levels (Wingard and Zahler, 2006).

109. *Mustela eversmanni* Lesson, 1827

Common names: Steppe polecat (English), omkhii khuren (Mongolian)

Synonyms: *M. larvatus*, *M. lineiventer*, *M. tiarata* (see Wilson and Reeder (1993) for further details)

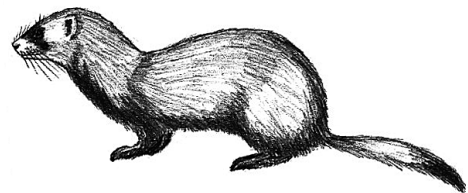


Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 12% of the species' range in Mongolia occurs within protected areas.



Global distribution: Czech Republic, Poland, Serbia and Montenegro, Slovakia, Romania, Ukraine, Bulgaria, Belarus, Russian Federation, Republic of Moldova, Kazakhstan, China, Mongolia; possibly also occurs in Georgia, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan.

Regional distribution: Throughout Mongolia, with the exception of south-western parts of the country, alpine and coniferous forest habitats in Mongol Daguur Steppe and Hentii Mountain Range, and parts of Hangai and Hövsgöl mountain ranges (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980). Most abundant in open steppe habitats, but also found at low densities in semi-desert habitats.

Dominant threats: Low levels of hunting for skins, for local use and international trade. Between 1958 and 1960, it was estimated that as many as 6,000 individuals were removed annually (Stubbe, 1965). Occasionally caught in traps intended for other species.

110. *Mustela nivalis* Linnaeus, 1766

Common names: Least weasel (English), khotnii uen (Mongolian)

Subspecies in Mongolia: *M. n. kerulenica*

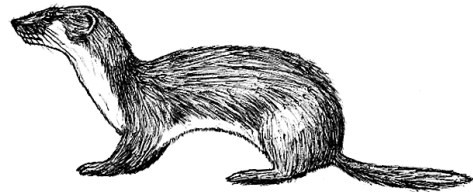
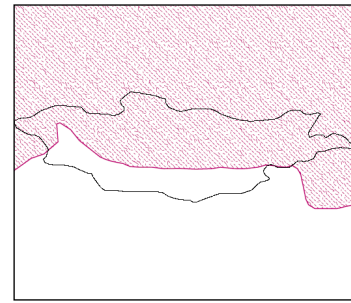
Synonyms: Including *M. alpinus*, *M. mictrous*, *M. typicus* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 8% of the species' range in Mongolia occurs within protected areas.



Global distribution: The Palearctic (excluding Ireland, the Arabian Peninsula, and the Arctic Isles), Japan; the Nearctic including Alaska (USA), Canada, USA, New Zealand [int] (Wilson and Reeder, 1993).

Regional distribution: Occurs widely throughout northern and central Mongolia (Bannikov, 1954; Dulamtseren, 1970). Most abundant in steppe habitats in Eastern Mongolia, south-western Hangai Mountain Range, and around Ulaanbaatar in Mongol Daguur Steppe.

Dominant threats: No available data.

111. *Mustela sibirica* Pallas, 1773

Common names: Siberian weasel (English), modnii uen (Mongolian)

Subspecies in Mongolia: *M. s. sibirica*

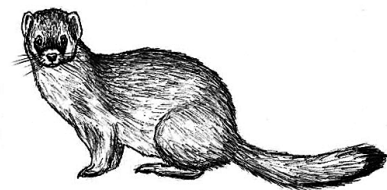
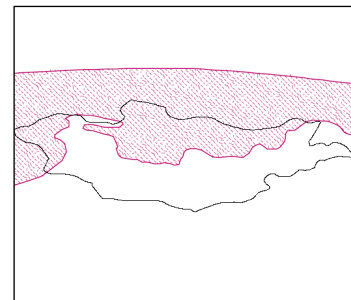
Synonyms: Including *M. horsfieldii*, *M. manchurica*, *M. peninsulae* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Approximately 13% of the species' range in Mongolia occurs within protected areas.



Global distribution: Russian Federation, Pakistan, China, India, Nepal, Mongolia, Bhutan, Myanmar, Republic of Korea, Democratic People's Republic of Korea, Thailand, Lao People's Democratic Republic, Viet Nam, Taiwan.

Regional distribution: Forest habitats in Hangai, Hövsgöl and Hentii mountain ranges, north-western Mongol Altai Mountain Range, and Mongol Daguur Steppe (Sukhbat and Shagdarjav, 1990).

Dominant threats: Low levels of hunting for skins, for international trade. Competition for resources with sable (*Martes zibellina*), and habitat degradation through human-caused and natural wildfires also constitute minor threats.

112. *Vormela peregusna* (Güldenstaedt, 1770)

Common names: Marbled polecat (English), ereen khuren (Mongolian)

Subspecies in Mongolia: *V. p. pallidior*

Synonyms: Including *V. euxina*, *V. negans*, *V. ornata* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Listed as Rare under the 1995 Mongolian Hunting Law (MNE, 1996), and in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 19% of the species' range in Mongolia occurs within protected areas.



Global distribution: Serbia and Montenegro, Greece, Romania, the former Yugoslav Republic of Macedonia, Ukraine, Bulgaria, Turkey, Russian Federation, Lebanon, Israel, Syrian Arab Republic, Georgia, Iraq, Armenia, Islamic Republic of Iran, Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, China, Mongolia.

Regional distribution: Steppe and occasionally desert and semi-desert habitats in Dzungarian Gobi Desert, Great Lakes Depression, Valley of the Lakes, Trans Altai Gobi Desert, Northern Gobi, Eastern Gobi and Alashan' Gobi Desert (Bannikov, 1954; Dulamtseren, 1970, Sokolov and Orlov, 1980; Chotolchu *et al.*, 1989; Dulamtseren *et al.*, 1999).

Dominant threats: Occasional accidental mortality through traps intended for other species.

Family Ursidae

113. *Ursus arctos* Linnaeus, 1758

Common names: Brown bear (English), khuren baavgai (Mongolian)

Subspecies in Mongolia: *U. a. baikalensis*, *U. a. gobiensis* (assessed individually below)

Synonyms: Including *U. baikalensis*, *U. collaris*, *U. dalli* (see Wilson and Reeder (1993) for further details)

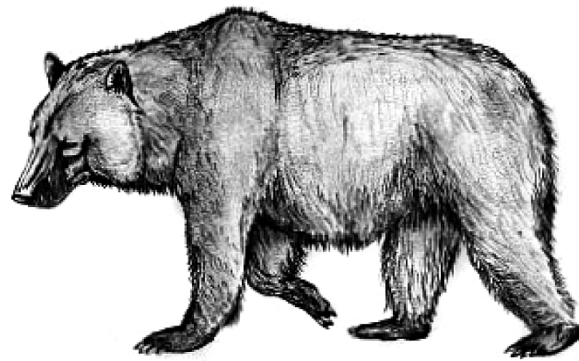


Global status: Least Concern

Regional status: Data Deficient

Rationale for assessment: Inadequate information on distribution, population size and trends, or the impact of threats.

Legal status: Listed under CITES Appendix II (UNEP-WCMC, 2006). The 2000 Mongolian Law on Fauna was amended in 2005 (Mongolian Government Act No. 248) to include this species as Rare. Hunting is permitted between August 1st and November 16th; trophy hunters can purchase



hunting licenses to export trophies, from which \$2,250 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 21% of the species' range in Mongolia occurs within protected areas.

Global distribution: Canada, USA, Spain, France, Norway, Italy, Austria, Czech Republic, Slovenia, Croatia, Sweden, Poland, Bosnia and Herzegovina, Serbia and Montenegro, Slovakia, Albania, Finland, Greece, Romania, the former Yugoslav Republic of Macedonia, Latvia, Estonia, Ukraine, Bulgaria, Belarus, Turkey, Russian Federation, Syrian Arab Republic, Iraq, Georgia, Islamic Republic of Iran, Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, China, India, Kyrgyzstan, Mongolia, Democratic People's Republic of Korea, Japan.

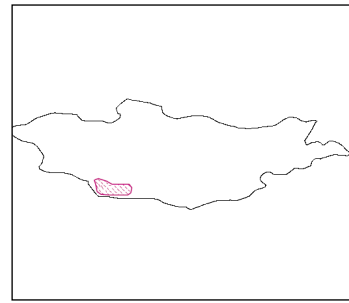
Regional distribution: Forest habitats in Hövsgöl Mountain Range, along Ulz and Onon rivers which run through eastern Hentii Mountain Range and Mongol Daguur Steppe, northern Mongol Altai Mountain Range, and Ikh Hyangan Mountain Range (Bannikov, 1954; Dulamtseren, 1970; Sokolov and Orlov, 1980).

Dominant threats: Human-caused changes in the availability of habitat is the dominant threat to this species. Illegal and unsustainable hunting for international trade; all body parts are used for traditional medicines. Within Mongolia, trade in gall bladders is the focus of illegal and unsustainable hunting (Wingard and Zahler, 2006).

114. *Ursus arctos gobiensis* Sokolov and Orlov, 1992

Common names: Gobi bear (English), mazaalai baavgai (Mongolian)

Subspecies in Mongolia: Officially recognised as a distinct taxon during an expedition by the Science Committee of the Mongolian People's Republic in 1943 (Bannikov, 1954). Described as a distinct species *Ursus gobiensis*, by Sokolov and Orlov (1992), however, this designation was based on morphological assessment of a limited sample of specimens and has since been questioned (Schaller *et al.*, 1993; McCarthy, 1999). Re-identified as a subspecies, *U. a. pruinosus* Blyth, 1854, this was later shown to be a misidentification, as Mongolia is not included in the geographic range of this subspecies and chronological investigation of a limited number of skull samples showed it to be distinct. In 1980, Sokolov and Orlov re-identified this taxon as *U. a. isabellinus*. Recent analysis of genetic samples taken from across the geographical range of *U. a. isabellinus* (Horsfield, 1826) suggests that this subspecies represents a monophyletic lineage which includes the Gobi bear, therefore *U. a. gobiensis* may represent a junior synonym of this subspecies (Galbraith *et al.*, submitted). It is hoped that further DNA analysis will reveal the true status of this taxon, but in the absence of sympatric or parapatric occurrence of populations of *U. a. isabellinus* and *U. a. gobiensis*, the Gobi bear is currently retained as a valid subspecies on the basis of its apparently distinctive morphology (H. Reynolds, pers. comm.).



Global status: Critically Endangered, D●●, pending review by IUCN authorities and resolution of taxonomic status.

Regional status: Critically Endangered, D

Rationale for assessment: This taxon has a very small population, currently estimated to be between 25 and 40 individuals (Batsaikhan *et al.*, 2004b). Population size is believed to have remained relatively stable since the 1970s, but low reproductive rates, the potential effects of inbreeding, and extreme environmental conditions continue to constitute severe threats. As the population consists of fewer than 50 mature individuals, this taxon qualifies as Critically Endangered under Criterion D. The assessment remains unchanged following application of regional criteria as this taxon is believed to be endemic to Mongolia.

Legal status: Listed under CITES Appendix I (UNEP-WCMC, 2006) and protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1953, and it is currently protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Very Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 82% of the taxon's range occurs within Great Gobi Section A Strictly Protected Area.

Global distribution: If found to be a distinct subspecies, it is endemic to Mongolia.

Regional distribution: Formerly occurred as far east as Tost Ula Mountains in Trans Altai Gobi Desert (Bannikov, 1954), but currently restricted to southern parts of this region, including Atas Bogd, Shar Khuls and Tsagaan Bogd mountains, near to oases (McCarthy, 1999). Individuals may occasionally move into Gobi Gurvansaikhan National Park (Nemegt and surrounding areas) in Gobi Altai Mountain Range (not shown on the map) to raid livestock forage (R. Reading, pers. comm.).

Dominant threats: Negative stochastic effects associated with small populations (e.g. inbreeding and low reproductive rates) make the Gobi bear vulnerable to environmental change and biotic factors such as disease. Levels of population isolation and gene flow across its range are unknown, but may further reduce population viability (McCarthy, 1999). Roads passing close to oases within Great Gobi Section A Strictly Protected Area have been closed, although enforcement has proven difficult and human disturbance may still be a threat (McCarthy, 1999). Drying of water sources and droughts threaten this taxon, although it remains unclear if these represent natural environmental changes or are driven by anthropogenic activity. Monitoring by Great Gobi Section A Strictly Protected Area staff has shown that this area has been suffering a drought since 1992, with annual precipitation decreasing over this period from c. 100 mm per year to c. 50 mm per year (Mijiddorj, 2006; H. Reynolds, pers. comm., using information provided by B. Mijiddorj, Director of Great Gobi Strictly Protected Area and L. Amgalan, Mongolian Academy of Sciences).

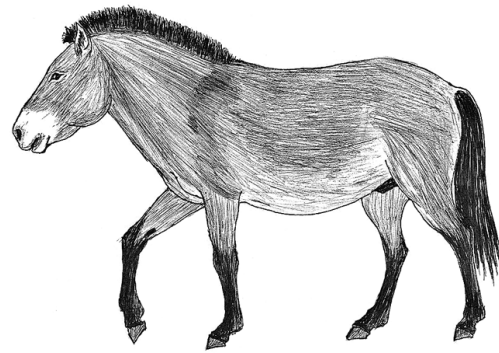
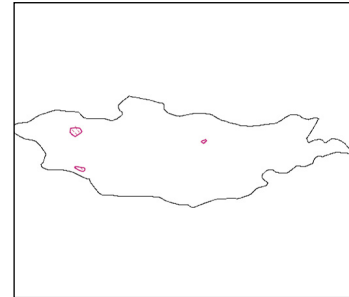
Order Perissodactyla

Family Equidae

115. *Equus ferus przewalskii* (Groves, 1986)

Common names: Przewalski's horse, Asiatic wild horse or Mongolian wild horse (English), takhi or takhi aduu (Mongolian)

Synonyms: *Equus caballus przewalskii*, *Equus przewalskii*. Przewalski's horse shares a common ancestor with the domestic horse (*Equus caballus* Boddaert, 1785), and can hybridise with domestic horses to produce fertile offspring (Ryder *et al.*, 1978; Trommerhausen-Smith *et al.*, 1979). However, genetic studies indicate that it is more distinct from its domestic relatives than are any two breeds of domestic horse (Ryder, 1994). Oakenfull *et al.* (2000) concluded that although Przewalski's horses have interbred with domestic horses in the past, and they are closely related, the fixed chromosomal number differences between them indicate that they should be interpreted as a distinct species.



Global status: Critically Endangered, D●, pending evaluation by the IUCN Equid Specialist Group.

Regional status: Critically Endangered, D

Rationale for assessment: Previously categorised as Extinct in the Wild from the 1960s until the most recent assessment in 1996. However, successful reintroductions at Hustai National Park, Tahiin Tal Nature Reserve, and Homiin Tal have qualified this species for reassessment. The population now consists of greater than 250 mature individuals of which many have had viable offspring. This species would qualify for Endangered if it were not for the five year rule which requires that a species must not meet any of the criteria of the higher category of threat for at least five years before it can be listed in a lower category of threat. Therefore, Przewalski's horse is currently listed as Critically Endangered and if current trends continue it will be listed as Endangered in the near future. This taxon is threatened by hybridisation with domestic horses, loss of genetic diversity, and disease. The assessment remains unchanged following application of regional criteria as there is no immigration from adjacent countries.

Legal status: Listed under CITES Appendix I (UNEP-WCMC, 2006), and protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1930, and it is listed as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Very Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). The taxon's entire range occurs within protected areas.

Global distribution: This taxon formerly had a wide distribution across most of Eurasia, as indicated by cave paintings in France and Spain. Reintroduction programmes are currently taking place in several parts of its former range, and there are now reintroduced populations in Ukraine [re-int], Kazakhstan [re-int], China [re-int] and Mongolia [re-int]. Considered endemic to Mongolia, as this is the only country where truly wild populations exist within its historic range.

Regional distribution: The last sighting of native wild horses in Mongolia took place in 1969, north of Takhiin Shar Nuruu in Dzungarian Gobi Desert (Paklina and Pozdnyakova, 1989). Reintroductions began in Tachiiin Tal Nature Reserve in Dzungarian Gobi Desert and Hustai National Park in Mongol Daguur Steppe in 1994 (King and Gurnell, 2005). A third reintroduction site in Homiin Tal in Great Lakes Depression was established in 2004, as a buffer zone to Har Us Nuur National Park in Valley of the Lakes (C. Feh, pers. comm.).

Dominant threats: Hybridisation with domestic horses is the primary threat, accompanied by competition for resources with domestic horses and possibly other livestock. There is concern over the potential loss of genetic diversity after being reduced to a very small population and maintained in captivity for several generations. Infectious diseases such as *Babesia equi*, *B. caballi* and strangles (infection by *Streptococcus equi*) are a major threat to these small reintroduced populations originating from zoos (Roberts *et al.*, 2005). Predation on foals by wolves accounts for a significant number of mortalities and constitutes a threat to the population growth and continued survival of this taxon (Shiirevdamba *et al.*, 1997; M. Stubbe, pers. comm.).

116. *Equus hemionus* Pallas, 1775

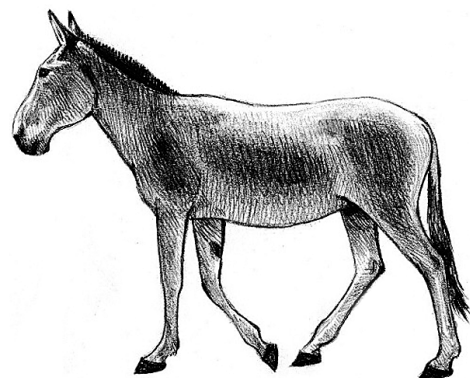
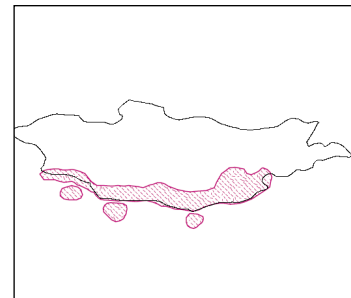
Common names: Asiatic wild ass (English), hulan or hulan aduu (Mongolian)

Subspecies in Mongolia: North Mongolian Asiatic wild ass *E. h. hemionus*, Gobi Asiatic wild ass *E. h. luteus*. These subspecies are currently interpreted as synonymous (Oakenfull *et al.*, 2000), a molecular study conducted jointly by the IUCN Equid Specialist Group and the Mongolian Academy of Sciences is underway to clarify the taxonomy of this species in Mongolia (Feh *et al.*, 2002).

Synonyms: Including *E. bedfordi*, *E. castaneus*, *E. finschi*, *E. luteus* (see Wilson and Reeder (1993) for further details)

Global status: *E. hemionus* is categorised as Vulnerable, A3bcd and C1. North Mongolian Asiatic wild ass (*E. h. hemionus*) and Gobi Asiatic wild ass (*E. h. luteus*) have both been infraspecifically assessed as Vulnerable, C1.

Regional status: Endangered, A4abd



Rationale for assessment: In 2003, the population was estimated to consist of 19,000-20,000 individuals (B. Lkhagvasuren, pers. comm.), but is declining due to exploitation, a decline in reproductive rates, and habitat loss/degradation. Generation length has been estimated as ten years, based on data from Nowak (1991). The off-take rate via illegal hunting may be as many as 3,000 individuals per year (Wingard and Zahler, 2006). This would result in a 5% decline per year and over a 20 year period could result in a greater than 60% decline. The population is known to have declined and a population reduction of at least 50% over the next three generations is inferred. Therefore this species is categorised as Endangered under Criterion A4abd. As the adjacent population in China does not appear to be expanding, the chance of any ‘rescue’ effect is small, so the assessment remains unchanged following application of regional criteria.

Legal status: *E. hemionus* is listed under CITES Appendix II, and both subspecies in Mongolia are listed under Appendix I (UNEP-WCMC, 2006). Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Hunting has been prohibited since 1953 (Shiirevdamba *et al.*, 1997), and it is currently listed as Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Included in Appendix II of the Convention on Migratory Species (CMS) in 2002, and listed as Rare in the ‘Mongolian Red Book’ of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 29% of the species’ range in Mongolia occurs within protected areas and in 1999, the Mongolian Government created two protected areas specifically for the conservation of this species, Little Gobi B Strictly Protected Area (Alashan’ Govi Desert) and Zagiin Us Nature Reserve (Northern Govi) (Feh *et al.*, 2002).

Global distribution: Once distributed throughout the Near East, including the Arabian Peninsula, Asia Minor and northwest India, but now extinct throughout most of its former range. Currently distributed in Israel [re-int], Saudi Arabia [re-int], Islamic Republic of Iran, Kazakhstan [re-int], Turkmenistan [including re-int populations], Uzbekistan [re-int], China (northern Xinjiang Province; R. Reading, pers. comm.), India, Mongolia (Feh *et al.*, 2002).

Regional distribution: Formerly widely distributed throughout steppe and semi-desert habitats, from the extreme west of the country to the Mongolian-Russian-Chinese border in the extreme north-east (Feh *et al.*, 2002). Asiatic wild ass have experienced a major decline in population and range size (Bannikov, 1981) and are currently only found in Trans Altai Govi Desert, Northern Govi, Alashan’ Govi Desert and Dzungarian Govi Desert (Reading *et al.*, 2001), as far north as Ikh Nartiin Chuluu Nature Reserve in Eastern Govi (Reading *et al.*, 2006). Recent evidence suggests that the population has either expanded or shifted further north and east over the past 20-25 years, but rarely crosses the Ulaanbaatar-Beijing railway line (Kaczensky *et al.*, in prep.). There are important populations in Great Gobi Section B Strictly Protected Area in Dzungarian Govi, and Great Gobi Section A Strictly Protected Area in Trans Altai Govi Desert (Feh *et al.*, 2002; Stubbe *et al.*, 2005b; Kaczensky *et al.*, in prep.).

Dominant threats: Illegal hunting for meat and skins for commercial use in some areas (Duncan, 1992; Stubbe *et al.*, 2005b). Habitat degradation/loss as a result of new human settlements (which restrict access to oases), resource extraction (mining), and possibly increasing numbers of livestock grazing (further evidence is required). Habitat fragmentation and restriction of wide-scale movements due to fencing is a significant problem along the Ulaanbaatar-Beijing railway and the China-Mongolia border (Kaczensky *et al.*, in prep), and is also caused by developing roads and railway lines associated with increasing resource extraction.

Order Artiodactyla

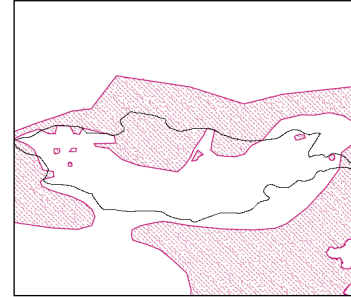
Family Suidae

117. *Sus scrofa* Linnaeus, 1758

Common names: Wild boar (English), zerleg gakhai (Mongolian)

Subspecies in Mongolia: *S. s. raddianus*, *S. s. nigripes*

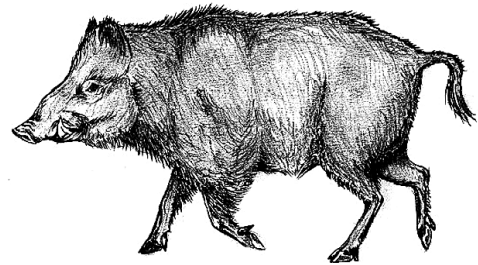
Synonyms: Including *S. barbarus*, *S. ferus*, *S. japonica* (see Wilson and Reeder (1993) for further details)



Global status: Least Concern

Regional status: Near Threatened

Rationale for assessment: No data on population sizes are available at present, although it is known that threats, particularly exploitation is having a large impact upon this species, coupled with hybridisation and habitat degradation. Generation length has been estimated as four years, based on data from Nowak (1991). As exploitation is known to be causing a population decline, when data becomes available this species may be re-categorised as threatened under Criterion A. There is a small chance of immigration from adjacent populations of *S. s. sibirica*, although levels of hunting pressure on these populations are not known, therefore the assessment remains unchanged following application of regional criteria.



Legal status: *S. s. nigripes* is protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Law of Mongolian Nature Conservation. Listed as Rare under the 1995 Mongolian Hunting Law (MNE, 1996); hunting is permitted between September 1st and December 1st (MNE, 2005). Trophy hunters can purchase a hunting license, from which \$225 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 13% of the species' range in Mongolia occurs within protected areas.

Global distribution: The historical distribution of this species includes most of Eurasia, and it has been introduced into many countries across the world (Nowak, 1991).

Regional distribution: *S. s. nigripes* occurs in forested regions in western Mongolia, including Great Lakes Depression and western Mongol Altai Mountain Range. *S. s. raddeanus* occurs in eastern parts of the country, including Hangai, Hövsgöl and Hentii mountain ranges, Ikh Hyangan Mountain Range and Mongol Daguur Steppe.

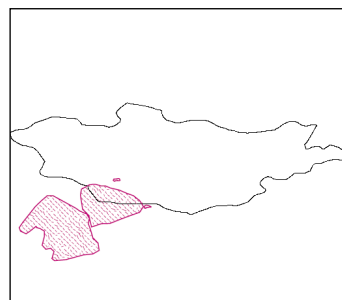
Dominant threats: Illegal and unsustainable hunting for meat for local and national use remains the primary threat. Habitat degradation through grazing by increasing numbers of livestock and human-caused and natural wildfires constitute threats. Habitat loss through resource extraction (selective logging) constitutes an increasing threat in parts of its range. Hybridisation with domestic pigs may also constitute a threat, although further evidence is required.

Family Camelidae

118. *Camelus bactrianus ferus* Przewalski, 1878

Common names: Bactrian camel or wild camel (English), havtgai or havtgai temee (Mongolian)

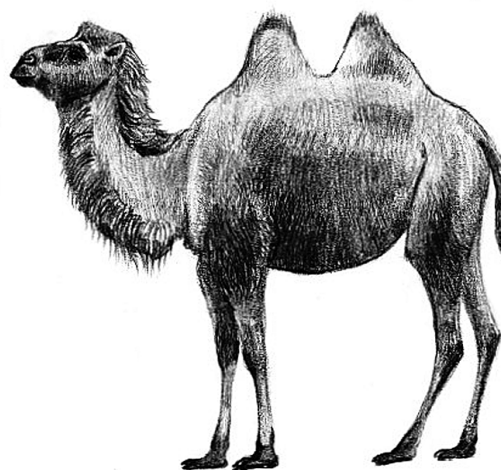
Synonyms: *C. ferus* (see Wilson and Reeder (1993) for further details). Preliminary genetic research indicates that wild Bactrian camels may represent a distinct species from domestic Bactrian camels (Han *et al.*, 2002), although further taxonomic research is required.



Global status: Critically Endangered, A3de and A4ade

Regional status: Endangered, C1

Rationale for assessment: Population size in Mongolia is estimated to consist of 463 mature individuals, ± 92 (Adiya and Dovchindorj, 2005). This taxon is currently threatened by hybridisation, disease, habitat loss, pollution, and extreme weather conditions. Generation length has been estimated as 20 years based on data from Nowak (1991). *Camelus bactrianus ferus* qualifies as Endangered under Criterion C1 as the small population is estimated to decline by 20% over the next two generations due to the impact of threats.



The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1930, and it is protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Very Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997) and recognised by the Convention on Migratory Species (CMS). Its entire range in Mongolia occurs within protected areas.

Global distribution: Restricted to four subpopulations in China and Mongolia: Gashun Govi (Gansu, China); Taklamakan Desert (Xinjiang, China - this population has declined and may now be extinct); northern slopes of Arjin Shan mountains and adjacent areas in Lop Nur Wild

Camel National Reserve (China); Great Gobi Section A Strictly Protected Area (Mongolia) and adjacent areas in China (Reading *et al.*, 1999; Mix *et al.*, 2002; Wang *et al.*, 2002).

Regional distribution: Trans Altai Gobi Desert (Mix *et al.*, 2002), from the foothills of the Edren Range to Shiveet Ulaan, and from Hühk Tömörtei Range to the state border (Mix *et al.*, 2002; Adiya *et al.*, 2004; Adiya and Dovchindorj, 2005).

Dominant threats: Hybridisation with domestic camels is the primary threat. The extent to which this occurs remains unclear, but it is known that many herders breed their domestic camels with wild camels (R. Reading, pers. comm.). Movements of domestic camels into Great Gobi Section A Strictly Protected Area have been observed on many occasions, posing potential threats for disease transmission and hybridisation (Walzer and Kaczensky, 2005). Habitat loss and human disturbance through increasing resource extraction (gold mining) also constitute threats, especially since this is often conducted illegally within protected areas (J. Hare, pers. comm.). In addition, potassium cyanide used for processing ore in gold mining pollutes water sources (Hare, 2006). A fence along the Mongolia-China border currently prevents camels from migrating into areas of suitable habitat, thus preventing gene flow with Chinese populations. Oases are believed to be drying up, either through natural environmental change or anthropogenic activity, although it remains uncertain whether current levels of oasis decline exceed natural patterns of flux in ephemeral water bodies in the region (R. Reading, pers. comm.). Predation on young camels by wolves is also believed to threaten the small remaining populations (M. Stubbe, pers. comm.).

Family Bovidae

119. *Capra sibirica* (Pallas, 1776)

Common names: Siberian ibex or Asiatic ibex (English), yangir yamaa (Mongolian)

Subspecies in Mongolia: Gobi ibex *C. s. hagenbecki* and Altai ibex *C. s. sibirica*. Many authorities believe these subspecies are synonymous and taxonomy requires further research (Mallon *et al.*, 1997; Shackleton, 1997).

Synonyms: Including *C. altaica*, *C. hagenbecki*, *C. wardi* (see Wilson and Reeder (1993) for further details). It is still not certain if Siberian ibex are a separate species from other ibex, and some authors use the name *Capra [ibex] sibirica* (Shackleton, 1997), although Wilson and Reeder (1993) regard this as a separate species, following Geptner *et al.* (1961).

Global status: Least Concern

Regional status: Near Threatened

Rationale for assessment: The 1987 'Mongolian Red Book' (Shagdarsuren *et al.*, 1987) estimated the total population in Mongolia to consist of around 80,000



individuals in Mongolia, although numbers are believed to have declined since this peak (Mallon *et al.*, 1997) due to exploitation, habitat degradation, and competition for resources. Generation length has been estimated as seven years, based on data from Nowak (1991). At present the population size and distribution is large enough to warrant the categorisation of this species as Near Threatened. However, the population could decline by as much as 30-40% over the next three generations, primarily due to exploitation, leading to a future re-categorisation under Criterion A if conservation actions are not implemented. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Protected as Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Trophy hunters can purchase hunting licenses, from which \$800 USD for Altai ibex and \$720 USD for Gobi ibex are allocated to the government for a quota of 260 animals in 2005 (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 14% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, Uzbekistan (Shackleton, 1997), Afghanistan, Pakistan, China (Gansu and Xinjiang), Tajikistan (Wilson and Reeder, 1993), India (Himachal Pradesh and Jammu-Kashmir), Kyrgyzstan, Mongolia.

Regional distribution: Rocky habitats throughout south-western and eastern parts of Govi Altai, Hangai and Hövsgöl mountain ranges (Bannikov, 1954; Dulamtseren, 1977). Populations have become fragmented in central and eastern Mongolia, but it is still found in Northern Govi, Hurkh Mountain in Alashan' Govi Desert, and in areas with rocky outcrops or steep terrain throughout Trans Altai Govi Desert (Mallon *et al.*, 1997). An introduced population was successfully established during the 1980s in Bogd Khan Uul Strictly Protected Area in Hentii Mountain Range, outside its native range. Recently recorded in northern Ikh Nartiin Chuluu Nature Reserve in Eastern Govi (Reading *et al.*, 2006). *C. s. hagenbecki* is distributed in Trans Altai Govi Desert and Govi Altai Mountain Range; *C. s. sibirica* occurs in northern Mongol Altai Mountain Range (Fedosenko and Blank, 2001).

Dominant threats: Illegal and unsustainable hunting for meat and skins which are traded regionally, and for trophies which are generally exported by foreign hunters. Increasing numbers of livestock grazing may be causing habitat degradation and competition for pasture and water (further evidence is required), while increasing resource extraction (mining) is resulting in habitat loss. Harsh winter weather conditions also severely impact population sizes.

120. *Gazella subgutturosa* (Güldenstaedt, 1780)

Common names: Goitered gazelle or black-tailed gazelle (English), khar suultii (Mongolian)

Subspecies in Mongolia: *G. s. hillieriana*. Taxonomy of designated subspecies within Mongolia requires further research.

Synonyms: Including *G. mongolica*, *G. hillieriana*, *G. gracilicornis* (see Wilson and Reeder (1993) for further details)

Global status: Vulnerable, A2ad

Regional status: Vulnerable, A3cde

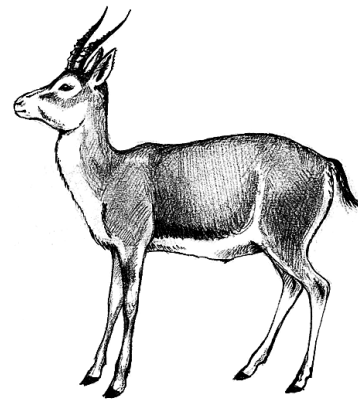
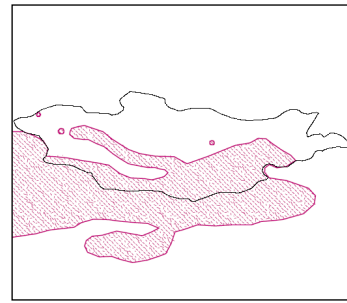
Rationale for assessment: Between the 1940s and 1960s the range and population size of this species declined in Mongolia by 30% (Lkhagvasuren *et al.*, 2001) and by the 1990s, the population was estimated to consist of 60,000 individuals (Amgalan, 1995). Exploitation is the primary cause for this population decline, but habitat degradation, competition for resources and human disturbance also constitute threats to this species. Generation length has been estimated as five years based on data from Nowak (1991). The causes of decline are expected to result in a population reduction of at least 30% over the next three generations, therefore *Gazella subgutturosa* qualifies as Vulnerable under Criterion A3cde. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Protected as Rare under both the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005), and the 1995 Mongolian Hunting Law (MNE, 1996). Trophy hunters can purchase hunting licenses, from which \$450 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 15% of the species' range in Mongolia occurs within protected areas.

Global distribution: Turkey, Syrian Arab Republic, Saudi Arabia, Bahrain, Jordan, Iraq, Yemen, Islamic Republic of Iran, Azerbaijan, Kazakhstan, United Arab Emirates, Oman, Turkmenistan, Uzbekistan, Afghanistan, Pakistan, Tajikistan, Kyrgyzstan, China, Mongolia.

Regional distribution: Occurs across a wide geographical area but at low densities. Currently most abundant in Dzungarian Gobi Desert, but also present in Great Lakes Depression, Valley of the Lakes, Trans Altai Gobi Desert, Eastern Gobi, and Alashan' Gobi Desert (Bannikov, 1954; Sokolov and Orlov, 1980; Amgalan, 1984; 1986; Lkhagvasuren *et al.*, 1999).

Dominant threats: Illegal hunting for meat and sport is the primary threat. Although this species requires very little water, increasing numbers of livestock may compete for use of oases, resulting in pasture degradation (further evidence is required). Increasing resource extraction (mining) is not causing a substantial loss of habitat at present, but associated human disturbance is a threat in some areas.



121. *Ovis ammon* (Linnaeus, 1758)

Common names: Argali (English), argali khony (Mongolian), arkhar (Altai and Kazakh regions of Mongolia)

Subspecies in Mongolia: Two subspecies were formerly recognised, Altai argali *O. a. ammon* and Gobi argali or Mongolian argali *O. a. darwini*. However, recent genetic studies (Tserenbataa, 2003; Tserenbataa *et al.*, 2004) suggest that all argali in Mongolia represent a single subspecies, *O. a. ammon*.

Synonyms: Including *O. altaica*, *O. argali*, *O. blythi* (see Wilson and Reeder (1993) for further details)

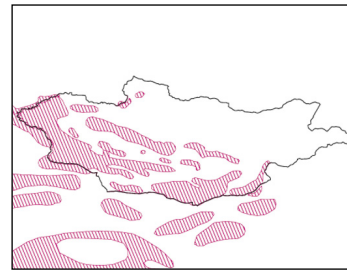
Global status: Vulnerable, A2cde. Gobi argali (*O. a. darwini*) have been infraspecifically assessed as Endangered, C1 and Altai argali (*O. a. ammon*) have been infraspecifically assessed as Vulnerable, A2cde and C1.

Regional status: Endangered, A2acde and A3cde

Rationale for assessment: The population size was estimated to consist of 50,000 individuals in 1975 and 60,000 in 1985, falling to 20,000 individuals by 1994 (Reading *et al.*, 1997), and continuing to decline to 13,000-15,000 individuals by 2001 (Amgalanbaatar *et al.*, 2002a). This represents a 72% decline over the past 26 years (Zahler *et al.*, 2004). Generation length has been estimated as five years based on data from Nowak (1991). This species qualifies as Endangered under Criterion A2acde, based on observed declines of greater than 50% over the past three generations, primarily due to exploitation, but also resulting from competition for resources and habitat loss/degradation. As the causes of decline are expected to continue over the next three generations, *Ovis ammon* also qualifies as Endangered under Criterion A3cde. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Hunting has been prohibited since 1953, and it is protected as Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Included in Appendix II of CITES with an export quota of 80 hunting trophies with horns, and 44 skins and horns in 2005 (UNEP-WCMC, 2006). Trophy hunters can purchase hunting licenses, from which \$18,000 USD and \$9,000 USD respectively is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 14% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, Uzbekistan, Afghanistan, Kyrgyzstan, Pakistan, Tajikistan, China, India, Nepal, Mongolia, Bhutan. Altai argali occur in the Russian Federation, China, Mongolia; Gobi argali occur in China and Mongolia.



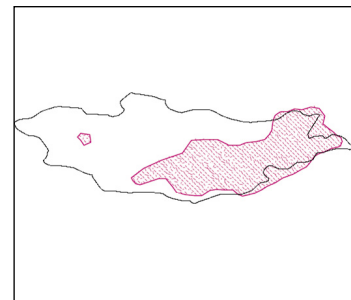
Regional distribution: Argali historically displayed a disjunct distribution across all but eastern Mongolia, in areas with rolling hills, mountains, rocky outcrops and plateaus. However, this distribution has become increasingly fragmented over the past few decades (Mallon *et al.*, 1997; Amgalanbaatar and Reading, 2000; Amgalanbaatar *et al.*, 2002a; 2002b). Currently distributed in mountainous habitats in Mongol Altai and Govi Altai mountain ranges, Dzungarian Govi Desert, Trans Altai Govi Desert, Eastern Govi, and Alashan' Govi Desert (Bannikov, 1954; Sokolov and Orlov, 1980; Fedosenko and Blank, 2005). Isolated populations exist in mountain-steppe and forested habitats in Middle Halh Steppe, Han Hökhii in western Hangai Mountain Range, and at the source of Arsain River in Hövsgöl Mountain Range (Dulamtsere, 1970; Sokolov and Orlov, 1980; Reading *et al.*, 1997; Reading, 2000; Adiya and Tumursukh, 2001; Amgalanbaatar *et al.*, 2002b; Fedosenko and Blank, 2005).

Dominant threats: The principal threat is illegal or unsustainable hunting, particularly for its impressive horns as trophies (Amgalanbaatar *et al.*, 2002b). The number of licences issued for argali trophy hunting is increasing despite its threat status (Zahler *et al.*, 2004), and currently exceeds the recommended quota established by the Mongolian Academy of Sciences (Zahler *et al.*, 2004; Wingard and Zahler, 2006). A large percentage of illegal hunting is carried out by domestic border guards (Reading *et al.*, 2003; 2005). Severe droughts and harsh weather conditions during winter are also a source of high mortality. Possible competition for resources and habitat degradation through grazing by increasing numbers of livestock, and habitat loss through increasing resource extraction (mining) may also constitute threats, although further evidence is required (Reading *et al.*, 1997; 2003; 2005; Wingard, 2005).

122. *Procapra gutturosa* (Pallas, 1777)

Common names: Mongolian gazelle (English), tsagaan zeer (Mongolian)

Synonyms: *P. altaica*, *P. orientalis* (see Wilson and Reeder (1993) for further details)

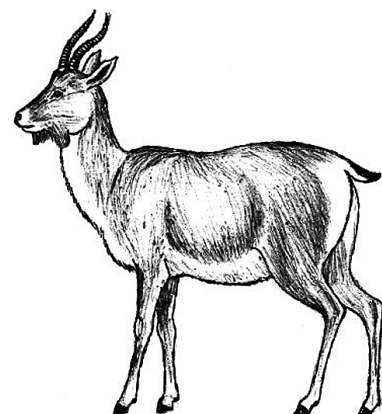


Global status: Least Concern

Regional status: Endangered, A4cde

Rationale for assessment: As many as 4.75 million gazelle may have occurred in Mongolia as recently as 80 years ago (Milner-Gulland and Lkhagvasuren, 1998). Population assessments in 1978 and 1979 estimated the total population to consist of 250,000-270,000 and 250,000 individuals respectively (Tsagaan, 1980; Sokolov and Lushchekina, 1997). Epizootic disease and extreme droughts in 1980 reduced the population to approximately 150,000-180,000 individuals, but by 1981, the number of Mongolian gazelles had increased and stabilised at around 300,000-400,000 individuals (Lushchekina *et al.*, 1983).

In 2002, a nationwide population assessment estimated the population to consist of 800,000-900,000 individuals (Olson *et al.*, 2005). The population may have fluctuated between



180,000 (Lushchekina, 1990) and 2.67 million individuals (results from an unpublished aerial survey with a standard error of 472,000) over the past 20 years. Population estimates vary widely due to differences in survey methodology and intensity, and as a result of population fluctuations caused by natural mortality and disease, therefore population estimates should be treated with caution (Milner-Gulland and Lkhagvasuren, 1998). Further surveys are required to clarify current population size. However, by 2000 it was known that this species occurs in less than a quarter of its mid-twentieth century range (Lkhagvasuren *et al.*, 2001). The Mongolian population is believed to be declining primarily due to exploitation, habitat loss and fragmentation, habitat degradation, competition for resources and human disturbance. Generation length has been estimated at five years based on generation lengths of similar species. This species qualifies as Endangered under Criterion A4cde as it is estimated that the causes of decline will result in a greater than 50% decline between 1996 and 2011. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Hunting has been state controlled since 1932, and quotas for subsistence hunting are provided at a regional level through an official harvest. Hunting is permitted between September 1st and December 1st (MNE, 2005). The 1995 Mongolian Hunting Law banned the use of motor vehicles to hunt Mongolian gazelle and established a fine of \$30-40 USD for each individual killed illegally. Trophy hunters can purchase hunting licenses, from which \$90 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to conservation efforts (Wingard and Zahler, 2006). Approximately 8% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, China and Mongolia.

Regional distribution: Formerly widely distributed in steppe and semi-desert habitats throughout Mongolia, with an estimated range size of around 780,000 km² (Bannikov, 1954). Populations have become fragmented in central and southern Mongolia (Lkhagvasuren *et al.*, 2001). Current distribution includes Northern Govi, Eastern Govi, Middle Halh Steppe, Eastern Mongolia, and eastern Valley of the Lakes. This species has recently been recorded wintering in Dornod province, in northern-eastern Mongolia, and in southern and eastern regions of Hentii Mountain Range (K. Olson, pers. comm.). An isolated population in Homiin Tal Steppe in Great Lakes Depression has been augmented by successful translocations from eastern Mongolia, conducted during the end of the 1980s and at the beginning of the 1990s. The species is highly nomadic and is often absent from areas for extended periods of time, giving the false impression that its range is expanding or contracting (Dulamtsuren *et al.*, 1989).

Dominant threats: Despite established hunting quotas, the primary threat is illegal hunting for meat on top of the legal harvest limit (Lkhagvasuren and Milner-Gulland, 1997). A harvest model was developed by Milner-Gulland and Lkhagvasuren (1998), and based on a population size of one million individuals, the sustainable off-take is 60,000 gazelles per year, current harvest estimates exceed this by more than 300 percent (Wingard and Zahler, 2006). In the winter of 1977, nearly 70,000 Mongolian gazelle were harvested by hunters in Eastern Mongolia (Sokolov and Lushchekina, 1997), with a total estimated off-take of 250,000 in 2004 (Wingard and Zahler, 2006). The development of the double-fenced Ulaanbaatar-Beijing railway and a paved road running parallel to the railway line has isolated smaller populations from the core population in eastern Mongolia. Fences along the Russia-Mongolia and China-

Mongolia borders prevent this species from reaching good quality habitat (Takahaiko *et al.*, 2005). Human disturbance associated with increasing resource extraction (particularly oil extraction) constitutes a threat in parts of its range, and areas of high human and livestock density may lead to competition for resources and exposure to diseases such as foot-and-mouth disease and foot rot (Schaller and Lkhagvasuren, 1998, Campos-Arceiz *et al.*, 2004). Sporadic severe winters can also cause high mortality.

123. *Saiga tatarica* (Linnaeus, 1766)

Common names: Saiga antelope (English), bokhon or tataar bokhon (Mongolian)

Subspecies in Mongolia: Mongolian saiga *S. t. mongolica*.

The subspecies *S. t. tatarica* has been considered Regionally Extinct in Mongolia for the past 40 years (Dulmaa and Shagdarsuren, 1973; Lkhagvasuren *et al.*, 2001).

Synonyms: *S. colus*, *S. mongolica*, *S. saiga*, *S. scythica* (see Wilson and Reeder (1993) for further details)

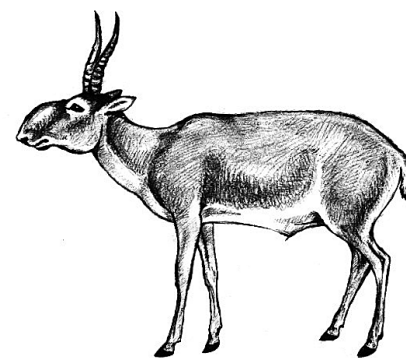
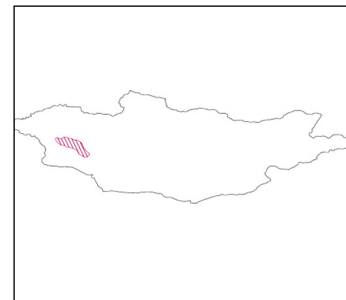
Global status: Critically Endangered, A2a; Mongolian saiga (*S. t. mongolica*) has been infraspecifically assessed as Endangered, A2ad and C1 and 2a(ii)

Regional status: Endangered, A2acde

Rationale for assessment: Annual surveys by WWF-Mongolia and the Mongolian Academy of Sciences estimated the total Mongolian population to consist of 2,950 individuals in 1998, rising to 5,240 in 2000 (Dulamtsuren and Amgalan, 2003). This species exists

in two isolated populations in Mongolia, and in 2001, the Sharga population was estimated to consist of 1,600-3,000 individuals, and the Mankhan population was estimated to contain 35 individuals (Mallon and Kingswood, 2001). The total Mongolian population declined to approximately 1,020 individuals in 2002, 750 individuals in 2003, and 800 individuals in 2004 (WWF, 2004; Zahler *et al.*, 2004). The most recent population assessment was conducted in 2005, estimating the total Mongolian population to consist of 1,500 individuals (L. Amgalan, pers. comm.). Generation length has been estimated as five years based on data from Nowak (1991). This species qualifies as Endangered under Criterion A2acde based on observed declines of greater than 50% over the past three generations, due to severe weather conditions, habitat degradation, competition for resources, and exploitation (the latter occurring at low levels). Although this decline may have been driven partly by changing environmental conditions and natural population fluctuations, additional impacts of overgrazing and hunting are known to have contributed to this decline. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Listed under CITES Appendix II (UNEP-WCMC, 2006). Both Mongolian subspecies of saiga are protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1930, and this species is protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996).



Listed as Very Rare in the ‘Mongolian Red Book’ of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 24% of the species’ range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, Turkmenistan, Uzbekistan, Mongolia. Mongolian saiga are endemic to Mongolia. *S. t. tatarica* are Regionally Extinct in Mongolia and Ukraine.

Regional distribution: *S. t. tatarica* was formerly found in Dzungarian Gobi Desert in south-western Mongolia (Bannikov, 1954; Dulmaa and Shagdarsuren, 1973; Lkhagvasuren *et al.*, 2001). Mongolian saiga (*S. t. mongolica*) now occupy only 20% of its former range, restricted to two small regions in western Mongolia. The majority of the population (90%) occurs in and around Sharga Nature Reserve in Mongol Altai Mountain Range, covering an area of approximately 2,000 km². The second population is situated 200 km north-west, in Mankhan Nature Reserve in Great Lakes Depression (Dulamtsuren and Amgalan, 1995). This species occasionally occurs in surrounding areas of Huis Gobi and Hüren Tal in Great Lakes Depression (Lushchekina and Dulamtsuren, 1997; Dulamtsuren and Amgalan, 2003). The total potential range of this species covers an area of approximately 13,000 km².

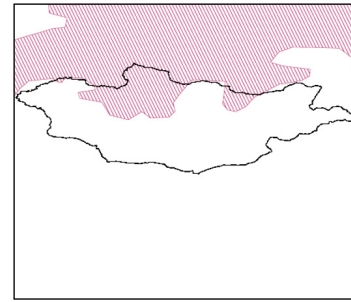
Dominant threats: The population is very small and therefore vulnerable to stochastic events such as severe winters (Lkhagvasuren *et al.*, 2001). Hunting levels in Mongolia may still be relatively low in comparison to other species, although even low levels can have a large impact on a small population (Lkhagvasuren *et al.*, 2001). Illegal hunting for the horns of males, used in traditional medicines, still occurs and results in skewed sex ratios (Zevogmid and Dawaa, 1973). Increasing numbers of livestock are also believed to be driving declines in population size through habitat degradation due to overgrazing and probable competition for pasture and water resources, although further evidence is required (Dulamtsuren and Amgalan, 1995; Zahler *et al.*, 2004). Transmission of diseases and parasites (e.g. parasitic botfly *Pallasiomyia antilopum*) from livestock may also constitute a threat to this species.

Family Moschidae

124. *Moschus moschiferus* Linnaeus, 1758

Common names: Siberian musk deer (English), huder or badanga huder (Mongolian)

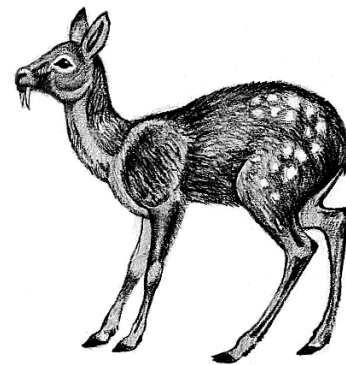
Subspecies in Mongolia: *M. m. moschiferus* (see Tsendjav, 2002). Musk deer taxonomy remains unresolved. This species is often included within the family *Cervidae*.



Global status: Vulnerable, A1acd

Regional status: Endangered, A3d

Rationale for assessment: During the 1970s the population size was estimated at 60,000-80,000 in Mongolia (Dulamtsere, 1977). The Institute of Biology of the Mongolian Academy of Sciences assessed the Mongolian population size in 1986 over 53,000 hectares across 63 units of six provinces, resulting in an estimate of 44,000 individuals (Dulamtsere, 1989). The population size is continuing to decrease and in one observed population, densities fell from 1.2 per km², to 0.2 per km² between 1990 and 2000 (Tsendjav and Bujinkhand, 2000; Tsendjav, 2002). Generation length has been estimated as six years based on data from Nowak (1991). As the causes of this decline, primarily exploitation, is expected to result in a population reduction of at least 50% over the next three generations, *Moschus moschiferus* qualifies as Endangered under Criterion A3d. Although there is a potential 'rescue' effect from populations in Russia, illegal hunting remains a dominant threat there as well, therefore the assessment remains unchanged following application of regional criteria. This species should be reassessed as Critically Endangered if conservation efforts to reduce hunting are not applied.



As the causes of this decline, primarily exploitation, is expected to result in a population reduction of at least 50% over the next three generations, *Moschus moschiferus* qualifies as Endangered under Criterion A3d. Although there is a potential 'rescue' effect from populations in Russia, illegal hunting remains a dominant threat there as well, therefore the assessment remains unchanged following application of regional criteria. This species should be reassessed as Critically Endangered if conservation efforts to reduce hunting are not applied.

Legal status: Listed under CITES Appendix II (UNEP-WCMC, 2006), and protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1953, and it is protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Very Rare in the 1997 'Mongolian Red Book' (Shiirevdamba *et al.*, 1997). Approximately 13% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, Afghanistan, Pakistan, China, India, Kyrgyzstan, Nepal, Mongolia, Bhutan, Myanmar, Viet Nam, Republic of Korea, Democratic People's Republic of Korea (Tsendjav, 2002).

Regional distribution: Forested habitats in northern Mongol Altai Mountain Range (Togtokhbayar *et al.*, 2000), Hangai Mountain Range (Sosorburam, 1970; Dulamtsere, 1977; Dulamtsere *et al.*, 1989), Hentii and Hövsgöl mountain ranges, and possibly around Han Höhii Mountain in western Hangai Mountain Range (Dulamtsere *et al.*, 1989; Wemmer, 1998; Tsendjav, 2002).

Dominant threats: Illegal hunting for musk is the principal threat. An estimated 25,000 adult males were killed between 1990 and 2001 (Homes, 2004). As hunting is often indiscriminate of sex and age, four to five Siberian musk deer are estimated to be killed per musk-pod harvested (Green, 1987). As cheaper, synthetic alternatives are becoming more popular, the use of musk in perfume production is decreasing, but its value for traditional medicines to treat cardiac, circulatory, and respiratory health problems remains high. Resource extraction (logging and mining) is not causing a substantial loss of habitat at present, but the resulting human disturbance from this activity does constitute a threat. Habitat fragmentation may also threaten this species (Tsendjav and Bujinkhand, 2000).

Family Cervidae

125. *Alces alces* (Linnaeus, 1758)

Common names: Elk or Eurasian elk (English, Eurasian populations), moose (English, North American populations), handgai or moltsog handgai (Mongolian)
Subspecies in Mongolia: Ussurian elk *A. a. cameloides*, East Siberian elk or Yakut moose *A. a. pfizenmayeri* (see Geist, 1998)

Synonyms: Including *A. americanus*, *A. columbae*, *A. pfizenmayeri* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Endangered, A2cd and A3d

Rationale for assessment: Only a small population of *A. a. cameloides* exists in Mongolia. In 2004, 73 were sighted in Nömrög Strictly Protected Area (K. Olson, pers. comm.). *A. a. pfizenmayeri* have a greater abundance in Mongolia and in 1989, a survey estimated there to be 10,000 individuals in Hentii and Hangai mountain ranges, which represented 70% of the total population. However, populations are known to be declining due to exploitation, habitat loss, and pollution. Between 1926 and 1985, 1.5 million tons of elk antlers were exported to Russia (Wingard and Zahler, 2006). Generation length has been estimated as nine years based on data from Nowak (1991). This species qualifies as Endangered under Criterion A2cd as the population is estimated to have declined by more than 50% over the past three generations due to the impact of threats. As other large Mongolian mammals continue to decline, hunters and traders are increasing hunting pressure on this species (Pratt *et al.*, 2004), and its decline is expected to continue over the next three generations, therefore *Alces alces* also qualifies as Endangered under Criterion A3d. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.

Legal status: Both Mongolian subspecies are protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited



since 1953, and both subspecies are protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Rare in the 'Mongolian Red Book' of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 20% of the species' range in Mongolia occurs within protected areas and the range of *A. a. cameloides* occurs entirely within Nömrög Strictly Protected Area in Ikh Hyangan Mountain Range.

Global distribution: Canada, USA, Norway, Czech Republic, Croatia, Sweden, Poland, Hungary, Slovakia, Finland, Romania, Latvia, Lithuania, Estonia, Ukraine, Belarus, Russian Federation, Kazakhstan, China, Mongolia. *A. a. cameloides* are found in the Russian Federation, China, eastern Mongolia. *A. a. pfizenmayeri* are found throughout central Asia (Hundertmark *et al.*, 2002).

Regional distribution: *A. a. cameloides* occur along Halh River and in Nömrög River Basin in Ikh Hyangan Mountain Range (Shagdarsuren and Stubbe, 1974; Shiirevdamba *et al.*, 1997). *A. a. pfizenmayeri* occur in taiga habitats, particularly along Onon and Herlen rivers in north-eastern Hentii Mountain Range, and along Eröö and Minj rivers in western Hentii Mountain Range. Also distributed in Ikh Dalbai River Basin, Horidol Saridag and Tsagaan mountains in Hövsgöl Mountain Range, Buteel Mountain in northern Hangai Mountain Range, and upstream of Tuul River in Hentii Mountain Range (Bannikov, 1954; Geptner *et al.*, 1961; Dulamtseren *et al.*, 1989).

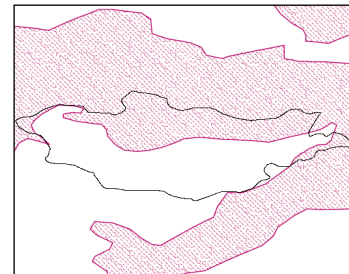
Dominant threats: Trophy hunting and illegal hunting for meat and skins, and antlers and muzzles which are used for traditional medicines. Habitat loss and pollution of water sources through resource extraction (gold mining and mineral extraction) also constitute threats. Competition with other large mammals for resources may also constitute a threat to this species, although further evidence is required.

126. *Capreolus pygargus* (Pallas, 1771)

Common names: Siberian roe deer or eastern roe deer (English), bor göröös (Mongolian)

Subspecies in Mongolia: *C. p. tianschanicus*

Synonyms: Including *C. bedfordi*, *C. ochracea*, *C. ferghanicus* (see Wilson and Reeder, 1993 for further details)



Global status: Least Concern

Regional status: Least Concern

Rationale for assessment: This species has a large population size and a wide distribution. No decline in population size has been detected.

Legal status: Hunting is permitted between September 1st and December 1st (MNE, 2005). Trophy hunters can purchase a hunting license, from which \$550 USD is allocated to the government (MNE, 2005). According to the Mongolian Law on Reinvestment of Natural Resource Use Fees, a percentage of this fee is designated to



conservation efforts (Wingard and Zahler, 2006). Approximately 13% of the species' range in Mongolia occurs within protected areas.

Global distribution: Russian Federation, Kazakhstan, China, Mongolia, Republic of Korea, Democratic People's Republic of Korea.

Regional distribution: Forest, sparsely wooded valleys, and open field habitats throughout northern Mongolia (Bannikov, 1954; Sokolov *et al.*, 1982; Dulamtseren *et al.*, 1989), including Lkhachinvandad Mountain in south-eastern parts of Eastern Mongolia, Hangai Mountain Range, Darkhad in Hövsgöl Mountain Range, Hentii Mountain Range, Ikh Hyangan Mountain Range, and north-eastern Mongol Altai Mountain Range.

Dominant threats: Unsustainable hunting for meat, traditional medicine, and antlers, largely for local use. Although not presently a threat, habitat degradation through grazing by increasing numbers of livestock and human disturbance associated with resource extraction may constitute potential future threats.

127. *Cervus elaphus* Linnaeus, 1758

Common names: Red deer (English, Eurasian populations), wapiti (English, American populations), haliun buga (Mongolian)

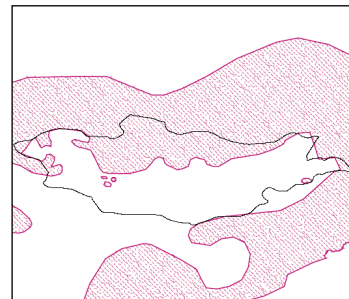
Subspecies in Mongolia: Altai wapiti or Siberian red deer *C. e. sibiricus*. For the purposes of this report, all Mongolian red deer are assigned to this subspecies. Some authors assign these animals to several different subspecies including *C. e. alashanicus*, *C. e. songaricus*, *C. e. xanthopygus* and *C. e. wachei*, while others synonymise all Asian red deer with the North American red deer *C. e. canadensis* (see Geist, 1998).

Synonyms: Including *C. alashanicus*, *C. hagenbecki*, *C. maral* (see Wilson and Reeder (1993) for further details)

Global status: Least Concern

Regional status: Critically Endangered, A2acd and A3d

Rationale for assessment: A government assessment in 1986 estimated the population to consist of 130,000 individuals across 115,000 km² (Dulamtseren *et al.*, 1989), declining to 8,000-10,000 individuals in 15 provinces in 2004, representing a 92% decline over the past 18 years (Zahler *et al.*, 2004). Generation length has been estimated as six years based on data from Nowak (1991). This species qualifies as Critically Endangered under Criterion A2acd, as there has been an observed decline of greater than 80% over the past three generations, primarily due to exploitation, but also resulting from habitat loss. As the causes of this decline are expected to continue over the next three generations, *Cervus elaphus* also qualifies as Critically Endangered under Criterion A3d. There is a potential rescue effect from populations in Russia, but further information on



population status and hunting pressure on this population is required, therefore the assessment remains unchanged following application of regional criteria.

Legal status: Protected as Rare under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Fauna (Badam and Ariunzul, 2005). Listed as Rare under the 1995 Mongolian Hunting Law. As the population is declining, hunting licenses are not currently being issued (Wingard and Zahler, 2006). Approximately 11% of the species' range in Mongolia occurs within protected areas.

Global distribution: Holarctic: southern Canada, most of USA and northern Mexico, north-western Africa, western and eastern Europe, Asia Minor, southern Siberia, Caucasus, Central Asia, northern and western China, Himalayan region, Mongolia, Korea (Nowak, 1991).

Regional distribution: Hövsgöl, Hangai, Hentii, Ikh Hyangan, Mongol Altai and Govi Altai mountain ranges (Dulamtsere, 1989). Introduced into open hills in south-eastern parts of its range from forested areas during the 18th Century (Sokolov *et al.*, 1982; Dulamtsere *et al.*, 1989).

Dominant threats: This species is primarily targeted for its antler velvet, which is highly valued for traditional medicines, with a current market value of \$60-100 USD per kg of antlers. Other antler products and body parts, including male genital organs, fetuses, and female tails are also valued for traditional medicines and have similar market values (Zahler *et al.*, 2004; Wingard and Zahler, 2006). Habitat loss and fragmentation, and human disturbance resulting from resource extraction (mining) and infrastructure development, constitute threats to some extent.

128. *Rangifer tarandus* (Linnaeus, 1758)

Common names: Reindeer or caribou (English), tsaa buga (Mongolian)

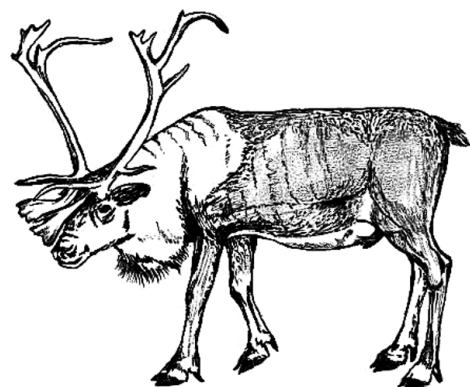
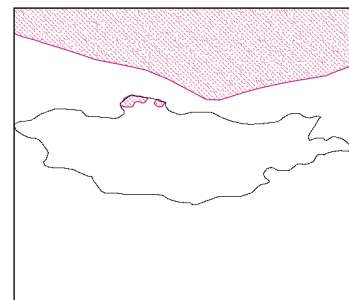
Subspecies in Mongolia: *R. t. valentinae*

Synonyms: *R. caribou*, *R. valentinae*, *R. granti* (see Wilson and Reeder (1993) for further details). Domestic populations are genetically distinct from wild populations (Geptner *et al.*, 1961).

Global status: Least Concern

Regional status: Vulnerable, D1

Rationale for assessment: The Mongolian population is estimated to consist of fewer than 1,000 individuals, although few population assessments have been conducted. This species is primarily threatened by high levels of exploitation, but habitat degradation, disease and hybridization also constitute threats. As the population size is so small, *Rangifer tarandus* qualifies as Vulnerable under Criterion D1. The assessment remains unchanged following application of regional criteria as there is no significant immigration from adjacent countries.



Legal status: *R. t. valentinae* is protected as Very Rare under part 7.1 of the Mongolian Law on Fauna (2000) (Badam and Ariunzul, 2005). Hunting has been prohibited since 1953, and it is protected as Very Rare under the 1995 Mongolian Hunting Law (MNE, 1996). Listed as Very Rare in the ‘Mongolian Red Book’ of 1987 and 1997 (Shagdarsuren *et al.*, 1987; Shiirevdamba *et al.*, 1997). Approximately 13% of the species’ range in Mongolia occurs within protected areas.

Global distribution: Canada, USA, Greenland, Norway, Finland, Russian Federation, Mongolia.

Regional distribution: Distributed upstream of Jodog River, and also along Byaranga, Tengis, Nariin Horoo, Sharga, Heven, and Zалуu Uur rivers, all of which are in Hövsgöl Mountain Range (Bannikov, 1954; Namnandorj, 1976; Bazardorj and Sukhbat, 1984; Litvinov and Bazardorj, 1992).

Dominant threats: Illegal hunting for meat and skins has caused a significant population decline, and remains the dominant threat. Possible habitat degradation through grazing by increasing numbers of livestock may constitute a threat in some areas (further evidence is required), and livestock can transmit diseases such as brucellosis. Hybridisation with domestic reindeer also constitutes a potential threat, although the level of occurrence is not yet known.

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ANNEXES

Annex I. Summary of criteria A-E used to evaluate threat status for Critically Endangered, Endangered or Vulnerable species (summarised from IUCN, 2001).

Use any of the criteria A-B	Critically Endangered	Endangered	Vulnerable
A. Population reduction Declines measured over the longer of 10 years or 3 generations			
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%
A1. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible AND understood AND ceased based on and specifying any of the following:			
	(a) direct observation		
	(b) an index of abundance appropriate to the taxon		
	(c) a decline in AOO, EOO and/or habitat quality		
	(d) actual or potential levels of exploitation		
	(e) effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.		
A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on (a) to (e) under A1			
A3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under A1.			
A4. An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on (a) to (e) under A1.			
B. Geographic range in the form of either B1 (extent or occurrence) OR B2 (area or occupancy)			
B1. Extent of occurrence	< 100 km ²	< 5,000 km ²	< 20,000 km ²
B2. Area of occupancy	< 10 km ²	< 500 km ²	< 2,000 km ²
and 2 of the following 3:			
(a) Severely fragmented or # locations	= 1	≤ 5	≤ 10
(b) Continuing decline in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals			
C. Small population size and decline			
Number of mature individuals	< 250	< 2,500	< 10,000
and either C1 or C2:			
C1. An estimated continuing decline of at least:	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
up to a maximum of 100 years			
C2. A continuing decline and (a) and/or (b):			
a (i) # mature individuals in all sub-populations:	< 50	< 250	< 1,000
a (ii) or % individuals in one sub-population at least	90%	95%	100%
(b) extreme fluctuations in the number of mature individuals			
D. Very small or restricted population			
Either:			
(1) number of mature individuals	< 50	< 250	< 1,000
OR			
(2) restricted area of occupancy	na	na	AOO < 20 km ² or # locations ≤ 5
E. Quantitative Analysis			
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations (100 years max)	≥ 20% in 20 years or 5 generations (100 years max)	≥ 10% in 100 years

Annex II. List 1: Species identified as occurring within Mongolia and assessed at the Mongolian Biodiversity Databank Workshop.

N.B. The Red List of Mongolian Mammals and its associated documents contain taxa that were on the agreed list for the Mongolian Biodiversity Databank Workshop, i.e. those that were known to occur in Mongolia in 2005. Subsequent to the workshop, several additional species have been suggested to occur in Mongolia, based on recent range expansions or their occurrence close to the Mongolian border. Those which are likely to occur in Mongolia have been added to List 1, but are marked with a plus sign (+) to indicate that they were not assessed during the workshop.

a) Rodentia

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Sciuridae			
<i>Marmota baibacina</i> Kastschenko, 1899	Grey marmot	Data Deficient	Least Concern
<i>Marmota sibirica</i> (Radde, 1862)	Siberian marmot	Endangered, A2ad	Least Concern
<i>Pteromys volans</i> (Linnaeus, 1758)	Russian flying squirrel	Data Deficient	Near Threatened
<i>Sciurus vulgaris</i> Linnaeus, 1758	Eurasian red squirrel	Near Threatened	Near Threatened
<i>Spermophilus alashanicus</i> Büchner, 1888	Alashan ground squirrel	Endangered, A3c	Least Concern
<i>Spermophilus dauricus</i> Brandt, 1843	Daurian ground squirrel	Data Deficient	Least Concern
<i>Spermophilus erythrogenys</i> Brandt, 1841	Red-cheeked ground squirrel	Least Concern	Least Concern
<i>Spermophilus undulatus</i> (Pallas, 1778)	Long-tailed ground squirrel	Least Concern	Least Concern
<i>Tamias sibiricus</i> (Laxmann, 1769)	Siberian chipmunk	Least Concern	Least Concern
Gliridae			
<i>Dryomys nitedula</i> (Pallas, 1778)	Forest dormouse	Data Deficient	Near Threatened
Castoridae			
<i>Castor fiber</i> Linnaeus, 1758	Eurasian beaver	Endangered, B1ab(iii)	Near Threatened
Dipodidae			
<i>Allactaga balikunica</i> Hsia and Fang, 1964	Balikun jerboa	Least Concern	Least Concern

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
<i>Allactaga bullata</i> Allen, 1925	Gobi jerboa	Data Deficient	Near Threatened
<i>Allactaga elater</i> (Lichtenstein, 1828)	Small five-toed jerboa	Endangered, B1ab(iii)	Least Concern
<i>Allactaga sibirica</i> (Forster, 1778)	Siberian jerboa	Least Concern	Least Concern
<i>Cardiocranius paradoxus</i> Satunin, 1903	Five-toed pygmy jerboa	Data Deficient	Vulnerable, A1c
<i>Dipus sagitta</i> (Pallas, 1773)	Northern three-toed jerboa	Least Concern	Least Concern
<i>Euchoreutes naso</i> Sclater, 1891	Long-eared jerboa	Vulnerable, A3c	Endangered, A1c
<i>Pygeretmus pumilio</i> (Kerr, 1792)	Dwarf fat-tailed jerboa	Least Concern	Least Concern
<i>Salpingotus crassicauda</i> Vinogradov, 1924	Thick-tailed pygmy jerboa	Data Deficient	Vulnerable, A1c
<i>Salpingotus kozlovi</i> Vinogradov, 1922	Kozlov's pygmy jerboa	Data Deficient	Near Threatened
<i>Stylodipus andrewsi</i> Allen, 1925	Andrews's three-toed jerboa	Least Concern	Least Concern
<i>Stylodipus sungorus</i> Sokolov and Shenbrot, 1987	Mongolian three-toed jerboa	Endangered, A3c	Endangered, A3c●
Cricetidae			
<i>Allocricetulus curtatus</i> (Allen, 1925)	Mongolian hamster	Least Concern	Least Concern
<i>Cricetulus barabensis</i> (Pallas, 1773)	Striped dwarf hamster	Least Concern	Least Concern
<i>Cricetulus longicaudatus</i> (Milne-Edwards, 1867)	Long-tailed dwarf hamster	Least Concern	Least Concern
<i>Cricetulus migratorius</i> (Pallas, 1773)	Grey hamster	Data Deficient	Near Threatened
<i>Cricetulus sokolovi</i> Orlov and Malygin, 1988	Sokolov's dwarf hamster	Data Deficient	Least Concern
<i>Phodopus campbelli</i> (Thomas, 1905)	Campbell's hamster	Least Concern	Least Concern
<i>Phodopus roborovskii</i> (Satunin, 1903)	Desert hamster	Least Concern	Least Concern

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Arvicolidae			
<i>Alticola barakshin</i> Bannikov, 1947	Gobi Altai mountain vole	Data Deficient	Least Concern
<i>Alticola macrotis</i> (Radde, 1862)	Large-eared vole	Data Deficient	Least Concern
<i>Alticola semicanus</i> (Allen, 1924)	Mongolian silver vole	Least Concern	Least Concern
<i>Alticola strelzowi</i> (Kastschenko, 1899)	Flat-headed vole	Data Deficient	Least Concern
<i>Alticola tuvinicus</i> Ognev, 1950	Tuva silver vole	Data Deficient	Least Concern
<i>Arvicola terrestris</i> (Linnaeus, 1758)	European water vole	Data Deficient	Least Concern
<i>Clethrionomys rufocanus</i> (Sundevall, 1846)	Grey red-backed vole	Least Concern	Least Concern
<i>Clethrionomys rutilus</i> (Pallas, 1779)	Northern red-backed vole	Least Concern	Least Concern
<i>Ellobius tancrei</i> Blasius, 1884	Zaisan mole vole	Least Concern	Least Concern
<i>Eolagurus luteus</i> (Eversmann, 1840)	Yellow steppe lemming	Data Deficient	Lower Risk, conservation dependant
<i>Eolagurus przewalskii</i> (Büchner, 1889)	Przewalski's steppe lemming	Data Deficient	Least Concern
<i>Lagurus lagurus</i> (Pallas, 1773)	Steppe lemming	Data Deficient	Least Concern
<i>Lasiopodomys brandti</i> (Radde, 1861)	Brandt's vole	Least Concern	Least Concern
<i>Lasiopodomys mandarinus</i> (Milne-Edwards, 1871)	Mandarin vole	Data Deficient	Least Concern
<i>Microtus arvalis</i> (Pallas, 1778)	Common vole	Data Deficient	Least Concern
<i>Microtus fortis</i> Büchner, 1889	Reed vole	Data Deficient	Least Concern
<i>Microtus gregalis</i> (Pallas, 1779)	Narrow-headed vole	Least Concern	Least Concern
<i>Microtus limnophilus</i> Büchner, 1889	Lacustrine vole	Data Deficient	Least Concern
<i>Microtus maximowiczii</i> (Schrenk, 1859)	Maximowicz's vole	Data Deficient	Least Concern

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
<i>Microtus mongolicus</i> (Radde, 1861)	Mongolian vole	Least Concern	Least Concern
<i>Microtus oeconomus</i> (Pallas, 1776)	Root vole	Least Concern	Least Concern
<i>Myopus schisticolor</i> (Lilljeborg, 1844)	Wood lemming	Data Deficient	Near Threatened
Muridae			
<i>Apodemus agrarius</i> (Pallas, 1771)	Striped field mouse	Data Deficient	Least Concern
<i>Apodemus peninsulae</i> (Thomas, 1907)	Korean field mouse	Least Concern	Least Concern
<i>Micromys minutus</i> (Pallas, 1771)	Eurasian harvest mouse	Data Deficient	Near Threatened
Gerbillidae			
<i>Meriones meridianus</i> (Pallas, 1773)	Mid-day gerbil	Least Concern	Least Concern
<i>Meriones tamariscinus</i> (Pallas, 1773)	Tamarisk gerbil	Endangered, B1ab(iii)	Least Concern
<i>Meriones unguiculatus</i> (Milne-Edwards, 1867)	Mongolian gerbil	Least Concern	Least Concern
<i>Rhombomys opimus</i> (Lichtenstein, 1823)	Great gerbil	Least Concern	Least Concern
Spalacidae			
<i>Myospalax aspalax</i> (Pallas, 1776)	False zokor	Data Deficient	Least Concern
<i>Myospalax psilurus</i> (Milne-Edwards, 1874)	Transbaikal zokor	Data Deficient	Least Concern

b) Lagomorpha

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Ochotonidae			
<i>Ochotona alpina</i> (Pallas, 1773)	Alpine pika	Least Concern	Least Concern
<i>Ochotona dauurica</i> (Pallas, 1776)	Daurian pika	Least Concern	Least Concern
<i>Ochotona hoffmanni</i> Formozov, Yakhontov and Dmitriev, 1996+		Not Evaluated	Vulnerable, D2

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
<i>Ochotona hyperborea</i> (Pallas, 1811)	Northern pika	Least Concern	Least Concern
<i>Ochotona pallasii</i> (Gray, 1867)	Pallas's pika	Least Concern	Least Concern
Leporidae			
<i>Lepus tibetanus</i> ⁺		Not Evaluated	Not Evaluated
<i>Lepus timidus</i> Linnaeus, 1758	Arctic hare	Least Concern	Least Concern
<i>Lepus tolai</i> Pallas, 1778	Tolai hare	Least Concern	Not Evaluated

c) Erinaceomorpha

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Erinaceidae			
<i>Hemiechinus auritus</i> (Gmelin, 1770)	Long-eared hedgehog	Least Concern	Least Concern
<i>Mesechinus dauuricus</i> (Sundevall, 1842)	Daurian hedgehog	Least Concern	Least Concern

d) Soricomorpha

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Soricidae			
<i>Crocidura sibirica</i> Dukelsky, 1930	Siberian shrew	Data Deficient	Least Concern
<i>Neomys fodiens</i> (Pennant, 1771)	Eurasian water shrew	Least Concern	Least Concern
<i>Sorex caecutiens</i> Laxmann, 1788	Laxmann's shrew	Least Concern	Least Concern
<i>Sorex daphaenodon</i> Thomas, 1907	Large-toothed Siberian shrew	Least Concern	Least Concern
<i>Sorex isodon</i> Turov, 1924	Even-toothed shrew	Data Deficient	Least Concern
<i>Sorex minutissimus</i> Zimmermann, 1780	Least shrew	Data Deficient	Least Concern
<i>Sorex roboratus</i> Hollister, 1913	Flat-skulled shrew	Data Deficient	Least Concern

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
<i>Sorex tundrensis</i> Merriam, 1900	Tundra shrew	Data Deficient	Least Concern
Talpidae			
<i>Talpa altaica</i> Nikolsky, 1883	Siberian mole	Data Deficient	Least Concern

e) Chiroptera

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Vespertilionidae			
<i>Eptesicus gobiensis</i> Bobrinskii, 1926	Gobi big brown bat	Least Concern	Least Concern
<i>Eptesicus nilssonii</i> (Keyserling and Blasius, 1839)	Northern bat	Least Concern	Least Concern
<i>Eptesicus serotinus</i> Schreber, 1774+	Serotine	Not Evaluated	Lower Risk, conservation dependant
<i>Hypsugo savii</i> (Bonaparte, 1837)	Savi's pipistrelle	Data Deficient	Least Concern
<i>Murina leucogaster</i> Milne-Edwards, 1872	Greater tube-nosed bat	Data Deficient	Least Concern
<i>Myotis brandti</i> (Eversmann, 1845)	Brandt's bat	Data Deficient	Least Concern
<i>Myotis daubentonii</i> (Kuhl, 1817)	Daubenton's bat	Least Concern	Least Concern
<i>Myotis ikonnikovi</i> Ognev, 1912	Ikonnikov's bat	Data Deficient	Least Concern
<i>Myotis mystacinus</i> (Kuhl, 1817)	Whiskered bat	Least Concern	Least Concern
<i>Nyctalus noctula</i> (Schreber, 1774)	Noctule	Data Deficient	Least Concern
<i>Plecotus auritus</i> (Linnaeus, 1758)	Brown long-eared bat	Least Concern	Least Concern
<i>Plecotus austriacus</i> (Fischer, 1829)	Grey long-eared bat	Data Deficient	Least Concern
<i>Vespertilio murinus</i> Linnaeus, 1758	Particoloured bat	Least Concern	Least Concern
<i>Vespertilio superans</i> Thomas, 1899	Asian particolored bat	Data Deficient	Least Concern

f) Carnivora

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Felidae			
<i>Felis silvestris</i> Schreber, 1775	Wild cat	Data Deficient	Least Concern
<i>Lynx lynx</i> (Linnaeus, 1758)	Eurasian lynx	Near Threatened	Near Threatened
<i>Otocolobus manul</i> (Pallas, 1776)	Pallas's cat	Near Threatened	Near Threatened
<i>Uncia uncia</i> (Schreber, 1775)	Snow leopard	Endangered, C1	Endangered, C2a(i)
Canidae			
<i>Canis lupus</i> Linnaeus, 1758	Grey wolf	Near Threatened	Least Concern
<i>Cuon alpinus</i> (Pallas, 1811)	Asiatic wild dog	Regionally Extinct	Endangered, C2a(i)
<i>Nyctereutes procyonoides</i> (Gray, 1834)	Raccoon dog	Least Concern	Least Concern
<i>Vulpes corsac</i> (Linnaeus, 1768)	Corsac fox	Near Threatened	Least Concern
<i>Vulpes vulpes</i> (Linnaeus, 1758)	Red fox	Near Threatened	Least Concern
Mustelidae			
<i>Arctonyx collaris</i> Cuvier, 1825	Hog badger	Data Deficient	Least Concern
<i>Gulo gulo</i> (Linnaeus, 1758)	Wolverine	Least Concern	Vulnerable, A2c
<i>Lutra lutra</i> (Linnaeus, 1758)	Eurasian otter	Data Deficient	Near Threatened
<i>Martes foina</i> (Erxleben, 1777)	Beech marten	Data Deficient	Least Concern
<i>Martes zibellina</i> (Linnaeus, 1758)	Sable	Vulnerable, A3cd	Least Concern
<i>Meles meles</i> (Linnaeus, 1758)	Eurasian badger	Least Concern	Least Concern
<i>Mustela altaica</i> Pallas, 1811	Alpine weasel	Least Concern	Least Concern
<i>Mustela erminea</i> Linnaeus, 1758	Stoat	Least Concern	Least Concern

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
<i>Mustela eversmanni</i> Lesson, 1827	Steppe polecat	Least Concern	Least Concern
<i>Mustela nivalis</i> Linnaeus, 1766	Least weasel	Least Concern	Least Concern
<i>Mustela sibirica</i> Pallas, 1773	Siberian weasel	Least Concern	Least Concern
<i>Vormela peregusna</i> (Güldenstädt, 1770)	Marbled polecat	Data Deficient	Least Concern
Ursidae			
<i>Ursus arctos</i> Linnaeus, 1758	Brown bear	Data Deficient	Least Concern
<i>Ursus arctos gobiensis</i> Sokolov and Orlov, 1992	Gobi bear	Critically Endangered, D	Critically Endangered, D●●

f) Perissodactyla

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Equidae			
<i>Equus ferus przewalskii</i> (Groves, 1986)	Przewalski's horse	Critically Endangered, D	Critically Endangered, D●
<i>Equus hemionus</i> Pallas, 1775	Asiatic wild ass	Endangered, A4abd	Vulnerable, A3bcd and C1

g) Artiodactyla

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
Suidae			
<i>Sus scrofa</i> Linnaeus, 1758	Wild boar	Near Threatened	Least Concern
Camelidae			
<i>Camelus bactrianus ferus</i> Przewalski, 1878	Bactrian camel	Endangered, C1	Critically Endangered, A3de and A4ade
Bovidae			
<i>Capra sibirica</i> (Pallas, 1776)	Siberian ibex	Near Threatened	Least Concern
<i>Gazella subgutturosa</i> (Güldenstädt, 1780)	Goitered gazelle	Vulnerable, A3cde	Vulnerable, A2ad
<i>Ovis ammon</i> (Linnaeus, 1758)	Argali	Endangered, A2acde and A3cde	Vulnerable, A2cde

<i>Scientific name</i>	<i>Common name</i>	<i>Regional assessment</i>	<i>Global assessment</i>
<i>Procapra gutturosa</i> (Pallas, 1777)	Mongolian gazelle	Endangered, A4cde	Least Concern
<i>Saiga tatarica</i> (Linnaeus, 1766)	Saiga antelope	Endangered, A2acde	Critically Endangered, A2a
Moschidae			
<i>Moschus moschiferus</i> Linnaeus, 1758	Siberian musk deer	Endangered, A3d	Vulnerable, A1acd
Cervidae			
<i>Alces alces</i> (Linnaeus, 1758)	Elk	Endangered, A2cd and A3d	Least Concern
<i>Capreolus pygargus</i> (Pallas, 1771)	Siberian roe deer	Least Concern	Least Concern
<i>Cervus elaphus</i> Linnaeus, 1758	Red deer	Critically Endangered, A2acd and A3d	Least Concern
<i>Rangifer tarandus</i> (Linnaeus, 1758)	Reindeer	Vulnerable, D1	Least Concern

List 2: Possible species occurring within Mongolia.

N.B. Species included in the Red List relate to species known to occur in the country in 2005, additional species whose presence is suspected or likely based on occurrence close to the borders/expanding ranges but have not yet been confirmed are included in the possible species list.

<i>Scientific name</i>	<i>Common name</i>
RODENTIA	
Dipodidae	
<i>Sicista subtilis</i> (Pallas, 1773)	Southern birch mouse
<i>Sicista betulina</i> Pallas, 1779	Northern birch mouse
Muridae	
<i>Microtus agrestis</i> (Linnaeus, 1761)	Field vole
SORICOMORPHA	
Soricidae	
<i>Sorex araneus</i> Linnaeus, 1758	Eurasian shrew
<i>Sorex minutus</i> Linnaeus, 1766	Eurasian pygmy shrew
CHIROPTERA	
Vespertilionidae	
<i>Eptesicus bottae</i> (Peters, 1869)	Botta's serotine
