

Recommendation on Rodent Spread Out In Growing Seabuckthorn Area in Mongolia

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Summary: Mongolia is located in the central Asian highlands surrounded by vast, isolated from the oceans, dominated by harsh and extreme climatic conditions, and the southern part consists of desert, semi-arid and steppe regions. Most of the population is engaged in pastoralism and agriculture. Farming and agriculture in Mongolia began to grow drastically with management since _____. Large enterprises mainly produce wheat, rapeseed, fodder plants, and potatoes. Small businesses and individuals carry fine vegetable greenhouses. In addition to these crops, many seabuckthorn fruit trees are grown, and the fruit juice, oils and other ingredients of the sea buckthorn are exported to overseas. At the same time, seabuckthorn fruit is very good for health, so the demand for the purchase for it is high. In Mongolia, sea buckthorn trees grow primarily in the wild. One of the major obstacles to growing seabuckthorn fruit process is that there are so many harmful rodents and other living organisms. The sea buckthorn fruit trees growing in our country have over ten species of rodents, and it affects a lot of sea buckthorn trees and bushes during harvesting season. Бүд 2016-2018 оны хооронд суурин судалгааны цэгт ажиглагдсан мэрэгчдийг гадаад, болон дотоод морфометрийн хэмжилт хийж зүйлийг тодорхойлсон. Between 2016 to 2018 we identified the rodents of external and internal from using the morphometric measurements.

Key word: harmful rodent

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I. Methodologies For The Study

1. Defining the components:

1.1 Select a monitoring point and place tape measures

From the monitoring points, the distribution and density can be seen of the species composition. At the same time, monitoring points are set up at the same time every year at the same time.

The monitoring points should be located on locations, as well as a strong mark, representing the specific features of the geographical location (eg, vegetation, harvesting conditions, mountain valleys, valleys, valleys, etc.).

Place the strip meter along the sea buckthorn tree at the point of the monitoring. Place a strip meter of 50 meters in length and measure the start and end point coordinates by GPS and place static markings (e.g rocks) on each spot.

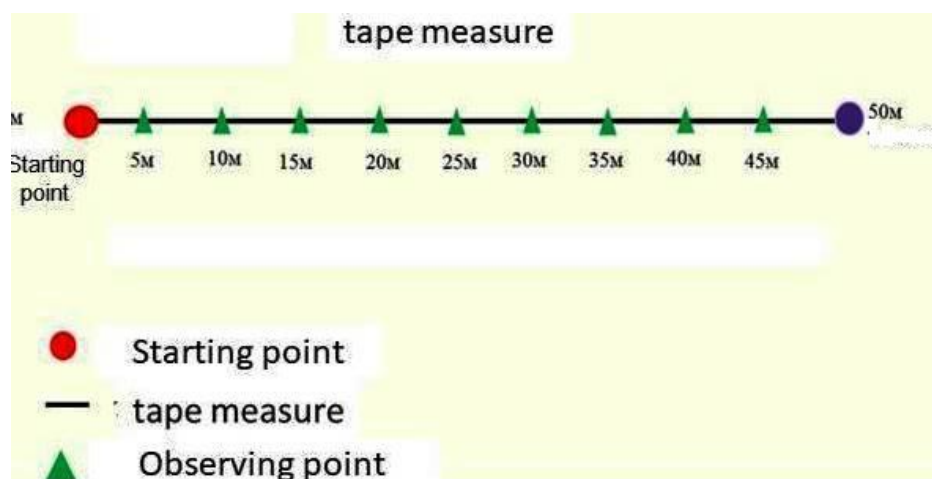


Figure 1. Selecting a test site for monitoring.

Place an information board at the start of the belt. The following information will be written on the board. Including: *Project name, Name of the sub topic, Province, Area, Team, Name of Place of Origin, Leader and Name of Contractor and the Date.*

1.2 Placement of live catch:

During the project research, the detection of rodent species will be used to measure the size of the species spread and the latest fieldwork methods. The linear transect methods will be used to detect numbers, heads, and distribution of rodents.

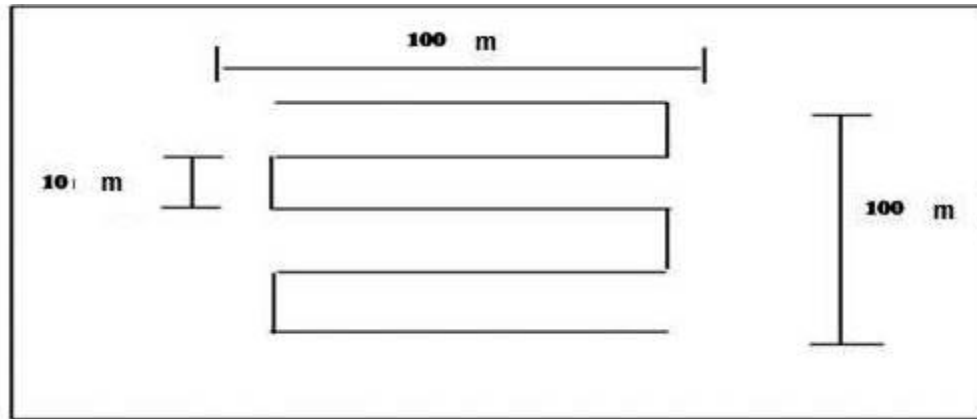


Figure 2.Survey sample area.

Sharmen traps can be used to determine rodents, abundance, and numbers of rodents. During the night time, animals will be recorded with the lights set up along the lines.

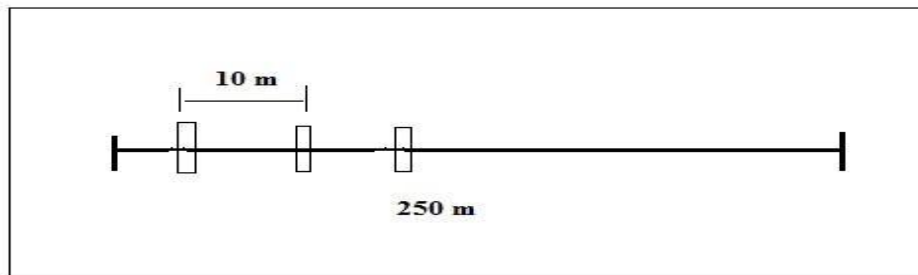


Figure 3. Placing the Sharmen trap

Monitoring observations on species composition and habitat are tracked by day-by-day observations and field surveys. In this way, the individual components captured in a sea buckthorn area will be determined by the internal and external morphology measurements for each individual captured. Record the number of animals that were built, morphological measurements and age-related ratios in the field journal.

Field journey offield surveyGraph1.

№	Date	Captured tool	Name of the species	Size of the body					Breeding status					Other things to be collected	Explanation
				Weight	Length /L/	Ears /A/	Tail C/	Length of the foot /P/	Balls		Status of kits				
									Length	Width	Right	Left	Spots		
1															

1. Determination of density:

The use of the ARMACAP 10.3 program to demonstrate the density and distribution of harmful rodents in the seabuckthorn is a combination of the MAXENT application and the distribution density statistics. This action will provide a breakdown of the dispersion by high, medium and moderate levels.

Graph 2.

Area	Evaluation	Number of census counts	The area
Census area (The size of the areas must be the same)	High density	6	
	Medium density	3	
	Moderate density	1	

Use the Absolute and Relative Survey method to determine the density of sea buckthorn areas, and choose 25x25m², 50x50m², 100x100m² as the area of the study area (I Put Brom1952,1969, Elton et al.1931, BB Кучерук, 1963, H. B. Birulya 1934) / relative research method / the number of holes in the area with a rodent rodent.. The absolute density is determined by the method of completion. (EAS Karaseva, U. Telitzya, Kucheruk 1952) / absolute density method /. This method is a method of catching rodents, traps and traps on the area onthe selected area, and completing the hole and checking whether or not there are rodents left.

*A record of soul caught from a single tunnel*Graph 3.

№ of the tunnel	Date	Sex ratio / count /			Total number	Catching tools
		Male	Female	Non-adult		

In addition, studies of rodents that cause significant damage to sea buckthorn areas can be used to place standard cone, smoked sniffer and traps on their tracks and habitats

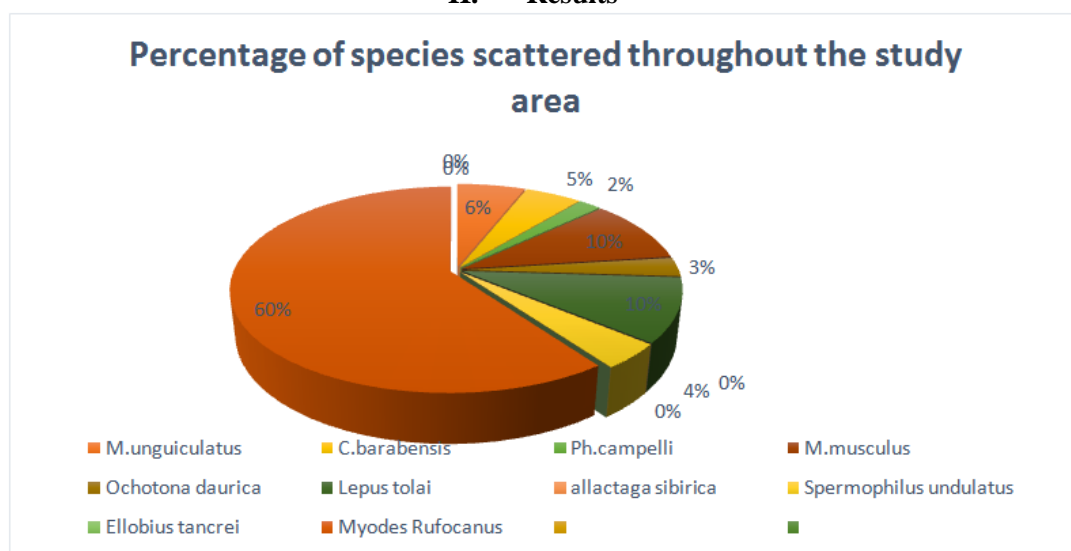
TOOLS

We use photo and video camera, two binoculars, GPS, 25 of Shararms trapping holders forsmall rodents, 25 kilos of lethal rodents, lentils, peanuts, night lights, Kestrel-2500 meteorological instruments, weighting tools ,scents,tools for collecting containers, reagents, forceps and maps.



Picture4.Tools.

II. Results



60% of the rodents in the field are fossilized by the Forest Cocktails, Home Mice, Vermiculite Rabbits, 10% each, Chicken Hamster, Shrouds, Long-tailed Squirrel, Mongolian Chips, and more.

Testing rodents in the seabuckthorn species and methods of testing and testing of densities and rodents in the seabuckthorn area in 2017

№	Team	Tribe	Type	Item
1	Rodent RODENTIA	Чичүүлийн овог GERBILIDAE	Чичүүл Meriones	Монгол чичүүл <i>M. unguiculatus</i> Milne Edwards, 1867
2	Rodent RODENTIA	Шишүүхэйн овог CRICETIDAE	Зузаг Phodopus	Орог зузаг <i>Phodopus campbelli</i> Thomos, 1905
3	Rodent RODENTIA	Шишүүхэйн овог CRICETIDAE	Шишүүхэй Cricetus	Хөхшишүүхэй <i>Cricetus barabensis</i> Pallas, 1773
4	Rodent RODENTIA	Хулганы овог MURIDAE	Хулгана Mus	Гэрийн хулгана <i>Mus musculus</i> Linnaeus, 1758
5	Rabbit LAGOMORPHA	Туулайн овог LEPORIDAE	Туулай Lepus	Боролзон туулай <i>Lepus tolai</i> Pallas, 1778
6	Rabbit LAGOMORPHA	Огдойн овог OCHOTONIDAE	Огдой Ochotona	Дагуур огдой <i>Ochotona daurica</i> Pallas, 1776
7	Rodent RODENTIA	Оготны дэд овог ARVICOLINAE	Оготно	Ойн хүрэн оготно <i>Myodes rufocanus</i> Sundevall, 1846
8	Rodent RODENTIA	Хэрэмний овог SCIURIDAE	Зурам Spermophilus	Урт сүүлт зурам <i>Spermophilus undulatus</i> Pallas, 1778
9	Rodent RODENTIA	Алагдаагын овог DIPODIDAE	Алагдаага Allactaga	Сибирь алагдаага <i>Allactaga sibirica</i> Forster, 1778
10	Rodent RODENTIA	Оготны дэд овог ARVICOLINAE	Оготно	Сохдой оготно <i>Ellobius tancrei</i> Blasius, 1884

Mongolia's blue hamster, long-tailed squirrel, dykes, cobblestones, etc. are often seen as sparse areas of the sea buckthorn region, while home mice contain greenhouses, wells, warehouses, and shelters.

Borolzon rabbits are common in the herbs with seabuckthorn berry bushes. Rabbit were seen at the area but it has not been caught yet.

Forest logs were the most common in the study area. There were 15 traps placed over all the area and all of the traps were successful. The live catcher were placed in every 5 meter squares. The forest logs and larvae feed on berries, moss, shrubs and bushy bushes and they feed mainly on herbs.

Судалгааны талбайгаас баригдсан зүйлийн гадаад морфометрийн үзүүлэлт

№	Species name	Weight /gram/	Length /mm/	Length of tail /mm/	Length of the foot /mm/	Length of the ears /mm/
1	<i>Myodesrufocanus</i>	55g	135-145mm	50mm	30 mm	10 mm
2	<i>Merionesunguiculatus</i>	70g	130mm	100 mm	40 mm	10 mm
3	<i>Ochotona daurica</i>	180g	170-220mm	-	25-29 mm	20 mm
4	<i>Mus musculus</i>	20-40g	70-110mm	38-102 mm	13-19 mm	10-15 mm
5	<i>Phodopuscampbelli</i>	14-20g	67-102mm	8-18 mm	10-14 mm	07 mm
6	<i>Cricetusbarabensis</i>	60g	85-124mm	20-33 mm	14-17 mm	13,5-18 mm
7	<i>Lepus tolai</i>	-	-	-	-	-

III. Conclusion

According to the approved project methodology, the research was carried out Umnig team of Batsumber soum of Tuv province within 30 ha of sea buckthorn area at "Polivitt" LLC. From 2016-2018, 10 species of rodents were observed.

In the survey area, the forest brownout, Borolzone rabbit density is highest. Rabbits have a major impact on young bushes and shrubs. The larvae of the larvae are the most common species, and the species has a serious impact on the bark of the tree. The study concludes that the distribution of habitats is high due to the presence of other habitats.

In 2018, we aim to combat rodents in sea buckthorn fields, to test some preparations and methods, and to develop a map on rodent distribution.

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