Readers Insight
Publisher of open access books and journals
PJMLS
Print ISSN: 2707-4471. Online ISSN: 2707-448X

Research Article	Pak-Euro Journal of Medical and Life Sciences
DOI: 10.31580/pjmls.v5i2.2578	Copyright © All rights are reserved by Corresponding Author
Vol. 5 No. 2, 2022: pp. 319-324	
www.readersinsight.net/pjmls	
Submission: April 27, 2022	**Revised:** June 25, 2022 **Accepted:** June 27, 2022

STATUS OF SULEMAN MARKHOR (*CAPRA FALONERI JERDONI*) IN ZIARAT NATIONAL PARK, BALOCHISTAN TO IDENTIFY ITS NEGATIVE INCENTIVE ALONG WITH CONSERVATION MEASURES

Sadia Jaffar[1], Nosheen Rafiq[1]*, Jafar Ali Baloch[2], Muhammad Naseem Jaffar[3], Hina Ali Ahmed[1], Tahir Habib[4], Syeed Inamullah[5], Kiran Aslam[1], Ehsan Ullah Jaffar[6], Hasil khan Baloch[7], Sundas Tariq [1], Muhammed Niaz Khan Kakar[2]

[1]**Department of Zoology,** Sardar Bahadur Khan Women University, Quetta, Pakistan

[2]**Forest and Wildlife Department,** Government of Balochistan, Pakistan

[3]**Department of Agriculture** Food Technology of Balochistan, Pakistan

[4]**Department of Local Government and Rural Development,** Balochistan, Pakistan

[5]**Department of Zoology,** Boys Degree College, Pishin, Government of Balochistan

[6]**Department of Horticulture** and Agriculture collage of Quetta Balochistan, Pakistan

[7]**Livestock and Dairy Development Department**, Balochistan, Pakistan

***Corresponding Author:** Dr. Nosheen Rafiq. E. mail: nosheenyasirzafar@gmail.com

Abstract

The present study work was conducted to investigate the population growth pattern, population status examination of negative elements that decreased their population and formation of positive actions for conservation of Suleman markhor "(Capra falconeri jerdoni) "in Ziarat National Park. The data in present work was assembled undeviatingly through occasional survey and meetings from the forest department, from the local community and wildlife department. Results showed that the number of Suleman markhor based on actual sighting is moderately subsidence as compared to those reported in 2017 by IUCN Pakistan. Density decreased due to climatic factors environmental factors, rise in hunting, food absence and drought. Thus it is recommended that taxonomic status persistence the flora and fauna of Ziarat park inference the wildlife rules against over hunting, conduction of surveys, proper vaccinations of animals, habitat hotbeds, dispersal species through GIS maps, investigation of genetic makeup through crossing different spices of others goats are mandatory for unusually unique species of Markhor in Ziarat National park, that is need of zoological point of view.

Keywords: *Current status, Positive actions, Suleman Markhor, Ziarat*

INTRODUCTION

Balochistan is the largest province of Pakistan having an area of 350,000 sq. km. The study was conducted in Ziarat National Park to examine the population of Sulaman markhor, also observed the positive incentive and negative incentive. The purpose of this study was to take positive action to save the Suleman markhor in Ziarat National Park. The park is situated at the distance about 15 km from Ziarat city. Markhors are generally found in grassy mountainous areas where rainfall is unpredictable and low and lies in the middle of 600- 3,600 meter altitudinal ranges (1). There was a dreadful need to control population monitoring to settle the existing status of markhor in Khalifat mountain range of Ziarat to know the population drift in the area. "*Capra falconeri jerdoni*" Suleman markhor is a threatened wild goat according to the IUCN Redlist 2012. In the eastern Pakistan compact information on its subsistence population and its

constant change compelling is known. The national mammal of Pakistan is Suleman markhor. It is known as threatened species in the International Union for Conservation of Nature (IUCN). Red list of endangered species has been track down in Khalifat mountain range in Ziarat. The survey conducted in the Khalifat mountain range in Ziarat revealed reduced population of Suleman markhor. Research conducted by Bazmir khan et al, revealed that number of markhor is decreased significantly based on the actual sighting as compared to those reported in 1996 by WWF – Pakistan (2).

Fig. 1. Suleman Markhor spotted in the mountain range of Ziarat

Suleman Markhor is the national mammal of Pakistan, which has been listed as a rare species in the (IUCN) Red List of Endangered Species. It was distributed in "northeastern Afghanistan", "northern India" "(southwest Jammu and Kashmir)", northern and central Pakistan, (Southern Tajikistan) and "southern Uzbekistan". It was found in mountain ranges at the height from 600 to 3,600 meters. Environment shattering, illegal hunting and other anthropogenic dangers need harshly reduced Markhor numbers in its natural environments (3).

Hunting is not only major cause of threatened and endangered rare animals but also unfavorable climate is one of the reason, Hunting Suleman markhor due to its strong branched horns and its meat quality.

Fig. 1. Sulaiman Markhor (Pakistan)

Recent survey in the spotted area showed that eight female and two male Suleman markhor were found in Khalifat Mountain. Threatened species are sensitive to climatic changes about 99.8% threatened species are touchy to climatic changes. Ground water is disintegrate in Khalifat mountain range, due to which Suleman markhor has to face shortage of water and many environmental pollution components including population expansion, deforestation, disorganizing and degradation wares effect of pollution or the ecological community exposed the lives of endangered animals.

The survey has publicized in the Khalifat mountain range of Ziarat where the existence of Suleman markhor population is very small. Almost six females and one male markhor were sighted during the survey in the area of Khalifat Mountain. Fresh existence of markhor in the Malikat Mountain was also spotted. Two females were found in Malikat Mountains. It also confirmed the existence of markhor in that area. On all

major mountain ranges directly to the north and east of Quetta isolated population Suleman markhor is found (4).

It was logically proved that markhor's do not eat snakes from the view of the "Persian language" only the name markhor is referred to "snakes eater". One of the documentation classes for various sub-species of makhor, beside from other genetic characteristics is the horn shape (5).

BIOLOGY OF SULAMAN MARKHOR

Markhor is an unreserved animal. Young males live with females and small groups with their kids. However, during the rutting season mature males are seam with females (6). Markhors are daily feeders with the highest movement in the initial morning and late evening time, but they feed in winter irregularly during the day (7). They surf as well as graze. They irregularly climb into "Oak" trees (Quercus spp.) to eat the vegetation (8). The availability of food changes with the season. When the ground is covered with snow Markhor eat "Oak" leaves, while in summer season they feed mostly on forbs and grasses (9).

Female markhor become mature at 30-36 months and they have straight-horned (1) although the age of first imitation in "flare-horned" markhor was 24 months (10). In late October to early December and continues for about one month the rutting season starts. Growth was around 160 to 170 days (11). One limb is record common in females' ≤ 5 years although twins are common in older females (12). According to Roberts (1977), markhor may live up to 10-12 years.

MATERIALS AND METHODS

STUDY DESIGN

This survey was conducted with the help of forest department "Ziarat National Park", such as the "forestry department", "agriculture department", "wildlife department" and (EPA) Balochistan. The secondary data was collected and then polished to show an exact and connected data finding.

Fig. 3. Ziarat National Park, Juniper forest

Ziarat was declared as the 3rd National park by the Balochistan government according to its efforts to increase the number of protected areas. The Ziarat area is also called the home of juniper forest "(*juniperus*

excelsa polycarpus)" in Pakistan. The forest covered about "110 000" Ha, and in the world it supposed to be the second largest of its kind. The junipers of Ziarat are among oldest living trees in the world. While no dendrological survey has yet been conducted, according to one approximation mature trees are frequently thousands of years old. The survey was started early in the morning and the water points were used to spot the animals. Binoculars were used to make observation. In the early hours from 6:30 to 11:30 am animals were counted and from 4:30 to 7:30 in late hours. Than we visit the park to examine the flora and fauna, we also interacted with hunters and local community members in the study area. The climate of district Ziarat is very cold in winter season and pleasant in summer. The study area was located at "30° 18-51" north and from "67° 41-37" east (13).

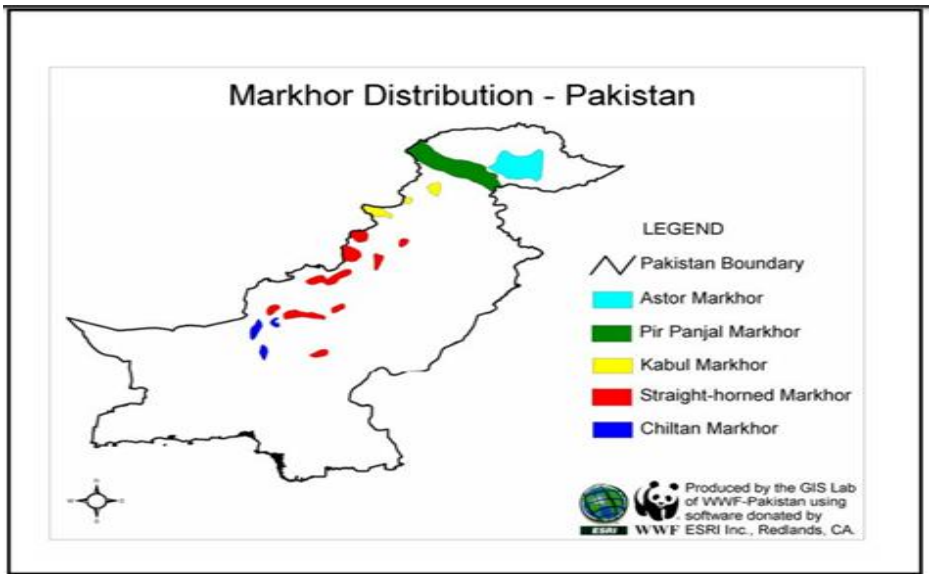

Fig. 4. Markhor distribution in Pakistan

At the junction of five vegetation zone Ziarat juniper forest ecosystem is located. Khalifat Mountain Ziarat provides habitat for threatened wildlife species, which include threatened mammal species such as Suleman Markhor, Balochistan Black bears and ursus thibetanus, also includes birds such as chukar (*Alectoris Chukar*), mistle, thrush (*Turdus Viscivorus*), strealced laughing thrush(*Garrulax Leucolophus*), black tit (*Parus Leucomelas*) and dark throated thrush (*Turdus Atrogularis)* etc. Rich diversity of plant is also supported by it.

RESULTS AND DISCUSSION

Studies have revealed the existence of actual sparse numbers of Suleman Markhor in Khalifat Mountains of Ziarat. Through the investigation, one male Markhor and six female Markhor were witnessed in the mountains of Khalifat. Two females were witnessed in the "Malikat Mountains". Fresh dung of Markhor in the (Malikat Mountains) also confirmed the presence of Markhor in this area.

Suleman Markhor is the national animal of Pakistan due to its quality meat and strong branched horns, people hunt them. The IUNC put the Suleman Markhor in the red list of endangered species, and in a recent survey showed that Khalifat Mountain has only eight female and two male Suleman markhors were spotted in the area.

Hunting is not the major cause of endangered or threatened of all the rare animals. As we know that endangered species are overwhelmingly threatened by the climate change, according to, yet Federal Agencies (YFA), 99.8% endangered species are sensitive to climate change. The disappearing of ground water in Khalifat mountain range due to which this specie has to face deficiency of water. Many environments desecrate factors such as logging, population growth, and the most annoying pollution of ecosystems has been endangering the lives of rare animals.

CONCLUSION

The sharp decline in from 2017 and the continued decline in Suleman Markhor's population may be due to the spread of drought, hunting, lack of feeding. This has been proven in the field of study, as food availability and shelters have always been proven to be the keys to population survival and production.

High-quality habitats inhabit more wild goats and lower-quality habitats, as food (quality and quantity), which is considered part of the environment, greatly affects the viability and fertility of animals. The ground supports a small number of goats.

Density has declined due to ecological factors such as increased hunting, climatic factors, food shortages and droughts. Therefore, it is advisable to determine the taxonomic status of the park's flora and fauna, the involvement of the Wildlife Council on overhunting, conducting surveys, proper vaccination, species distribution and environmental resolution through the GLS database. It is a study of suitable genetic equipment for mating with common goats and is needed from a "zoological" point of view to restore the community of Suleman Markhor in the surrounding area and Ziarat National Park.

Recommendations:

Based on the results, regular surveys should be directed to study detailed biological studies, population trends (taxonomic checklists) of park flora and fauna. "Illegal hunting" is still observable and can be reduced with better controlling skills. Vaccination, flooding, and injection "(against ectoparasites and endoparasites)" by the livestock sector in the mark area at minimum twice a year it is also advised.

Conserving biodiversity is an essential prerequisite for the survival of living organisms on ocean planets. Balochistan being the largest state in Pakistan has only dry mountains that lack water, animal food and other basic needs. The biggest problem here is uncontrolled hunting of animals, which is on the list of endangered species. Today, Balochistan animals are endangered by the Pakistani elite and other hunters who come to the state for hunting's different species of animals without government consent. Violations of the law are in the order of the day. Forest Conservation Agency is not found anywhere in the state. In these harsh conditions, it is imperative that all individuals take action to protect endangered species.

Acknowledgement:

The author would like to thank all staff for their cooperation in data collection research from various departments, all faculty and staff in the Forest and Wildlife Department for funding this research work under "Ten billion tsunami tree project", and the local support and approval of staff in the Ziarat National Park.

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