

Population Status of Markhor (*Capra falconeri cashmirensis*) in Kunsher, Palas valley, Pakistan

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Abstract: There were strong reports about the existence of markhor in the Kunsher area of Palas valley. Field visits were thus conducted in three consecutive years from 2006 to 2008 to assess the population of the animal. The population was assessed by establishing three vantage points for direct counts of the animal. The population was revealed as 10, 5 and 4 respectively for the years 2006, 2007 and 2008, with a decreasing trend, attributed to habitat fragmentation, population expansion and poaching. Thus, it has been recommended to conduct habitat assessment studies, awareness raising campaigns and prevention of poaching for the long term survival and improvement of markhor's numbers in that area.

Keywords: Status, Markhor, Kohistan, Palas, Pakistan

INTRODUCTION

The Kashmir markhor (*Capra falconeri cashmirensis*), also termed as Pir Panjal markhor, belongs to the family Bovidae and sub-family Caprinae. It is recognized as a sub species of markhor, *Capra falconeri* (Schaller and Khan, 1975). The markhor was first described by Wagner (1836). Overall three sub species of markhor are documented that include *Capra falconeri falconeri*, *Capra falconeri heptneri*, and *Capra falconeri megaceros* (Grubb, 2005). In Pakistan, five subspecies of markhor were speculated (Ellerman and Morrison-Scott, 1951; Roberts, 1969) however, it was generally grouped into two categories i.e. Flare horned markhor and Straight horned markhor (Schaller and Mirza, 1971). The Flare horned markhor includes *Capra falconeri falconeri* and *Capra falconeri cashmirensis* and Straight horned markhor includes *Capra falconeri megaceros* and *Capra falconeri jerdoni* (Schaller, 1977; Nowak, 1991; Corbet and Hill, 1992). The fifth one, *Capra aegagrus chialtensis* on the other hand described as a wild goat or rather a hybrid (Schaller and Khan, 1975; Roberts 1997).

The distribution range of Kashmir markhor is scattered in an area between Pakistan, India, Afghanistan, Turkmenistan, Tajikistan and Uzbekistan (Schaller, 1977). The habitat elevation varies from 600 m to 3600 m (Hammer *et al.*, 2008). In Pakistan, however, the highest numbers, 3200 to 3700 individuals, have been reported (Shackleton 1997; Weinberg *et al.*, 1997). The Kashmir markhor has been described in Chitral, Dir, Swat Kohistan,

Indus Kohistan and with few recordings from Azad Kashmir and South Kashmir as well (Roberts, 1997; Suhail and Baba, 2002). The Chitral area has shown to be a stronghold of this sub species with estimate of 299 animals in 1977 at Chitral Gol National Park (Aleem, 1977), and 160 to 300 animals during 1985-1987 surveys again in Chitral Gol National Park (Hess, 2002) and 125 animals in Tushi valley north of Chitral (Schaller and Khan, 1975).

The markhor has been declared as endangered species according to recent assessment of IUCN in 2008. Its sub species Kashmir markhor, similarly, has also been reported as endangered species few times (Hess *et al.*, 1997; Habibi and Wahid, 2001; Grubb, 2005).

Kashmir markhor was previously reported in Kunsher area of Palas, District Kohistan. Thus the present study was conducted to estimate the existing population of Kashmir markhor in the study area.

MATERIALS AND METHODS

The Kunsher area is situated in Palas vally, Kohistan. It is one of the ten Union Councils present in Tehsil Palas. The four main villages of Kunsher include Kot Kunsher, Ser Kunsher, Sury Kunsher and Gamri. The total human population of the area has been recorded as 350 approx. The area is eminent for its ecological diversity. The flora of the area includes *Cedrus deodara*, *Pinus gerardiana*, *Juglans regia* etc (Akbar, 2003). The fauna of the area is comprised of *Ursus thibetanus*, *Prionailurus bengalensis*, *Canis lupus* etc (Arshad, 2003).

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A preliminary survey was conducted in the study area in early 2006 as discussions with local people, herdsman and hunters and special pockets harbouring markhor were identified. Following that, vantage points were selected in areas with alleged good populations of this species according to local people, herdsman and hunters. The vantage points were Lagharho, Gurtakone and Chavee, located in Laash Galash Peak, near to village Garmi. Therefore, we conducted surveys spreaded over three years with the purpose of population assessment of Kashmir markhor in Kunsher area.

RESULTS

The recorded markhor population in the studied area revealed as 10, 5 and 4 individuals during years 2006, 2007 and 2008 respectively, which showed a significant decline in number of individual over the time (Figure 1).

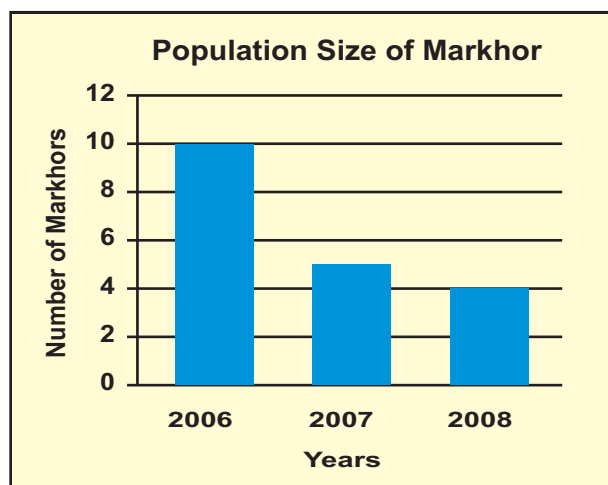


Figure 1: Population size of Kashmir markhor in Palas Valley

Similarly, the population of markhor in the investigated area showed the presence of 5, 2 and 2 males for the respective years of 2006, 2007 and 2008. Similarly, females recorded for the year 2006, 2007 and 2008 were 3, 2 and 1 respectively and yearlings were 2, 1 and 1 for the above mentioned three investigating years (Figure 2).

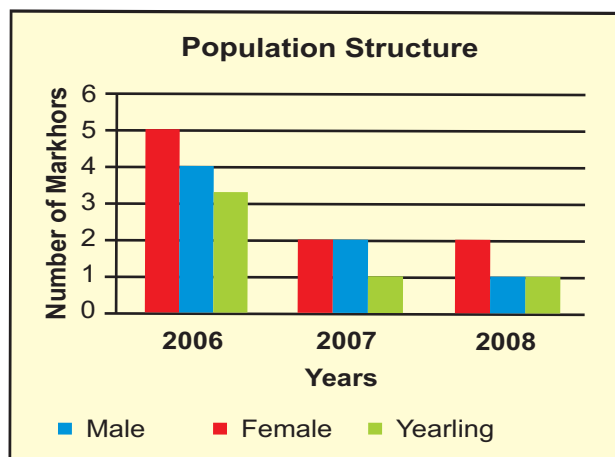


Figure 2: Population structure of males, females and yearlings of Kashmir markhor in Palas Valley

In 2006, a group size of 10 animals were observed, and in 2007, a group size of 5 was recorded and likewise a group size of 4 individuals were observed in 2008.

The data revealed sex ratio as 1:0.6, 1:1 and 1:2 according to respective years 2006, 2007 and 2008.

DISCUSSION

Kashmir markhor was said to be present in the study area in previous reports. Although it was confirmed during the surveys that markhor does exist in the Kunsher area but the animal counts were not encouraging. Moreover, the grave concern is that the population has shown a declining trend, which obviously raised questions about the future survival of the species in this area. The issues observed in the study area were habitat fragmentation, illegal poaching and human population expansion/settlement, which were leading towards the decline of markhor population (Hess, 2002).

However, in the Dasso tehsil adjacent to Palas harboured a good population of markhor is reported. This population is mainly ascribed as continuous and strenuous conservation efforts in the area. This therefore, showed that if positive efforts are taken in right directions, then we may increase the chances of improving markhor population in Kunsher area (Ali, 2008). Nonetheless, the presence of species in Kunsher is in itself a magnificent approach, as there are only few pockets in the country where markhor population is thriving.

It is therefore, recommended that detailed study on habitat destruction assessment suitable for markhor should be conducted and strategies be formulated for their long term conservation. Moreover, awareness

about raising campaigns of Kashmir markhor be recommended to stimulate conservation amongst the local communities. Poaching should be discouraged and necessary measures should be adopted for this purpose.

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