

Studies on Population Status of Punjab Urial (*Ovis vignei punjabienses*) in Jalalpur, District Jhelum

Mirza Muhammad Azam, Abdul Qayyum Nazar and Naeem Abbas
Zoological Survey Department, Government of Pakistan, Islamabad

Abstract

Jalalpur Wildlife Sanctuary and adjacent areas of Salt Range in district Jhelum, Punjab were surveyed for study of population status of Punjab urial (*Ovis vignei punjabienses*). The population in the sanctuary was estimated to be 130. The average density was 4.89 animals per sq km. Of the 51 animals actually seen, 19 were females, 17 young, 13 males below 6.5 years age and two males above 6.5 year age. In the area adjacent to the sanctuary, 44 sq km was surveyed and an estimated population of 80 urials with the average density of 1.8 animals per sq km was found. Of the 19 animals actually seen, 8 were females, 5 young, 5 males below 6.5 year age and two males above 6.5 year.

Keywords: Jalalpur Wildlife Sanctuary, Punjab Urial, population, Status.

Introduction

Pakistan has versatile habitat types and ecological zones, from deep sea to high mountains including coasts, rivers, lakes, forest, deserts and mountains. Due to this versatile ecology the country is rich in diversity of its fauna and flora. Ungulates are the most important of the game animals which are now under an extremely high hunting pressure. In addition, they are also facing habitat degradation with increasing human settlements. Some of the species of ungulates, such as, swamp deer and black buck have become extinct in the county while some others have been exterminated from a numbers of their original distribution ranges and are now restricted to some pockets where they still face high hunting pressure and habitat degradation.

For the protection and conservation of the ungulates various government and NGOs have been working since long with a little success. This has led to a recent trend of involvement of local communities in the programme aiming at protection and conservation of ungulates. This has resulted in the development of many community based conservation programmeme throughout the world, including community based trophy hunting programmemes. The trophy hunting programmemes have met success in NWFP province and Torghar in Balochistan. The programme has now been expanded in all the four provinces and Northern Areas of the country. Punjab urial (*Ovis vignei punjabienses*) is though seriously threatened in the country yet unabated hunting is continuing. Starting a trophy hunting programme the present study aims at knowing the present status of the urial in one of such proposed site i.e. Jalalpur (District Jhelum, Punjab, Pakistan) urial in some selected area is being considered.

A number of workers have conducted studies on distribution, status, biology and ecology of urials in Pakistan. Schaller (1974, 1977) studied feeding and breeding habits of urial whereas Stocky (1922), Nowak (1991) conducted studies on its breeding biology. Ahmad and Ghalib (1975) described the distribution of urial in Pakistan. Reberts (1997)

described distribution, status, and ecology and biology. Mirza *et al* (1979) and Aleem (1977) studied population and status of urials.

Material and Methods

The Jalalpur Wildlife Sanctuary (plate-1) is situated a few miles in the northeast of Jalalpur Town in Tehsil Pind Dadan Khan, District Jhelum. It has an area of 22.6 sq km. The sanctuary area comprises of an almost parallel series of hills with a torrent between them. The altitude ranges from 700 feet to about 2,000 feet. The sanctuary is bounded in the north by Rakh Noorpur and private land of Nakka Kalan, in the south by Jalalpur Sharif, in the east by Rakh Kandal and in the west private land of Wagh. The sanctuary has typical steppe vegetation of the area dominated by *Acacia modesta* with seahoved bushes of *Ziziphus nemmularia*, *Acacia nilotica*, *Prosopis spp.* *Salvadora oleoids* and *Capparis decidua*.

A part of the area of a Salt Rang adjacent of Jalalpur was also studied which includes 20 sq km areas adjacent to Behr Faqirian, and 24 sq km area adjacent to Pind Sawikka This area was also observed to have typical habitat and vegetation of the Salt Range.



Fig. 1. A general view of Jalalpur Wildlife Sanctuary:

The study was undertaken between December 17 and 24, 2005 adopting belt transect sampling methods. Handheld GPS was used for the determination of the observation points. Observation teams consisting of 3 to 4 experienced observers were constituted to survey different parts of the areas simultaneously to minimize the chance of double count. Location and altitude of site and observation of urial was recorded. Density and population were calculated by dividing the numbers of animals by the size of survey area. The age of the rams was determined by the horn rings method. Females

were difficult to be aged with this technique; therefore, they were classified according to the size of their body and color. The data was categorized as young adult females, adult males class I (upto 6.5 years) and adult males class II (above the 6.5 years).

Results and Discussion

During present survey observation and sightings of animals revealed that a sizeable population of urial was present in the Jalalpur Wildlife Sanctuary, while in the adjacent area density of urial is much low.

Jalalpur Wildlife Sanctuary

The study suggested a population of 130 urial in the Jalalpur Wildlife Sanctuary. This distribution was found to be not uniform as some areas have higher density while it was relatively lower in other areas (Table-I). Major concentration was noticed in the northeastern part of the Sanctuary, while in the southwestern part density was relatively low. The average density was calculated to be 4.89 animals per sq km. During survey 51 animals were actually seen. These include 19 females, 17 young, 13 males below the age of 6.5 years and 2 males above 6.5 years. The largest herd comprised of 10 animals while average herd size was found 5.1.

Area Adjacent of Jalalpur

The estimated number of animals in this area was 80 (Table-II). As the survey area was approximated 44 sq. km, therefore, there was an average population of 1.8 urial per sq. km. Of the 19 animals actually seen, 8 were females, 5 young, 5 males below 6.5 years age and 2 were males above 6.5 years age. The largest herd has 6 animals while average number of animal in the herd was 3.8.

Table-I. Distribution of Punjab urial in various sites in the Jalalpur Wildlife Sanctuary

Location	Total	Female	Young's	Male - I	Male - II
Kalwacha	5	2	2	1	-
Sarjali	10	3	5	1	1
Kharappa	2	-	1	1	-
Kharapha	8	2	4	2	-
Kharapha	4	2	-	2	-
Kharapha	3	2	-	1	-
Kharapha	4	2	-	2	-
Shappes Nalls	8	2	4	1	1
Shappes Nalls	5	3	1	1	-
Kharappa	2	1	-	1	-
Total	51	19	17	13	2

Only two trophy size males, having the age of 6.5 years, were seen out of a total of 19 animals. It is calculated that number of males exceeding 6.5 years age (which may be categorized as trophy hunting size) may up to 8 in total open area surveyed under present study.

Table-II. Distribution of Punjab Urial in various sites in the area adjacent to Jalalpur

Location	Total	Female	Younger	Male - I	Male - II
Sharabbi	6	3	2	1	-
Pind Sawihha	4	1	2	1	-
Lamma Mera	2	1	-	-	1
Sai Shoukat Kas	3	1	1	1	-
Sai Shoukat Kas	4	2	-	1	1
Total :-	19	8	5	4	2

Very few and fragmented studies have been conducted on urials, especially in Salt Range. Roberts (1997) observed that in the Salt Range urials have been totally exterminated from the Koho-i-Murat hills and only a few were reported to be surviving around Traki Morth of Jhelum, around Bhoun and west of Chokri. Main concentration of urials is reported to be in the Kala Chitta hills, northwest at Masan valley and Kalabagh. Mirza *et al* (1976), who surveyed the hill in the Salt Range in 1976, estimated 1,288 urials for the Kalabagh Reserve (District Mianwali), 213 in Kala Chitta Hills (Chack Jabbi area) and a total of 588 animals in Jhelum District with sizeable population in the Domeli Hills, Barali Hills, Tilla Hills, Kandal Rakh and Parera Hills.



Fig. 2 Punjab urial (*Ovis vignei punjabienses*) in Jalalpur Wildlife Sanctuary

Based on the data, the area can be categorized as high density and low-density areas. Jalalpur Wildlife Sanctuary may be regarded as high density area, while areas

adjacent to sanctuary may be treated as low-density areas. Wildlife sanctuary can again be classified into high quality habitat and low quality habitat. It may be pointed out that high density and low density area of Wildlife Sanctuary are not based on the vegetation and habitat qualities but rated according to due to disturbance level. The areas of Wildlife Sanctuary relatively closer to Jalalpur Town are the areas of relatively high disturbance, caused by domestic grazers, while those of relatively far away are relatively less disturbed.

References

- Ahmad, M. F. and Ghalib, S. A., 1975. A checklist of mammals of Pakistan. Rec. Zool. Sur. Pakistan 7: 1-34.
- Aleem, A. 1977. Punjab urial in Chack Jabbi, Ara, Kala Chitta Range. Pakistan Forest. 27: 130-138
- Mirza, Z. B., Khan, M. A., Asghar, M. and Mehal, A. Q., 1979. Distribution, status, habitat and food of the urial (*Ovis orientalis punjabiensis*) in the Punjab. Bombay Nat. Hist. Soc. 76: 423-430.
- Nowak, R. M., 1991. Walkers Mammals of the World Vol. I. Johns Hopkins Univ. Press Maryland.
- Roberts, T. J., 1997. The Mammals of Pakistan. Ernest Benn Ltd., London.
- Schaller, G. B., 1974. On the behavior of Punjab urial (*Ovis orientalis punjabiensis*). In: The Behaviour of Ungulates and its Relation to Management. (V. Geist, and F. Walther, eds). IUCN New Series, Morges, Switzerland: 306-323.
- Schaller, G. B., 1977. Mountain Monarchs: Wild Sheep and Goats of the Himalaya. Univ. of Chicago Press, Chicago.
- Stocky, L. L. C. H., 1922. Notes on urial. Bombay Nat. Hist. Soc. 28: 1126-1128.

