

Vanishing Antelope Cervicapra (black-buck) Population in Kaimur Wild Life Sanctuary, Mirzapur-Sonbhadra (U. P.)

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ABSTRACT

Depletion of biodiversity is an alarming problem all over the world. Though India has an age old tradition of nature conservation and the same is reflected in old literature and cultural ethics, but during the recent past, there had been sudden decline in the wild life biodiversity of India. The ideal system for genetic resource conservation is "in situ" i.e. in reserve forest and protected areas. The protected areas are the key to the survival of endangered species. In spite of being numerous, unfortunately they are small in size and are under considerable pressure from ever increasing anthropogenic development. The presence of human being in the Indian wild life habitat has increased to the extent that there is hardly any forest area in India which is truly free from human intrusion.

The present paper provides useful information about black-buck (Antelope Cervicapra) of Kaimur wild life sanctuary. This sanctuary was established in 1982 and situated on Vindhyan hills. The sanctuary covers the area of 501 square Km. and belongs to the southern part of district Mirzapur and Sonbhadra. The sanctuary was once known for its black-buck population but now this beautiful timid mammal species is threatened and rapidly vanishing at faster rate than anticipated. Thus it is high time to save this species from complete extermination in this region. The paper also deals with the causes of depletion of black-buck (Antelope cervicapra) population in the sanctuary itself.

Keywords: Depletion, Antelope Cervicapra, Black-Buck

I. INTRODUCTION

On the global level, Indian subcontinent is unique in having immense natural beauty in its different biomes and also in possessing a rich and diverse wild life fauna. We owe this to India's position in the tropical and subtropical latitudes with their inherent wealth of life. In India about 1,15,000 species of plants and animals have been identified and described and is one of the 12 mega diversity centers of the world. McNeely et al⁷. India ranks tenth in the number of endemic species of higher vertebrates in the world Kumar and Asija⁵.

Kaimur wild life sanctuary is situated in the civil district of Mirzapur and Sonbhadra between 24° 33' and 24° 73' North Latitudes and 82° 12' to 82° 21' East Longitudes. This area is characterized by tropical dry deciduous and scrub forests, interspersed with open Savannah patches of central vindhyan ranges, covering a part of drainage basin of the Ganges river system which has been ancient home for number of wild species. This area harbours several species of deers and antelopes, comprising of the largest Indian deer - Sambar, the most attractive - cheetal, and the endangered species of antelopes, the chinkara - a rare species, the sacred Nilgai and the beautiful black-buck which is worshiped by the Bisnoi community of Rajasthan. Black-buck belongs to the genus antelope and is widely distributed in India. The Indian black-buck is one of most spectacular and numerous of wild animals living in close proximity to human settlements.. During recent past, the population of black-buck is declining very rapidly in the sanctuary itself. Since black-buck form an important component of food chain and major prey base for carnivores, their destruction will be a danger point for them. The drastic decrease in the population of black-buck had led the emphasis to workout the ecological and natural behaviour of the animal and also to work out serious conservation techniques for the increase of the population in protected areas as well.

Materials and Methods: For the present study, visits were performed to some of the major wild life areas and vegetation type in all the four ranges viz. - Halia, Ghorawal, Robertsganj and Gurma range of Kaimur wild life sanctuary. Field observations were carried out mainly in the mornings and evenings, usually with the help of 8 x 30 binoculars or a 15 x 40 monocular. Monthly survey of the study area was performed during both the years, specifically from November 2003 to October 2004 and similarly from November 2004 to October 2005 to become familiar with ecological conditions existing there. The survey in the forest was facilitated by the personnel's of forest department of Kaimur wild life sanctuary and also many local people of the nearby villages, who helped a lot in this task. Most of the observations were made from a car, bullock-carts and on foot wherever, the opportunity afforded from mid June to September, during both the years to cover all roads in Kaimur wild life sanctuary was impossible, because of the monsoon rains, making observation on foot a necessity.

The forest department conducts yearly wild life census, which helped a lot during the study period. Further, the animals were counted in a drive census with villagers and tally the number and kinds of animals, they see. The population was estimated on the basis of direct counting of animals during the study period, combined with census report of the forest department. The study area is quite open and the visibility is fair to count the animal from a distance with the aid of a binocular even at dusk or dawn. In spite of direct census, a record of total sightings made in each month has been kept for two completed years, from November 2003 to October 2005. The total number classified were further identified into fawns, females and males.

Observation : Antelope cervicapra is typically Indian in distribution. During present investigation, this beautiful and timid animal was frequently observed in Halia, Robertsganj and Ghorawal ranges of Kaimur wild life sanctuary, as it prefers open plains covered with scrub and cultivated land.

The fluctuation in any species population abundance is called the population dynamics. In the present investigation, direct count method is applied for the computation of the size of the population of black-buck.

During 2003-2004, total 5327 individuals of black-buck were counted, out of this, 1429 were males, 3267 were females and 631 were fawns. while, in the next year i.e. during 2004-2005, total 4796 black-buck were counted comprising 1275 males, 2941 females and 580 fawns. The data clearly indicates a considerable reduction (of 531 individuals) in black-buck population within just two years (Tables 1 and 2). More precisely, the male black-buck population showed the reduction of 154 individuals, females showed the reduction of 326 individuals and fawns also showed reduction in the number by 51. This gives a comprehensive picture of the population structure and also was indicative of the annual cyclic changes. The species composition inside the various component ranges of the Kaimur wild life sanctuary is also very significant.

The month wise composition of black-buck population shows that the number of individuals were minimum in the month of April and October during both the years of study and it was maximum during December (2003) and August (2004) during first year of consensus while, in the next year maximum black-buck population was counted in the month of December (2004) and June (2005). Thus, it is obvious that black-buck population showed a bimodal pattern of increase in all the component ranges of Kaimur wild life sanctuary.

Table-1 : Month wise percentage composition of male, female and fawns in the population composition of black-buck in kaimur wildlife sanctuary (2003-2004).

Month and Year	Total Population Classified	Male			Female			Fawn		
		Number	% of Population for the Month	% of Population (Col. 2)	Number	% of Population for the Month	% of Population (Col. 2)	Number	% of Population for the Month	% of Population (Col. 2)
1	2	3	4	5	6	7	8	9	10	11
Nov 2003	558	136	24.37	2.55	360	64.51	6.75	62	11.11	1.16
Dec 2003	588	138	23.47	2.59	381	64.79	7.15	69	11.73	1.29
Jan 2004	398	99	24.87	1.85	251	63.06	4.71	48	12.06	0.90
Feb 2004	379	91	24.01	1.70	235	62.00	4.41	53	13.98	0.99
Mar 2004	467	114	24.41	2.14	298	63.81	5.59	55	11.77	1.03
Apr 2004	310	77	24.83	1.44	198	63.87	3.71	35	11.29	0.65
May 2004	407	119	29.23	2.23	234	57.49	4.39	54	13.26	1.01
Jun 2004	564	155	27.48	2.90	344	60.99	6.45	65	11.52	1.22
Jul 2004	517	135	26.11	2.53	331	64.02	6.21	51	9.86	0.95
Aug 2004	585	174	35.87	3.26	254	52.37	4.76	57	11.75	1.07
Sep 2004	378	97	25.66	1.82	241	63.75	4.52	40	10.58	0.75
Oct 2004	276	94	34.05	1.76	140	50.72	2.62	42	15.21	0.78
Total	5327	1429			3267			631		

Table-2 : Month wise percentage composition of male, female and fawns in the population composition of black-buck in kaimur wildlife sanctuary (2003-2004).

Month and Year	Total Population Classified	Male			Female			Fawn		
		Number	% of Population for the Month	% of Population (Col. 2)	Number	% of Population for the Month	% of Population (Col. 2)	Number	% of Population for the Month	% of Population (Col. 2)
1	2	3	4	5	6	7	8	9	10	11
Nov 2004	508	122	24.81	2.54	328	64.76	6.83	58	11.41	1.20
Dec 2004	523	120	22.94	2.50	339	64.81	7.06	64	12.23	1.33
Jan 2005	363	89	24.51	1.85	229	63.08	4.77	45	12.39	0.93
Feb 2005	345	81	23.47	1.68	215	62.31	4.48	49	14.20	1.02
Mar 2005	430	102	23.72	2.12	278	64.65	5.79	50	11.62	1.04
Apr 2005	282	69	24.46	1.43	180	63.82	3.75	33	11.70	0.68
May 2005	368	106	28.80	2.21	213	57.88	4.44	49	13.31	1.02
Jun 2005	502	137	27.29	2.85	306	60.95	6.38	59	11.75	1.23
Jul 2005	461	120	26.03	2.50	295	63.99	6.15	46	9.97	0.95
Aug 2005	431	154	35.73	3.21	226	52.43	4.71	51	11.83	1.06
Sep 2005	337	91	27.00	1.89	210	62.31	4.37	36	10.68	0.75
Oct 2005	246	84	34.14	1.75	112	49.59	2.54	40	16.26	0.83
Total	4796	1275			2941			580		

Discussion and Result : The present study summarises the result of two years study in the Kaimur wild life sanctuary area performed between November 2003 and October 2005. It is worthwhile, at this stage to confirm and compare the observed data with other resulted studies. The black-buck has been known to inhabit large areas throughout India, below an altitude of about 1000 meters. It has not been known to cross this height even when there are no physical barriers and the forage shade and water are in plenty Schaller. The status of black-buck has been described from time to time by various workers Blanford¹.

Black-buck is an animal of open land with thorny and dry deciduous forest. The grazing pattern and the comfort movements described by Schaller!) and Krishnan" are in accordance with the present observation, except for at least twice a day which has been recorded during the period of observation by the author. The most striking character of the Indian fauna as emphasized by Jayson, is the very recent regressive changes. "There is no existing and generally accepted theory regarding the purpose of the herding habit in mammals" and it may simply be the alternative to a solitary life Wynne⁹

From the geographical distribution records of wild species, most important challenge of the present and immediate future, there is a general scientific consensus i.e. emphasis should be laid on maintaining natural ecosystem and thus "in situ" conservation of wild life.

Antelopes population has declined drastically to a critical level, where its conservation becomes extremely necessary. Since, deers and antelopes form an important component of food chain and major prey base for carnivores, their destruction will be danger point for them. The present paper will provide important information about black-buck in Kaimur wild life sanctuary and will also contribute to outline the factors responsible for their declining trend in this area.

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