

**CONSERVATION STATUS OF BLACKBUCK (*Antelope cervicapra*
LINNEAUS, 1758) AT KHAIRAPUR, BARDIA, NEPAL**



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of Master of Science in Zoology with special paper Ecology

Submitted to

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Institute of Science and Technology
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DECLARATION

I hereby declare that the work presented in this thesis has been done by myself, and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by reference to the author(s) or institution(s).

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RECOMMENDATION

This is to recommend that the thesis entitled “**Conservation Status of Blackbuck (*Antelope cervicapra* Linneaus, 1758) at Khairapur, Bardia, Nepal**” has been carried out by Suprabha Ban for the partial fulfilment of Master’s Degree of Science in Zoology with special paper Ecology. This is his/her original work and has been carried out under my supervision. To the best of my knowledge, this thesis work has not been submitted for any other degree in any institutions.

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ABSTRACT

The population status, seasonal habitat preference, conservation threats of Blackbuck and the crop loss by Blackbuck in marginal agricultural lands was studied in BCA at Khairapur, Bardia by direct observations, indirect observations, field survey and questionnaire method. The field research was conducted from 25 January, 2011 to 22 October, 2011.

Blackbuck (*Antelope cervicapra rupicapra*) is a vulnerable species and is one of the protected mammals of Nepal; lies in Appendix III of CITES. The population of Blackbuck in BCA at Khairapur, is the only single wild population of Blackbuck in Nepal which indicates that the population is more vulnerable to extinction.

A total of 264 Blackbucks were estimated during the study period with an increase of 180.85% in population of Blackbuck since 1999 AD. The natality rate was estimated to be 0.84 per mature female per year and the mortality rate was 0.015 per individual per year. The sex ratio was estimated to be 1:1.64 and the average herd size was found to be 15.10 individuals. The crude population density was estimated to be 50.09 individuals / km² while the ecological density was 151.72 individuals / km². It was found that block A (57.90%) was mostly preferred by Blackbuck followed by block C (23.43%) and block B (18.65%). The one-way ANOVA test concluded that the Pr value (0.033) with df 2 at 95% level of confidence (LC) signifies the significant difference in mean population distribution of Blackbuck in three different blocks, i.e alternative hypothesis was accepted. There was high significant difference in mean pellet distribution of Blackbuck in four seasons where Pr value is 0.00888 having 3 df at 99% of confidence level, so the alternative hypothesis was accepted. It was observed that the crop loss was more in SUC > DUC > RUC > BUC and the crop loss was estimated to be NRs. 2,126,260, which was a loss of NRs. 31,735.22 per household.

For the long term survival of Blackbuck in Nepal, translocation of the species and habitat management should be focused. The rotational and controlled grazing should be practiced in different blocks of the habitat as an important and effective wildlife management tool.

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ABBREVIATIONS / ACRONYMS

BCA	Blackbuck Conservation Area
BCAP	Blackbuck Conservation Awareness Programme
BUC	Babai User Committee
CCEW	Centre for Conservation of Environment and Wildlife
CITES	Convention on International Trade in Endangered Species of wild flora and fauna
d f	Degrees of Freedom
DNPWC	Department of National Park and Wildlife Conservation
DUC	Dasaratha User Committee
FAO	Food and Agricultural Organization
FONAREM	Forum of Natural Resource Managers
GoN	Government of Nepal
HMGN	His Majesty's Government of Nepal
ICDC	Integrated Centre for Development and Conservation
IUCN	International Union for the conservation of Nature and Natural resources
km ²	Square Kilometer
m	meter
MFSC	Ministry of Forest and Soil Conservation
mm	Millimeter
MYA	Million Years Ago
NGO	Non-governmental Organization
No.	Number
PAs	Protected Areas
p value	Probability value
RUC	Radhakrishna User Committee
SUC	Sarju User Committee
T.U.	Tribhuvan University
TAL	Terai Arc Landscape Programme
w.r.t.	With respect to
WWF	World Wildlife Fund