DISTRIBUTION AND CONSERVATION STATUS OF RED PANDA (*Ailurus fulgens*) IN DHORPATAN HUNTING RESERVE, NEPAL RAM NATH KANDEL
2008

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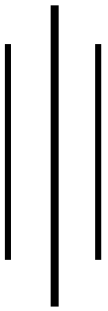

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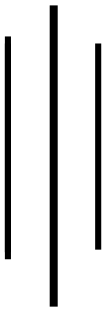
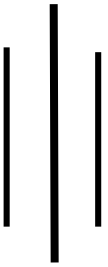


A DISSERTATION SUBMITTED TO CENTRAL DEPARTMENT OF ZOOLOGY FOR THE PARTIAL FULFILLMENT OF MASTER'S DEGREE IN ZOOLOGY (ECOLOGY)



INSTITUTE OF SCIENCE AND TECHNOLOGY

TRIBHUVAN UNIVERSITY, KIRTIPUR

KATHMANDU NEPAL

2008, DECEMBER

RECOMMENDATION

It is my pleasure to mention here that Mr. Ram Nath Kandel has carried out dissertation entitled **"DISTRIBUTION AND CONSERVATION STATUS OF RED PANDA (*Ailurus fulgens*) IN DHORPATAN HUNTING RESERVE, NEPAL"** under my supervision and guidance. This is the candidate's original work and as far as my knowledge it has not been submitted for any other degree. Therefore, I recommend that the dissertation be accepted for the partial fulfillment of the requirement for the degree of Master's of Science in Zoology specializing in Ecology.

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On the recommendation of Supervisor Mr. Hari Prasad Sharma, Lecturer, Central Department of Zoology, Tribhuvan University, the dissertation work entitled "DISTRIBUTION AND CONSERVATION STATUS OF RED PANDA (*Ailurus fulgens*) IN DHORPATAN HUNTING RESERVE, NEPAL" submitted by **Mr. Ram Nath Kandel** has been approved for the partial fulfillment of the Master's Degree in Zoology with Ecology as specialization paper.

Date: _____

Prof. Vasanta Kumar Thapa, Ph.D.

Head of Department

Central Department of Zoology

Acceptance

The dissertation work entitled "DISTRIBUTION AND CONSERVATION STATUS OF RED PANDA (*Ailurus fulgens*) IN DHORPATAN HUNTING RESERVE, NEPAL" submitted by **Mr. Ram Nath Kandel** has been accepted for the partial fulfillment of the Master's Degree in Zoology with Ecology as specialization paper.

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Internal Examiner

Date:

Declaration

I hereby declare that the work presented in this dissertation has been done myself and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by references to the authors or institution.

Date: _____

Mr. Ram Nath Kandel

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Abstract

A survey of Red Panda was carried out in three blocks namely Barse, Fagune and Surtibang of Dhorpatan Hunting Reserve (DHR) to establish baseline information of this species from March- May, 2007. The distribution of Red Panda was assessed through informal discussions with local people, herders and reserve staff followed by the dropping survey. Vegetation analysis was done by using square quadrats of 10×10 m^2 for trees and 4×4 m^2 for shrubs to determine Important Value Index.

The study revealed the clumped type distribution pattern of Red Panda which was affected by different factors like presence of *Arundinaria* spp., north facing slope, water source availability, habitat condition, human activities, and livestock grazing. Altogether four Red Pandas were noticed and were identical in morphological characters. A correlation analysis of combined data on the distribution of Panda faecal pellets with elevation up to certain limit showed positive correlation. In the range of 3,200 to 3,500 m, the droppings of the Red Panda were more common than above or below the range where *Abies*, *Rhododendron*, *Betula* and *Arundinaria* were dominant. Red Panda most prefer northwest facing slope in the range $30^0 – 40^0$ during the study period. A chi-square test performed showed that slope aspect differs with the distribution pattern of Red Panda. Because of the violence and insurgency, the management offices and check posts were transferred to the urban area. Illegal felling, looping, hunting, poaching and over exploitation were common during the study period. About 160 traps were collected and hand over to the Reserve officials. Occasional death of Red Panda was also recorded in Dharkharka of Barse block. Summer huts for livestock was one of the main threats for the conservation of Red Panda in DHR.

Key Words:- Red Panda, Dhorpatan Hunting Reserve, Distribution, Conservation threats, Livestock grazing, Poaching.

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LIST OF ABBREVIATIONS

DHR	:	Dhorpatan Hunting Reserve
GIS	:	Geographical Information System
GPS	:	Global Positioning System
HMGN-DFRS	:	His Majesty Government Nepal- Department of Forest Resources Survey
IUCN	:	International Union of Conservation Nature and Natural Resources
Kg	:	Kilogram
Km	:	Kilometer
KCA	:	Kanchanjunga Conservation Area
LNP	:	Langtang National Park
M	:	Meter
NRDB	:	National Red Data Book
%	:	Percent
Pers. Comm.	:	Personal Communication
R.H.	:	Relative Humidity
VDCs	:	Village Development Committee
0^c	:	Degree Celsius