

**POPULATION STATUS, DISTRIBUTION AND GENERAL  
BEHAVIOUR OF ASSAMESE MACAQUE (*Macaca assamensis*,  
McClelland, 1840) IN TAGHRING AND GHERMU VDCs, LAMJUNG,  
NEPAL**



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**A Thesis Submitted in Partial Fulfillment of the Requirements for the Award  
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Ecology and Environment**

**Submitted to  
Central Department of Zoology  
Institute of Science and Technology  
Tribhuvan University  
Kirtipur, Kathmandu  
Nepal  
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## DECLARATION

I hereby declare that the work presented in this thesis entitled “**Population Status, Distribution and General Behaviour of Assamese Macaque (*Macaca assamensis* McClelland, 1840) in Taghring and Ghermu VDCs, Lamjung, Nepal**” has been done by myself, and has not been submitted elsewhere for the award of any degree. All the sources of the 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 “**Population Status, Distribution and General Behaviour of Assamese Macaque (*Macaca assamensis* McClelland, 1840) In Taghring and Ghermu VDCs, Lamjung, Nepal**” has been carried out by Mr. **Ram Krishna Adhikari** for the partial fulfillment of **Master’s Degree of Science in Zoology** with special paper ‘Ecology and Environment’. This is his 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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## LETTER OF APPROVAL

On the recommendation of the supervisor Dr. Mukesh Kumar Chalise, Associate Professor, this thesis submitted by Mr. Ram Krishna Adhikari entitled “**Population Status, Distribution and General Behaviour of Assamese Macaque (*Macaca assamensis* McClelland, 1840) in Taghring and Ghermu VDCs, Lamjung, Nepal**”, is approved for the examination and submitted to the Tribhuvan University in partial fulfillment of the requirements for **Master’s Degree of Science in Zoology** (Ecology and Environment).

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## CERTIFICATE OF ACCEPTANCE

This thesis work submitted by Mr. Ram Krishna Adhikari entitled “**Population Status, Distribution and General Behaviour of Assamese Macaque (*Macaca assamensis* McClelland, 1840) In Taghring and Ghermu VDCs, Lamjung, Nepal**” has been approved as a partial fulfillment for the requirements of Master Degree of Science in Zoology specializing in Ecology and Environment.

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## ABSTRACT

Population status, distribution pattern and general behaviour of Assamese Macaque (*Macaca assamensis*) were studied from April 2012 to March 2013 in Taghring of Annapurna Conservation Area and Ghermu VDCs of Lamjung district. The total area of 183.14 km<sup>2</sup> was surveyed by total count method, questionnaire survey and behavioral data were collected by scan sampling method.

A total of 53 Assamese macaques were counted in three different troops. The group density was found to be 0.016 groups/ km<sup>2</sup> with a population density of 0.28 individuals/ km<sup>2</sup> and a mean group size of 17.66 (range 13-25) individuals. Age-sex composition of macaque comprised 28% adult females followed by 17% sub-adult females, 15% sub-adult males, 15% juveniles, 13% adult males and 12% infants. The adult sex ratio (male to female) was observed 1:2.140.46 i.e. 46 males per 100 females. The distribution pattern of Assamese macaques among three different study blocks was found clumped distribution in the study area. There was no significant difference in distribution of Assamese macaques among three different blocks ( $\chi^2 = 4.6$ , d. f. = 2,  $p = 0.05$ ). A total of 2640 scan samples were recorded during the study period covering all four distinct seasons. The study group spent more than one third (45%) of their total time for foraging purpose, followed by 25% on locomotion, 20% on resting and 10% on grooming. A distinct seasonal variation in activities has been recorded. Analysis of collected vegetation data showed that 32 tree species were encountered in protected area (Taghring VDC) in which *Schima wallichii* was the most dominant tree species having highest Important Value Index (IVI), i. e. 33.2145 whereas 28 tree species in Himali Community Forest on non protected area (Ghermu VDC) in which *Alnus nepalensis* was the most dominant tree species having highest IVI i.e. 52.012. Crop raiding was the main cause of conflict to human beings with a loss of maize (44%), potato (27%), millet (13%), wheat (7%), paddy (4%), fruits (3%) and vegetables (2%). Similarly, out of 72 observed samples of aggressive interaction by human beings towards monkey to protect their crops guarding (68%), stone and catapult (16%), using dog (12) and hitting tin box & scarecrows (4%).

Population estimation of Assamese Macaques should be carried out throughout the Lamjung district.

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## LIST OF ABBREVIATIONS

<b>Abbreviated form</b>	<b>Details of abbreviations</b>
ACAP	Annapurna Conservation Area Project
AD	Anno Domini
asl	altitude
CBS	Central Bureau of Statistics
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
d.f.	Degree of Freedom
DDC	District Development Committee
GPS	Global Positioning System
IUCN	International Union for the Conservation of Nature and Natural resources
Kg	Kilogram
KMTNC	King Mahendra Trust for Nature Conservation
LNP	Langtang National Park
m	Meter
Max. /Min.	Maximum/ Minimum
mm	Millimeter
MW	Megawatt
NG/DHM	Nepal Government/Depart of Hydrology and Meteorology
Sq. Km.	Square Kilometer
T. U.	Tribhuvan University
VDCs	Village Development Committees

