### STUDY OF POPULATION, GENERAL BEHAVIOUR AND HUMAN-MONKEY CONFLICT

# OF ASSAMESE MONKEY (Macaca assamensis McClelland, 1840) IN RAMDI, PALPA, NEPAL



Submitted by:

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T.U. Registration Number: 5-2-49-121-2007

T.U. Exam Symbol Number: 21658

Batch: 2068/069 B.S.

A thesis submitted
In partial fulfillment of the requirements for the award of the degree of Master of Science in

Zoology with special paper Ecology

#### **Submitted to**

Central Department of Zoology
Institute of Science and Technology
Tribhuvan University
Kirtipur, Kathmandu
Nepal

November, 2016

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#### RECOMMENDATION

It is my great pleasure to recommend that Mr. Krishna Adhikari has successfully carried out the dissertation entitled "Study of population, general behaviour and human-monkey conflict of Assamese monkey (*Macaca assamensis* Mcclelland, 1840) in Ramdi, Palpa, Nepal" under my supervision and guidance for the partial fulfillment of Master's Degree of Science in Zoology with special paper ecology. This is the candidate's original work, which brings out important findings in the concerned field. To the best of my knowledge, this work has not been submitted for any other degree in any institution.

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#### LETTER OF APPROVAL

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#### CERTIFICATE OF ACCEPTANCE

This thesis work submitted by Krishna Adhikari entitled "Study of population, general behaviour and human-monkey conflict of Assamese monkey (*Macaca assamensis* Mcclelland, 1840) in Ramdi, Palpa, Nepal" has been accepted as a partial fulfillment for the requirements of Master's Degree of Science in Zoology with special paper Ecology.

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#### **DECLARATION**

I have declare that the work presented in this dissertation entitled "Study of population, general behaviour and human-monkey conflict of Assamese monkey (*Macaca assamensis* Mcclelland, 1840) in Ramdi, Palpa, Nepal" has been done by myself and not been submitted elsewhere for the award of any degree. All sources of information have been specially acknowledged by reference to authors or institution.

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#### ACKNOWLEDGEMENTS

I acknowledge my heartily gratitude is to my supervisor Dr. Mukesh Kumar Chalise, Associate Professor, Central Department of Zoology, Tribhuvan University, Kirtipur Kathmandu. He gave me his precious time, constant guidance, close supervision, constructive advice and encouragement throughout the whole research period of the study.

I acknowledge my gratitude and thanks to Prof. Dr. Ranjana Gupta, Head of Central Department of Zoology for her kind support and also thanks to all my respected teachers and all members of Central Department of Zoology.

I am grateful to Central Bureau of Statistic and Department of Hydrology and Meteorology for providing related literature and data. My sincere thanks also go to local people of Ramdi who help me in field work.

I would like to thank Kul Bahadur Thapa and Sabina Koirala for continuous help and support. I am also very much indebted to my family members for their inspiration and continuous encouragement. I would like to express my sincere thanks to all the well-wishers, friends and colleagues who directly or indirectly helped me.

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Exam Symbol Number: 21658

T.U. Registration Number: 5-2-49-121-2007

Specialization: 'Ecology and Environment'

Batch: 2068/069 B.S.

#### **ABSTRACT**

The study entitled as "Study of population, general behaviour and human-monkey conflict of Assamese monkey (Macaca assamensis Mcclelland, 1840) in Ramdi, Palpa, Nepal" was carried with the major objective of analyzing Population, Behaviours and human- monkey conflict in Ramdi Area. The study site covers the total area of ward no. 2 and 9 in Khanichhap VDC in Palpa, Ward No. 2 and 6 in Darlamdanda VDC in Palpa and Ward No. 6 in Malunga VDC in Syangja Districts. Two troops of Assamese monkey with total population of 48 were recorded in study area. The mean troop size was found to be 24 individuals. The group density was 0.33 groups / km<sup>2</sup> with a population density of 6 individuals/ km<sup>2</sup>. Age-sex composition of macaque comprised 12.5% infants, 27.08% juvenile, 37.5% young, 8.33% adult male and 14.58% adult females. The adult sex ratio and birth rate were 0.57 and 0.85 respectively. Five major behaviors were recorded from the selected two troops for behavior study and found that macaques spent 43.96 % of time on feeding, 26.24% of time on resting, 21.99% on grooming, 4.14% on foraging, and 3.65% on moving behavior. According to the vegetation study, 5 major tree plant species contributed 64.81% of the total plant density. Out of total 91 trees of different 16 species, these 5 major species consists a total of 59 trees. Only 1 major tree plant species were food plants of Assamese monkey. It indicates that scarcity of food plants. There for level of Human-Monkey Conflict is high in Ramdi area because of scarcity of food. Crop damage (reported by 69% respondents, N = 100), grabbing/taking of food materials and clothes (reported by 47 % respondents), damaging electric cables moving over it (reported by 1 % respondents); biting/scratching (reported by 1% respondents) and others were the monkey related problems in the study area. Crop mostly eaten includes maize (35%), Vegetables (20%), pulses (13%), fruits (13%), Wheat (11%), potato (6%), Rice (2%) were found to be damaged by the monkey in the study site. However crops like lady's finger, peas, soya beans, coriander, ginger, turmeric and chilly were less preferred by the monkey. Catapult (reported by 97% respondents; N = 100); scolding and charging (reported by 1% respondents); etc. were the common deterrent methods against monkeys. Food scarcity (reported by 78% respondents; N = 100); increasing population of monkey (reported by 33% respondents); monkey habitat loss (reported by 3% respondents) were reported as the causes of increasing monkey problems. Most respondents i.e. 60% (N = 100) said that their compound is invaded by monkey 2-3 days, followed by daily, weekly etc. According to 59% respondent monkey are mostly active in morning time i.e. 5am-11am and they create great problem to local people. Artificial provisioning by other, 37% respondent reported that they had seen the artificial provisioning by other people like Tourists, pilgrims, local visitors. In Ramdi area monkey are habituate by provisioning of waste foods therefore they come and create conflict. Due to this their diet, home range, habitat and behavior were also change.

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#### **ABBREVIATIONS**

#### **Abbreviated form** Details of abbreviations

asl above sea level

BCN Bird Conservation Nepal

CAMP Conservation Assessment and Management plan

CITES Convention on International Trade in Endangered Species

of Wild Fauna and Flora

DBH Diameter at Breast Height

DNPWC Department of National Parks and Wildlife Conservation

GoN Government of Nepal
GPS Global Positioning System

IUCN International Union for the Conservation of nature and

Natural Resources

LNP Langtang National Park

MBCA Makalu Barun Conservation Area

RH Relative Humidity

T/HB Tail to Head Body Ratio

VDC Village Development Committee