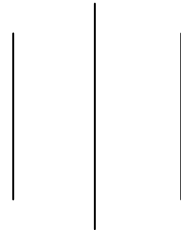


**STUDY ON THE PREVALENCE OF COMMONLY OCCURING  
FOUR HUMAN INTESTINAL PARASITES IN JALARI AND  
KUMAL COMMUNITIES IN LEKHNATH MUNICIPALITY, KASKI,  
NEPAL**

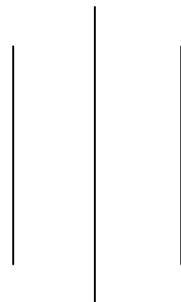


***A THESIS***

**SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE MASTER'S DEGREE IN ZOOLOGY WITH SPECIAL PAPER  
PARASITOLOGY**

***SUBMITTED BY***

**MADAN PRASAD JAMARKATTEL**



**SUBMITTED TO:**

**CENTRAL DEPARTMENT OF ZOOLOGY  
INSTITUTE OF SCIENCE AND TECHNOLOGY,  
TRIBHUVAN UNIVERSITY, KIRTIPUR,  
KATHMANDU, NEPAL**

**YEAR- 2007.**

**TRIBHUVAN UNIVERSITY**  
**INSTITUTE OF SCIENCE AND TECHNOLOGY**  
**CENTRAL DEPARTMENT OF ZOOLOGY**  
**KIRTIPUR, KATHMANDU, NEPAL**

**RECOMMENDATION**

This is to certify that **Mr. MADAN PRASAD JAMARKATTEL** has completed his dissertation work entitled **“STUDY ON THE PREVALENCE OF COMMONLY OCCURRING FOUR HUMAN INTESTINAL PARASITES IN JALARI AND KUMAL COMMUNITIES IN LEKHNATH MUNICIPALITY, KASKI, NEPAL”** for the partial fulfillment of the **M. Sc. Degree in Zoology with special paper Parasitology under my supervision**. To the best of my knowledge, this is an original work and has not been submitted for any other degree.

.....

**SUPERVISOR**  
**DR. RANJANA GUPTA**  
Associate Professor,  
Central Department of Zoology,  
Tribhuvan University, Kirtipur,  
Kathmandu, Nepal.

**DATE.....**

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**CENTRAL DEPARTMENT OF ZOOLOGY**  
**KIRTIPUR, KATHMANDU, NEPAL**

**RECOMMENDATION**

On the recommendation of supervisor **Associate Professor Dr. RANJANA GUPTA**, this dissertation of **Mr. MADAN PRASAD JAMARKATTEL** is approved for examination and submitted to the Tribhuvan University in partial fulfillment of the requirements for **M. Sc. Degree in Zoology with Parasitology** as a special paper.

.....  
**Professor Dr. Tej Kumar Shrestha**

Head of the Department,  
Central Department of Zoology,  
Tribhuvan University, Kirtipur,  
Kathmandu, Nepal.

DATE: .....

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**CENTRAL DEPARTMENT OF ZOOLOGY**  
**KIRTIPUR, KATHMANDU, NEPAL**

**APPROVAL**

We, the members of the expert committee, evaluated the dissertation work entitled “**STUDY ON THE PREVALENCE OF COMMONLY OCCURING FOUR HUMAN INTESTINAL PARASITES IN JALARI AND KUMAL COMMUNITIES IN LEKHNATH MUNICIPALITY, KASKI, NEPAL**” and approved that Mr. MADAN PRASAD JAMARKATTEL is qualified for awarding M. Sc. in Zoology with Parasitology as a special paper.

**Expert Committee**

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**SUPERVISOR**  
**DATE.....**

**HEAD OF DEPARTMENT,**  
**DATE.....**

.....

**External Examiner**

**DATE.....**

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## Abstract

Intestinal parasitic infections have always been an important public health problem in the tropical and sub-tropical areas particularly in developing countries like Nepal, where the humid climate, the unsanitary environment, poor socio-economic conditions and over dispersion of parasites within the human communities contribute to the problem.

The general objective of the study was to determine the prevalence of intestinal parasites in the people of two ethnic groups (Jalari and Kumal) of Lekhnath Municipality ward number 9 and 1 respectively in Kaski District, Nepal.

A total of 236 stool samples of the persons of different age and sex groups were randomly collected as 104 samples from Jalari and 132 samples from Kumal community from 1 June 2003 to 27 September 2003. The samples were examined by direct wet mount technique in normal saline (0.9%), iodine solution and 2.5% Potassium Dichromate and data were analyzed using Microsoft excel sheets (tables and diagrams), statistical analysis (chi-square, test in 95% confidence interval).

Out of 236 stool samples examined, 56.0% (132) persons were infected with intestinal parasites with the prevalence 54.8% in Jalari and 56.8% Kumal community without any significant ( $P>0.05$ , 95% CI). The prevalence in males and females were 59.6% (31 out of 52) and 50.0% (26 out of 52) respectively in Jalari community without any significant with age-wise ( $P> 0.05$ , 95% CI) and sex-wise ( $P> 0.05$ , 95% CI). The prevalence of parasites were *Entamoeba histolytica*: 4.8%, *Giardia lamblia*: 11.5% *Ascaris lumbricoides*: 15.4 *Trichuris trichiura*: 2.9% in Jalari community. The prevalence in males and females were 63.9% (39 out of 61) and 50.7% (36 out of 71) respectively in Kumal community with statistically significant ( $P<0.05$ , 95% CI) with sex-wise and not significant with age-wise ( $P>0.05$ , 95% CI). The prevalence of parasites were *Entamoeba histolytica*: 6.8%, *Giardia lamblia*: 16.0% *Ascaris lumbricoides*: 19.0% *Trichuris trichiura*: 3.0% in Kumal community.

Different factors are considered risk factors for the parasite transmission. These are infected food, water, soil, pattern of defecation, food habit, water drinking habit, domestic animals in houses, and types of occupation, level of education, family income and knowledge to specific parasites on the basis of statistical analysis in 95% CI.

Epidemiological studies are important for identifying etiological factors that play a role in risk assessment and in decision-making. The molecular method should be applied and the case-controlled study should be made to confirm the roles of risk factors to transmit intestinal parasites in these ethnic groups in Nepal.