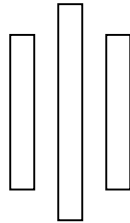
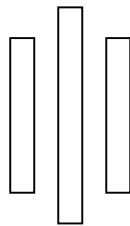


Prevalence of *Enterobius vermicularis* in early school aged children in relation to socio-economic factors in Bharatpur Municipality, Nepal



A dissertation

Submitted in Partial fulfillment of the requirement for the Master's Degree in Science  
Zoology with special paper Parasitology

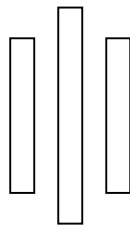


Submitted By

**Ishwar Raj Pandit**

Roll No.1392

T.U.Regd.No.8100-93



Submitted to

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

2008



# TRIBHUVAN UNIVERSITY

Institute of Science and Technology

Central Department of Zoology

Kathmandu, Kirtipur

Nepal

## RECOMMENDATION

This is to certify that **Mr. Ishwar Raj Pandit** has completed the dissertation work entitled "**Prevalence of *Enterobius vermicularis* in early school aged children in relation to socio-economic factors in Bharatpur Municipality, Nepal**" as a partial fulfillment of M. Sc. Degree in Zoology with special paper Parasitology under my supervision. This is the candidate's original work that brings out important findings in parasitological research. It is my pleasure to recommend this work for the partial fulfillment of Master of Science in Zoology at Tribhuvan University.

I recommend that the dissertation be accepted for the partial fulfillment of the requirement for the Degree of Master of Science with special paper Parasitology.

-----  
**Janak Raj Subedi**

**Lecturer**

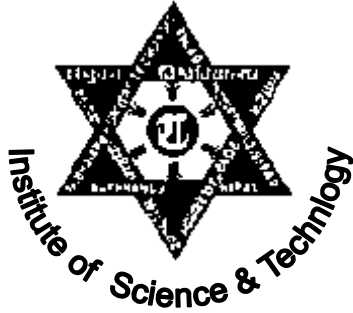
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Central Department of Zoology

Tribhuvan University

Kathmandu, Nepal

Date: .....



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Institute of Science and Technology

Central Department of Zoology

Kathmandu, Kirtipur

Nepal

## LETTER OF APPROVAL

On the recommendation of supervisor **Janak Raj Subedi**, this dissertation submitted by **Mr. Ishwar Raj Pandit** entitled "**Prevalence of *Enterobius vermicularis* in early school aged children in relation to socio-economic factors in Bharatpur Municipality, Nepal**" is approved for the examination and is submitted to Tribhuvan University in partial fulfillment of the M. Sc. Degree in Zoology with special paper Parasitology.

-----  
**Prof. Dr. Vasant Kumar Thapa**

**Head of the Department**

Institute of Science and Technology

Central Department of Zoology

Tribhuvan University

Kathmandu, Nepal

Date:



# TRIBHUVAN UNIVERSITY

Institute of Science and Technology

Department of Zoology

Kirtipur, Kathmandu,

Nepal

## APPROVAL

This dissertation submitted by **Mr. Ishwar Raj Pandit** entitled "**Prevalence of *Enterobius vermicularis* in early school aged children in relation to socio-economic factors in Bharatpur Municipality, Nepal**" has been approved for partial fulfillment of the requirements for the Master's Degree of Science in Zoology with special paper Parasitology.

### EVALUATION COMMITTEE

-----  
**Head**

**Prof.Dr.Vasanta Kumar Thapa**

Institute of Science and Technology

Central Department of Zoology

Tribhuvan University

Kathmandu, Nepal

-----  
**Supervisor,**

**Janak Raj Subedi**

**Lecturer**

Institute of Science and Technology

Central Department of Zoology

Tribhuvan University

Kathmandu, Nepal

-----  
**External Examiner**

Date: .....

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**Ishwar Raj Pandit**

Exam Roll No.: 1392

Regd. No.: 8100-93

Batch No: 059/060

## ABSTRACT

The present study was conducted to assess the prevalence of pinworm among the early school aged children inhabiting the Bharatpur Municipality. An active detection was made by collecting 163 samples from early school aged children at different schools during the study period, by microscopic examination of stool and scotch tape method. Besides this, structured questionnaires were administered to assess the socio-economic status and the environmental aspects in relation to the pinworm. Out of 163 samples collected, 9 samples were positive for the pinworm infestation. There is a significant difference among frequencies of positive & negative rates of Enterobiasis. ( $\chi^2 = 98.53$ ;  $df = 1$ ; and at 0.05 significant level). Similarly in relation to sex, the positivity rate was 5.20% in males and 5.97% in females. The distributions of pinworm among the children were found to be significant according to their age ( $\chi^2 = 2.35$ ;  $df = 3$ ; and at 0.05 significant level). The prevalence of pinworm showed no significant differences in relation to father's occupation, size of family members, economic status of the family, the mother's literacy rate. Occupation wise prevalence was found to be highest in the kids of labours (13.04%) followed by farmer's (2.43%) and jobholder's (12.12%). In relation to environmental aspects pinworm infection was common in children who used to bite nail frequently (20%) followed by having worms in their stools (13.33%), itching anus (11.11%) and in those who used to grind teeth (10%). The distribution of pinworm among the children was found to be significant according to the environmental aspect (Attitude & Practice). ( $\chi^2 = 1.586$ ;  $df = 3$ ; and at 0.05 significant level). Statically difference was found between the prevalence rates of pinworm in the habit of trimming nails. ( $\chi^2 = 9.221$ ;  $df = 3$ ; and at 0.05 significant level). The prevalence of pinworm showed no significant differences as per the bathing ( $\chi^2 = 1.221$ ;  $df = 3$ ; and at 0.05 significant level) and the children using other garments or underwear. ( $\chi^2 = 0.666$ ;  $df = 2$ ; and at 0.05 significant level). Based on the present study; biological, physical and socio-economic measures are recommended for the effective control of pinworm in the study area.

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## ABBREVIATIONS

B.N.Pa.	Bharatpur Nagarpalika
CBS	Centre Bureau of Statistics
DUMC	Duke University Medical Centre
EPI	Expanded Programme of Immunization
i.e.	That is
IU/ml	International Unit per milliliter
KG	Kindergarten
mm	millimeter
Ni. Ma. Vi.	Nimna Madhyamik Viddyalaya
NP	Nagarpalika
OPD	Out Patient Department
PCL	Proficiency Certificate Level
Pra. Vi.	Prathamik Viddyalaya
RCC	Rod, Cement & Concrete
SLC	School Leaving Certificate
S.No.	Serial Number
UN	United Nations
µm	micrometer
USA	United State of America
Vs	Versus
VDC	Village Development Committee
WHO	World Health Organization
Wt.	Weight