

**SEASONAL PREVALENCE OF INTESTINAL HELMINTH  
PARASITES OF  
GOATS (*Capra hircus*) OF KHASIBAZAR, KALANKI,  
KATHMANDU**

**A THESIS**

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

**BY**

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**SUBMITTED TO**

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

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## RECOMMENDATION

It is our pleasure to mention here that **Miss Bimla Kumari Bashir** has completed her dissertation work entitled **“SEASONAL COPROLOGICAL STUDY ON HELMINTH PARASITES OF GOATS (*Capra hircus*) OF KHASIBAZAR, KALANKI, KATHMANDU”** under our supervision and guidance. It is her original work and brings out useful results and findings in the concerned field.

We strongly recommend this dissertation for approval for the partial fulfillment of the requirements for the Master's Degree of Science in Zoology with special paper **Parasitology**.

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## DECLARATION

I hereby declare that the work presented in this thesis 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.

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## ABSTRACT

*Capra hircus* (goat) being an important source of meat and livestock in Nepal has been considered in the present thesis work. This species is greatly affected by the helminthes parasites. The current study was carried out in order to observe the seasonal prevalence of intestinal helminthes parasites in goat. The two different techniques used during the detection of helminthes parasites were sedimentation and flotation technique. The samples were collected in the months of December/January and May/June/July. The total numbers of samples collected and examined for the study were 100 and 124 respectively for these study periods. The overall prevalence of helminthes parasite during December and January were 46 % and that in the month of May and June were 90.3%. A huge difference in the prevalence of helminthes parasites in the two different study period was observed. During December and January 10 % of infections were caused by Trematodes, 28 % by Cestodes and 30 % by Nematodes. Likewise 17.74 %, 37.09 % and 65.08 % of infections were caused by Trematodes, Cestodes and Nematodes respectively during May and June. Nematode genus *Ancylostoma*, *Necator* and *Gnathostoma* are reported for the first time from Nepal. Trematode genus *Schistosoma* has been reported in goats from other parts of the world but not in goats of Nepal. So it has been reported for the first time in goats of Nepal. The prevalence percentages of identified genera of trematode are *Dicrocoelium* 2.53%, *Fasciola* 12.65% and *Schistosoma* 5.06%

Among cestodes, the genera identified with their prevalence percentage were found to be *Moniezia* 24.05% and *Taenia* 22.78%. Similarly the genera included in nematodes are *Ancylostoma* 1.26%, *Ascaris* 7.59%, *Bunostomum* 2.53%, *Capillaria* 6.32%, *Chabertia* 32.91%, *Diactophyma* 1.26%, *Dictyocaulus* 35.44%, *Gnathostoma* 7.59%, *Haemonchus* 17.72%, *Oesophagostomum* 36.7%, *Oestertagia* 12.64%, *Strongyloids* 26.58%, *Trichostrogylus* 5.06%, *Trichuris* 6.32%, *Necator* 1.26%. Single infection was found in 32% samples during summer and during winter it was found in 12.5% samples. Mixed infection was observed in 26% and 87.5% in the samples of winter and summer respectively. The difference in the prevalence of helminthes parasites during both seasons were found statistically significant ( $\chi^2 = 52.31$ ,  $P < 0.05$ , d. f. = 1).

**Key words:** Helminth, Trematodes, Cestodes, Nematodes, Parasite, Prevalence, Sedimentation, Flotation.



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## **ABBREVIATIONS**

CBS	-	Central Bureau of Statistics
CDZ	-	Central Department of Zoology
CTVM	-	Centre for Tropical Veterinary Medicine
CVL	-	Central Veterinary Laboratory
DLSO	-	District Livestock Service Office
FAO	-	Food and Agricultural Organisation
GDP	-	Gross domestic production
GI	-	Gastro Intestinal
IAAS	-	Institute of Agriculture and Animal Science
MOAC	-	Ministry of Agriculture and Cooperatives
PVC	-	Packed Red Cell Volume
TU	-	Tribhuvan University
VDC	-	Village Development Committee
VEC	-	Veterinary Epidemiology Centre