

**TREMATODE INFECTIONS IN AQUATIC SNAILS AND BUFFALOES:
A CASE STUDY OF RAMGRAM MUNICIPALITY,
NAWALPARASI, WEST NEPAL**

**A Thesis Submitted in Partial Fulfillment
of the Requirements for Master's Degree in Zoology
with a Special Paper Parasitology**

**Submitted To :
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RECOMMENDATION

It is our pleasure to mention here that Mr. Naresh kohar has carried out the thesis work entitled "**Trematode Infections in Aquatic Snails and Buffaloes : A Case Study of Ramgram Municipality, Nawalparasi, West Nepal**" under our supervision and guidance. It is his original work and brings out useful result and findings in the concerned field.

We strongly recommend this thesis for approval for the partial fulfillment of the requirement for the Master's Degree in Zoology with a special paper Parasitology .

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LETTER OF APPROVAL

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CERTIFICATE OF ACCEPTANCE

This thesis presented by Naresh Kohar entitled "**Trematode Infections in Aquatic Snails and Buffaloes: A Case Study of Ramgram Municipality, Nawalparasi West Nepal**" has been approved for partial fulfillment of the requirements for the Degree of Master of Science in Zoology with special paper Parasitology.

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ABSTRACT

The present study was conducted in Ramgram Municipality, Nawalparasi during July to October 2008. Freshwater snails were examined to determine the occurrence of larval trematodes and faecal samples of domestic buffaloes were examined for parasitic eggs. A total of 2921 freshwater snails belonging to eight (8) species were collected from temporary ditches and drainages along the road side. Altogether 92 (3.15%) snail individuals harboured patent trematode infections. *Lymnaea* sp. had the highest overall prevalence of infection 34 (7.26%), followed by *Indoplanorbis exustus* (3.08%), *Segmentina* sp. (3.03%), *Gyraulus* sp. (2.01%), *Gabia orcula* (1.60%). No parasite infection was recorded in *Bellamya bengalensis*, *Bellamya dissimilis* and *Pila globosa*. The most common six (6) morphotypes of cercariae were identified. They are Longifurcate-pharyngeate (*Strigea*) cercaria, Brevifurcate-apharyngeate (*Schistosoma*) cercaria, Brevifurcate-pharyngeate (*Clinostomoid*) cercaria Gymnocephalous (*Fasciola*) cercaria, Amphistome cercaria and Xiphidiocercaria.

Examined 735 fecal samples of domestic buffaloes showed 189 (25.71%) of total samples were positive for faecal infection. Among positive infections, 146 (19.86%) samples contained trematode egg (*Fasciola* sp.) infection. Other remaining 43 eggs other than *Fasciola* were not confirmed and not specified during the study. The prevalence of *Fasciola* egg infection was maximum in September (38.09%) followed by August (26.98%), October (19.01%) and July (15.87%)

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LIST OF ABBREVIATION

%	=	Percentage
⁰ C	=	Degree Celsius
C.D.Z	=	Central Department of Zoology
C.V.L	=	Central Veterinary Laboratory
d.f.	=	Degree of Freedom
D.F.A.M.S.	=	Department of Food and Agriculture Marketing Services
D.H	=	Definitive Host
Ha	=	Alternative Hypothesis
Ho	=	Null Hypothesis
Hrs.	=	Hours
I.H	=	Intermediate Host
I.N.G.Os.	=	International Non Governmental Organizations
I.A.A.S.	=	Institute of Agriculture and Animal Science
NARC	=	National Agriculture Research Center
N.G.Os	=	Non Government Organizations
P.C.R	=	Polymerase Chain Reaction
Ph	=	Puissance de Hydrogen
P.H.D	=	Doctor of philosophy
Spp.	=	Species
T.U.	=	Tribhuvan University
V.D.C.	=	Village Development Committee
W.H.O	=	World Health Organization