

**INVENTORY OF TREMATODE CERCARIAE INFECTIONS IN FRESHWATER
SNAILS IN CHITWAN AND NAWALPARASI DISTRICTS
AND
TREMATODE INFECTIONS IN DOMESTIC ELEPHANTS
OF SAURHA (Minor Study)**

A THESIS

**Submitted for the Partial Fulfillment of the Master's Degree of
Science in Zoology with Special Paper Parasitology**

By

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**Submitted to
Central Department of Zoology
Institute of Science and Technology
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RECOMMENDATION

This is to certify that Mr. Ramesh Devkota has completed his thesis work entitled "Inventory of Trematode Cercariae Infections in Freshwater Snails in Chitwan and Nawalparasi Districts and Trematode Infections in Domestic Elephants of Sauraha (Minor Study)" for the partial fulfillment of the Master's Degree of Science in Zoology with special paper Parasitology under our supervision. To the best of our knowledge, this is an original work and has not been submitted for any other degree.

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LETTER OF APPROVAL

On the recommendation of supervisor Associate Professor Dr. Ranjana Gupta and Co-Supervisor Mr. Prem Budha, this thesis on "Inventory of Trematode Cercariae Infections in Freshwater Snails in Chitwan and Nawalparasi Districts and Trematode Infections in Domestic Elephants of Sauraha (Minor Study)" is approved for examination and submitted to the Tribhuvan University in the partial fulfillment of the requirements for Master's Degree of Science in Zoology with special paper Parasitology.

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We, the members of the expert committee, evaluated the thesis work entitled "Inventory of Trematode Cercariae Infections in Freshwater Snails in Chitwan and Nawalparasi Districts and Trematode Infections in Domestic Elephants of Sauraha (Minor Study)" and approved that Mr. Ramesh Devkota is qualified for awarding Master's Degree of Science in Zoology with special paper parasitology.

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ABSTRACT

Between August 2007 to November 2007, freshwater snails were collected from different parts of Nawalparasi and Chitwan districts of Nepal to determine the occurrence of larval trematodes. A total of 2525 snails, representing ten species, were collected from 6 habitats and 89 (3.52%) harboured patent trematode infections. *Gabbia orcula* had the highest overall prevalence of infection (6.5%) followed by *Indoplanorbis exustus* (4.5%). Whereas no infection was recorded in *Bellamya bengalensis*, *Brotia costula*, *Parreysia* sp.; *Pila globosa* and *Segmentina* sp. The highest percentage of infection (6.23%) was found in small temporary ponds. Five morphologically distinguishable types of cercariae were identified. The Amphistome was the most common type of cercaria recovered, contributing 43.82% of all infections. Xiphidiocercaria contributed 42.7% of all infections and were recorded from four different snail species. The Brevifurcate-apharyngeate (*Schistosoma*) cercaria (7.87%), Clinostomoid cercaria (3.37%) and Longifurcate-pharyngeate (*Strigea*) cercaria (1.12%) were recorded only from the *Indoplanorbis exustus*. A *Indoplanorbis exustus* with double infection (Amphistome and *Schistosoma*) was also recorded. This study also reported the presence of the eggs of *Schistosoma* sp. and *Fasciola* sp. in captive elephants of Chitwan.

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