

**GASTRO-INTESTINAL PARASITES OF WILD BOAR (*Sus scrofa*
Linnaeus, 1758) IN CHITWAN NATIONAL PARK, CHITWAN,
NEPAL.**



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degree of Masters of Science in Zoology with special paper Parasitology**

Submitted to

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RECOMMENDATION

This is to recommend that the thesis entitle “ **Gastro-intestinal parasites of wild boar (*Sus scrofa* Linnaeus, 1758) in Chitwan National Park, Chitwan, Nepal**” has been carried out by Sanskar Neupane for the partial fulfillment of Master's Degree of Science in Zoology with special paper Parasitology. This is his original work and has been carried out under my supervision. To the best of my knowledge, this thesis work has not been submitted for any other degree in any institutions.

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On the recommendation of supervisor **Mr. Janak Raj Subedi** this thesis submitted by Mr. Sanskar Neupane entitled “**Gastro-intestinal parasites of wild boar (*Sus scrofa* Linnaeus, 1758) in Chitwan National Park, Chitwan, Nepal**” is approved for the examination and submitted to the Tribhuvan University in partial fulfillment of the requirements for 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 by myself, and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by reference to the author(s) or institution(s).

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ABSTRACT

Wild boar (*Sus scrofa*) also known as 'Bandel' in Nepali is considered as least concern in global and national context. This species is widely distributed across Nepal including within all protected areas of lowland Terai and parts of protected areas in the highland Churia to Annapurna ranges and also occurs extensively outside protected areas. The present study was carried out to determine the prevalence of Gastro-intestinal (GI) parasites of wild boar in Chitwan National Park. A sum total of 100 fecal samples were collected from wild boar at Chitwan National Park for a time span of two months ranging from April 2017 to May 2017 and examined by direct smear, sedimentation and floatation technique. Out of 100 fecal samples examined, 95 (95%) fecal samples were found to be positive for different parasites. Protozoan infection was found comparatively more (70%) followed by nematode (56%) and trematode (12%). Nine different genus of parasite were revealed following one protozoan, *Eimeria* sp. with micropyle (40%) and *Eimeria* sp. without micropyle (70%); One trematode i.e *Fasciola* sp. (12%) and seven nematodes: *Strongyloides* sp. (56%), *Strongyle* sp. (49%), *Stephanurus* sp. (44%), *Globocephalus* sp. (38%), *Metastrongylus* sp. (12%), *Ascaris* sp. (7%) and *Trichuris* sp. (6%). The overall prevalence of Gastro-Intestinal parasite in wild boar were found statistically significant ($\chi^2 = 158.42$, $P < 0.05$) whereas prevalence of protozoan (70%), trematode (12%) and Nematode (56%) were statistically significant ($\chi^2 = 208.34$, $P < 0.05$). Among identified protozoan parasites, *Eimeria* sp. with micropyle and *Eimeria* sp. without micropyle shows statistically significant ($\chi^2 = 21.662$, $P < 0.05$). Similarly prevalence of helminth parasite and prevalence of nematode parasites were found to be statistically highly significant ($\chi^2 = 149.7$, $P < 0.05$) and ($\chi^2 = 129.08$, $P < 0.05$) respectively. In mixed infection, double infection showed highest rate (50.52%) followed by multiple infection (20%), triple infection (18.94%) and single infection (10.52%) and these were highly statistically significant ($\chi^2 = 46.75$, $P < 0.05$). In intensity of parasitic infection maximum number of samples were found with light intensity followed by mild, moderate and heavy intensity. Wild boar host different GI parasites of public health concern so that appropriate measures should be applied to control the prevalence of GI parasites in wild boar so that it would not be the conservation burden for the conservation of wild animals in wild habitat.

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LIST OF ABBREVIATIONS

CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora

cm - Centimetre

CNP - Chitwan National Park

DNPWC – Department of National park and Wildlife Conservation

et al. - And his associates

FAO – Food and Agriculture Organization

GIT – Gastro intestinal tract

GoN MoSC- Government of Nepal, Ministry of Forest and Soil conservation

i.e. - That is

IUCN – International Union for Conservation of Nature

Kg – Kilogram

Km² – Kilometre square

m – Metre

NPWC- National Park wildlife Conservation

P- value – Probability value

rpm – revolutions per minute

sp. – Species

TU – Tribhuvan University

UNESCO - United Nation for Educational Scientific and Cultural Organization

UK – United Kingdom

USA – United States of America

WHO – World Health Organization

WWF – World Wildlife Fund

RCNP- Royal Chitwan National Park