

GASTRO-INTESTINAL PARASITES OF RED PANDA (*Ailurus fulgens fulgens* Cuvier, 1825) IN RARA NATIONAL PARK,
MUGU, NEPAL



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KIRTIPUR, KATHMANDU

NEPAL

AUGUST, 2015

RECOMMENDATION

This is to recommend that the thesis entitled “**Gastro-intestinal parasites of Red Panda (*Ailurus fulgens fulgens* Cuvier, 1825) in Rara National Park**” has been carried out by Mr. Chandra Kaji Pan Shrestha for the partial fulfillment of the requirements for the Degree of Master of Science in Zoology with special paper ‘Parasitology’. This is his original work and has been carried out under our supervision. To the best of our knowledge, this thesis work has not been submitted for any other degree in any institutions. I recommend that the thesis be accepted for the Degree of Master of Science in Zoology (parasitology), Tribhuvan University, Kirtipur, Kathmandu, Nepal.

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On the recommendation of the supervisor Associate Professor Mahendra Maharjan (Ph.D), this thesis submitted by Mr. Chandra Kaji Pan Shrestha entitled “**Gastro-intestinal parasites of Red Panda (*Ailurus fulgens fulgens* Cuvier, 1825) in Rara National Park**” is approved for the examination and submitted to the Tribhuvan University in partial fulfillment of the requirements for the Degree of Master of Science in Zoology with special paper **Parasitology**.

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DECLARATION

I hereby declare that the work presented in this thesis entitled “**Gastro-intestinal parasites of Red Panda (*Ailurus fulgens fulgens* Cuvier, 1825) in Rara National Park**” has been done by myself, and has not been submitted anywhere for the award of any degree. All the sources of the information have been specifically acknowledged by reference to the author(s) or institution(s).

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ABSTRACT

The present study has been carried out to determine the prevalence of gastro-intestinal parasites in Red Panda (*Ailurus fulgens fulgens*) of Rara National Park, Mugu, Nepal. A total of 22 faecal samples of Red Panda were collected in the month of May/June 2011 and 21 faecal samples from the same site during the month of May/June 2012. All the samples were microscopically examined by faecal floatation and sedimentation techniques. Out of 43 faecal samples examined, 40 samples (93.00%) were found to be positive for gastro-intestinal parasites. Altogether, 12 different species of gastro-intestinal parasites were recovered from Red Panda. Among them, two species of protozoan parasites and 10 species of helminthes were observed. In protozoan parasites, *Eimeria* (67.44%) was more prevalent than *Entamoeba* (62.79%). Among helminthes, *Oxyuris* sp. showed the highest prevalence rate followed by *Toxoascaris* sp. (48.84%), Hookworm (44.19%), *Baylisascaris* sp. and *Crenosoma* sp. (34.88%), *Strongyloides* sp. and *Moniezia* sp. (18.60%), *Trichuris* sp. and *Metastrongylus* sp. (4.65%) and *Angiostrongylus* sp. (2.33%). Only one species of cestoda i.e. *Moniezia* sp. was found but trematoda and acanthocephalans were not found in Red Panda of Rara National Park. The concurrency of parasite infection indicated highest for multiple and quintuple infection. Intensity of infection revealed that the Red Pandas of RNP were infected heavily by protozoan parasites; *Eimeria* and *Entamoeba* and helminth parasites; *Oxyuris*, *Baylisascaris*, and *Trichuris* indicating that parasitic infection possess an important threat in conservation of Red Panda in Nepal.

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LIST OF ABBREVIATIONS

Abbreviated form	Details of abbreviations
CDZ	Central Department of Zoology
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DNPWC	Department of National Park and Wildlife Conservation
GI	Gastro-intestinal
IUCN	International Union for Conservation of Nature
PNHZP	Padmaja Naidu Himalayan Zoological Park
RNP	Rara National Park
PCR	Polymerase Chain Reaction
NLM	Neural Larva Migrans
OLM	Ocular Larva Migrans
VLM	Visceral Larva Migrans
µm	Micrometer
mm	Millimeter
ft	Feet
km	Kilometer
m	Meter
gm	Gram
ml	Milliliter
rpm	Revolutions per minute