

**PARASITIC IMPEDIMENTS OF OSTRICHES (*Struthio camelus*  
Linnaeus 1758) FARMING AT GANGOLIYA VDC-1, RUPANDEHI**



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A thesis submitted in partial fulfilment of the requirements for the award of the degree of Master  
of Science in Zoology with special paper Parasitology

**Submitted to**

Central Department of Zoology  
Institute of Science and Technology  
Tribhuvan University  
Kirtipur, Kathmandu  
Nepal  
September, 2013

## 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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## RECOMMENDATIONS

This is to recommend that the thesis entitled “Parasitic Impediments of Ostriches (*Struthio camelus* Linnaeus 1758) Farming at Gangoliya VDC-1, Rupandehi” has been carried out by Youb Raj Poudel for the partial fulfilment 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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## LETTER OF APPROVAL

On the recommendation of supervisor “Dr. Mahendra Maharjan” this thesis submitted by Youb Raj Poudel entitled “Parasitic Impediments of Ostriches (*Struthio camelus* Linnaeus 1758) Farming at Gangoliya VDC-1, Rupandehi” is approved for the examination and submitted to the Tribhuvan University in partial fulfilment of the requirements for Master’s Degree of Science in Zoology with special paper Parasitology.

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## LIST OF ABBREVIATIONS

<b>Abbreviated form</b>	<b>Details of abbreviations</b>
° C	Celsius
° F	Fahrenheit
µm	micrometer
CM	Centimetre
CNS	Central Nervous system
gm	gram
GNP	Gross National Product
HCl	Hydrochloric Acid
Kg	Kilogram
Ltd	Limited
mg	milligram
ml	mililitre
mm	millimeter
NaCl	Sodium Chloride
Pvt	Private
Rs	Rupees
VDC	Village Development Committee
ZnSO <sub>4</sub>	Zinc sulphate

## ABSTRACT

Parasitic impediments of Ostrich farming in Gangoliya-1 Rupandehi was investigated by random faecal sampling and inspecting management practices in the farm. A total of 92 fresh pooled samples from four subdivided farms of Ostrich Nepal Pvt. Ltd. (The only one Ostrich farm of Nepal) were collected in a wide mouth sterile vial with 2.5% potassium dichromate. Collected samples were subjected to sedimentation and floatation processes followed by Lugol's Iodine mount and Saline mount. Management systems of the farm were inspected through Questionnaire survey and Observational study. Out of 92 faecal samples examined 80 samples were positive contributing 86.96% as prevalence rate of endoparasites. Ostriches belonging to those four subdivided farms were found to harbour a variety of Protozoan parasites such as *Entamoeba* (57.6%), *Eimeria* (7.6%), *Balantidium* (5.43%), *Isospora* (3.26%) and *Histomonas* (1.09%) and Helminths parasites such as unidentified Cestode (4.35%), Nematodes such as *Ascaridia* (43.48%), *Serratospiculum* like (36.96%), *Libyostrongylus* (14.13%) and *Codiostomum* (6.52%). Most interestingly three species of ectoparasites were isolated during faecal examination. These includes *Goniocotes* (1.09%), *Gabucinia* (2.17%) and *Dermoglyphus* (1.09%). The results reveals a commercial production of Ostriches by 100% with the farm engaged in production of other livestock species (Emus). Similarly, all the sub-divided farms were provided with premix based compounded foods which includes Grass (Lucerne or clover) (50%), Wheat (12%), Maize (18%), Soyameal (17%), Vitamins and minerals (1%) and Others (2%). High prevalence of endoparasites could be due to lack of antihelminthic medication and faulty management practices. Since these parasitic infections may lead to poor performance and efficacy in laying and weight gain in Ostriches, effective deworming program and management strategy should be conducted in order to upgrade the health status of Ostriches and hence to maximize the benefits from them.