

**IMPACTS OF INVASIVE ALIEN PLANT SPECIES (IAPS) ON THE  
WETLAND-DEPENDENT BIRDS OF BEESHAZARI TAAL,  
CHITWAN, NEPAL**

**A Dissertation submitted to the Institute of Science and Technology,  
Tribhuvan University for the Partial Fulfillment of the requirement for the  
Master's Degree in Zoology (Ecology)**

**Submitted by  
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**ACCEPTENCE**

The dissertation entitled “IMPACTS OF INVASIVE ALIEN PLANT SPECIES (IAPS) ON THE WETLAND-DEPENDENT BIRDS OF BEESHAZARI TAAL (LAKE), CHITWAN, NEPAL” submitted by Bimal Kumar Chhetri has been accepted for the partial fulfillment of requirement for the Degree of Master’s of Science in Zoology with Ecology as a special paper.

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**RECOMMENDATION**

Mr. Bimal Kumar Chhetri has successfully completed his dissertation entitled “IMPACTS OF INVASIVE ALIEN PLANT SPECIES (IAPS) ON THE WETLAND–DEPENDENT BIRDS OF BEESHAZARI TAAL (LAKE), CHITWAN, NEPAL” under my supervision. This is his original work, which brings out useful findings in the concerned field. Hence, I recommend this dissertation to be accepted for the partial fulfillment of requirement for the Degree of Master’s of Science in Zoology (Ecology).

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# ABSTRACT

Bird species diversity and abundance is decreasing on wetlands due to the rapid invasion of Invasive Alien Plant Species (IAPS). Wetland-dependent birds are the indicators of the healthy status of wetlands.

This study was conducted at Beeshazari Taal, a Ramsar Site situated in the Central lowland of Nepal from December 2004 to May 2005 to assess the extent and effects of the coverage of IAPS over the lake; to determine the composition of wetland-dependent bird species and to determine diversity indices and similarity index among the different blocks of the lake.

Direct count method was used to assess the abundance of birds. Extent of coverage of IAPS over the lake area was measured by the grid system. Tools like Shannon's Index of Diversity, Simpson's Diversity Index and Sorensen's Similarity Index were used to assess the various diversity and similarity indices.

A total of 1000 individuals of 18 species from 11 families of 4 orders were recorded during the study period. Out of these, 5 species were migratory birds and 10 were found breeding in and around the lake area. The extensive coverage of Water Hyacinth (*Eichhornia crassipes*) and American Cutgrass (*Leersia hexandra*) was observed and this might be the reason for the absence of duck or goose species in the study. The abundance of Bronze-winged Jacana (*Metopidius indicus*) and Common Moorhen (*Gallinula chloropus*) indicates the dense network of floating vegetation facilitating them in breeding as well as for foraging.

The continuous proliferation of Invasive Alien Plant Species over the lake area might result a drastic change on the habitat conditions for the wetland-dependent birds in the Beeshazari Taal in future.

**Key words:** *Wetland-dependent birds, habitat degradation, Invasive Alien Plant Species,*

*Water Hyacinth and American Cutgrass.*

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