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Fish Fauna of River Sewa, an Important Himalayan Tributary of the River Ravi, in Kathua District of Union Territory of Jammu & Kashmir, India

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ABSTRACT

Eight fish species belonging to order Cypriniformes (6 species), Siluriformes (1 species) and Salmoniformes (1 species) were netted from river Sewa, an important Himalayan tributary of the river Ravi, and have been reported. Fish fauna is represented by Indo-Gangetic fishes of Malayan origin, exotic cold water trout and Indian trout of Palaearctic origin. Comparison of fish fauna of river Sewa with various tributaries of the river Ravi has shown a minimum fish diversity. Conservation status based on IUCN observation has also been given.

Keywords: Fish Fauna; River Sewa; Tributary of the River Ravi; Kathua District

Introduction

Fresh water fish fauna, in the Himalayan streams, is rapidly decreasing. It is due to over exploitation, fishing during breeding season, fishing of small sized fishes, construction of reservoirs and hydroelectric projects and illegal fishing methods (poisoning, dynamiting, grenading and electric-shocking). Development of fisheries (exploitation and introduction of fishes) in any water body requires a knowledge of existing fish fauna. Our knowledge of fish fauna of the river Ravi and its tributaries has been contributed by various workers [1-13]. There is no record of fish fauna of river Sewa joining the river Ravi in Bassohli, district Kathua. This work shall be helpful for fishery department of Jammu & Kashmir to undertake further studies and implement various developmental programs.

Topography and Material and Methods

River Sewa, an important tributary of the river Ravi, rises from the Domal structure of Kalikund in the laps of Himlayan ranges. After passing through Doda, Udhampur and Bassohli area of Kathua districts, it joins the river Ravi. The latter drains India and Pakistan. Fishes collected by fishermen using cast net from different spots of river Sewa, in Sewa Hydroelectric project area, were studied for colour pattern and identified in laboratory [14-17].

Observations and Discussion

Fish fauna of river Sewa, is represented by Indo-Gangetic fishes of Malayan origin (*Barilius vagra*, *Barilius bendelisis*, *Crossocheilus latius diplocheilus*, *Tor putitora and Cirrhinus reba and Glyptothorax stoliczkae*), exotic cold water snout trout (*Salmo trutta fario*) and Indian trout (*Schizothorax richardsonii*) of Palaearctic origin. Eight fish species observed in Sewa river belong to order Cypriniformes (6 spp.), Siluriformes (1 sp.) and Salmoniformes (1 sp.). Fish diversity in river Sewa is lowest of all the tributaries of the river Ravi joining at different places in Indian segment. Sehgal [1] reported 16 fish species belonging to 2 order, 3 families and 11 genera from Chamba area, H.P. drained by the river Ravi. Study of fish fauna of various tributaries of the river Ravi in Kathua district started with a survey by Joshi, et al. [2] who enlisted 12 fish species belonging to 4 orders, 6 families and 11 genera from Kathua Khad and 3 fish species viz.

Barilus vagra, *Tor putitora* and *Channa punctatus* from Ujh river. Dutta, et al. [6] noticed 27 fish species belonging to 4 orders, 8 families and 20 genera from Ujh river; 16 fish species belonging to 2 orders, 4 families and 12 genera from Tarnah nullah and total absence of fish from seasonal Kathua Khad.

Rathore, et al. [11] observed 42 fish species belonging to 5 orders, 10 families and 27 genera from river Ujh. Dutta [12] reported 64 fish species belonging to 7 orders, 17 families and 42 genera from Wajoo nullah and its tributaries. Dutta, et al. [4] surveyed fish fauna of river Basantar, an important tributary of the river Ravi, in Samba district, and enlisted 59 fish species belonging to 6 orders, 15 families and 41 genera. Sharma and Dutta. [8] documented 35 fish species belonging to 5 orders, 10 families and 25 genera, with maximum diversity and density during monsoon floods, in river Basantar. Poor fish diversity as observed in Sewa river has also been observed in a cold water torrential Neeru nullah (*Schizothorax richardsonii* and *Glyptosernum reticulatum*), Bhaderwah by Dutta, et al. [18]. This low fish diversity in river Sewa is because of torrential flow, cold water, presence of boulders and rocks and absence of soft sediments, absence of macrophytes and poor diversity of fish food organisms.

Fish conservation measures in Sewa river require:

i. Strict implementation of fishing restrictions during fish breeding period.

ii. Check on netting of small sized fishes

iii. Strict checking of illegal fishing methods

iv. Construction of pools at different places using local available materials.

v. Introduction of aquatic plants at selected places to provide shelter and food to the fish

vi. Plantation by the forest department in the catchment of the river to prevent soil erosion and to increase rain water in filtration. Plantation will also help in increasing springs and spring water discharge at various places.

The IUCN [19] Redlist showed that *Tor putitora* is endangered; *Schizothorax richardsonii* is vulnerable; *Barilius vagra*, *Barilius bendelisis*, *Cirrhinus reba* and *Crossocheilus latius diplocheilus* are least concern and *Glyptothorax stoliczkae* and *Salmo trotta fario* are in not evaluated category.

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