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Hameed Ur Rehman

Department of Chemistry,
Kohat University of Science and
Technology-26000, KPK,
Pakistan.

Abdul Haseeb

Department of Chemistry,
Kohat University of Science and
Technology-26000, KPK,
Pakistan.

Abdul Wahab

Department of Pharmacy, Kohat
University of Science and
Technology-26000, KPK,
Pakistan.

Alam Zeb Khan

Department of Chemistry,
Kohat University of Science and
Technology-26000, KPK,
Pakistan.

Raqeab Ullah

Department of Zoology,
Abdul Wali Khan University
Mardan, KPK, Pakistan.

Iftihar Ahmad

Department of Zoology,
Shaheed Benazir Bhutto
University Sheringal Dir upper,
KPK, Pakistan.

Correspondence

Hameed Ur Rehman

Department of Chemistry,
Kohat University of Science and
Technology-26000, KPK,
Pakistan.

Fish diversity of dargai Pal Dam South Waziristan Agency, KPK, Pakistan

Hameed Ur Rehman, Abdul Haseeb, Abdul Wahab, Alam Zeb Khan, Raqeeb Ullah, Iftihar Ahmad

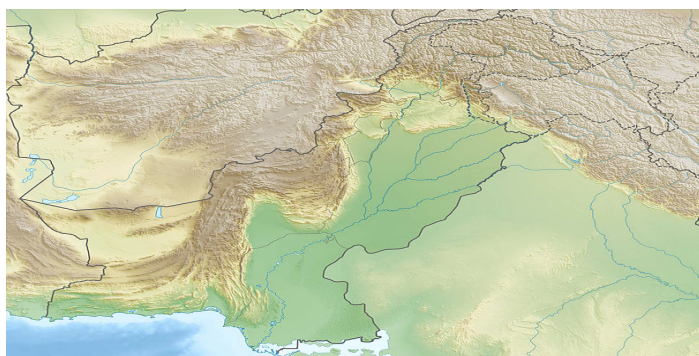
Abstract

The present study was carried out to find out the fish diversity of Dargai Pal Dam South Waziristan Agency, Pakistan during the period of June 2010 to July 2011. A total 5 species were found and identified in which all of 5 were belong to one family cyprinidae. These five species were *Cyprinus carpio*, *Hypophthalmichthys molitrix*, *Ctenopharyngodon idella*, *Cirrhinus cirrhosus*; *Tor tor*. The current study shows that dargai dam is favourable for cyprinidae species.

Keywords: Fishes, Dargai Pal Dam, biodiversity

1. Introduction

Biodiversity is the quantity, variety and distribution across biological scales ranging through genetics and life forms of populations, species, communities and ecosystems [1]. Biodiversity affects the capacity of living systems to respond to changes in the environment, underpins ecosystem function and provides the ecosystem goods and services that support human being, as well as having intrinsic value, biodiversity has aesthetic value: many of us have admired the wonderful colures and shapes of fishes on coral reefs and in other coastal habitats [2]. Some benefits of biodiversity are not apparent today but may be revealed in the future compounds derived from marine animals and plants may serve as medicine to prevent and cure more of our ills in the future. Biodiversity is important for the future sustainability of marine natural resources that include commercial fisheries. Fisheries that exploit a range of species may have more stable catches than fisheries that exploit a single species. A high genetic diversity within a fish population may protect it against environmental stressors (e.g., climate change, pollutants) and the spread of diseases [3]. Understanding biodiversity distribution patterns is a principal issue for scientists and managers concerned with the current extinction processes. Freshwater fishes are not only the most diverse group of vertebrates but also the one that features the greatest proportion of threatened species [4]. The decline of freshwater fishes is a comprehensive phenomenon noticeable on global [5] regional and local [6, 7] scales. The major threats to freshwater fishes are the deterioration or destruction of habitats, both by pollution and intense modifications (i.e. damming, channelization) and the introduction of exotic species [8]. Dargai Pal Dam is an earth filled dam in South Waziristan Agency of FATA, Pakistan. The dam has a height of 84 feet, covered a length of around 764 feet, with actual storage capacity of water 2178 acre feet [9].



Map: Showing Dargai Pal Dam South Waziristan Agency

2. Material and Methods

Fishes were collected from Dargai Pal Dam South Waziristan Agency with the help of local fisherman using different types of catch nets and hooks at the regular intervals. The collection was made from different sites of the water to avoid missing of species. Immediately after capturing the fishes were directly preserved in 10% formalin solution, larger fishes were given injection of formalin in their abdomen and other parts of the body to avoid bacterial contamination. After collection the fishes were brought to the laboratory for proper identification. The maristic and morphometric characters were studied and the fishes were indentified up to species level with the help of using different types of following books and fish keys. Fishes of the Punjab, Pakistan Mirza and Sandhu, Fishes of the world Nelson, Pakistan ketazapanikemachlian by Mirza ^[10, 11, 12].

3. Results and Discussion

Dargai Pal Dam is an earth filled dam in South Waziristan Agency of FATA, Pakistan. The survey was conducted from June 2010 to July 2011. In this survey total 5 species were recorded which belong to orders cypriniformes and cyprinidae families (see Table 1). During the study five species were identified *Cyprinus carpio*, *Hypophthalmichthys molitrix*, *Ctenopharyngodon idella*, *Cirrhinus cirrhosus*, *Tor tor*. The fauna of the study area was rich due to the current cease fire in the South Waziristan Agency due to the current terrorism situation in the area. Feeding and habitat availability play an important role in the diversity and distribution of the fish fauna of area. The flora of the study area was rich and due to the thick flora the study area was bearing rich fauna.

Table1: Showing Taxonomic Classification of Dargai Pal Dam Fishes.

Name	Order	Family	Genus	Species
Common Carp	Cypriniformes	Cyprinidae	<i>Cyprinus</i>	<i>C. carpio</i>
Silver Carp	Cypriniformes	Cyprinidae	<i>Hypophthalmichthys</i>	<i>H. molitrix</i>
Grass Carp	Cypriniformes	Cyprinidae	<i>Ctenopharyngodon</i>	<i>C. idella</i>
Mori	Cypriniformes	Cyprinidae	<i>Cirrhinus</i>	<i>C. cirrhosus</i>
Mahseer	Cypriniformes	Cyprinidae	<i>Tor</i>	<i>T. tor</i>

As the flora of the Study area was very thick and was found in large numbers as there were many places of shelters for their breeding and other activities. It was observed that the fishes were hunted but the hunting ratio was low due to the current situation of terrorism in Waziristan Agency therefore the fish fauna was rich.

4. Conclusion

Hunting and habitat destruction are major threats to wildlife. From the obtained study it may be concluded that Dargai Pal Dam South Waziristan Agency of FATA, having richest fauna of cyprinidae species.

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