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Variety of Icthyofauna Shahid Chandra Shekhar Azad Sagar's Jobat (M.P.)

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Abstract:

Lentic water body fish survey Azad Sagar, Jobathas, Shahid Chandra Shekhar, and others have reported finding 36 species in 7 orders, 14 families, and 26 genera. Of the six orders, the order Cypriniformes had the most species—25—followed by the orders Ophiocephaliformes (three species), Perciformes (three species), and Mastabeleformes (two species). The orders Beloniformes and Clupeiformes each had one species. Fishing during the reproductive season, illegal fishing, and overexploitation are all contributing to the rapid decline in fish variety. By stocking different carps in seasonal waters, there is a large chance that fish productivity in this body of water would increase.

Reference: Sharma S.*, Siddiqui A., and Dawar B. (2016). Variability in the Ichthyofauna of Shahid Chandra Shekhar Azad Sagar, Jobat, India. Biodiversity Journal. Photon 116, 488–492.

Keywords: Diversity, Population dynamics, Fish Species, Abiotic factors, Azad Sagar

1. Introduction:

Aquatic biodiversity can be defined as variety of life and the ecosystems that makes up the freshwater, tidal and marine regions of the world and their interactions. Aquatic biodiversity

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encompasses freshwater ecosystems, including lakes, ponds, reservoirs, rivers, streams, ground water and wet lands. It also consists of marine ecosystems including oceans, estuaries, salt marshes, sea grass beds, coral reefs, kelp beds and mangrove forests. Aquatic biodiversity includes all unique species, their habitats and interaction between them. It consists of phytoplankton, zooplankton, aquatic plants, insects, fish, birds, mammals and others.

Fresh water fishes show variations in relation to habitat and geographical distribution. It is thus necessary to understand their distributional and behavioural pattern so as to know the suitability of a fish for culture in a particular locality. Some fishes in hilly region show some special adaptations, like modification of pelvic fins into suckers, smooth and soft body, small size etc. Much work has been done on different river in hill stream fishes by Silas (1960), Berg (1964), Baloni (1976), Jayaram (1981), Talwar and Jhingran (1981).

2. Material and Methods:

Sampling of fish has been made for every fortnight days throughout the study period. Collection of fish was made directly from the fisherman's during the time of fishing. Two types of fish nets were used: (i) Gill net and (ii) Cast net. (Gill nets of different mesh sizes viz. 20,25,30,36,78,100mm cost net of (mesh size 14 and 22 mm) and hand net (mesh size 610 of mm). Coloration and general pigmentation of the fishes was recorded prior to their preservation in the formalin. The identification of the fishes was done with the help of standard keys and book Jayaram, 1994; Shrivastava, 1998; Jhingran, 1991; and Day, 1958.

3. Result & Discussion:

The diversity of fishes mainly depends upon the biotic & biotic factors and types of the ecosystem (lentic & lotic habitat). Age of the water body, mean depth, water level fluctuations. So far approximately 25,000 fish species have been reported from the entire world. Thus, the species

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richness in fresh water, in relation to area of habitat is extremely high. Hence it is important to have adequate knowledge of the constituent biota especially for river conservation and management of large, medium & small reservoirs of different river basins. According to Panniah, 1994.

3.1 Analysis in Fish Fauna of Shahid Chandra Shekhar Azad Sagar, Jobat:

During in the Shahid Chandra Shekhar Azad Sagar, Jobat was studied for a period of two year from October 2014 to September 2015 in the present study, 36 species of Fish were identified); 02 species of **Order- Clupeiformes**, 25 species of **Order-Cypriniformes,** 1 species of **Order-Beloniformes**, 3 species of **Order-Ophiocephaliformes**, 3 species of **Order- Perciformes**, and 2 species **Order- Mastacembeleformes**. These Fish species can be used to establish biological criteria to classify the fresh water ecosystem as being healthy or polluted.

S.No.	Order of FISH	Name of FISH	2014-15							
			Monsoon	Monsoon	Post	Winter	Summer	Post	Winter	Summer
1	Order-Clupeiformes	**Family- Clupeidae**								
		Hilsa hilsa	+	-	-	-	-	+	-	-
		Family- Notopteridae								
2		*Notopterus notopterus*	-	-	-	++	+	-	++	+

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	Order-Cypriniformes	**Family-Cyprinidae**								
3		*Cyprinus carpio*	-	+	+	+++	+	-	-	+
4		*Catla catla*	+	++	-	+++	-	+	+++	+
5		*Cirrhinus mrigale*	+	+	+	+	-	+	+++	+
6		*Cirrhinus reba*	-	+	-	++	-	-	-	-
7		*Labeo rohita*	+	+	+	+++	-	+	+++	++
8		*Labeo calbasu*	+	+	-	+++	-	-	+++	+
9		*Labeo gonius*	+	+	++	+++	+	-	-	-
10		*Labeo bata*	-	-	-	++	=	-	++	+
11		*Labeo fimbriatus*	-	-	++	++	++	-	-	-
12		*Puntius ticto*	+	+	+	+	-	-	-	-
13		*Puntius guganio*	+	-	++	-	++	+	+++	-
14		*Puntius sarana*	+	+	-	+	+	+	+++	-
15		*Puntius dorsalis*	-	+	-	-	-	-	-	-
16		*Puntius conchonius*	-	+	+	++	+	-	-	-
17		*Rasbora daniconius*	-	-	-	+++	-	-	++	-
		Family- Cobitidae								

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18		*Noemacheilus botia*	-	+	+	+	-	-	-	-
		Family- Siluridae								
19		*Wallago attu*	+	+	+	+++	+++	+	++	++
		Family- Bagridae								
20		*Mystus seenghala*	+	+	-	++	+	-	+++	-
21		*Mystus bleekari*	+	-	-	++	++	+	+++	++
22		*Mystus vittatis*	-	+	+	+	++	++	-	-
23		*Mystus cavasius*	+	++	+	-	-	-	-	-
24		*Mystus tangara*	+	-	++	++	+	-	+++	+
25		*Rita rita*	-	+	+	+	+	-	-	-
		Family- Saccobranchidae								
26		*Heteropneustes fossillis*	+	+	-	++	+	++	+	++
		Family- Clariidae								
27		*Clarias batrachus*	-	-	+	-	+	-	-	+
	Order- Beloniformes	**Family-Belonidae**								

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28		*Xenentodon cancila*	-	-	-	++	-	-	-	-
	Order-Ophiophaliformes	**Family-Ophiocephalidae**								
29		*Channa gachua*	-	-	-	-	-	-	-	-
30		*Channa punctatus*	-	-	-	++	++	-	+	++
31		*Channa striatus*	-	-	-	+		++	-	-
	Order-Perciformes	**Family-Centropomidae**								
32		*Chanda nama*	-	+	++	++	++	-	++	+
		Family- Nandiae								
33		*Nandus nandus*	-	+	+	+	++	-	-	-
		Family-Anabantidae								
34		*Colisa fasciatus*	-	+	-	++	-	-	-	-
	Order-Mastacembeleformes	**Family-Mastacembelidae**								
35		*Mastacembelus Pancalus*	+	-	-	-	-	++	+	++

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36.		*Mastacembalus armatus*	-	-	-	+	+	-	+	+

Index: +++ Abundant, ++ Less Abundant, Always Visible

+ Rare, Sometime Visible, - Absent

During the present study variety and abundance of fishes of Shahid Chandra Shekhar Azad Sagar, Jobat 36 species (2014-15) belonging to 14 families were observed in Shahid Chandra Shekhar Azad Sagar, Jobat (table 01.)The shoreline of Shahid Chandra Shekhar Azad Sagar, Jobat have rich biodiversity of benthic fauna due to organic pollution and shore line vegetation. The season fluctuation an animal biomass is related to physicochemical factor and organic pollution of lake.Mandal, and Moitra, 1975; Sharma, 2007.

The fish communities is represented by 36 species in year (2013 – 2014) belonging to the six orders, out of the six orders Cypriniformes was dominant with 25 species followed by Ophiocephaliformes with three species, order Perciformes with three species and order Mastacembeleformes with two species, Beloniformes and Clupeiformes represented by one species each. The change in the composition of fish assemblage often indicate a variation in the water quality parameters. Such as pH, temperature, D.O. and nutrients Jhingran, 1982; Vijaykumar, and Paul, 1990.

4. Conclusion:

Shahid Chandra Shekhar Azad Sagar, Jobat has a fish community made up of both native and introduced species for fishing purposes. Creation. Numerous fish species are native to this area. To protect every kind of indigenous fish considering the overall diversity of fish, it is essential to stop fertilizer and pesticide runoff from agriculture fields nearby, significant siltation during high

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fingerling stocking density and intense rainfall fish illnesses and specific culture fishes. Durable fish production by adopting the necessary measures for Maintaining fish diversity is vital for conservation these delicate resources.

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