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SEASONAL VARIATINS AND MOLLUSCAN DIVERSITY IN WAGHUR DAM NEAR JALGAON DISTRICT (MS)

SHAIKH HAFIZ MAHMAD.
Department of Zoology, H.J.Thim College of Arts and Science, Jalgaon.

ABSTRACT

Present study deals with seasonal variation and molluscan diversity in Waghur Dam near Jalgaon district. The molluscan are second largest invertebrates groups o the planate earth. The Molluscans play an important role in aquatic food web and food chain of aquatic ecosystem. They are good indicator of localized condition and water quality. During study 17 species were reported of them 9 belongs to group Gastropoda and 8 to Pelecypoda. During winter season molluscan population abundantly recorded. Present study revealed that Gastropoda are predominated as compare to Pelecypoda.

Key words: Mollusca, Gastropoda, Pelecypoda, Waghur Dam.

INTRODUCTION

Waghur dam is constructed on waghur river at Raipur village which is originated from Ajanta caves hills in Maharashtra. This is considering one of the important dam in North Maharashtra region in Maharashtra. It is situated in east longitudes 75.7067^0E and north latitudes $20.9180\ ^0$N.

Present study deals with seasonal variation and Molluscan diversity in Waghur dam near Jalgaon district. Mollusca are one of the most diverse phylum among the vertebrates. Fresh water Molluscans are classified into two groups Gastropods and Pelecypoda.

MATERIALS AND METHODS

During present study Molluscan samples were collected randomly from Waghur dam at morning on 8:00am to 10:00am. The samples were collected with the help of local fisherman by hand net, forceps and hand and transfer in 5 liter jar. The collected samples were counted separately as No./m^2 .The Collected specimens were firstly narcotized by methanol and chloral hydrates then fixed in to10% formalin for for 24 hours. After that samples were transfer into 70% ethanol and identified. The identification of species was done in laboratory by standard literature of Ward and Whipple(1959), Pinnak(1989), Tonapi (1980) and APHA(1998).

RESULT AND DISCUSSION

In presence study total 17 species of Mollusca where recorded from Waghur dam. Out of which 9 species belongs to Gastropoda and 8 to Pelecypoda. The species belongs to Gastropoda were *pila globosa ,Bithynia tentaculata ,Vivipara malleatus, Vivipara subpurpurus, Valvata cristata, Lymnaea stagrialis,Lymnaea truncatula, Planorbis exustus* and *physa acuta*. While species belongs to Pelecypoda were U*nio tertoni, Unio mancus, Unio pictorm, Anodonta anatina, Anodonta cataracta, Anodonta pseudodopsis,Pisidium amnium* and *Pisidium casertanum.*

During winter season *Pila globosa* were abundantly recorded from Gastropoda whereas *Unio* species from Pelecydia. As compared to monsoon and summer season molluscan were abundantly found in winter season same result recorded by several workers (Subha B.R. and

T.K. Ghos , 2001, Nautiyal P-2002,Pennak Robot W. 2004). *Bithynia tentaculata, Vivipara mallaetus,Vivpara subpurpureus, Valvata cristata* where also abundantly distributed in waghur dam. *Lymnaea stagrialis, Lymnsea truncatula* , were moderately distributed while *Planorbis exusta* and *Physa acuta* rarely distributed in monsoon and summer season during study period. Similar observation reported bySharma V.K.(1999),Sharma M.P.(2006) and Sinha R.(2005).

The species belong to Pelecypoda such as *Unio* species were dominant *Unio turtoni,Unio mancus*,and *Unio pictorum* abundantly found in winter season due to clear water and vigorous growth of planktons in dam. Similar observation noted by (Chaube U. 2008 and Pennak Robert w. 2004). The *Anodonta* species moderately distributed while *Pisidium* species rarely distributed in waghur dam water. One of the important factor to determine habitat and activities of Molluscan species is level of dissolved salt in water it is essential for the formation of shell in Mollusca(Sharma et.al.2008). The role of Mollusca are supported to be helpful in purification of water due to their filter feeders and scavengers clearing suspended particulate organic matters. Molluscan also provide food of other organism in food web and food chain like fish and birds (Preston.H.B. 1915)

CONCLUSION

Waghur dam is rich resource of aquatic flora and fauna specially ichthyofauna and Mollusca in Jalgaon region. This dam is facing problem of encroachment, weed invasion, siltation and number of anthropogenic activities which affect the life of aquatic flora and fauna including Mollusca. Thus there is an urgent need to initiate step for further research in to ecology, distribution, conservation and sustainable management of Mollusca in waghur dam which is helpful for conservation and maintenance of biodiversity of aquatic ecosystem. There is a need to develop awareness among the people of local about the significance of Molluscan ecosystem.

Table:1- Seasonal variation and diversity of Molluscan in Waghur dam.

Sr. No.	**Groups of Mollusca**	**Species of Mollusca**	**Season**												
			Monsoon				**Winter**				**Summer**				**Total**
			June	**July**	**Aug**	**Sept.**	**Oct**	**Nov**	**Dec**	**Jan.**	**Feb.**	**Mar.**	**April**	**May**	
1	**GASTROPODA**	1)*Pila globosa* ,	14	16	15	13	17	18	16	18	15	12	10	11	175
		2)*Bithynia tentaculata* ,	4	6	5	3	11	12	14	11	11	10	8	6	101
		3)*Vivipara malleatus*	3	4	2	1	4	5	7	6	3	2	1	1	39
		4)*Vivipara subpurpurus*	2	3	2	4	6	5	7	6	4	2	2	1	44
		5)*Valvata cristata*	2	4	4	3	7	8	9	10	9	6	7	4	73
		6)*Lymnaea stagrialis*	3	2	3	4	5	7	9	8	7	5	4	5	62
		7)Lymnaea truncatula	2	2	4	3	5	7	8	9	6	5	7	3	61

		8) *Planorbis exustus*	1	2	2	4	6	7	5	4	5	3	2	1	42
		9)*physa acuta*.	2	1	2	1	4	5	7	5	3	3	2	3	38
2	**PELECYPODA**	1)U*nio tertoni*	11	13	11	10	14	15	17	18	20	12	11	13	165
		2)*Unio mancus*	5	4	6	3	8	10	12	11	12	8	5	3	87
		3)*Unio pictorm*	3	2	2	4	6	8	7	9	5	3	2	2	53
		4)*Anodon tanatina*	4	3	3	5	7	9	10	11	5	6	3	2	68
		5) *Anodonta cataracta*	4	3	3	4	6	8	9	6	5	3	3	4	58
		6)*Anodonta pseudodopsis*	2	4	3	5	8	9	11	12	11	6	7	5	83
		7)*Pisidium amnium*	3	2	4	5	7	9	7	10	8	7	6	9	77
		8)*Pisidium casertanum*	1	1	2	3	4	5	3	6	5	3	2	1	36

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