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DISTRIBUTION OF THE FRESHWATER BIVALVES IN THE WATER BODIES OF BHOPAL DISTRICT

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ABSTRACT

Different water reservoirs a rivers from the Bhopal district region were surveyed for the biodiversity of bivalves it was observed the there were four major species as *Lamelliidens corrianus. Lamellidens marginalls, Parreysia corrugate* and *Indonaia caeruleus* available in the water of Bhopal district region. Beside these species, there was a species of *Corbiculid*, the *Corbicula regularis* which was very rare and it being small was not useful for the food value and its shell was also not nacreous, therefore it was not important for the aquaculture. The details of the surveyed places and the availability of the bivalve species in different habitats were accounted .Their ecological biodiversity were studied and the data were prepared.

KEYWORDS: Bivalve, water bodies, Bhopal district region.

INTRODUCTION

The bivalves are filter feeders and always found in the regions where the water is available throughout the year. It therefore makes very difficult to collect the animals when they reach the depth as much as fifty feet due to the increase of the water level of the reservoir during rainy season. The rivers may not have flowing water throughout the year. Usually the river areas in which the water is released for the agriculture and drinking purpose from the dams have running water for most of the year. The rivers in some regions may not have flowing water throughout the year and in such situation the ponds and ditches in the basin of the river have these fauna.

MATERIALS AND METHODS

The water bodies and the areas where the availability of the water was throughout the year were surveyed. The sites at freshwater bodies for the collection of bivalves from lentic and lotic habitat in Bhopal district region were confirmed. Bivalves were collected from different lentic and lotic localities of Bhopal district region as per their availability. The collected bivalves were identified as per the manual of the Zoological Survey of India and their availability in different locations was recorded.

Table 1: Data o the survey of the lentic and lotic habitats and the availability of the bivalves in different habitat.

S. No	Name of the water reservoir/region	Lentic	Procurement period	Species of Bivalves	Remarks
1	Upper Lake	Lentic	10 to 12 months	*Lamellidens*	
2	Lower Lake	Lentic	10 to 12 months	*L. marginalis*	
3	Shahpura Lake	Lentic	10 to 12 months	*Parreysia corrugata*	
4	Ayodhya Naqar Pond	Lentic	10 to 12 months	*P. corrugata*	
5	Char lmil Pond	Lentic	10 to 12 months	*L. marginalis*	
6	Damkheda Village	Lentic	12 months	*L. marginalis, L. corrianus*	
7	Hataikheda Reservoir	Lentic	12 months	*L. corrianus, L. marginalis Indonaia caeruleus*	Indonaia caeruleus rare
8	Halati Reservoir	Lentic	10 to 12 months	*L. corrianus, L. marginalis*	
9	Kaliasote	Lentic	10 to 12 months	*L. corrianus, L. marginalis*	Both species very rare
10	Kerwa Reservoir	Lentic	10 to 12 months	*L. corrianus, L. marginalis*	
11	Kolar Reservoir		10 to 12 months	*L. corrianus, L. marginalis*	
12	Lendiya Talab	Lentic	10 to 12 months	*L. marginalis,*	I.careuleus rare
13	Lahorpur Reservoir	Lentic	12 months	*L. corrianus, L. marginalis Indonaia*	I.careuleus rare

14	Munshi Hussain Khan	Lentic	10 to 12 months	*L. corrianus, L. marginalis Indonaia caeruleus*	I. careuleus rare
15	Motia Tank	Lentic	10 to 12 months	*L. corrianus, L. marginalis Indonaia caeruleus*	I. careuleus rare
16	Neelbad Tank	Lentic	10 to 12	*L. corrianus, L. marginalis Indonaia caeruleus*	I. careuleus rare
17	Siddiqui Hussain Tank	Lentic	10 to 12	*L. marginalis*	

RESULTS AND DISCUSSION

Lamellidens marginalis and lamellidens corrianus were available in most of the aquatic habitas of the Bhopal district region and were also abundant in most of the cases. However, Parreysia corrugate and Indonaia caeruleus were restricted only in certain places and were very rare. Parreysia corrugate was found only in lentic waters. It was therefore difficult to obtain them in all the monts in lentic as well as lotic habitat. L. marginalis and L. corrianus were large bivalves ranging in the gross weight from 4 gm to 150 gm with the flesh up to 70 gms. The minor and neglected species of the corbiculid was also obtained from the Kaliasot Dam of Bhopal and the species was Corbicula regularis however other species Corbicula striate/ha found in many areas of Bhopal district state was not observed in the Bhopal district.

The availability and abundance of freshwater bivalves was dependent on the physiological parameters of the water and availability of water and food.

The ecology of various slugs were studied. In east Lancashire, England Vater relations and parameters of molluscs were-studied by various investigators. Anon cifcumscriptus and Deroceros reticu/atum, unrelated but native of same region, were similar in their temperature preference, cold toleration and food variation; whereas Deroceros reticulatum and D. Iaeve,

Closely related but native of different regions were similar in substrate moisture preference, heat tolerance and desiccation'. Under normal conditions, Hlix pomatia undergoes daily fluctuations of weight of a cyclical nature due to variation in water content.
L. marginalis and *L. corrianus* are highly dominant in all the water bodies indicating their adaptability to any type of environment. In many regions, these species were found live in the semidried mud indicating their adaptation to the aerial respiration. There are records that some bivalves use the oxygen that dissolves in the little water that is present in the mantle cavity after developing the bubbles.

The present investigation provides basic knowledge regarding the availability of the bivalves from Bhopal district region.

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