ISSN: 2249-894X IMPACT FACTOR : 5.2331(UIF) VOLUME - 6 | ISSUE - 11 | AUGUST - 2017
UGC APPROVED JOURNAL NO. 48514

REVIEW OF RESEARCH

THE POTENTIAL PRODUCTIVITY AND PHYSICO-CHEMICAL ANALYSIS OF PONDS OF MADHUBANI DISTRIC

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ABSTRACT

The present study is based on the sample of fish and fish were collected from pond with help of local fisherman by fisher net. Hence the present study was aimed at studying the physico-chemical analysis of ponds water located in and around the Madhubani region in relation to pH, temperature, transparency, dissolve oxygen, calcium, & magnesium.

The pH was found to be highest in Jan. ranged from 7.5 to 8.0 temperature of pond water followed by the same course that of air temperature. Calcium, Mg was also found to be highest in Jan. Especially inMadhubani region from where the present study has been carried out. The population of fish was highest in July & Aug. and Minimum in sept. to Jan. The fish fauna belong to family clupeidae, Notopteridae, Cyprinidae, Bagridae, Siluridae, Heterpneustiedae, Ophiocephalidae, Amphinoidae, Anabentidae & Mastecembelidae.

The Systematic study of fish of Madhubani pond has shown that the water bodies ware rich in population. Approx 18 fishes were collected which stretched to 10 families.

KEYWORD : *social sciences, technology, engineering, commerce, management.*

INTRODUCTION

Clean water in nature's greatest gift to mankind. It is one of the most important and precious natural resources. Madhubani isthe divisional head quarters of landlocked state of Bihar abounds in ponds hence called "city of ponds".

Production of fishes in ponds depends mostly on physico-chemical properties of water. It also depends upon soil and certain biological factors. Therefore its specific properties as a cultural medium are of great significance in productivity potential of pond.

Keeping in view the importance of fish production an attempt was made to evaluate the detailed limnological studies of pond.

MATERIAL & METHOD

Transparency was measured by using sacchidic (20cm indiameter). It was dipped into water until it disappeared and unlifted with the help of stringly by tied to it. Temperature was recorded by using a

centigrade mercury thermometer. (century type no cp901). pH of the pond water measured with the help of systronics pH meter (Model 324). Dissolved oxygen was estimated through winkler method (A.P.H.A. 1975). Calcium & Magenicium ions was estimated by EDTA titrimetric method using enochromo black T as indicater Magnesium was calculated.

Seasonal variation of Physico-Chemical of Fish Water Pond of Mithilanchal.

Parameters	Summer		Mansoon		Winter		Spring	
	Min	Max	Min	Max	Min	Max	Min	Max
Temperature	30.5	31.5	30.0	32.5	16.05	29.00	20.05	27.5
Transparency	50.00	65.5	41.0	43.03	40.00	47.05	45.00	60.05
pH	6.5	6.95	7.02	7.09	8.00	8.02	7.20	8.02
D.O.	4.01	6.0	7.4	7.8	9.0	10.00	7.09	10.01
Calcium	11.0	20.05	31.0	34.05	33.5	52.00	15.05	40.5
Magnesium	7.02	14.00	7.00	10.05	8.02	13.5	8.5	12.00

Collection of Fishes:-

Collection of fishes of pond were collected at interval with the help of local fisherman. For this following gears (nets) like Dragnet (Darvari), Scapnet (Jali) are used.

Survey of fishes in Mithilanchal pond during investigation period.

Local Name	Scientific Name	Family
Suhia	Gudusia Chapra (Ham)	Clupeidae
Bhuna	Notopterus notopterus	Notopteridae
Chilwa Catla Naini Rewa Rohu Pothia	Aspiodoparia Marar (Ham) Catla, Catla (Ham) Cirrihinus Reba (Ham) Cirrihinus Reba (Ham) Labeo Rohita (Ham) Puntis Sophore (Ham)	Cyprinidae
Tengra	Mystus Vittatus	Bagridae
Boyari	Wallago attus	Siluridae
Mangur	Clarias Batrachus	Siluridae
Singhi	Hetoropneustes fossilis	
Garai Sauri Chanega Saur	Channa punctatus Channa striatus Channa gachua Channa marulius	Ophiocephalidae
Bami	Amphiphous cuchia	Amphinoidae
Kabai	Anabas Testudineus	Anabentidae
Gaichi	Macroganthus aculeatus	Mastecembelidae

Preservation and identification of fishes.

The collected fish were first kept in 8% formalin for 48hrs. After that preserved for detailed study and identification in the laboratory . The identification of the fishes were made with the help of books " Fish fauna of British India " and the classification of the fishes of " Lio.S .Berg respectively.

RESULT & DISCUSSION

The fishes were collected from different standard nets by the local fisherman .The systematic position of the collected fish was studied. The present study is an effort to prepare a catalogue of fishes found in water body. The scheme of the classification followed was according Berg 1947.The temperature was simultaneous charges in water with the atmospheric Temperature. This finding in accordance with Manawar (1990).The transparency was low during monsoon. It varies between 41.0 ppm to 45.3 ppm.

The pH of water always above 6.5.00 i.e alkaline through out the year. It varies to 7. 0 to8.3best pH for pisciculture according to Hore and Pilay (1967).

Dissolove oxygen is an important gauge of existing water quality and the solubility water body to support aquatic life. It ranged 5.to 10.1ppm.

The calcium is important as nutrient in water body. It varies in these pond from 12.05to 52.0 ppm. The maximum value may be due to fact that animal excrete are drained into the pond.

All kind of natural water posses magnesium. It is required in good quality for the growth of fauna and flora. It varies from 8.2 to 12.0

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