International Journal of
Life Sciences
International Peer Reviewed Open Access Refereed Journal

Special Issue A 12: March 2018:286-288
UGC Approved Journal No 48951

Original Article | Open Access

Diversity of Benthic fauna in freshwater lakes of Pombhurna Tehsil of Chandrapur District, MS, India

Pimpalshende Atul K[1*] and Sitre Shashikant R[2]

[1]Research Scholar, [2]Department of Zoology, CHLR in Zoology, Nilkanthrao Shinde Science & Arts College, Bhadrawati, Dist. Chandrapur (M.S.) India – 442902
*Corresponding author Email: ak_pimpalshende@rediffmail.com

Manuscript details:

Available online on
http://www.ijlsci.in

ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

Editor: Dr. Arvind Chavhan

Cite this article as:
Pimpalshende Atul K and Sitre Shashikant R (2018) Diversity of Benthic fauna in freshwater lakes of Pombhurna Tehsil of Chandrapur District, MS, India, *Int. J. of. Life Sciences*, Special Issue, A12: 286-288.

ABSTRACT

The present study was carried out on Satara Bhosale and Satara Tukum lake of Pombhurna tehsil in Chandrapur district(M.S.) to analyze the benthic fauna present in it. 25 different benthic macrovertebrate forms belonging to Annelida, Nematoda, Arthropoda and Mollusca were found in lakes. 17 species observed in Satara Tukum lake and 24 species observed in Satara Bhosale lake. The diversity of species of Satara Tukum Lake is less than Satara Bhosale lake indicating that Satara Bhosale lake harbors more forms and is quite rich in biodiversity as compared to Satara Tukum.

Keywords- Benthic fauna, Satara Bhosale, Satara Tukum, diversity.

INTRODUCTION

The structure of benthic macro invertebrate communities provides precise an local information on recent events (Marques *et al.*, 2003). The benthic macrofauna resides on or inside the deposit of bottom soil and feeds on organic debris. They play very unique role through recirculation of nutrients in aquatic environment of ponds and lakes by accelerating the breakdown of decaying organic matter into simpler inorganic forms (Idown and Ugwumba, 2005). They also serve as food source for many form of fishes.

Literature Survey reveals that several studies were reported with respect to aquatic benthic diversity and water, sediment with physic-chemical status of the aquatic ecosystem (Wang *et al.* 2010, Jana and Manna 1995, Quasin *et al.* 2009, Garg *et al.* 2009). Literature review clearly shows that an in adequate information on the benthic form of water bodies of pombhurna tehsil of chandrapur district of Maharashtra state. From this point and view observations on the two freshwater lakes Satara Bhosale and Satara Tukum in relation to their habitat was studied and presented in this research paper.

METHODOLOGY

The benthic fauna sample were collected for qualitative estimation from both the lakes. The collection of mud sample was done with the help of scoop. The collected sample was further sieved with the help of copper sieve having mesh. Macro benthic invertebrates obtained after sieving were preserved in 4% formalin for further laboratory studies and identification. Benthic forms were observed under the dissecting microscope and classified into different species.

Study area

A) Satara Bhosale Lake- Satara Bhosale village is 16 km away from pombhurna tehsil and 27 km away from chandrapur. The lake is about 194 m above mean sea level and is at 19°89'56.63' N latitude and 79°62'98.79' E longitude (Fig.1).

Fig.2: Satellite image of Satara Bhosale lake

Fig.2: Satellite image of Satara Tukum lake

Satara Bhosale Lake receives the water from the surrounding catchment areas during the monsoon period. The area of Satara Bhosale is spread over 36 acres . The water depth of Satara Bhosale is 18 feet during monsoon and 6 feet during summer season. The water of this lake is primarily used for Cloth washing, bathing, fishing activities, agriculture, animals drinking and other domestic purposes.

B) Satara Tukum Lake: Satara Tukum village is 15 km away from pombhurna and 25 km away from chandrapur. The lake is freshwater in origin and about 194 m above mean sea level and is at 19°89'54.63' N latitude and 79°62'94.79' E longitude (Fig. 2). Satara Tukum receives the water from the surrounding catchment areas during the monsoon period. The area of Satara Tukum is spread over 34 acres. The water depth of Satara Tukum is 17 feet during the monsoon and 7 feet during the summer season. The water of this lake is primarily used for Cloth washing, bathing, fishing activities, agriculture and animal drinking and other domestic purposes.

RESULT AND DISCUSSION

During the study period total 25 species of macro benthic invertebrates belonging to four different phylum like molluscas, annelids, arthropoda and nematoda were recorded.

Table 1: Benthic forms recorded in Satara Bhosale and Satara Tukum lake during 2016-17

SN	CLASS/ PHYLUM	SPECIES	S.B	S.T.
1	Nematoda	*Diplogaster factor*	-	+
2	Nematoda	*Rhabditis sp.*	+	+
3	Nematoda	*Paradoxorhabitis sp.*	+	+
4	Annelida	*Pheretims posthuma*	+	+
5	Annelida	*Hirudinaria granulose*	-	+
6	Oligocheta/ Annelida	*Aeolosoma sp.*	+	+
7	Oligocheta/Annelida	*Tubifex sp.*	+	+
8	Oligocheta/Annelida	*Pterobdella sp.*	+	+
9	Oligocheta/Annelida	*Chaetogaster*	-	+
10	Celeoptera	*Dinecutus sp.*	-	+
11	Crustacea/Arthropoda	*Cancer*	+	+
12	Diptera/Arthropoda	*Mosquito larva*	+	+
13	Odonata/Arthropoda	*Dragon-fly*	+	+
14	Hydrachnidia/Arthropoda	*Water mite*	+	+
15	Hydrophilidae/Arthropoda	*Cybister sp.*	-	+
16	Diptera/Arthopoda	*Chironomous larva*	-	+
17	Hemiptera/Arthopoda	*Belostoma sp.*	+	+
18	Hemiptera/Arthopoda	*Nepa sp.*	+	+
19	Hemiptera/Arthopoda	*Ranatra sp*	+	+
20	Gastropda/Mollusca	*Lymnaea sp.*	-	+
21	Gastropda/Mollusca	*Pila globosa*	+	+
22	Mollusca	*Planorbis exustus*	-	+
23	Mollusca	*Vivipera bengalensis*	+	+
24	Mollusca	*Indonia coerulea*	+	+
25	Mollusca	*Melania scabra*	+	+

In Satara Bhosale lake 17 and Satara Tukum lake 25 species were recorded. Macro benthic fauna as bio-indicator of water quality in Kishore sagar lake, Kota(Rajasthan) India. International Environment committee 13th conference paper (wuhan).

Aknowledgement

The authors are thankful to Dr. L.S. Ladke, Principal, N.S. Science and Arts college, Bhadrawati for permitting and providing necessary laboratory facilities for conducting this research work in CHLR in Zoology affiliated to Gondwana University, Gadchiroli.

REFERENCES

Garg RK, Rao RJ and Saksena DN (2009). Correlation of molluscan diversity with physic-chemical characteristics of water of Ramsagar reservoir, India. *Int. J. Biodiver. Conserv*. 1: 202-207.

Idown EO and Ugwumba AAA (2005). Physical chemical and benthic faunal characteristics of a southern Nigeria reservoir. *The zoologist*, 3: 15-25.

Jana BB and Manna AK (1995). Seasonal changes of benthic invertebrates in two tropical fish and pond. *J. Freshwater Biol.,* 7: 129-136.

Marques MJ, Martinez-Conde E and Rovira JV (2003). Effect of zinc and lead mining in the benthic macroinvertebrate fauna of a fluvial ecosystem. Wat. Air soil Poll. 148: 366-388.

Quasin S, Ganguly K, Roy S and Nath A (2009). Diversity of macrobenthic fauna of two freshwater pisciculture ponds of west-Bengal. Environ. Ecol., 27: 1017- 1021

Wang Chang-Fu, Xian-Qiu Ren, and Run-Lin Xu (2010). Composition, abundance and diversity of the peracarida on different vegetation types in the Qi ao-Dan'gan Island Mangrove Nature Reserve on Qi'ao Island in the Pearl River Estuary, China. Zool. Stud., 49: 608-615.