

Study on Aquatic Macrophytes Diversity of Popatkhed Dam Near Akot Tahsil, District Akola (MS), India

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Abstract: *The Popatkhed Dam is principal fresh water body located in Popatkhed village of Akot Tahsil in Akola District of Maharashtra State. Akot is a tahsil place and it is 45 km north side away from Akola. In present investigation Popatkhed Dam is 15 km north side away from Akot tahsil and it is about 778M above from sealevel and is at 77o 5'3.89" E longitude and 21o 12' 15.17" N latitude and depth of water is 42.6 M (140 feet). The gross storage capacity of water is 10,709 km³ (2,569 cu. mi), the water of this dam is primary used for washing, bathing, fishing activities, agricultural and other domestic purpose but now it is at a traditional state with respect to degradation. The Macrophytes were studied from Jan 2023 to Dec 2023 during this period total 21 species of Macrophytes were found in sample of water three sites A, B and C. In the present study total 21 Macrophytes species of 5 different types were recorded in Popatkhed Dam..*

Keywords: Macrophytes diversity, Popatkhed Dam, Akot, Maharashtra

I. INTRODUCTION

Aquatic macrophytes play a vital role in healthy ecosystems. Macrophytes are the conspicuous plants that dominate wetlands, shallow lakes and streams. They serve as primary producers of oxygen through photosynthesis provide a substrate for algae and shelter for many invertebrates. There are three types of macrophytes, floating macrophytes. Submerged plants with small leaves and growing in dense stands, provide structure, where as floating-leaves plants and pleustophytes provide little submerged surface, but support animals such as amphibians and water birds. As a consequence, aquatic macrophytes are one of the essential ecological components wherever they occur. In the present study total 21 Macrophytes species of 5 different types were recorded in Popatkhed Dam.

II. MATERIAL AND METHODS

Macrophytes in shallow water were collected directly while those from deeper water with the help of long handled hook. On collection the specimen were thoroughly washed, excess water soaked with filter paper, kept in polythene bags lined with filter paper and brought to the laboratory. The specimen was identified up to species level as per the guidelines of Kodarkar (1994).

III. RESULT AND DISCUSSION

Macrophytes are most of the aquatic weeds referred such as the macrophytes that grows in or near Water. On the basis of habit and habitats aquatic weeds are classified into floating weeds, submerged weeds, emergent weeds, marginal weeds, filamentous weeds and algal blooms.

Narayana, et. al. (2006) reported about the aquatic macrophytes of Husain sagar in Karnataka. Kiran, et al., (2006) observed about the macrophytes in the fish culture pond in Bhadra fish farm, Karnataka. Game and Salaskar (2007) recorded about the macrophytes on Malchmali lakes of Thane, Maharashtra. Sanjay Mishra and Satya Narain (2010) they observed and reported of wetlands macrophytes. Uzma Ahmad (2012) observed the aquatic macrophytes in Chautal pond at Aligarh. NV. Harney, et. al.,(2013) founded 19 species of macrophytes belonging to 5 groups in three lakes in Bhadrawati, District Chandrapur, Maharashtra.

K. Harish Kumar (2015) observed the 13 species belonging to 11 families were recorded in Jannapura tank Bhadravati Taluka of Karnataka. Santosh Kumar and Narendra V. Harney (2015) reported 16 species representing 15 families from Moharli lake near Chandrapur. (M.S.). Venkatraman et al. (2000), Yadav Sardesai (2002), Pejawar (2005), Kumar (2011), Sitre (2013), Sitre et al. (2014), Datta (2014), Parveen et al. (2014), Parikhet et al. (2015), Pradeep & Dwivedi (2016), Murkute & Chavan (2016), Kaisar et al. (2016), Islam et al. (2017), Sanyal (2017), Prasad & Das (2018), Pimpalshende et al. (2021), Yadav (2021), Patil (2022), Rathod (2022), Paul (2022), Bhanja et al. (2023), there are no reported research work on aquatic macrophytes diversity in Popatkhed dam near Akot tahsil, district Akola, India. Therefore the work was carried out to Study on Aquatic Macrophytes Diversity of Popatkhed Dam Near Akot Tahsil, District Akola (M.S.), India.

The total 21 species of macrophytes belonging to 5 groups are observed during the present study. Among different macrophytes, *Salvenia sp.*, *Vallisneria sp.*, *Ipomoea sp.* and *Nymphaea sp.* were founded in abundance in site A as compare to site B and site C While *Utricularia sp.* was not recorded from site A.

Table No. 1.1: Macrophytes forms of site A, Site B and Site C

Sr. No.	Types/Life Forms	Name of the Macrophytes
1	Submerged floating weeds	<i>Ceratophyllum echinatum</i>
2	Submerged floating weeds	<i>Ceratophyllum demersum</i>
3	Submerged floating weeds	<i>Nymphaea odorata</i>
4	Submerged floating weeds	<i>Myriophyllum exalbescens</i>
5	Submerged floating weeds	<i>Utricularia sp.</i>
6	Submerged floating weeds	<i>Eutricularia sp.</i>
7	Submerged floating weeds	<i>Vallisneria americana</i>
8	Rooted floating leaves weeds	<i>Marsilea quadrifolia</i>
9	Rooted floating leaves weeds	<i>Nymphaea tuberosa</i>
10	Rooted floating leaves Weeds	<i>Trapa natans</i>
11	Rooted emergent with heterophile weeds	<i>Sagittaria sp</i>
12	Free floating suspended submerged	<i>Lemna minor</i>
13	Free floating suspended submerged	<i>Azolla carolimana</i>
14	Free floating suspended submerged	<i>Salvinia rotundifolia</i>
15	Free floating suspended submerged	<i>Pistia stratiates</i>
16	Free floating suspended submerged	<i>Najas indica</i>
17	Free floating suspended submerged	<i>Wolfia</i>
18	Free floating suspended submerged	<i>Nymphidis</i>
19	Rooted submerged hydrophytes	<i>Hydrilla</i>
20	Rooted submerged hydrophytes	<i>Ipomoea aquatica</i>
21	Rooted submerged hydrophytes	<i>Ipomoea indica</i>

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