



Study of Aquatic Macrophyte Diversity of Pulgaon River Distinct Wardha (Maharashtra) India.

Ajay .B. Jadhao, A. A Kshrisagar

Department Of Botany, Arts And Science College Pulgaon, Wardha, Maharashtra, India

ABSTRACT

Macrophytic and phytoplankton vegetation plays an important role to maintaining the ecosystem. Aquatic macrophytes are key components of waterscape because they provide food, affect nutrient cycles and mainly because they increase the habitat complexity. Aquatic macrophytes play a prominent role in water ecosystems. Aquatic plant provide directly or indirectly food, shelter and habitat for a large number of aquatic organisms called zooplankton in which some important small fishes, crabs and many more organism. Macrophytes play a significant role in maintaining the growth of fauna in water bodies. the present study focused on macrophytes present water as well as along the edge of the Pulgaon river. The present study carried out month Jan 2016- 2017 which include some floating, free-floating, submerged and some algal species also.

I. INTRODUCTION

Biodiversity provides all basic needs of human being like various types of food, vegetables, and shelter to small organism. The entire living organism indirectly or directly dependent on both terrestrial as well as aquatic biodiversity, as both biodiversities. Aquatic macrophyte is classified in to two phytoplankton and zooplankton. These aquatic macrophyte includes ferns, mosses, microalgae, angiosperms as well as small and large trees that require saturated soil condition to standing fresh water to thrive (Sculthorpe,1967). Aquatic macrophytes are able to use nutrients and influence water quality and by their presence and absence (suominen,1968 and Uoltilo1971). Aquatic macrophytes are of various life form and classified in to four groups 1) free-loadings e.g pistia stratiotes, 2) floating leaves but rooted plants e.g Nymphaea 3) submerged plants eg. Utricularia sp and 4) Emergents plants eg. Typha Macrophytes are well known to play significant multidimensional role in lakes. Littoral flora provides excellent habitats for photosynthetic and heterotrophic micro biota (Wetzel,2001; Wantzen et al., 2008).

Some author reported the plankton diversity of wardha river included varieties of phytoplankton and zooplankton of genera chlorophyceae and taxa protozoa (patki ,2017). Phytoplakton diversity of Dham river in wardha present 36 different species of phytoplankton. (Bekhode, Sitre.2016). There will be no report on the macrophytic investigation so author try to investigate macrophytic as well as phytoplankton organism present in pulgaon river respectively.

II. MATERIAL AND METHODS

Present research work were carried out by survey methods during 2016-2017 along the Pulgaon river and nearby area. The collected macrophytic plant were identify using some floras Then identified with the help of standard floras (Ugemuge 1986; Sharma et al., 1996).

III. STUDY AREA

Present area is located at 20°43'34"N 78°19'01"E It has an average elevation of 285 metres (935 feet). The nearby towns are Nachangaon (2.0 nautical miles (3.7 km) to south), Kautha. The town is built on rocky soil and derives its water supply mainly from

the Wardha river, though in recent years quite a few wells have been added to augment the water supply. In dry years when the water runs low a scarcity of water is felt. Pulgaon connects two districts namely Wardha and Amravati. Wardha is the nearest city (32 km, via new Nagpur-Aurangabad-Mumbai express highway) and a district place too. While it's accessible to three cities & districts as well, Amravati (75 km) on West, Wardha (32 km) on East and Yavatmal (50 km) on Southwest.



Figure 3. Map showing location of river



Figure 1. Pulgaon Bridge



Figure 2. showing Macrophytic vegetation

Table 1. Macrophytic and phytoplankton distribution.

S.No.	Scientific name	Family	Life form
1	<i>Ipomea aquatica</i>	Convolvulaceae	Floating leaved anchored
2	<i>Pistia stratiotes</i>	Araceae	Floating
3	<i>Spirodela polyrrhiza</i>	Araceae	Floating
4	<i>Alternanthera aphila laxeroides</i>	Amaranthaceae	Emergent anchored
5	<i>Jussiaea repens</i>	Onagraceae	Floating leaved anchored
6	<i>Azolla pinnata</i>	Azollaceae	Floating
7	<i>Nymphaea sp.</i>	Nymphaeaceae	Floating leaved anchored
8	<i>Typha sp.</i>	Typhaceae	Emergent anchored
9	<i>Nelumbonuc ifera</i>	Nymphaeaceae	Floating leaved anchored
10	<i>Commelina:sp.</i>	Commelinaceae	Emergent anchored
11	<i>Polygonum glabrum</i>	Polygonaceae	Marshy amphibious
12	<i>Cynodondac tylon</i>	Poaceae	Emergent anchored
13	<i>Monocharia vaginalis</i>	Pontederiaceae	Marshy amphibious
14	<i>Hydrilla vrticillata.Royle</i>	hydrocharitaceae	Floating.
15	<i>Oxalis corniculata.L.</i>	Oxalidaceae	Submerged.
16	<i>Nitell sp</i>	chlorophyceae	Floating
17	<i>Chara vulgaris</i>	Charophyceae	Submerged
18	<i>Polygonum lanigerum R.Br</i>	Polygoniaceae	Emergent
19	<i>Alternanthera sessilis L.</i>	Amaranthaceae	Emergent
20	<i>Echinochloa sativna.</i>	Poaceae	Emergent

IV. RESULT AND DISCUSSION

Hydrophytes are the plants which modify themselves to survive in aquatic environments. Their distribution is specific and depends up on the water quality and environmental conditions. Aquatic macrophyte exhibited a heterogenous assemblage 20 different macrophytes(table 1). Among which *Ipomea aquatic*, *Nymphaea sp.*, *Nymphaea sp.*, *Typha sp.*, *Alternanthera sessilis L.* are the floating leaves anchor sp. There are some algae also observed like *chara sp.*, *nitella sp.* From family chlorophyceae. There are some floating macrophyte also observed such as *Pistia stratiotes*, *Hydrilla vrticillata.Royle*, *Azolla pinnata*, *Spirodela polyrrhiza.* the study of macrophyte from pulgaon river

so 20 different type of macrophyte along with phytoplankton respectively .

V. REFERENCES

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