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ORIGINAL ARTICLE

Diversity of Aquatic Macrophytes in Kamanpoor Pond & Agraharam Pond of Karimnagar District, Telangana

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ABSTRACT
The aim of the present study is to document the Aquatic Macrophytes of Kamanpoor and Agraharam ponds located in Karimnagar district of Telangana State, South India. The present experimental work of identification of macrophytes was carried out during the period August 2015- July 2016. The Aquatic Macrophytes collected from the site were identified and were categorizes as three life forms submerged, floating and emergent. The genera were recorded. They majorly belonged to the families Alismataceae, Araceae, Convolvulaceae, Cyperaceae, Characeae Nymphyaceae and Hydrocharitaceae.
Key Words: *Aquatic Macrophytes, Kamanpoor, Agraharam ,Eco-system.*

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INTRODUCTION

The Aquatic Macrophytes are of considerable ecological & economic importance. They contribute significantly to the productivity of water bodies, mobilize mineral elements from the bottom sediments and provide shelter to aquatic invertebrates and fishes. They also respond to the changes in water quality and have been used as indicator of pollution in several cases.

The sampling of aquatic macrophytes is a tedius work & depends on the type of habitat, type of vegetation, variation and distribution of vegetation . Studies related to aquatic and wetland flora were globally carried [1-6]."Aquatic Macrophytes" is a term given to a vast category of aquatic vascular plants. In certain cases however the term has been used to include even the microscopic algae and member of the group Bryophyta. The Aquatic Macrophytes occur mainly in the hollow regions of lakes, ponds, pools, marshes, streames and rivers etc.

Macrophytes colonize many different types of aquatic ecosystems, such as lakes, reservoirs, wetlands, streams, rivers and marine environments .

MATERIALS AND METHODS

STUDY SITE

Karimnagar District lies between 18^0 28' Northern latitude and 79^0 06' Eastern longitude. Kamanpoor pond located at Karimnagar Mandal, and Agraharam pond (FIG : 1) located at vemulawada Mandal ,Karimnagar District of Telangana State was chosen to study and document the diversity of Aquatic Macrophytes.

DATA COLLECTION

Qualitative survey was carried out during the period Aug 2015 to July 2016 . The aquatic macrophytes were collected on site Some of them were directly pulled by hand, few were picked out with suitable aids and were placed into large polythene covers. They were brought to the laboratory, sorted out species wise, identified with the help of regional floras, standard taxonomic manuals and manuals of aquatic plants. A set of these specimens were vouchered number wise. Taxonomic description and

identification characters were noted in filed notes and these specimens were preserved in the laboratory for herbarium purpose

Fig : 1 . Agraharam Pond

RESULTS AND DISCUSION

The Aquatic macrophytes collected during survey period were presented in Table.1 & 2.In the present paper an attempt was made to explore the aquatic wealth of Kamanpoor pond & Agraharam pond with reference to aquatic macrophytes. In the present work macrophytes identified belonging to different families were recorded. It was observed that the emergent aquatic macrophytes were abundantly found when compared to submerged forms. Macrophytes release oxygen which add to the dissolved oxygen of the water. Aquatic macrophytes act as indicators of water quality and reduce pollution also. Some aquatic plants are used by humans as a food source. Examples include water caltrop (*Trapa natans*), Chinese water chestnut (Eleocharisduleis),Indian lotus (*Nelumbo nucifera*),Water spinach (*Ipomia aquatica*).

Few of the aquatic macrophytes collected from Kamanpoor pond & Agraharam pond are categorized as follow shown based on their habit (Fig :2)

1**.** Submerged Macrophytes:- In largely or completely submerged plants the roots may or may not be present. *(Potomogeton, Cerotophyllum, Vallisnaria.)* Most submerged aquatic macrophytes belong to the families Ceratophyllaceae, Haloragaceae, Hydrocharitaceae, Nymphaeaceae and Potamogetonaceae. These macrophytes are found in various types of water bodies, including estuaries, rivers, lakes, ponds, natural depressions, ditches, swamps and floodplains. Like other macrophytes, they compete with phytoplankton for nutrients, decreasing the productivity of the water and causing hindrance to the movement of fish, irrigation and navigation.

2. Emergent Macrophytes:- Plants not submerged in water they are further subdivided into two categories.

a. Erect leafed Emergent plants:- Rooted plants with principle photosynthetic surfaces projecting above the water (Typha, Skirpus, etc.)

b. Floating leaved emergent plants :- Rooted plants with floating leaves .

3. Floating Macrophtes :- The crown of the plants floating on the water surface **.**

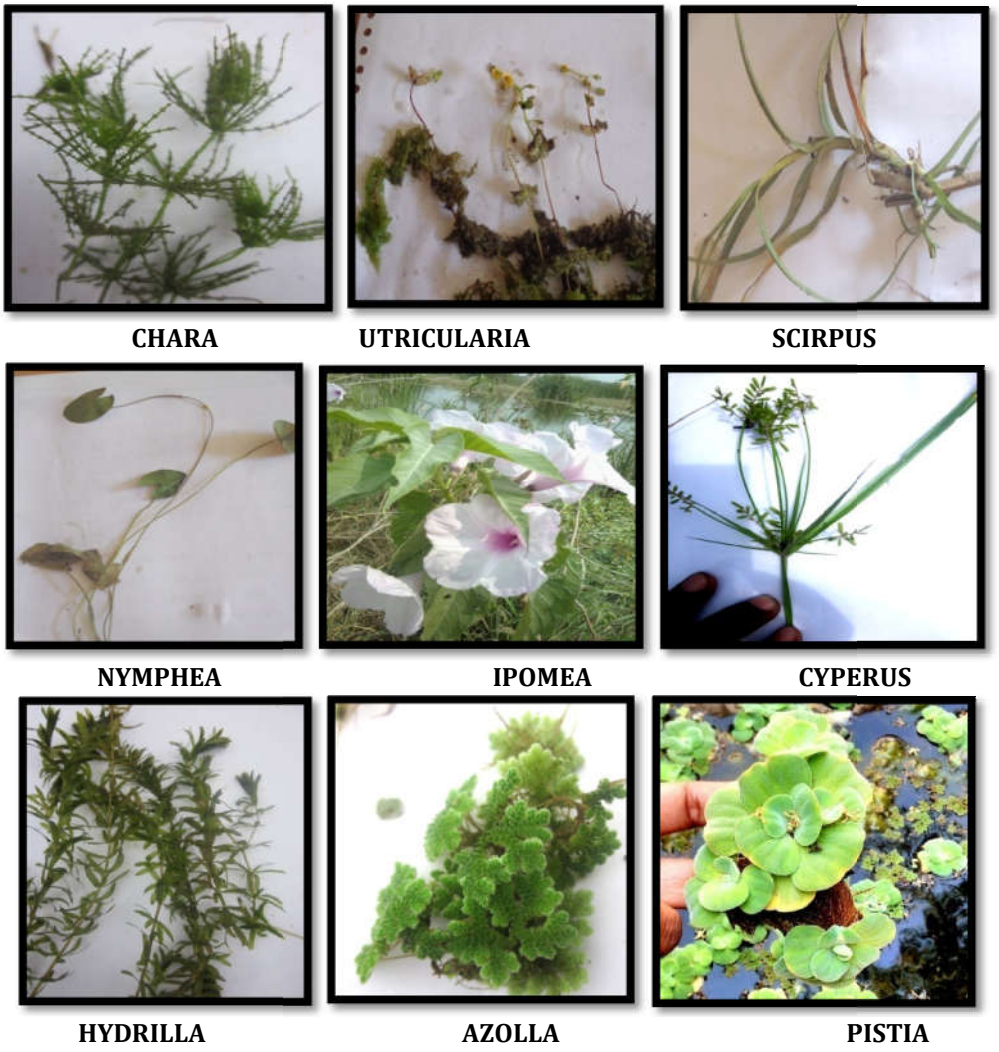
TABLE : 1 LIST OF MACROPHYTES IDENTIFIED FROM KAMANPUR POND

Scientific name	Common name	Family	Life form
Trapa natans	Water nut	Alismataceae	Critically endangered
Sagitaria	Duck potato	Alismataceae	Emergent
Ipomia aquatica	Water spinach	Convolvulaceae	Emergent
Hydrilla verticillatae	Indian stargrass	Hydrocharitaceae	Submerged
Nitella terrestris	Stonewort	Characeae	Submerged
Submersum	Horn wort	Ceratophyllaceae	Submerged
Ipomea aquatica	Water spinach	Convolvulaceae	Emergent

TABLE: 2 LIST OF MACROPHYTES IDENTIFIED FROM AGRAHARAM POND

Scientific name	Common name	Family	Life form
Chara	Scoring rushes	Characeae	Submerged
Utricularia	Bladder worts	Lentibulariaceae	Submerged
Skirpus cernuns	Fiber optics grass	Cyperaceae	Emergent
Nymphia pubescence	Water lilly	Nimpheaceae	Floating
Pistia stratiotes	Water lettuce	Araceae	Floating
Cyperus rotundus	Flat sedge	Cyperaceae	Emergent
Ipomia carnea	Pink morning glory	Convolvulaceae	Floating
Cyperus rotundus	Flat sedge	Cyperaceae	Emergent

FIG :2 SHOWING MACROPHYTES COLLECTED FROM KAMANANPUR & AGRAHARAM PONDS



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