



Cyperaceae of Sabarmati River , Gandhinagar District, Gujarat State , India.

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ABSTRACT

Cyperaceae family known as sedge family, mostly resemble like grasses. Plant species of family Cyperaceae mostly grow in water bodies, moist places, some species found in sandy soil and rocky area. *Cyperus*, *Scirpus*, *Fimbristylis* are known genera and its widely distributed. Vegetation in riverbed commonly referred to as the Riparian riverain vegetation. The present research paper deals with observation, Collection and enumerate plant species of family Cyperaceae from Sabarmati river passing through Gandhinagar district of Gujarat state, India. Plant species of family Cyperaceae from Sabarmati riverside area, have been listed systematically which counts 11 species of 04 genera, These plant species grown mostly as wild, and known as weed plants.

KEYWORDS

Cyperaceae, Sabarmati, Gandhinagar.

INTRODUCTION

The Cyperaceae -sedge family are grasslike, herbaceous plants, commonly found in wet or saturated conditions. The stems are usually 3-angled and solid. The leaves are alternate, commonly in 3 ranks, usually with a closed sheathing base and a parallel-veined, strap-shaped blade. The flowers are very minute and are bisexual or unisexual. Each floret is in the axil of a chaffy bract and these are arranged spirally or distichously in spikelets. Perianth may be represented by scales or bristles in two whorls or may be entirely lacking. The androecium consists usually of 3 distinct stamens but 1, 2 or rarely 6 may be present. The gynoecium consists of a single compound pistil of usually 2 or 3 carpels, a single style usually with 2 or 3 lobes or branches, and a superior ovary with a single locule containing a single basal ovule. Sometimes the ovary is enveloped by a membranous sac called a perigynium. The fruit is a 3-angled or lens-shaped achene. The word "Riparian- riverain" itself means along the river margin and in riverbed. Usually altitude, total rainfall, duration of rainy season, wind, and temperature along with soil characteristics influenced by climatic factors determine the nature of plant communities. In all the cases water availability, humidity becomes a critical factor. Because of this reason the riparian- riverain zone is a unique system. The riparian- riverain wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstance do support a prevalence of vegetation typically adapted for life in saturated soil conditions.

STUDY AREA:

The geographical situation of the Gandhinagar district is between 23° 21' North latitude and 72° 63' East longitude. Sabarmati river is main river passing across the district, It originates from Arvalli hills, in Rajasthan State and finally enters into the Gulf of Khambhat (Cambay), Gujarat state.

MATERIAL AND METHODS :

The study of family Cyperaceae of monocot angiosperms from the Sabarmati river is based on the extensive field survey of the vegetation of an area. Field survey was carried out for observation and collection of plants in various seasons. Field study visit made for Six (2010-2015) years after long back completed after Ph.D. research work and recollect the data of plants. The enumerated plants were categorized according to their systematic positions on the levels of genera and species, followed by Bentham & Hookers classification system. The list of plant species with their Scientific name, Vernacular name and Habit present in description

RESULT:

The list of collected plants is given in Table-1. Nomenclature and enumeration, brief descriptions of each species, flowering and fruiting period, local names are mentioned.

Sr.	Name of Species	Local Name	Habit
1	<i>Cyperus rotundus</i> L.	Moth	Herb
2	<i>Cyperus tuberosus</i> Rottb	Nagar -moth	Herb
3	<i>Cyperus triceps</i> (Rottb.) Endl.	Nirbisi	Herb
4	<i>Cyperus bulbosus</i> Vahl .	Moth ni jat	Herb
5	<i>Cyperus corymbosus</i> Rottb .	Moth ni jat	Herb
6	<i>Cyperus difformis</i> L .		Herb
7	<i>Cyperus haspan</i> L..	Chiyo	Herb
8	<i>Eleocharis dulcis</i> (Burm . f .)		Herb
9	<i>Fimbristylis bisumbellata</i> (Forsk .)		Herb
10	<i>Fimbristylis dichotoma</i> L.		Herb
11	<i>Scirpus grossus</i> L.		Herb

CYPERACEAE:

1. *Cyperus rotundus* L. (Moth)

Perennial herbs. Leaves glabrous, linear. Spikelets linear-lanceolate. Nuts triquetrous, obovate-oblong, smooth. **Fls. & Frs. :** All most the year. Common in the area.

2. *Cyperus tuberosus* Rottb . (Nagar -moth)

Perennial herbs having fragrant tubers. Leaves 17-30 cm long, glabrous, linear. Spikelets 1-1.5cm across. Nuts obovate-oblong, obtusely trigonous. **Fls. & Frs. :** All most the year. Common

3. *Cyperus triceps* (Rottb.) Endl. (Nirbisi)

Perennial, slender, tufted herbs. Leaves narrowly linear. Spikelets numerous, greenish-white or dirty-white, in terminal, 2-4-lobed or rarely unlobed head. Nuts oblong or ellipsoid, biconvex. **Fls. & Frs. :** Aug.-Jan. common among grasses.

4. *Cyperus bulbosus* Vahl . (Moth ni jat)

Perennial, glabrous , bulbosus herbs. Leaves narrowly linear. Inflorescence compound umbel . Spikelets numerous, yellowish brown to reddish brown ., in terminal. Nuts obovoid - oblong , trigonus .**Fls. & Frs.** : Jul.-Dec . Common , Throughout among grasses.

5. *Cyperus corymbosus* Rottb .

Perennial, glabrous , glaucous – green herbs. Leaves long narrowly linear. Inflorescence terminal compound umbel . Spikelets numerous, Spikelets ovate .**Fls. & Frs.** : Nov.-Feb . Not common .

6. *Cyperus difformis* L . (Moth ni jat)

Tufted, glabrous herbs. Leaves lng , narrowly linear. Inflorescence terminal . simple umbel . Spikelets numerous, greenish brown . Nuts obovate - oblong , punctate .**Fls. & Frs.** : Aug.-Dec . Common , Throughout among grasses.

7. *Cyperus haspan* L.. (Chiyo)

Perennial, solitary tufted glabrous herbs. Leaves narrowly linear. Inflorescence umbel . Spikelets stellately arranged . Nuts obovate, trigonus

Fls.&Frs.:Oct.-Dec.Not common,Throughout among grasses.

8 . *Eleocharis dulcis* (Burm . f .)

Tufted submerged herbs .leaves not present ,Spikelet solitary , terminal , cylindric , reddish –brown .Nut broadly obovate , smooth , creamy white . **Fls.& Frs.** : Aug.-Dec .Common , Throughout in moist ground

9. *Fimbristylis bisumbellata* (Forsk .)

Erect spreading , glabrous herb .Leaves long linear . Spikelets long , ellipsoid oblong , yellowish brown in umbels

.Nut oblong - obovate, creamy –yellow.**Fls. & Frs.** : Aug.-Dec . Common , Throughout in moist ground .

10 . *Fimbristylis dichotoma* L.

Perennial erect spreading , glabrous herb .Leaves long linear . Spikelets long , ellipsoid - oblong , yellowish brown in terminal compound umbels .Nut biconvex , pale – straw , sessile .**Fls. & Frs.** : Throughout the year . Found in moist ground .

11 . *Scirpus grossus* L.

Perennial erect , stoloniferous , herb .Leaves linear . Hy-pogynous bristles brown unequal . nut obovate , trigonous , yellowish brown .**Fls. & Frs.** : Dec - Mar . Found in moist ground .

Family	Genus	Species
Cyperaceae	04	11

DISCUSSION & CONCLUSION:

The analysis of the plant species in the area give the result that the total 14 species belong to 08 genera of the family Amaranthaceae including naturalized and indigenous plants. The dominance of the plant species presence of habit like herbs . Most of the species as weeds in this study area.

ACKNOWLEDGEMENT:

I am very thankful to the earlier research investigators and local people who give me their information regarding to some plant species in the study sites, I am thankful to my Ph.D Research Guide Dr.D.C.Bhatt for constant approach for plant exploration and research investigation.I am also thankful to my Principal and head of department of Institute for giving me opportunity to done my work.

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