



Plants of Family Amaranthaceae as Riparian Vegetation from Gandhinagar District, Gujarat State , India.

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ABSTRACT

This research paper deals with observation ,Collection and compile a data of family Amaranthaceae plant species from Sabarmati river passing through Gandhinagar district of Gujarat state ,India. Vegetation in riverbed commonly referred to as the Riparian vegetation. Plant species of family Amaranthaceae from Sabarmati riverbed –riverside area, have been listed systematically which counts 14 species of 08 genera ,These plant species grown mostly as wild, and known as weed plants.

KEYWORDS

Amaranthaceae, Riparian, Gandhinagar.

INTRODUCTION

Amaranthaceae is a plant family in the order Chenopodiales dominated by herbs , Leaves are mostly simple and entire, non-stipulate, phyllotaxy is alternate/opposite. Flowers are regular, cyclic, tiny, and characterized by spiny perianth with conspicuous bracts and bractlets and are either unisexual/bisexual, The Amaranthaceae family has many economically important plant species, including ornamentals, weeds, protein rich, white-seeded grain species.Important secondary etabolites include different alkaloids, saponins, sapogenins, flavonols, betalins etc. The word "Riparian" itself means along the river margin and in riverbed. Plant Communities seen along the river margins are commonly referred to as the riparian vegetation and in riverbed commonly referred to as the riverain vegetation. 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.

Earlier , Shah,G. L. (1978) published the flora of Gujarat State..Earlier many research workers explore the North Gujarat region but not much explore the river Sabarmati.

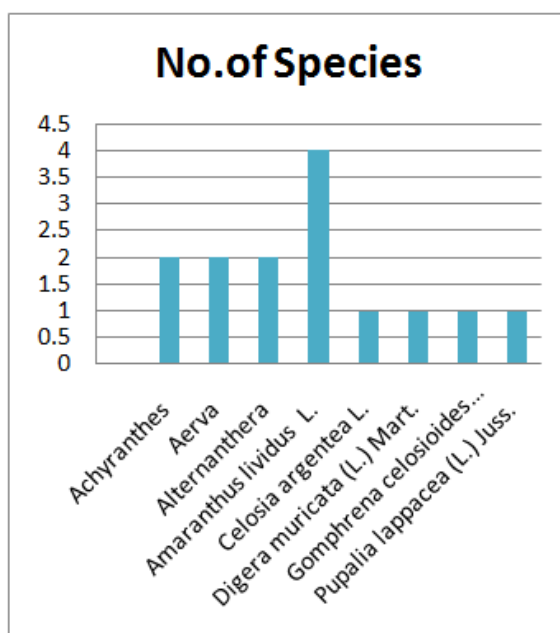
STUDY AREA: The geographical situation of the Gandhinagar district is between 23° 21' North latitude and 72° 63' East longitude. Sabarmati river is main river passing across the district, It originates from Arvalli hills, in Rajasthan State and finally enters into the Gulf of Khambhat (Cambay) ,Gujarat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

MATERIAL AND METHODS The study of family Amaranthaceae of 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. With nomenclature and enumeration, brief descriptions of each species, flowering and fruiting period, local names Descrip-

tions of the genera are not given separately

Sr.	Name of Species	Local Name	Habit
1	<i>Achyranthes aquatica</i> R.Br.	Jal anghedi	Herb
2	<i>Achyranthes aspera</i> L.var. <i>aspera</i>	Anghedi	Herb
3	<i>Aerva javanica</i> (Burm.f.) Juss.	Gorakh Ganjo	Herb
4	<i>Aerva lanata</i> (L.)Juss.	Gorakh Ganjo	Herb
5	<i>Alternanthera pungens</i> H.B.&K.	Alternanthera	Herb
6	<i>Alternanthera sessilis</i> (L.) Dc.	jaljanbhvo	Herb
7	<i>Amaranthus hybridus</i> L.	Rajgaro	Herb
8	<i>Amaranthus spinosus</i> L.	Kantalo dambho	Herb
9	<i>Amaranthus viridus</i> L.	Dhimdo	Herb
10	<i>Amaranthus lividus</i> L.	Tandaljo	Herb
11	<i>Celosia argentea</i> L.	Lampadi	Herb
12	<i>Digera muricata</i> (L.) Mart.	Kanejro	Herb
13	<i>Gomphrena celosioides</i> Mart.	Button	Herb
14	<i>Pupalia lappacea</i> (L.) Juss.	Dholo zipto	Herb



1. *Achyranthes aquatica* R.Br.

(Jal Anghedi)

Aquatic herb, annual, pubescent hairy herbs. Leaves elliptic, petiolate, hairy. Flowers bright white long spikes. Fruit oblong-cylindrical, smooth, glabrous. Seeds small, polished. **Fls. & Frs.** : Aug.-Dec. Common in the water body of river.

2. *Achyranthes aspera* L. (Anghedi)

Annual, pubescent hairy herbs. Leaves acute, ovate or oblanceolate, petiolate, hairy. Flowers pale to bright purple in long spikes. Fruit oblong-cylindrical, yellowish-brown, smooth, glabrous. Seeds small, black, polished. **Fls. & Frs.** : Aug.-Feb. Common in the waste lands of riverbank mostly in Monsoon.

3. *Aerva javanica* (Burm. f.) (Gorakhganjo)

Erect herbs with tomentose much branched stem. Leaves alternate, acute, tomentose, ovate-lanceolate or linear-oblong, greenish-white. Flowers greenish-white, unisexual, sessile, in linear spikes, terminal panicles. Fruit utricle orbicular-ovoid, thin, polished seeds. **Fls. & Frs.** : July-Jan. Abundant, Common, found in the riverbed and riverside dry soil.

4. *Aerva lanata* (L.) Juss. (Gorakhganjo)

Erect herbs with tomentose much branched stem. Leaves alternate, acute, tomentose, ovate-lanceolate, Flowers greenish-white, unisexual, sessile, in linear spikes. Fruit orbicular-ovoid, thin, glabrous seeds. **Fls. & Frs.** : Throughout, Common, found in the riverbed and riverside dry soil.

5. *Alternanthera pungens* H. B. & K.

Creeping herbs. Leaves broadly ovate, obovate or almost orbicular, alternate, subopposite or subfasciated, pubescent beneath. Spikes axillary. Seeds orbicular, smooth, reddish-brown. **Fls. & Frs.** : Almost around the year. Common in plains.

6. *Alternanthera sessilis* (L.) DC.

Annual diffuse or prostrate herbs. Leaves linear-lanceolate or elliptic-oblong, sessile or nearly so, glabrous, entire. Flowers white or tinged pink in spikes. Utricle small with thickened margins. Seeds minute, polished suborbicular, glabrous. **Fls. & Frs.** : Almost around the year. Common in the moist ground.

7. *Amaranthus hybridus* L. (Rajgaro)

Stout, annual herbs; leaves broadly ovate to ovate-rhomboid or lanceolate, glabrous. Spikes simple or branched, axillary and terminal. Fruit ovoid, seeds subglobose, dark-brown or black, smooth, glabrous. **Fls. & Frs.** : Almost around the year. Cultivated in riverside field.

8. *Amaranthus spinosus* L. (Kantalo dambho)

Annual erect or diffuse herbs. Leaves simple, glabrous, entire, ovate, ovate-rhomboid, oblong-elliptic. Spikes pale-green, axillary, globose. Utricle ovoid, membranous, rugose. Seeds compressed, dark brown, polished, smooth, glabrous.

Fls. & Frs. : Almost around the year, Commonly found in the open areas.

9. *Amaranthus viridis* L. (Dhimdo)

Erect or diffuse annuals, glabrous. Leaves broadly ovate

to ovate-rhomboid, glabrous. Spikes at first green, at length deep-reddish-brown, axillary, terminal one simple or branched, **Fls. & Frs.** : Almost around the year. Common, in the cultivated fields.

10. *Amaranthus lividus* L. (Tandaljo)

Erect, Tall herb, annuals, glabrous. Leaves ovate, glabrous. Spikes flower green, at axillary, terminal one simple or branched, **Fls. & Frs.** : Almost around the year. Common, in the cultivated fields. **Fls. & Frs.** : Almost around the year. Common, in the cultivated fields.

11. *Celosia argentea* L. (Lampdi)

Annuals with erect branches. Leaves broadly ovate to ovate-lanceolate or linear-lanceolate. Spikes terminal, bright pinkish purple or glistening white. Utricles greenish-brown. Seeds spherical, compressed, dark-black, smooth, glabrous. **Fls. & Frs.** : July-Dec. common in cultivated field.

12. *Digera muricata* (L) Mart. Beitr. (Kanejaro)

Erect, slender annuals herbs. Leaves ovate or ovate-lanceolate, or orbicular, glabrous, petiolate, simple, entire. Utricles ovoid. Seeds minute, pale-brown. **Fls. & Frs.** : Throughout the year. Common as a weed in the cultivated field.

13. *Gomphrena celosioides* Mart.

Erect or prostrate, annual herbs. Leaves glabrous, entire, smooth, hairy, elliptic-oblong or obovate-oblong. flowers dirty white or creamy yellow, in terminal erect spikes. Fruit ovoid or elliptic-oblong, smooth, glabrous. Seeds minute, smooth. **Fls. & Frs.** : Almost around the year. Commonly found.

14. *Pupalia lappacea* (L) (Dholo zipto)

Annual erect or suberect or straggling herbs. Leaves entire, simple, broadly ovate or ovate-elliptic, glabrous. Flowers greenish-yellow or slightly tinged pinkish, clustered. Utricles membranous, ovoid-oblong, glabrous. Seeds small, oblong, dorsally compressed, smooth. **Fls. & Frs.** : Almost around the year along the riverside in the hedges.

Family	Genus	Species
Amaranthaceae	08	14

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.

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